

CHAPTER VI Alternatives

VI.A INTRODUCTION

VI.A.1 Legislative Framework

In accordance with CEQA Guidelines Section 15126.6, EIRs are required to include a discussion of alternatives to a proposed project. Section 15126.6(a) states that an EIR should describe a range of reasonable alternatives to a project that would attain most of the basic objectives of a project while reducing one or more of the significant impacts of the project, and should evaluate the comparative merits of those alternatives.

Public Resources Code Section 21002 states, in pertinent part:

In determining the nature and scope of alternatives to be examined in an EIR, the Legislature has decreed that local agencies shall be guided by the doctrine of “feasibility.” It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. In the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.

California has declared that the statutory requirements for consideration of alternatives must be judged against a rule of reason. CEQA Guidelines Section 15126.6(f) defines the “Rule of Reason,” which requires that an EIR set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR is (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to offer substantial environmental advantages over the project proposal (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(1) requires an analysis of the No Project Alternative. The purpose of describing and analyzing the No Project Alternative is to allow decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project. CEQA Guidelines Section 15126.6(e)(3)(A) provides that “when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the ‘no project’ alternative will be the continuation of the existing plan, policy or operation into the future.” The No Project Alternative in this chapter discusses future conditions on the Project site if current planning controls continued in the future and no other Redevelopment actions or incentives were implemented.

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).”

VI.A.2 Analytic Method

This chapter describes the Project alternatives and identifies potential environmental impacts associated with implementation of Project alternatives relative to the impacts of the Project. The Project variants discussed in Chapter IV (Project Variants) could be approved instead of the Project. Therefore, the alternatives analysis also includes a comparison of impacts of Project alternatives relative to the impacts of the variants. To identify reasonable alternatives to this Project, the Agency and the City, as co-Lead Agencies, considered the objectives of the Project, those alternatives that are feasible to accomplish, and those alternatives that could reduce one or more of the significant impacts of the Project.

The general process for identifying alternatives for consideration in the document included these steps:

1. Review the significant effects resulting from the Project and identify possible strategies to avoid or lessen such impacts
2. Review ideas and alternative concepts suggested during the Project scoping process and any presented to the lead agencies during the preparation of the DEIR
3. Categorize and evaluate strategies and concepts for the ability to meet the basic project objectives and avoid or lessen significant impacts
4. Develop preliminary alternatives based on the strategies and concepts retained from preliminary screening and evaluate feasibility with respect to technical, institutional, costs and regulatory considerations
5. Select and refine a final set of alternatives for CEQA analysis

From this process, four alternatives, in addition to the required No Project Alternative, were selected for further evaluation and comparison to the Project and the Project Variants. Together, this set of five alternatives represents a broad range of options in terms of how key aspects of the proposed Project could be implemented. Each alternative differs from the Project in one or more of the following ways:

1. In the treatment of the Yosemite Slough bridge, either by changing the design or removing the Bridge proposal from the project and substituting an alternative transportation component
2. In the intensity of development
3. In the location and type of land uses
4. In the treatment of the Candlestick Point State Recreation Area (CPSRA), either by changing the reconfiguration proposed or removing the CPSRA from the project
5. In the treatment of the 49ers Stadium, either by changing the location of the Stadium or removing the Stadium from the project

The alternatives selected were judged the best to represent the range of identified strategies and concepts. Mitigation measures that have been identified for Project impacts would apply to impacts of the alternatives if the alternatives analysis indicates that mitigation is required to minimize a similar significant impact.

VI.A.3 Project Objectives

Project alternatives were evaluated for their ability to attain most of the basic objectives of the proposed Project, consistent with CEQA. Project objectives are identified in Chapter II (Project Description) and are summarized below.

- The integrated development should produce tangible community benefits for the Bayview and the City
- The integrated development should reconnect Candlestick Point and the HPS site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents
- The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and include the rebuilding of Alice Griffith Public Housing
- The integrated development should incorporate environmental sustainability concepts and practices
- The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure
- The integrated development should be fiscally prudent, with or without a new stadium

Project objectives are described in more detail in the Chapter II.

VI.B DESCRIPTION OF ALTERNATIVES TO THE PROJECT

Five alternatives to the Project have been evaluated, including the No Project Alternative, as required by CEQA, an alternative that presents the same development program as the Project, but without building a bridge over the Yosemite Slough, and three different reduced development alternatives. The alternatives considered include the following:

- **Alternative 1: No Project**—Consistent with Section 15126.6(e)(1) of the CEQA Guidelines, this alternative assumes that no new development would occur at Candlestick Point and HPS Phase II would be developed with new uses consistent with the existing *Hunters Point Shipyard Redevelopment Project* (HPS Redevelopment Plan).
This alternative was selected in accordance with CEQA Guidelines Section 15126.6(e)(3)(A), which states that when the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the “no project” alternative would be the continuation of the existing plan, policy, or operation into the future. This discussion would allow the decision-makers to compare the impacts of approving the Project with the impacts of not approving the Project.
- **Alternative 2: CP-HPS Phase II Development Plan; No Yosemite Slough Bridge**—Alternative 2 would have the same land use program proposed with the Project, including the State Parks agreement. Alternative 2 would not include the Yosemite Slough bridge. The main roadway connection between Candlestick Point and HPS Phase II would be via Ingalls Street. A bus rapid transit (BRT) route would be constructed along an abandoned railroad right-of-way to provide access between Candlestick Point and HPS Phase II. This alternative assumes that the 49ers Stadium is relocated to HPS Phase II and the Agency enters into an agreement with CPSRA to reconfigure CPSRA land in the same way as for the Project.

This alternative was selected to avoid impacts to biological and scenic resources associated with bridge construction and operation, although these Project impacts were identified as less than significant. Significant traffic, noise, and air quality impacts would not be reduced. This alternative would result in greater transportation-related impacts on game days because vehicular ingress and egress to and from the stadium would be delayed and traffic levels would be increased on local streets, including Innes Avenue, Evans Avenue, and Ingalls Street.

- **Alternative 3: Reduced CP-HPS Phase II Development; San Francisco 49ers Stay at Existing Candlestick Park Stadium; Limited State Parks Agreement; Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians**—Alternative 3 would be a reduced development alternative. Total housing with this alternative would be 5,210 units, about half of the units proposed with the Project. At Candlestick Point, residential development would be decreased and retail and arena uses would not be developed. Replacement of the Alice Griffith Public Housing site would occur and consist of 1,210 housing units. Minor improvements would be made to the CPSRA under the Limited State Parks Agreement. At HPS Phase II, housing would be increased; other uses at HPS Phase II would be similar to the Project. A new Yosemite Slough bridge serving only transit, bike, and pedestrian traffic would extend Arelious Walker Drive from Candlestick Point to HPS Phase II. This alternative assumes that the 49ers football team would continue to use the existing Candlestick Park stadium. At HPS Phase II, the alternative would not include a new 49ers Stadium.

This alternative was selected to provide an alternative to the Project that reduces construction-related impacts generally and operational impacts associated with traffic, air quality, noise, demand for public services, biological resources, and other growth-related impacts. The development program of this alternative would be reduced compared to the Project and would generate fewer vehicle trips and reduce the area subject to development. This alternative would reduce traffic and noise impacts associated with an increase in vehicle trips and air quality impacts associated with Project construction and operation. This alternative would reduce impacts to biological resources associated with bridge construction and operation as a result of the narrower bridge footprint and reduced bridge traffic. Construction and/or operational impacts related to the amount of development and the development footprint, such as soil erosion and stormwater runoff, as well as operational impacts related to population and employment growth, such as police and fire services, would also be reduced by this alternative.

- **Alternative 4: Reduced CP-HPS Phase II Development; Historic Preservation; No HPS Phase II Stadium, Marina, or Yosemite Slough Bridge**—Alternative 4 would also be a reduced development alternative. Total housing with this alternative would be 7,350 units, about 30 percent less than proposed with the Project. The proposed floor areas for most uses would be approximately 30 percent smaller at full build-out in comparison to build-out of the Project. This alternative includes preservation of three potentially historic structures at HPS Phase II. No Yosemite Slough bridge, stadium, or marina would be built. The State Parks agreement would occur.

This alternative was selected to provide a reduced development alternative to the Project. This alternative would reduce the area subject to development and would avoid significant impacts to historic resources at HPS Phase II. Reduced development would result in fewer vehicle trips. This alternative would reduce traffic and noise impacts associated with the increase in vehicle trips and air quality impacts associated with Project operation and construction. This alternative would also avoid impacts to biological resources associated with bridge construction and operation. Construction and/or operational impacts related to the amount of development and the

development footprint, such as soil erosion and stormwater runoff, as well as operational impacts related to population and employment growth, such as police and fire services, would also be reduced by this alternative.

- **Alternative 5: Reduced CP-HPS Phase II Development; No HPS Phase II Stadium, State Parks Agreement, or Yosemite Slough Bridge**—Alternative 5 would have the same land use program proposed with the Project, except that the new stadium at HPS Phase II and the Yosemite Slough bridge would not be constructed and the 49ers would continue to utilize Candlestick Park. The total number of housing units would be the same as for the Project; however, because this alternative would not include the CPSRA boundary reconfiguration, the land area available for development would be smaller. Approximately 1,350 units would be shifted from Candlestick Point to HPS Phase II. This alternative assumes a State Parks agreement does not occur and there is no agreement with the 49ers for a stadium at the Project site.

This alternative was selected to reduce construction impacts generally and to avoid impacts to biological resources associated with bridge construction and operation. Significant traffic, noise, and air quality impacts would not be reduced. Construction impacts that relate to the size of the development footprint would also be reduced by this alternative.

Alternatives 2 through 5 are depicted in Figure VI-1 (Alternative 2 Circulation Plan Railroad Right-of-Way for Bus Rapid Transit), Figure VI-2 (Alternative 3 Land Use Plan), Figure VI-3 (Alternative 4 Land Use Plan), and Figure VI-4 (Alternative 5 Land Use Plan).

Consistent with the analysis of Project impacts, the primary focus of this alternatives analysis is the physical development that could occur, rather than the policy framework required of or by that development. The alternatives identified above consider a range of different types, sizes, or locations of physical development and the physical properties of these alternatives (including the amount and location of such development and the employment and housing provided by this development) that could result in physical effects to the environment. The analysis of potential impacts assumes that each alternative would comply with applicable Project requirements and implement all feasible mitigation measures. Only those impacts that were identified as less than significant or significant and unavoidable for the Project are compared to alternatives impacts in this analysis, except where the alternative would have an impact but the Project analysis identified no impact. Further, for purposes of comparison, where significant and unavoidable impacts were identified for the Project, the impact for the same threshold for each of the alternatives is identified by both significance level and whether the impact is greater than, similar to, or less than the impact of the Project, even if the level of significance does not change.

VI.C ANALYSIS OF PROJECT ALTERNATIVES

This section provides an analysis of the environmental impacts of each of the alternatives, including a comparison of the potential impacts of the alternative to the Project's less-than-significant and significant and unavoidable impacts, as well as the impacts that would result from implementation of the Project alternatives themselves. For each alternative, it is assumed that relevant Project requirements and/or mitigation measures identified for the Project would be implemented, if required to reduce the impacts for the alternative. Table VI-1 (Summary of Project Alternatives) presents a summary of the alternatives compared to the Project.

Table VI-1 Summary of Project Alternatives

Use	Project	Alternative 1 No Project ^a	Alternative 2 No Bridge Alt	Alternative 3 49ers at Candlestick	Alternative 4 Lesser Build	Alternative 5 No Park Agreement
Candlestick Point						
Residential (units)	7,850	0	7,850	1,210	5,495	6,500
Retail (gsf):						
Regional Retail	635,000	0	635,000	0	444,500	635,000
Neighborhood Retail	125,000	0	125,000	0	87,500	125,000
Retail Subtotal (gsf)	760,000	0	760,000	0	532,000	760,000
Community Services (gsf) ^a	50,000	0	50,000	0	50,000	50,000
Hotel (gsf) ^b	150,000	0	150,000	0	105,000	150,000
Office (gsf)	150,000	0	150,000	0	105,000	150,000
10,000-seat Arena (gsf)	75,000	0	75,000	0	75,000	75,000
Football Stadium (seats)	0	70,000	0	70,000	0	70,000
HPS Phase II						
Residential (units)	2,650	1,800 ^c	2,650	4,000	1,855	4,000
Neighborhood Retail (gsf)	125,000	570,000	125,000	125,000	87,500	125,000
Research & Development (gsf)	2,500,000	1,087,000	2,500,000	2,500,000	1,750,000	2,500,000
Artists' Studios (gsf):						
1:1 Studio Renovation and Replacement (gsf) ^d	225,000	225,000	225,000	225,000	225,000	225,000
New Artist Center (gsf)	30,000	0	30,000	30,000	30,000	30,000
Artist Studio Sub-Total (gsf)	255,000	225,000	255,000	255,000	255,000	255,000
Community Services (gsf) ^b	50,000	0	50,000	50,000	50,000	50,000
Football Stadium (seats)	69,000	0	69,000	0	0	0
Mixed-Use	0	580,000	0	0	0	0
Cultural and Education	0	330,600	0	0	0	0
Marina (slips)	300	0	300	300	0	300
Other Elements						
Yosemite Slough bridge	Bridge	No bridge	No bridge	BRT/Pedestrian bridge	No bridge	No bridge
Shoreline Improvements	Yes	No	Yes	Yes	Yes	Yes
State Parks Agreement/ total acres of State Parkland	Yes/96.7	No/120.2	Yes/96.7	Yes/117.2 ^e	Yes/96.7	No/120.2

SOURCE: Lennar Urban, PBS&J, 2009.

a. Community Services have not been precisely defined but could include uses such as library, educational facility, police station/substation, or fire station.

b. Hotel uses include 220 rooms at the proposed Regional Retail Center.

c. 1,800 housing units on the entire Shipyard including the Phase I site.

d. Existing artist studios would be replaced at a one-to-one ratio under all alternatives.

e. Limited exchange of 3.03 acres to construct BRT/pedestrian only Yosemite Slough bridge and Alice Griffith Public Housing

VI.C.1 Alternative 1: No Project

■ Summarized Description

Alternative 1 assumes that the build-out allowed under Proposition G, the voter-approved initiative that enabled the Project, would not be pursued. Development regulations and zoning would revert to the regulations that were in place prior to passage of Propositions D and F and establishment of the Candlestick Point Special Use District.¹³¹⁹ The Yosemite Slough bridge would not be constructed, and the circulation network would not be altered. No new uses would be constructed at Candlestick Point. Development at HPS Phase II would proceed under land use plans and controls adopted as part of the HPS Redevelopment Plan, described in detail below and shown in Table III.B-5. Table VI-2 (Comparison of Alternative 1 and Project Build-Out) provides a comparison of the uses proposed in the Project site under the Project and Alternative 1.

■ Detailed Description

Candlestick Point

Under Alternative 1, no new development would occur at Candlestick Point. The Alice Griffith Public Housing complex would not be replaced, and the Candlestick Park stadium would continue to function as under existing conditions. The CPSRA land agreement between the Candlestick Point and HPS Phase II sites would not be pursued. No new open space would be developed at this site and no improvements of the existing open space would occur.

HPS Phase II

Alternative 1 assumes that HPS Phase II would be developed with new uses consistent with the existing HPS Redevelopment Plan. Under these land use controls, this alternative would result in construction of up to 1,800 new housing units (on the entire Shipyard, including the Phase I site), approximately 570,000 gross square feet (gsf) of neighborhood commercial space, 1,087,000 gsf of R&D space, and one-to-one replacement of existing artist studios. This alternative would also include 580,000 gsf of mixed-use development and 330,600 gsf of cultural and educational space, uses not proposed under the Project. The HPS Redevelopment Plan also allows maritime industrial uses. The San Francisco 49ers football stadium would not be relocated to HPS Phase II, and the community services and artist center proposed under the Project would not be constructed at this site.

■ Basis for Impact Analysis

For the Project, the potential impacts are generally based on the parameters of the Project, which include the size, bulk, and type of development, the footprint of development, and the number of residents, employees, and visitors to the Project site. For Alternative 1, the impacts of the Project are compared to the impacts that would occur with new development at HPS Phase II consistent with the existing HPS

¹³¹⁹ Note that the Candlestick Point Special Use District was repealed by passage of Proposition G in June 2008.

Table VI-2 Comparison of Alternative 1 and Project Build-Out			
Use	Alternative 1	Project	Comparison to Project
Candlestick Point			
Residential (units)	0	7,850	-7,850
Retail (gsf):			
Regional Retail	0	635,000	-635,000
Neighborhood Retail	0	125,000	-125,000
Community Services	0	50,000	-50,000
Hotel (gsf)	0	150,000	-150,000
Office (gsf)	0	150,000	-150,000
10,000-seat Arena (gsf)	0	75,000	-75,000
Football Stadium (seats)	70,000	0	70,000
HPS Phase II			
Residential (units)	1,800 ^a	2,650	-850
Neighborhood Retail (gross square feet - gsf)	570,000	125,000	+445,000
Research & Development (gsf)	1,087,000	2,500,000	-1,413,000
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	0	30,000	-30,000
Community Services	0	50,000	-50,000
Football Stadium (seats)	0	69,000	-69,000
Mixed Use	580,000	0	580,000
Cultural and Education	330,600	0	330,600
Other Elements			
Yosemite Slough bridge	No	Yes	-
Marina	No	Yes	-
State Park Agreement/total acres of State Parkland	No/120.2	Yes/96.7	+23.5

SOURCE: Lennar Urban, PBS&J, 2009.

a. 1,800 housing units on the entire Shipyard including the Phase I site.

Redevelopment Plan and Hunters Point Shipyard Design for Development (Hunters Point Shipyard D4D).^{1320,1321} Furthermore, development under Alternative 1 at HPS Phase II would be subject to the

¹³²⁰ San Francisco Redevelopment Agency, *Redevelopment Plan for the Hunters Point Shipyard Redevelopment Project*, July 14, 1997. A copy of this document is available for public review at the San Francisco Redevelopment Agency, One South Van Ness Avenue, Fifth Floor as part of File No. ER06.05.07, or at the City Planning Department, 1650 Mission Street, Fourth Floor, San Francisco, CA, 94103 as part of File No. 2007.0946E.

¹³²¹ San Francisco Redevelopment Agency and San Francisco Planning Department, *Design for Development, Hunters Point Shipyard Redevelopment Project*, December 9, 2004. A copy of this document is available for public review at the San Francisco Redevelopment Agency, One South Van Ness Avenue, Fifth Floor as part of File No. ER06.05.07, or at the City Planning Department, 1650 Mission Street, Fourth Floor, San Francisco, CA, 94103 as part of File No. 2007.0946E.

mitigation measures adopted with certification of the *Final Environmental Impact Statement (EIS) for Disposal and Reuse of Hunters Point Shipyard* (Hunters Point Shipyard Final EIR).¹³²² Development at HPS Phase II under Alternative 1 would also be subject to the requirements of the City's *Municipal Code*. Under Alternative 1, no development would occur at Candlestick Point and the existing uses and site conditions would remain as they are currently. The Yosemite Slough bridge and San Francisco 49ers stadium would not be constructed under any future development scenarios considered for Alternative 1.

■ Potential Impacts

Land Use and Plans

Implementation of Alternative 1 would not require amendments to the HPS Redevelopment Plan or other planning and policy documents. Development would be subject to the mitigation measures adopted for the Hunters Point Shipyard Redevelopment Plan. Development under Alternative 1 would not conflict with applicable land use plans, policies, or regulations (of an agency with jurisdiction) adopted for the purpose of avoiding or mitigating an environmental effect and this impact would be less than significant, the same as for the Project.

Implementation of Alternative 1 would not result in a substantial adverse change in the existing land use character. Development under Alternative 1 could change the character of the HPS Phase II site from industrial uses to mixed-use, industrial, R&D, cultural/educational, and open space uses in accordance with the HPS Redevelopment Plan. However, the range of uses at HPS Phase II would not result in a substantial adverse change in the existing land use character of the Project site. Therefore, similar to the Project, this impact would be less than significant. However, without development at Candlestick Point, the deteriorated conditions throughout much of the site would remain and the beneficial effects of the Project on improving the character of the site would not occur. Therefore, while the overall changes resulting from development under Alternative 1 would not be considered adverse, the limited changes would not allow for the overall benefits of the Project.

Population, Housing, and Employment

Construction activities associated with implementation of Alternative 1 would induce direct job growth at HPS Phase II. The number of construction workers that would be employed during the construction period would be less than the Project because construction at Candlestick Point would not occur, and the Yosemite Slough bridge and the San Francisco 49ers stadium would not be constructed. It is anticipated that construction employees would commute from elsewhere in the region, rather than relocate to the Bayview Hunters Point neighborhood for a temporary construction assignment. Thus, construction under this Alternative would not generate a substantial, unplanned population increase. Similar to the Project, direct and indirect impacts associated with construction employment would be less than significant; however, impacts would be even less than under the Project.

¹³²² Navy, *Final Environmental Impact Statement for Disposal and Reuse of Hunters Point Shipyard*, November 20, 2000. A copy of this document is available for public review at the San Francisco Redevelopment Agency, One South Van Ness Avenue, Fifth Floor as part of File No. ER06.05.07, or at the City Planning Department, 1650 Mission Street, Fourth Floor, San Francisco, CA, 94103 as part of File No. 2007.0946E.

Implementation of Alternative 1 would induce direct and indirect population growth, but this growth would not be considered substantial. Development under this Alternative would not result in new housing at Candlestick Point, but would result in up to 1,800 units at the Shipyard (including Phase I). Employment growth generated by this Alternative would result in the demand for 6,773 new housing units, less than the total number of new housing units that would be provided. There would be over three times as many jobs provided as housing units (approximately 6,200 jobs compared to 1,800 housing units), which could result in indirect residential growth in the surrounding Bayview Hunters Point neighborhood. Although the residential units currently under construction at HPS Phase I would supplement this demand, the demand would still not be met. Therefore, the deficit in housing would result in a significant and unavoidable impact that does not occur with the Project.

Transportation and Circulation

Alternative 1 transportation effects would be those presented for the 2030 No Project conditions presented in Section III.D (Transportation and Circulation); development consistent with the 1997 HPS Redevelopment Plan and other growth would be projected to occur by 2030.

The Transportation Study analyzed Alternative 1 and conclusions from the Transportation Study are presented below.

Construction Impacts

Construction activities associated with Alternative 1 would be reduced compared to the Project, depending on the phasing of the development. Localized construction-related traffic impacts would therefore remain significant and unavoidable.

Intersection Conditions

Alternative 1, 2030 No Project conditions would have cumulative effects at 38 study intersections. With Alternative 1, 39 of the 60 study intersections would operate at LOS E or LOS F conditions during the weekday AM or PM, and Sunday PM peak hours, compared to three intersections under existing conditions, and 44 intersections with the Project. In addition, 2030 No Project Conditions would not include transportation improvements proposed as part of the Project. Section III.D discusses traffic effects at study intersections, and the feasibility of mitigation measures. In general, intersection conditions would be significant and unavoidable effects of the No Project Alternative.

Freeway Conditions

Alternative 1 freeway mainline sections effects, freeway ramp junction conditions, and ramp queuing effects would be similar to the Project conditions, with significant and unavoidable impacts.

Transit Impacts

Alternative 1 transit conditions assume implementation of the proposed SFMTA Transit Effectiveness Program (TEP), but no other Project-related transit improvements. Alternative 1 would have a less than significant impact on local and regional transit capacity. However, as with the Project, transit impacts would occur from traffic congestion delay. Overall, those transit delay conditions with 2030 No Project would affect the same lines as with the Project as presented in Section III.D, Impact TR-21 to

Impact TR-30. As concluded in Section III.D, the transit delay effects would remain significant and unavoidable. During the AM and PM peak hour, Alternative 1 would require 16 additional vehicles on the same routes as the Project, compared to up to 28 vehicles with the Project.

Parking Impacts

Alternative 1, assuming buildout of the 1997 HPS Redevelopment Plan, would result in a demand for about 9,150 spaces, compared with a maximum permitted supply of about 6,730 spaces; therefore, the maximum off-street parking supply would be about 2,420 spaces fewer than the estimated peak demand. The Project would have a demand for 21,233 spaces and maximum supply of 16,874 spaces, about 4,360 spaces fewer than estimated peak demand. As noted for the Project, it is possible that some drivers may seek available parking in adjacent Bayview residential areas to the west. The potential increase in parking demand in adjacent neighborhoods would likely spill over to streets with existing industrial uses in the vicinity, which could, in turn, increase demand for parking in nearby Bayview residential areas. Parking supply is not considered a permanent physical condition, and changes in the parking supply would not be a significant environmental impact under CEQA, but rather a social effect. The loss of parking may cause potential secondary effects, which would include cars circling and looking for a parking space in neighboring streets. The secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to some drivers, who are aware of constrained parking conditions in a given area, shifting to other modes. Hence, any secondary environmental impacts that may result from a shortfall in parking would be minor. Therefore, the parking shortfall would not result in significant parking impacts, and Alternative 1 impacts on parking would be less than significant.

This alternative would have less than significant effects on other transportation conditions (loading, air traffic, emergency access).

Aesthetics

The development program for HPS Phase II under the existing HPS Redevelopment Plan is substantially less than the development program for HPS Phase II under the Project. Therefore, construction-related impacts to scenic vistas, visual character or quality, and light and glare would be reduced compared to the Project, as the overall construction period and intensity at the HPS Phase II site would be reduced. In addition, all construction-related impacts at Candlestick Point would be avoided because construction would not occur on that portion of the site. Similar to the Project, all construction lighting at the HPS Phase II site would be required to comply with City of San Francisco lighting requirements. Therefore, similar to the Project, this impact would be less than significant; however, impacts would be more limited than under the Project.

Development at the HPS Phase II site under Alternative 1 would be subject to the Hunters Point Shipyard D4D, which establishes development guidelines for uses, bulk and mass, architecture, street design, signage, and parking. The Hunters Point Shipyard D4D limits all development at HPS Phase II to a maximum height of 65 feet, substantially less than the stadium and residential towers up to 370 feet proposed under the Project. There are no scenic resources on the HPS Phase II site that would be adversely affected by implementation of Alternative 1, similar to the Project. Thus, while the Project would not substantially obstruct views across the site or result in a substantial adverse effect on any scenic vistas, Alternative 1, since it would involve lower building heights and less development, would

reduce this impact further. Similar to the Project, Alternative 1 would not substantially degrade the visual character or quality of the site, because development would comply with the Hunters Point Shipyard D4, as noted. Compliance with City requirements and the Hunters Point Shipyard D4D would ensure that impacts to scenic resources, visual character or quality, and light and glare would be less than significant, and less than under the Project.

Shadows

Since development under Alternative 1 would only occur at the HPS Phase II site, no new shading would occur at Candlestick Point. New shadows from development at HPS Phase II would be substantially reduced compared to the Project, because building heights would be limited to 65 feet and the overall development program would be reduced. Development under Alternative 1 would be subject to *Planning Code* Section 295, which only applies to new structures over 40 feet in height that would add shade to San Francisco Recreation and Parks Department (SFRPD) property between one hour after sunrise to one hour before sunset at any time of year. The only existing SFRPD properties in the vicinity of the HPS Phase II site are the India Basin Shoreline Park and India Basin Open Space. These areas are to the north of the HPS Phase II site, and the nearest development under Alternative 1 would have maximum heights of 55 to 65 feet. New shade created by implementation of Alternative 1 would occur at limited times of the day and year, and would not substantially affect the use of open space facilities at HPS Phase II. Similar to the Project, this impact would be less than significant; however, impacts would be even less than under the Project.

Wind

Development at HPS Phase II under Alternative 1 would not include structures above 65 feet in height. These structures would not extend far above surrounding existing buildings. Wind hazards would not be created at Candlestick Point because development would not occur at this site under Alternative 1. The Hunters Point Shipyard D4D would ensure pedestrian safety in pedestrian-access areas at HPS Phase II. Similar to the Project, wind impacts would be less than significant; however, impacts would be even less than under the Project.

Air Quality

Alternative 1 does not involve any development at Candlestick Point, and considerably less development would occur at HPS Phase II. No new stadium would be constructed, and the State Parks agreement would not occur. As development would be considerably less than under the Project, the potential air quality impacts would be less than the Project.

Construction activities for Alternative 1 would generate dust; however, they would need to comply with the *San Francisco Health Code* and BAAQMD requirements. A mitigation measure was adopted with certification of the Hunters Point Shipyard Final EIR that would require the Applicant to ensure that construction contractors comply with the dust control strategies included in an approved site-specific dust control plan, which would reduce the impacts caused by construction dust to a less-than-significant level.

Construction activities could also create diesel particulate emissions (DPM); however, as the development of Alternative 1 would be considerably smaller than the Project, this impact would likely remain less than significant. Construction activities could also generate toxic air contaminants (TAC) containing PM₁₀; however, as there would be fewer construction activities for Alternative 1, this impact would be less than significant.

Though operational emissions associated with Alternative 1 would be much lower than with the Project, due to the scale of Alternative 1, the mass emissions would exceed the BAAQMD CEQA thresholds. Therefore this impact would remain significant and unavoidable, similar to the Project. Alternative 1 has reduced R&D square footage and potential TAC emissions from facilities in R&D areas would also be reduced. With the implementation of a mitigation measure adopted with certification of the Hunters Point Shipyard Final EIR requiring evaluation of and permitting of all stationary sources of TACs, this impact would be less than significant, and less than the Project.

Additionally, as the scale of Alternative 1 would be smaller than the Project, the impacts from Alternative 1 traffic (e.g., carbon monoxide and PM_{2.5}) would be less than significant and less than the Project.

According to the current BAAQMD CEQA Guidelines, odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that the BAAQMD regards as having the potential to generate considerable odors include: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, oil refineries and chemical plants. Alternative 1 would be a large mixed-use development containing residential, office, retail, R&D, recreational, and entertainment uses. Although there may be some potential for small-scale, localized odor issues to emerge around proposed sources such as solid waste collection, food preparation, etc., substantial odor sources and consequent effects on on-site and off-site sensitive receptors would be unlikely and would be resolved by interventions after receipt of any complaints. This would be a less-than-significant impact. No mitigation is required.

The Project is consistent with regional air quality plans; therefore, as Alternative 1 would be smaller than the Project, it would remain consistent with these plans. Alternative 1 promotes the use of alternative transportation modes, such as transit, biking and walking. In addition, it puts housing in close proximity with jobs and retail establishments, reducing the length of trips and further reducing reliance on single-occupancy vehicles. Therefore, Alternative 1 conforms to the regional air quality plan and there would be a less-than-significant impact. No mitigation is required.

Noise

Under Alternative 1 no development would occur at Candlestick Point, and considerably less development would occur at HPS Phase II. No new stadium would be constructed, and the State Parks agreement would not occur. As development would be considerably less than under the Project, the potential noise impacts would be less than the Project.

Construction activities for Alternative 1 would expose sensitive receptors to increased noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to

comply with the San Francisco Noise Ordinance, which generally prohibits construction between 8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. Compliance with Sections 2907 and 2908 of the *Municipal Code*, which require implementation of construction Best Management Practices to reduce construction noise and limit the hours of construction, would reduce any potentially significant impacts to less-than-significant levels, the same as for the Project.

Construction activities for Alternative 1 would result in a temporary or periodic increase in ambient noise that would be noticeable and likely cause for human annoyance. Construction activities would occur within 25 feet of existing and future residential uses. Pile driving activities could result in substantial noise levels of up to 107 dBA at new residential uses on the site or at adjacent existing residences. Construction-related temporary increases in ambient noise levels would be considered significant and unavoidable, the same as for the Project.

Construction activities could also create excessive groundborne vibration levels at proposed on-site residential uses, should the dwelling units be occupied before construction activity on adjacent parcels is complete. Compliance with Sections 2907 and 2908 of the *Municipal Code* would require implementation of construction Best Management Practices and limit the hours of construction. However, it is anticipated that construction activities would occur within 50 feet of vibration-sensitive receptors and, therefore, vibration levels would exceed the threshold for human annoyance (approximately 80 VdB). Compliance with Sections 2907 and 2908 of the *Municipal Code* would reduce vibration impacts under Alternative 1, but not to a less-than-significant level; therefore, this impact would remain significant and unavoidable, but less than the Project because fewer construction activities would be required.

Daily operation of Alternative 1, such as mechanical equipment and delivery of goods, would not expose noise-sensitive land uses on or off site to noise levels that exceed the standards established by the City of San Francisco. This impact would be less than significant, similar to the Project. Operation activities associated with Alternative 1, such as truck deliveries, would not generate or expose persons on or off site to excessive groundborne vibration. This impact would also be less than significant, similar to the Project.

Operation of Alternative 1 would generate increased local traffic volumes that would cause a permanent increase in ambient noise levels in existing residential areas along the major Project site access routes. Noise level increases associated with Alternative 1 would be less than the Project due to less development, and significant impacts along Carroll Avenue, Gilman Avenue, and Jamestown Avenue would be eliminated, as no development would occur at Candlestick Point. This impact would be less than significant, and less than the Project.

Because Alternative 1 would not include a football stadium, the significant and unavoidable noise impacts identified for the Project from football games and concerts would not occur with implementation of Alternative 1.

Cultural Resources

Construction activities associated with Alternative 1 could result in a substantial adverse change in the significance of paleontological resources. Compared to the Project, these potential impacts would be limited to the HPS Phase II site only. Construction activities at HPS Phase II under the Project would be required to implement a mitigation measure (MM CP-3a) that would reduce potential impacts to paleontological resources through a *Paleontological Resources Monitoring and Mitigation Program*. Construction activities under Alternative 1 would be subject to the mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR. However, as no mitigation to reduce impacts to paleontological resources was adopted with certification of the Hunters Point Shipyard Final EIR, implementation of Alternative 1 could result in a substantial adverse change in the significance of paleontological resources, which would be a greater than the less-than-significant impact identified for the Project.

Construction activities associated with Alternative 1 could result in a substantial adverse change in the significance of archaeological resources. Unlike the Project, these potential impacts would be limited to the HPS Phase II site only. The HPS Phase II site is likely to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods. A mitigation measure was adopted with certification of the Hunters Point Shipyard Final EIR that would reduce potential impacts to archaeological resources through implementation of a treatment and monitoring program. Implementation of this measure would reduce the effects of Alternative 1 on archaeological resources to a less-than-significant level, which would be similar to the Project.

Implementation of Alternative 1 would retain Drydocks 2 and 3 and rehabilitate Buildings 140, 204, 205, and 207 at the HPS Phase II site. A mitigation measure was adopted with certification of the Hunters Point Shipyard Final EIR that would require that these resources be retained and any alterations that would affect the historic resources be implemented according to the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. However, development under Alternative 1 would result in the demolition of Buildings 211, 231, and 253, which have been identified in this EIR as historic resources in the potential expansion of the Hunters Point Commercial Dry Dock and Naval Shipyard Historic District to include Drydock 4 and contributing buildings. This would result in a significant impact, since the proposed actions would materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historic Resources (CRHR). A mitigation measure to reduce impacts to these resources was not adopted with certification of the Hunters Point Shipyard Final EIR. Therefore, implementation of Alternative 1 would, like the Project, result in a substantial unavoidable adverse change in the significance of historic resources.

Hazards and Hazardous Materials

The potential hazardous materials impacts for development under Alternative 1 would only occur as a result of construction activities at the HPS Phase II site. Development under the existing HPS Redevelopment Plan would have a footprint comparable to the Project (for the HPS Phase II site) and would require similar construction activities. For development under Alternative 1, potential hazardous material impacts would be addressed through mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR. The mitigation measures address the following hazardous materials

issue at the site: reuse prior to complete remediation; construction prior to remediation; reuse after complete remediation; construction after remediation; discovery of previously unknown contamination; ecological exposure; contamination of aquifers; and handling of naturally occurring asbestos. Similar to the Project, development under Alternative 1 would also be subject to the federal, state, and local requirements regulating the investigation and cleanup of hazardous materials contamination identified in Section III.K (Hazards and Hazardous Materials) of this EIR. Implementation of mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR, along with compliance with applicable regulations, would reduce potential hazardous materials impacts to less-than-significant levels.

Similar to the Project, after development under Alternative 1, land uses at the HPS Phase II site would involve the routine use, storage, transportation, and disposal of hazardous materials, but it 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. Through compliance with the identified requirements (including adherence to applicable federal, state, and local regulations related to the use, storage and transport of such materials), no significant hazard to the public or the environment is anticipated to occur for development under Alternative 1. Similar to the Project, this impact would be less than significant.

Geology and Soils

Potential soil erosion impacts under development of Alternative 1 could occur as a result of construction activities at the HPS Phase II site only. Development under the existing HPS Redevelopment Plan would have a footprint comparable to the Project (for the HPS Phase II site) and would require similar construction activities. Similar to the Project, construction activities, such as removal of paved areas, grading, and excavation, could remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, could be subject to soil loss and erosion by wind and stormwater runoff. The Hunters Point Shipyard Final EIR did not include mitigation measures to reduce soil erosion impacts. However, construction activities would be required to implement Best Management Practices (BMPs) through the City's permitting process. The BMPs would stabilize soils in construction areas and reduce soil erosion impacts.

The potential for exposure to adverse affects caused by seismic groundshaking and seismically induced ground failure such as liquefaction, lateral spreading, landslides and settlement exists at the Project site for development under Alternative 1. Development under Alternative 1 would incorporate appropriate engineering practices to ensure seismic stability of all structures and improvements as required by state and local building code requirements. The potential for adverse affects caused by landslides, settlement, expansive and corrosive soils also exists. Compliance with the requirements of the *Building Code* would reduce all impacts to less than significant, similar to the Project.

Hydrology and Water Quality

The footprint and extent of development for Alternative 1 would be reduced compared to the Project, because no State Parks agreement would occur, the Yosemite Slough Bridge would not be constructed, and no new uses would be constructed at Candlestick Point. Development at HPS Phase II would be limited to land uses proposed and approved under the HPS Redevelopment Plan. As such, impacts from construction and operation of the Alternative 1 would be less than the Project.

With adherence to applicable regulatory requirements, construction activities associated with Alternative 1 would not violate water quality standards, cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements due to sediment-laden runoff, contaminated groundwater from dewatering activities, or the incidental or accidental release of construction materials. For development under Alternative 1, potential impacts associated with violation of water quality standards would be addressed through mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR. The mitigation measures address stormwater Best Management Practices (BMPs). Similar to the Project, development under Alternative 1 would also be subject to the federal, state, and local requirements regulating discharges to receiving water bodies identified in Section III.M (Hydrology and Water Quality) of this EIR. Implementation of mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR, along with compliance with applicable regulations, would reduce potential impacts to less-than-significant levels.

Construction activities associated with Alternative 1 would include excavation for building foundations and underground utilities, which could require short-term and/or long-term dewatering of the affected areas. As no extensive excavation is proposed for Alternative 1, the installation of underground building elements and utilities would not substantially alter groundwater levels, similar to the Project. As such, Alternative 1 would not substantially deplete groundwater supplies and would result in a less-than-significant impact, similar to the Project. As the total amount of open space under Alternative 1 is reduced compared to the Project, the amount of permeable surface within the Project area would also be less. Although the State Parks agreement would not occur, open space accounted for under the Project would remain. Therefore, Alternative 1 would not 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. This impact would be less than significant, similar to the Project.

No streams or rivers are currently located within the Alternative 1 site and thus no streams or rivers would be altered by construction activities. Under existing conditions, stormwater typically drains to storm drains (which include both combined and separate systems) or directly to the Bay via surface runoff (generally only along portions of the shoreline). During construction of Alternative 1, the existing drainage patterns within the area would generally be preserved. Construction activities associated with Alternative 1 would not substantially alter the existing drainage pattern of the site in ways that would result in substantial erosion, siltation, or flooding on or off site. Impacts would be less than significant, similar to the Project.

Construction activities associated Alternative 1, including site clearance, grading, and excavation, could create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff. The extent of the stormwater drainage system replacement proposed under Alternative 1 would not be extensive as under the Project; therefore, Alternative 1 would be expected to result in less extensive site disturbance. Potential impacts associated with violation of water quality standards would be addressed through mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR, requiring preparation of a SWPPP and implementation of stormwater BMPs, and would reduce this impact to a less-than-significant level, similar to the Project.

Operation of Alternative 1 could contribute to violations of water quality standards or waste discharge requirements or otherwise degrade water quality. New development would have the potential to degrade the quality of surface receiving waters through the introduction of new impervious surfaces that contribute to stormwater runoff volumes and from the mobilization of pollutants in stormwater that would be generated by the proposed land uses. The potential for degradation of water quality due to this development would be reduced to a less-than-significant level with the incorporation of mitigation from the Hunters Point Shipyard Final EIR, requiring preparation of a Stormwater and Erosion Control Plan. As the extent of impervious surfaces would be reduced compared to the Project, impacts would be less than the Project.

Alternative 1 would reduce wastewater flows into the Combined Sewer System compared to the Project. Stormwater and wastewater from the Candlestick Point site would continue to discharge into the Combined Sewer System, as no separated system would be constructed at Candlestick Point. Therefore, overall flows from the site during wet weather could increase, because it is unknown whether the reduction in stormwater from a separate system at HPS Phase II under Alternative 1 would completely offset the stormwater from Candlestick Point that would continue to enter the Combined Sewer System. If the volume of stormwater from Candlestick Point plus the additional wastewater generated by development at Hunters Point Shipyard exceeds the stormwater diverted from the HPS Phase II site after development (compared to existing conditions), this potential increase in wet-weather flows would increase the potential for discharge from the combined sewage outfalls, which could increase potential impacts to receiving waters, a greater impact than the less-than-significant impact identified for the Project. To reduce adverse affects to water quality in the Bay from the discharge of stormwater runoff and wastewater to the combined system, Alternative 1 would include implementation of mitigation measures from the Hunters Point Shipyard EIR. However, it is uncertain whether this mitigation would offset the existing stormwater flows from Candlestick Point such that there would be no net increase in wet-weather flows. Thus, potential impacts related to violations of water quality standards or waste discharge requirements could be significant with Alternative 1, and greater than the less-than-significant impact identified for the Project.

As discussed above, implementation of Alternative 1 would not substantially deplete groundwater supplies. Development under Alternative 1 would also not utilize groundwater as a source of water supply. Thus, there would be no net deficit in aquifer volume or a lowering of the local groundwater table level and this impact would be less than significant, similar to the Project.

Operation of Alternative 1 would not alter the course of a stream or river, as none exists at or near the site currently. Additionally, operation of Alternative 1 would not alter the existing drainage pattern of the site in ways that would result in substantial erosion, siltation, or flooding on or off site. Implementation of the Alternative 1 would not contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff as the existing stormwater system would accommodate runoff flows and treat runoff prior to discharge to the Bay. Implementation of mitigation measures from the Hunters Point Shipyard EIR, requiring design of stormwater improvements to control CSO volumes, would reduce all impacts to a less-than-significant level.

The Project site is located within a special flood hazard zone (Zone A), as mapped on the Preliminary Flood Insurance Rate Map (FIRM). Implementation of Alternative 1 would include the placement of housing and other structures within the proposed 100-year flood zone that could impede or redirect flows. Because the Hunters Point Shipyard EIR did not include mitigation addressing this issue, the flood-related impacts of Alternative 1 would be significant, especially considering projected future sea level rise. In comparison to the Project, which includes mitigation to reduce this impact to a less-than-significant level, the impact associated with Alternative 1 would be more severe and potentially significant.

The Project site is adjacent to, but not within, dam failure inundation zones. Thus, implementation of the Alternative 1 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. Furthermore, based on historical records and the location of development, the placement of residential development would not expose people or structures to inundation by seiche, tsunami, or mudflow. These impacts would be less than significant, similar to the Project.

Biological Resources

Compared to the Project, implementation of Alternative 1 would result in fewer impacts to biological resources because no development would occur at Candlestick Point. Furthermore, impacts related to construction of the Yosemite Slough bridge, shoreline improvements, and marina would be avoided because no such improvements are included in the HPS Redevelopment Plan. Similar to the Project, development under Alternative 1 could result in increased strike hazards to the new buildings along the shoreline of HPS Phase II. However, the development intensity would be substantially less and would not include any structures greater than 65 feet in height. Therefore, adverse operational effects to migratory birds would be less than with the Project. Development under Alternative 1 would not conflict with any local policies or ordinances protecting biological resources, similar to the Project. Impacts would be less than significant.

Public Services

Police Protection

Construction activities associated with implementation of Alternative 1 could result in obstruction of emergency access. The Project includes mitigation that would require the preparation of a Construction Traffic Management Plan (CTMP) to reduce this impact. However, no mitigation was included in the Hunters Point Shipyard Final EIR to ensure maintenance of adequate emergency access at all times. The City permitting process would likely address construction staging and emergency site access during the construction period, but this is not assured. Without mitigation or a process to ensure emergency access at all times on the site, construction activities under Alternative 1 also could provide increased opportunity for criminal activity and increase demand for police services. This could be a potentially significant impact that would not occur under the Project.

Implementation of Alternative 1 would result in a smaller increase resident and employee population at the Project site because of the smaller amount of development compared to the Project. Alternative 1 would require an increase in police services (15 new officers) to provide a comparable level of service to

existing conditions.¹³²³ The San Francisco Police Department (SFPD) evaluates the need for additional officers by sector, and not station or district needs. While it is unlikely that 15 new officers would be needed, some redistribution of the police presence in the southeastern portion of the City could be warranted by development of Alternative 1. This impact would be less than significant, the same as for the Project, although somewhat less because of the smaller amount of development.

Under this Alternative, land would not be dedicated for community-serving uses. If the SFPD determines that the reconfiguration of the Bayview Station would not be sufficient to accommodate additional officers, a new station or facility would have to be constructed at an off-site location. Construction of a new SFPD facility (counter, storefront, or other configuration) within the community services uses on the Project site and/or the reconfiguration or expansion of the existing Bayview Station would be funded by either the SFPD or the Project Applicant.

The cost for additional police officers and on-going operational costs would be funded through property taxes collected from future owners of on-site properties. Development of this Alternative would not require new or physically altered police facilities beyond the scope of the Project to maintain acceptable police services. Therefore, for development under Alternative 1, this impact is considered less than significant, the same as for the Project.

Fire and Emergency Medical Services

No mitigation measure was included in the Hunters Point Shipyard Final EIR to ensure maintenance of continued emergency access during construction activities. Without mitigation to ensure adequacy of emergency site access during construction, there could be a new impact to fire protection and emergency medical services under Alternative 1 compared to the Project. While the City permitting process would likely address construction staging and emergency site access during the construction period, this is not assured, and, without mitigation or a process that would ensure emergency site access, this could result in a potentially significant impact that would not occur under the Project. Alternative 1 would include additional residential units and substantially increase employment-generating uses compared to existing conditions, resulting in an employment population of 6,200. The increase in the residential and daytime employment population (for a total population of 10,394, including a residential population of 4,194 (combined Phase I and Phase II) plus 6,200 employees), combined with an increase in the intensity of physical development on the Project site, would result in new demand for fire protection and emergency medical services, potentially resulting in the need to construct new facilities. This demand would be less than with the Project because of the lower amount of development under Alternative 1.

If needed, additional firefighters and ongoing fire protection operations would be funded through property taxes collected from future owners of on-site properties, allowing the San Francisco Fire Department (SFFD) to maintain acceptable response times for fire protection and emergency medical services. Under this alternative, land would not be dedicated for community-serving uses. Similar to the Project, prior to construction of new land uses at HPS Phase II, review of access strategies would be

¹³²³ The number of required police officers needed to meet comparable levels of service to existing conditions was determined using the total daytime population of Alternative 1 (residential population of 17,126 plus 7,578 employees) and the ratio of officers to population presented in Table II.O-2 (1:665 officer to population).

required pursuant to the SFFD's plan review requirements.¹³²⁴ However, because the stadium would not be constructed at HPS Phase II, consideration of game-day access would not be necessary. Compliance with all applicable provisions of the *San Francisco Fire Code*, in addition to the considerations discussed above, would ensure that this impact is less than significant for development under Alternative 1, the same as for the Project, although somewhat less because of the smaller amount of development.

Schools

Compared to the Project, the number of school-age children who would live within the Project site following full build-out of Alternative 1 would be substantially reduced. While schools in the Project vicinity have approximately 49 percent capacity remaining in the 2008-2009 school year, it is projected that a 12 percent overcapacity of San Francisco Unified School District (SFUSD) as a result of citywide population growth by 2030 would occur. Similar to the Project, the payment of school impact fees pursuant to SB50 would be considered full mitigation for potential school impacts. This impact is considered less than significant for development under Alternative 1, the same as for the Project.

Libraries

Construction of Alternative 1 would not result in impacts to the San Francisco Public Library (SFPL) system. Library branches are not currently located on the Project site. All library services would be available to the community throughout the duration of construction. As such, no impact to library services during construction of Alternative 1 would occur.

Residential and nonresidential development associated with Alternative 1 would increase demand for local library services in the Bayview neighborhood. Although this Alternative would result in a direct and indirect population increase within the Bayview neighborhood, library branches serving the Project site, including the Portola, Visitacion Valley, and the Bayview branches, would continue to meet the demands of the community. Unlike the Project, this alternative would not include space dedicated to library services to supplement the Bayview branch library. The SFPL branches would be required to accommodate increased demand from development under this Alternative. It is not anticipated that new or physically altered library facilities would be required in order to maintain acceptable service ratios; therefore, this impact is considered less than significant for development under Alternative 1. On balance, the impact would be substantially similar to the impact under the Project.

Recreation

Implementation of Alternative 1 would not include a State Parks land agreement or development of new parks at Candlestick Point. Compared to the Project, the CPSRA would remain 120.2 acres, compared to the 23.5-acre reduction under the Project. Neighborhood parks would be constructed at HPS Phase II consistent with the HPS Redevelopment Plan and Hunters Point Shipyard D4D. However, the amount of open space at HPS Phase II would be less than with the Project. Construction impacts associated with development of new parks and recreational facilities under the Project would be less than significant. Construction impacts for the development of parks under Alternative 1 would be similar to the

¹³²⁴ San Francisco Fire Department, Plan Check website. http://www.sfgov.org/site/sffd_page.asp?id=57395 (accessed August 2009).

construction impacts for the Project, and would essentially be the same impacts as discussed in Chapter III (Environmental Setting, Impacts, and Mitigation Measures) of this EIR.

At build-out of Alternative 1, the projected population within the Project site would consist of 4,194 new residents and approximately 6,200 new jobs. Compared to the Project, the CPSRA would remain 120.2 acres, compared to the 23.5-acre reduction under the Project. The total area of neighborhood parks would be reduced compared to the Project because parks would not be built at Candlestick Point. The amount of open space at HPS Phase II would also be less than the Project. The increase in population and employment could result in an increase in the use of existing parks, recreational facilities, and open space. Without a State Parks land agreement, there would be no established funding mechanism for future maintenance of the State Parks on site from the Project Applicant. Increased use of the CPSRA as a result of population and employment growth associated with Alternative 1 could result in deterioration of CPSRA facilities. This could result in a substantial adverse impact on recreational facilities at the Project site that would not occur under the Project. Without an established funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. Therefore, development of Alternative 1 could result in a new adverse impact on recreational facilities not identified for the Project.

In addition, Alternative 1 would not provide the substantial CPSRA improvements that would occur under the Project. These improvements, which are described at length in Section III.P (Recreation), include revegetation and landscaping, shoreline restoration and stabilization, infrastructure improvements (such as trails, pathways, and visitor facilities), the provision of habitat and opportunities for environmental education, “Eco-Gardens,” and salt-marsh restoration. These improvements would turn portions of the Park that are used for Candlestick Park stadium parking or are undeveloped and underutilized into vibrant parts of the CPSRA and of the Project’s overall network of parks. Currently improved parts of the CPSRA, such as The Heart of the Park, The Point, The Neck, and The Last Port, would also be improved. Overall, the reconfiguration and improvements would enhance park aesthetics and landscape ecology, provide connections throughout the CPSRA and the other Project parks, and provide direct access to the Bay and the Bay shoreline for walking, swimming, fishing, kayaking, and windsurfing. None of these improvements would occur under Alternative 1.

Alternative 1 would not alter the windsurfing launch site at CPSRA. Since the height of structures would be limited to 65 feet under Alternative 1, large volumes of wind are not likely to be intercepted by development under Alternative 1. No impact on windsurfing would occur under Alternative 1.

Utilities

Water Supply

Construction activities associated with this alternative, including installation of new water service utility infrastructure, would be required to implement mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR, along with compliance with applicable federal, state, and local regulations. The water required for construction activities is assumed to be supplied by water trucks and/or existing sources. No construction-related impacts associated with the consumption of water would occur with this alternative.

This alternative would generate less demand for water compared to the Project. Utilizing a demand methodology similar to the Project, Alternative 1 would require approximately 0.58 million gallons per day (mgd) (including Phase I), less than the 1.37 mgd of net demand required by the Project.¹³²⁵ As stated in the Water Supply Assessment prepared for the Project, the San Francisco Public Utilities Commission (SFPUC) indicates that adequate supply would be available to satisfy all retail demand, including Project-related demand, under normal conditions (refer to Appendix Q1 [Water Supply Assessment]). Therefore, there would be sufficient water supplies to accommodate the water demand of Alternative 1, as it includes less development than under the Project. In addition, a mitigation measure adopted with certification of the Hunters Point Shipyard Final EIR would require improvements to the drinking water supply system to ensure safe potable water and adequate water pressure. Similar to the Project, implementation of Alternative 1 would not require or result in the construction of new or expanded water treatment facilities, and this impact would be less than significant.

The Hunters Point Shipyard Final EIR determined that the existing water system has insufficient pressure for adequate fire protection in certain portions of the Project site. Alternative 1 would be required to implement a mitigation measure adopted with certification of the Hunters Point Shipyard Final EIR that requires construction of a new auxiliary water supply system to augment the water supply for firefighting purposes. The AWSS would ensure the provision of adequate water for on-site firefighting purposes, and Alternative 1 would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements for water to fight fires. The impact would be less than significant, the same as for the Project.

Wastewater

Construction activities associated with this alternative, including installation of new wastewater treatment or collection facilities or expansion of existing facilities, would be required to implement mitigation measures adopted with certification of the Hunters Point Shipyard Final EIR, along with compliance with applicable federal, State, and local regulations.

Development under Alternative 1 would only occur at the HPS Phase II site. Wastewater from the HPS Phase II site flows into the Hunters Point tunnel sewer. The analysis in Section III.Q (Utilities) determined that wastewater generated by development under the Project would be accommodated within the remaining capacity of the Hunters Point tunnel sewer. Because water demand would be less for Alternative 1 than the Project, wastewater generation would also be less. Therefore, the sewer would have sufficient capacity to accommodate development under Alternative 1, as analyzed for the Project, and the impact would be less than significant. In addition, a mitigation measure adopted with certification of the Hunters Point Shipyard Final EIR would require that a sanitary collection system would be constructed to meet the collection needs of the development.

This alternative would not exceed wastewater treatment requirements of the applicable RWQCB, compliance with which is otherwise required by law. Compliance with any applicable permit requirements, as monitored and enforced by the SFPUC, would ensure that Alternative 1 would not

¹³²⁵ Water demand for this alternative was estimated by prorating water demand for the Project (presented in Table III.Q-4) based on build-out of Alternative 1.

exceed the applicable wastewater treatment requirements of the RWQCB. This impact would be less than significant, the same as for the Project.

Solid Waste

As shown in Table III.Q-7 (Estimated Demolition Debris), it is estimated that under the Project at HPS Phase II, approximately 477,823 tons of construction waste would be produced during building demolition and approximately 69,281 tons of construction waste would be produced during road demolition. A total of approximately 547,104 tons of construction waste would be produced during building and road demolition over the build-out period for HPS under Alternative 1, compared to 971,785 tons of construction waste under the Project. Construction waste would be substantially reduced because no demolition or construction would occur at Candlestick Point. Some construction and demolition debris would be reused on site, while other materials would be transported off site for separation. Materials that cannot be reused or recycled would be transported to the landfills in the area. Alternative 1 would be subject to the City's Green Building Ordinance, which requires the diversion of at least 75 percent of construction waste. Therefore, the impact of the construction waste generated by the Alternative 1 on the capacity of the Altamont Landfill would be less than significant, and less than the Project because the total amount of construction waste would be less.

Construction activities at HPS Phase II, including demolition and excavation, could require disposal of hazardous wastes such as asbestos, lead-based paint, and contaminated soils. These would require disposal by a licensed transporter to a Treatment, Storage, and Disposal facility (TSD) authorized to treat such hazardous waste. Currently, TSDs in California and adjoining states have sufficient capacity to accommodate all hazardous wastes. Because TSDs in California and adjoining states have sufficient capacity to treat hazardous wastes, construction of HPS Phase II would not generate hazardous wastes (construction debris or contaminated soil) that would exceed the capacity of TSDs authorized to treat such waste. This would be a less-than-significant impact, and less than the Project, as the total amount of hazardous waste would be less.

At full build-out, Alternative 1 would generate approximately 6,525 tons of municipal solid waste annually when all uses are fully operational and assuming no waste-reduction measures. This would represent approximately 1.1 percent of the total waste generated in San Francisco as of 2008 (approximately 594,732 tons).¹³²⁶ All residents and businesses of the Project would be required to comply with the City's mandatory recycling and composting ordinance. Municipal solid waste remaining after sorting is currently transported to the Altamont Landfill in Livermore. The Altamont Landfill is scheduled to close in January 2029, concurrent with full build-out of the Project, and the City's existing contract with Altamont Landfill expires in 2014, likely before build-out of the Alternative. Three landfills have been identified as candidates to accommodate the City's solid waste needs after the contract with Altamont Landfill expires. The process of selection and negotiation of a new contract is anticipated to be completed by early 2010. The impact of operational solid waste generated by Alternative 1 on the capacity of the Altamont Landfill (and/or the landfill with which the City contracts at the close of the

¹³²⁶ Solid waste generation for this alternative was estimated using the solid waste generation rates presented in Table III.Q-8.

current selection process) would be less than significant. Because the total amount of solid waste that would be generated by Alternative 1 would be less than under the Project, the impact would also be less.

Specific businesses or activities that could operate under Alternative 1 are not known at this time. However, nearly all uses would involve the routine use of hazardous materials at varying levels that would require disposal. It is assumed that a variety of hazardous materials could be used in small quantities, ranging from R&D in which a wide variety of hazardous materials would be used, to facilities such as the proposed stadium, where fuels and maintenance products would comprise the majority of hazardous materials, to smaller-scale users, such as artists' studios, and the marina, where small quantities of fuel could be utilized. In addition, the HPS Redevelopment Plan allows maritime industrial uses, which could store and use greater quantities of hazardous materials. Since there is no established ceiling on capacities of TSDs in California and adjoining states, it is assumed there would be sufficient capacity to accommodate all anticipated hazardous wastes from such uses. New residents and businesses would be expected to comply with all hazardous waste regulations, including the disposal of household hazardous waste. Hazardous waste that would be generated by the Project could be accommodated by existing facilities, and this impact would be less than significant. Because the total amount of hazardous waste would be less than under the Project, the impact would also be less with Alternative 1.

As with all projects, this alternative would comply with all applicable federal, state, and local statutes and regulations related to solid waste. Compliance with the identified project requirement would ensure that this impact would be less than significant, the same as for the Project.

Electricity, Natural Gas, and Telecommunications

The HPS Phase II site is currently served by PG&E for electricity and natural gas and by Pacific Bell for telecommunications. Development of Hunters Point Shipyard would be subject to any mitigation measures included in the Hunters Point Shipyard Final EIR, which would reduce construction impacts from any needed infrastructure improvements to less than significant. Any subdivision process would include submittal of detailed infrastructure plans to the Department of Public Works identifying how infrastructure needs of new development would be met. Implementation of these plans would be a condition of subdivision approval. The subdivision process would ensure that adequate infrastructure is provided to accommodate the demands of development such that the capacity of the service providers to provide such utilities would not be exceeded. Therefore, the impact would be less than significant for Alternative 1, similar to the Project.

Energy

Construction activities associated with implementation of Alternative 1 would require energy sources including electricity, diesel, and gasoline. Construction activities would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not generate a prolonged demand for energy and would be subject to requirements to minimize wasteful fuel consumption. Alternative 1 would include a much smaller development program compared to the Project because development would occur at the HPS Phase II site only, and, therefore, the energy use during the construction period of Alternative 1 would be substantially less than the Project. Therefore, construction-related energy use associated with development under Alternative 1 would be less than significant, even less than the Project.

Implementation of Alternative 1 would result in baseline electricity and natural gas consumption substantially less than the Project, primarily because the development program would be reduced. Similar to the Project, development of Alternative 1 would be subject to the requirements of Title 24 and would be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. However, development under Alternative 1 would not be required to include additional efficiency measures as proposed under the Project. Nonetheless, energy consumption at the HPS Phase II site under development of Alternative 1 would be in compliance with existing energy-efficiency standards, which would ensure that energy use is efficient and not wasteful. Therefore, energy impacts would be less than significant under development of Alternative 1, but greater than under the Project.

Alternative 1 would increase trips to and from the HPS Phase II site, thereby increasing the use of petroleum fuels. However, new trips would be substantially less than the Project because the overall development program would be substantially reduced. For development of Alternative 1, mitigation measures adopted with certification of the Final EIR for the Hunters Point Shipyard Final EIR would require implementation of a TDM program, similar to the Project. The TDM measures would be implemented to reduce automobile and light truck vehicle miles traveled and encourage residents, employees, and visitors to use alternative modes of travel, such as transit, walking, and bicycling. In addition, the TDM plan would include measures to reduce the demand for travel during peak times. With implementation of TDM measures, Alternative 1 would not be wasteful with respect to petroleum fuel consumption, and impacts would be less than significant.

Greenhouse Gas Emissions

Similar to the Project, construction activities associated with implementation of Alternative 1 would emit GHGs associated with diesel and gasoline consumption. Construction activities would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not be a prolonged source of GHG emissions. Alternative 1 would include a much smaller development program compared to the Project because development would occur at the HPS Phase II site only, and, therefore, the GHG emissions during the construction period of Alternative 1 would be substantially less than the Project. Therefore, construction-related GHG emissions and climate change associated with development under Alternative 1 would be less than significant, even less than the Project.

Implementation of Alternative 1 would result in operational GHG emissions substantially less than the Project, primarily because the development program would be reduced. Similar to the Project, development of Alternative 1 would be subject to the requirements of Title 24 and would be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Alternative 1 would increase trips to and from the HPS Phase II site, thereby increasing the use of petroleum fuels. However, new trips would be substantially less than the Project because the overall development program would be substantially reduced. For development of Alternative 1, mitigation measures adopted with certification of the Final EIR for the Hunters Point Shipyard would require implementation of a TDM program, similar to the Project. The TDM measures would be implemented to reduce automobile and light truck vehicle miles travelled and encourage residents, employees, and visitors to use alternative modes of travel, such as transit, walking, and bicycling. In addition, the TDM plan would include measures to reduce the demand for travel during peak times. In addition, similar to the Project,

Alternative 1 would also be subject to the vehicle efficiency regulations and renewable portfolio standards that would reduce the GHG emissions associated with vehicles and electricity use. However, development under Alternative 1 would not include a requirement to include additional efficiency measures as proposed under the Project. In addition the development would not result in the same reductions in trips as are associated with a larger and denser development with more local jobs. Nonetheless, GHG emissions at the HPS Phase II site under development of Alternative 1 would be in compliance with existing energy efficiency standards, vehicle efficiency measures, and renewable energy portfolio standards which would ensure that there are some reductions in GHG emissions. Therefore, GHG emissions and climate change impacts would be less than significant under development of Alternative 1.

BAAQMD is considering the future adoption of quantitative CEQA thresholds of significance for operational-related GHG emission impacts. At present, two options relevant to the Project are under consideration for operational GHG emission thresholds; the lead agency can choose either option. Option 1 is based on a project's total operational GHG emissions of 1,100 metric tonnes CO₂e per year. The Project's total operational emissions would exceed this level, which means that if this was used, the Project would be significant. Option 2 is based on the amount of a project's operational GHG emissions per service population, set at 4.6 metric tonnes CO₂e per year. In anticipation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the Project's operational GHG emissions under the proposed thresholds of significance identified above. The BAAQMD thresholds stated above are still in draft form and may undergo additional changes before being finalized; a revised version is expected Monday, November 2nd. The methodologies presented in this EIR for quantification of GHG operational emissions is based on using more refined data sources than indicated in the BAAQMD guidance and are the most appropriate to use for the No Project Alternative and the Project.

With mitigation, the Project-related operational emissions of 154,639 result in 4.5 tonnes CO₂e per service population per year based on a service population of 34,242 (this accounts for 23,869 net new residents and all jobs except for the stadium jobs, which already exist, 10,373). Therefore, the Project-related operational emissions would be less than 4.6 tonnes CO₂e per service population per year and would result in a less-than-significant impact on climate change. While the No Project Alternative would include less development, it would not include the density and job creation attributes of the Project, thus the No Project Alternative would decrease the housing density, alter the service population, and not include implementation of energy efficiency measures which would impact the amount of GHG emissions per service population. Without a quantitative analysis, the comparison to the BAAQMD threshold cannot be judged, and it may not be below the threshold.

■ Attainment of Project Objectives

Implementation of the No Project Alternative would not meet most of the Project objectives, as no new uses would be constructed at Candlestick Point and development at HPS Phase II would proceed under land use plans and controls adopted as part of the 1997 HPS Redevelopment Plan. Because development would occur at HPS Phase II, some of the Project objectives could be met, but not to the same extent as the Project. Objectives would be partially met by development at HPS Phase II because Alternative 1

would: create public open space; create jobs and economic development; create permanent space for artists; provide neighborhood-serving retail; develop affordable housing; and transform contaminated portions of the shipyard into economically productive uses or public open space. Many objectives would not be met by the No Project Alternative because it would not include: improvements to CPSRA and development of new public open space uses at Candlestick Point; extension of the Bay Trail along the waterfront; development of a new stadium for the San Francisco 49ers; redevelopment of the Alice Griffith Public Housing site; or creation of connections between Candlestick Point, HPS, and the larger Bayview neighborhood.

Refer to Table VI-3 (Attainment of Project Objectives—Alternative 1) below for a discussion of whether or not the Alternative achieves each objective.

Table VI-3 Attainment of Project Objectives Alternative 1		
Objective	Meets Project Objective?	Analysis
1. The integrated development should produce tangible community benefits for the Bayview and the City.	Y–	Alternative 1 would include some community benefits because development would occur at HPS Phase II. However, compared to the Project, Alternative 1 would include substantially less economic development, affordable housing, parks and open space amenities, and improved connection to the existing Bayview neighborhood. Therefore, Alternative 1 would meet this objective to a lesser extent than the Project.
2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents.	Y–	Alternative 1 would include a mix of uses and urban design concepts that would provide a direct physical, visual, and architectural connection to the Bayview neighborhood and City. However, development would only occur at HPS Phase II. Alternative 1 would not provide automobile, public transportation, and pedestrian connections between HPS Phase II and Candlestick Point. Connections to the Bayview neighborhood would be substantially reduced compared to the Project. Therefore, Alternative 1 would meet this objective to a lesser extent than the Project.
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourages the rebuilding of Alice Griffith Public Housing.	N	Alternative 1 would include a substantially reduced amount of affordable housing and would not rebuild the Alice Griffith Public Housing site. Alternative 1 would not meet this Project objective.
4. The integrated development should incorporate environmental sustainability concepts and practices.	Y–	Alternative 1 would be required to meet the sustainability requirements of the City and State with regard to design of public open spaces, recreation facilities, and infrastructure including wastewater, storm water, utility, and transportation systems. Alternative 1 would not include the additional energy-efficiency measures proposed under the Project. Therefore, Alternative 1 would meet this objective to a lesser extent than the Project.
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure.	N	Alternative 1 would not include construction of a new stadium and would not meet this Project objective.
6. The integrated development should be fiscally prudent, with or without a new stadium.	Y–	Development of Alternative 1 would increase sales tax revenue to the City and would encourage substantial private capital investment at the HPS Phase II site. However, the amount of sales tax generating use and potential private investment would be substantially less than the Project and would meet this objective to a lesser extent than the Project.

Y = Alternative does meet Project objective.

Y– = Alternative meets Project objective, but to a lesser extent than the Project.

Y– = Alternative meets Project objective, but to a significantly lesser extent than the Project.

N = Alternative does not meet Project objective.

VI.C.2 Alternative 2: CP-HPS Phase II Development Plan; No Yosemite Slough Bridge

■ Summarized Description

Alternative 2 would have the same land use program as the Project as presented in Project Description, Table II-3 (Proposed Land Use), except that the Yosemite Slough bridge would not be constructed. The agreement between the CDPR and the City or the Agency to reconfigure the boundaries of CPSRA, provide park improvements, and provide an ongoing source of funding for park operation and maintenance (referred to as State Parks agreement) would take place as proposed under the Project. This alternative would include a stadium at HPS Phase II.

■ Detailed Description

Candlestick Point

The development program at Candlestick Point under Alternative 2 would be the same as for the Project, including, residential, retail, office, community services, hotel, arena, and parks and open space. The Yosemite Slough bridge would not be constructed.

HPS Phase II

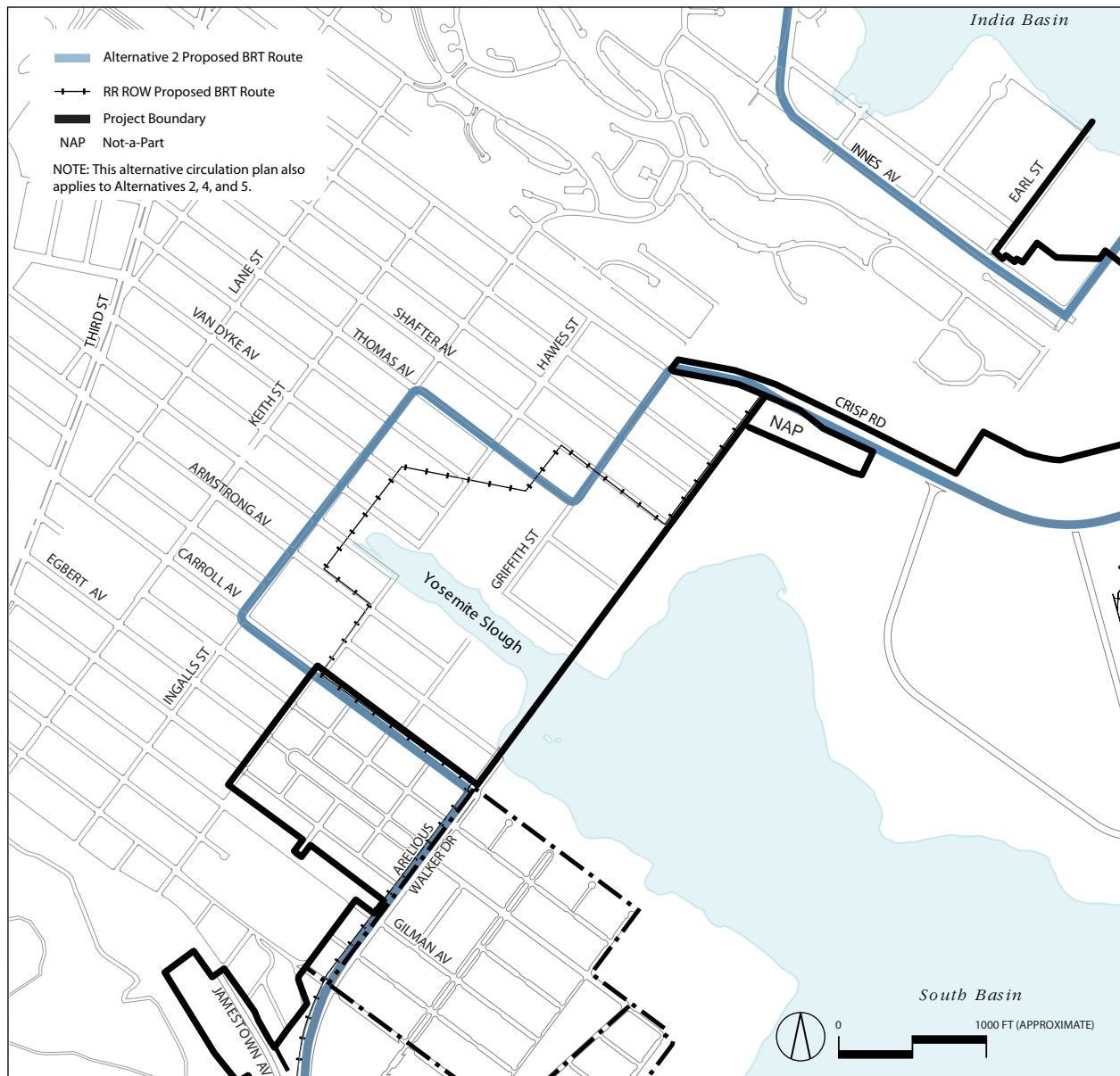
The development program at HPS Phase II under Alternative 2 would be the same as under the Project, including the stadium, residential, retail, R&D, artists' studios, community services, marina, and parks and open space.

Transportation and Circulation System (without Yosemite Slough Bridge)

Under Alternative 2, motorized and non-motorized traffic would be required to circumnavigate Yosemite Slough because no bridge would be constructed. Figure VI-1 (Alternative 2 Circulation Plan Railroad Right-of-Way for Bus Rapid Transit) illustrates the proposed route. The rest of the street network at Candlestick Point and HPS Phase II would be the same as the Project.

The primary roadway connection for automobiles and other vehicular traffic between Candlestick Point and HPS Phase II would be west on Carroll Avenue to Ingalls Street, north along Ingalls Street to Thomas Avenue, and east on Thomas Avenue to Griffith Street. Ingalls Street would remain an industrial mixed-use street with two auto lanes and parking and loading zones on its northern and southern sides. The width of sidewalks on that portion of Ingalls Street from Carroll Avenue to Yosemite Avenue would be decreased from 16 feet to 11 feet to create a uniform street width to accommodate the auto lanes, parking, and loading.

Between the intersection of Carroll Avenue/Arelious Walker Drive and Crisp Road within HPS Phase II, the proposed BRT line would be routed on Carroll Avenue between Arelious Walker Drive and Hawes Street; on Hawes Street between Carroll Avenue and Armstrong Avenue (currently unimproved); and on Armstrong Avenue between Hawes Street and the Navy rail right-of-way; along the Navy rail



SOURCE: Lennar Urban, PBS&J, 2009.

PBS&J 10.31.09 08068 | JCS | 09

Candlestick Point — Hunters Point Shipyard Phase II EIR

**ALTERNATIVE 2 CIRCULATION PLAN RAILROAD
RIGHT-OF-WAY FOR BUS RAPID TRANSIT**

FIGURE VI-1

right-of-way between Armstrong Avenue and Shafter Avenue; along Shafter Avenue between the Navy rail right-of-way and Arellous Walker Drive; and on Arellous Walker Drive between Shafter Avenue and Crisp Road (currently unimproved).

On Carroll Avenue, Hawes Street, and Armstrong Avenue to the Navy rail right-of-way, the Bus Rapid Transit (BRT) line would operate within an exclusive BRT lane and one of the two travel lanes in each direction would be transit-only. Hawes Avenue between Carroll Avenue and Armstrong Avenue and Arellous Walker Drive between Shafter Avenue and Crisp Road are currently unimproved streets and would be built out to accommodate one transit-only travel lane in each direction. The Navy rail right-of-way between Armstrong Avenue and Shafter Avenue would be improved to provide one transit-only travel lane in each direction. Shafter Avenue between the Navy rail right-of-way and Arellous Walker Drive would be reconfigured to provide four travel lanes, with BRT operating in dedicated center lanes.

■ Basis for Impact Analysis

For the Project, the potential impacts are generally based on the parameters of the Project, which include the size, bulk, and type of development, the footprint of development, and the number of residents, employees, and visitors to the Project site. For Alternative 2, the impacts of the Project are compared to the impacts of the same development program and parameters of the Project, except Alternative 2 would not include construction of the Yosemite Slough bridge and approach streets. The total square footage of all uses would be the same as the Project, including a new stadium at HPS Phase II.

■ Potential Impacts

Land Use and Plans

Implementation of Alternative 2 would require amendments similar to the Project for the following planning documents: *City of San Francisco General Plan*; *Bayview Hunters Point Redevelopment Plan*; *Hunters Point Shipyard Redevelopment Plan*; *San Francisco Bay Plan (Bay Plan)*; *San Francisco Bay Area Seaport Plan*; and *CPSRA General Plan*. However, with implementation of the requirements and mitigation measures identified for the Project in Section III.C through Section III.S of this EIR, development under Alternative 2 would not conflict with any applicable land use plans, policies, or regulations (of an agency with jurisdiction) adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, development under this Alternative would not conflict with any of the policies, goals, and strategies analyzed for the Project. Although the Project is consistent with the Bay Plan policies with regard to Bay fill, it should be noted that development under Alternative 2 would reduce the amount of Bay fill compared to the Project, because the Yosemite Slough bridge would not be constructed. Similar to the Project, this impact would be less than significant.

Implementation of Alternative 2 would not result in a substantial adverse change in the existing land use character of the site. Without the Yosemite Slough bridge, the BRT would be routed partially along local streets and partially within the Navy right-of-way. This would change the land use character of the areas along the BRT route, but would not be considered an adverse change, as simply adding rapid buses to the area would not materially affect land use character. Development under Alternative 2 would substantially change the character of the site from open space and industrial uses to an urbanized area

representative of other areas in San Francisco. This change would improve deteriorated conditions and connectivity, as well as provide numerous areas of open space, extensive landscaped areas, pleasing architecture, and shoreline improvements, all of which would improve the character of the site. Therefore, changes resulting from development under Alternative 2 would not be considered adverse. Furthermore, the transition in scale between adjacent neighborhoods and development under this Alternative, as well as the varied range of proposed uses, would ensure that the change in the land use character is not adverse. Similar to the Project, this impact would be less than significant.

Population, Housing, and Employment

Construction activities associated with implementation of Alternative 2 would induce direct job growth at the site. The number of construction workers that would be employed during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge would not occur. It is anticipated that construction employees would commute from elsewhere in the region, rather than relocate to the Bayview Hunters Point neighborhood for a temporary construction assignment. Thus, construction under this Alternative would not generate a substantial, unplanned population increase. Direct and indirect impacts associated with construction employment would be less than significant, the same as for the Project.

Implementation of Alternative 2 would induce direct and indirect population growth, but this growth would not be considered substantial. Similar to the Project, development under this Alternative would result in 7,850 housing units at Candlestick Point and 2,650 units at HPS Phase II, for a total of 10,500 new housing units at the Project site. Employment growth generated by development under this Alternative would result in the demand for 8,263 new housing units, which would be less than the total number of new housing units (10,500) that would be provided. The jobs and housing units that would be provided at the site would be closely balanced (approximately 10,730 jobs and 10,500 housing units) so that neither a surplus of housing nor jobs would occur that could result in indirect residential or employment growth. As a result, similar to the Project, the population and employment increase associated with development under Alternative 2 would not be substantial. This impact is considered less than significant, the same as for the Project.

Transportation and Circulation

Alternative 2 would be the same as the Project, except it would not include the Yosemite Slough bridge. The main roadway connection between Candlestick Point and HPS Phase II would be via Ingalls Street. The bus rapid transit (BRT) route would be along Carroll Avenue, Hawes Street, Armstrong Avenue, and the abandoned railroad right-of-way to provide access between Candlestick Point and HPS Phase II. Alternative 2 would otherwise have the same transportation improvements as proposed with the Project.

The Transportation Study analyzed Alternative 2 and conclusions from the Transportation Study are presented below.

Construction Impacts

Construction activities associated with Alternative 1 would be similar to effects with the Project. Localized construction-related traffic impacts would therefore remain significant and unavoidable.

Intersection Conditions

Alternative 2 would have similar project and cumulative effects at study intersections. The Yosemite Slough bridge would not serve vehicle traffic on game days at the football stadium; weekday conditions would be the same as with the Project. Section III.D discusses traffic effects at those intersections, and the feasibility of mitigation measures. In general, intersection conditions would be significant and unavoidable effects of Alternative 2.

During game days at the football stadium, with no Yosemite Slough Bridge, the entrance and exiting capacity for vehicles would be reduced about 40 percent compared to the Project; four out of a total 11 exit lanes would be available without the bridge. A mitigation measure to implement a Travel Demand Management Plan for the stadium events would reduce but not avoid traffic impacts, which would be significant and unavoidable.

Freeway Conditions

Alternative 2 freeway mainline sections effects, freeway ramp junction conditions, and ramp queuing effects would be similar to Project conditions, with significant and unavoidable impacts.

Transit Impacts

Alternative 2 transit conditions assume implementation of Project-related transit improvements. Alternative 2 would have a less than significant impact on local and regional transit capacity. However, as with the Project, transit impacts would occur from traffic congestion delay. Overall, those transit delay conditions with Alternative 2 would affect the same lines as with the Project as presented in Section III.D, Impact TR-21 to Impact TR-30. As concluded in Section III.D, the transit delay effects would remain significant and unavoidable. During the AM and PM peak hour, Alternative 2 would require up to 28 additional vehicles, the same as with the Project.

Although the alternative BRT route around Yosemite Slough would be technically feasible, it would not be an optimal configuration for a BRT system. BRT service would provide direct, fast, and reliable travel in a dedicated right-of-way, typically with signal priority for VRT vehicles. When these elements are combined, the BRT service takes on a higher quality character than typical local bus service. The Yosemite slough bridge would provide a dedicated right-of-way and most direct route between Hunters Point Shipyard and points to the west, including Candlestick point, the Bayshore Caltrain Station, and Balboa Park BART. Alternative 2 would not accommodate the BRT route on the bridge proposed with the Project.

Bicycle Impacts

The Alternative 2 bicycle trips would be accommodated within the proposed street and network, although there would not be a Yosemite Slough bicycle and pedestrian route; impacts on bicycle circulation would be less than significant.

Pedestrian Impacts

The Alternative 2 pedestrian trips would be accommodated within the proposed sidewalk and pedestrian network, although there would no Yosemite Slough bicycle and pedestrian route; impacts on pedestrian circulation would be less than significant.

Parking Impacts

Alternative 2, with the same land use program and parking plans as the Project, would have the same parking effects as the Project. There would be a parking shortfall, but this impact would be considered less than significant.

This alternative would have less than significant effects on other transportation conditions (loading, air traffic, emergency access).

Aesthetics

Construction activities associated with implementation of Alternative 2 would occur during the same 19-year build-out period and involve the same activities as the Project. Like the Project, those activities would be visible to surrounding land uses and could impact views of scenic vistas and scenic resources in the area. However, any impacts to views would be temporary visual distractions typically associated with construction activities and commonly encountered in developed areas. Mitigation for the Project would also be implemented with this alternative that would reduce visual construction impacts to less than significant. Therefore, impacts to scenic vistas during construction of Alternative 2 would be the same as under the Project, and less than significant. Construction activities associated with Alternative 2 would not result in adverse effects on any scenic vistas and the impact would be less than significant, the same as for the Project.

There are no scenic resources on the Project site that would be adversely affected by construction of Alternative 2. As with the Project, construction activities for Alternative 2 would result in exposed trenches, roadway bedding (soil and gravel), spoils/debris piles, and possibly steel plates that would be visible during construction of the utility infrastructure improvements, especially where right-of-way improvements are required for the route around the slough. Although these activities would take place primarily on site, views of the activities could be available from surrounding land uses. As with the Project, implementation of the identified mitigation measure (MM AE-2) would require the Project developer of Alternative 2 to screen construction sites from public view at street level, provide for appropriate staging of construction equipment, and maintain the cleanliness of construction equipment. Therefore, construction activities under Alternative 2 would have a less-than-significant impact on the visual character or quality of the site, similar to the Project.

Construction of Alternative 2 would occur during daylight hours, and, therefore, glare could be created as a result of reflection of sunlight off windows of trucks and other construction materials that have the potential to generate glare (i.e., glass); however, similar to the Project, the glare created by construction activities at the Project site would not be substantial enough to affect daytime views in the area. Security lighting would be provided after hours on all construction sites, but this lighting would be minimal, restricted to the Project site, and would not exceed the level of existing night lighting levels in other

urban areas of San Francisco. The overall construction period would remain essentially the same as under the Project. In addition, similar to the Project, construction lighting would comply with all City lighting requirements. Therefore, construction activities for development under Alternative 2 would have less-than-significant light and glare impacts.

As shown in Figures III.E-11 through Figure III.E-18 in Section III.E (Aesthetics), development under Alternative 2 would change views of the Project site from surrounding public viewpoints, but would not substantially obstruct any scenic vistas. Alternative 2 would not introduce the new visual element of the bridge across Yosemite Slough, but the analysis for the Project determined that the bridge would not result in average long- or short-range views of the Bay or other scenic vistas. Development of Candlestick Point would not block publicly accessible views of the Bay or other scenic vistas. Views of the East Bay and the Bay from the Project site would be maintained within public access areas, as well as at City and State parks located within Candlestick Point. Similarly, development of HPS Phase II would not substantially block scenic vistas, including the Bay. Views of the East Bay and the Bay from HPS Phase II would be maintained on the site and within public access areas, such as from HPS Phase I Hilltop Park. While development of Alternative 2 would include high-rise towers similar to the Project at Candlestick Point and HPS Phase II, those towers are not clustered and would not substantially obstruct views of the Bay or beyond from any long-range viewpoints. Therefore, similar to the Project, development under Alternative 2 would not substantially obstruct any scenic vistas, and this impact would be less than significant.

Alternative 2 would include the same development program as the Project, with the exception of the Yosemite Slough bridge. As shown by the various photographs and simulations in Section III.E, development under Alternative 2 would not substantially damage scenic resources that contribute to a scenic public setting. Alternative 2 would include replacing degraded urban areas and outdated residential development with new, well-designed urban development and integrated public parks. The Yosemite Slough bridge and roadway approaches would not be constructed and the appearance of the slough would be unchanged. Scenic resources at HPS Phase II would be retained, including the Re-gunning crane. Shoreline improvements at Candlestick Point and HPS Phase II would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 2 would not damage or remove any identified scenic resources that contribute to a scenic public setting and the impact would be less than significant.

As shown in Figures III.E-19 through Figure III.E-30, development of Alternative 2 would change the visual character of the Project site. However, similar to the Project, Alternative 2 would not substantially degrade the visual character or quality of the Project site area or its surroundings. In fact, development under Alternative 2 would improve the degraded and deteriorated condition of much of the Project site. Development under Alternative 2 would replace the existing conditions with a more dense urban setting, but this would not be considered an adverse change. The proposed shoreline improvements would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 2 would not substantially degrade the visual character or quality of the Project site or its surroundings. The impact would be less than significant.

Development under Alternative 2 would increase lighting on the Project site relative to existing outdoor lighting, and new building surfaces would increase the level of illumination in the area. Area lighting would illuminate larger areas that are well traveled so as to promote way finding and provide for a safe environment. In addition to area lighting, building lighting would be angled towards building surfaces for aesthetic purposes and/or to illuminate signs. Like the Project, both types of lighting would be designed to avoid direct visibility of the light source. City Resolution 9212 prohibits the use of highly reflective or mirrored glass in new construction. Implementation of the identified mitigation measures (MM AE-7a.1, MM AE-7a.2, MM AE-7a.3, and MM AE-7a.4) and compliance with City Resolution 9212 would reduce impacts from light and glare to a less-than-significant level by shielding lighting fixtures, minimizing spill light, screening vehicle headlights to the maximum extent feasible, and eliminating or minimizing increased glare by the use of non-reflective glass and non-reflective textured surfaces within the proposed development area.

The new San Francisco 49ers stadium on the HPS Phase II site would provide a source of illumination in a different location from the existing Candlestick Park stadium. Similar to the Project, implementation of the identified mitigation measures (MM AE-7b.1 and MM AE-7b.2) would ensure that the impact of stadium lighting would be less than significant. The stadium developer would be required to test the installed field-lighting system to ensure that lighting meets the operating requirements in the stadium and minimizes obtrusive spill lighting from the facility. The impact would be less than significant.

Shadows

Development under Alternative 2 would include the same heights, layouts, and orientations of buildings as the Project. At Candlestick Point, the existing public open space, Bayview Park and Gilman Park, would not be affected by new shading from development under Alternative 2. Gilman Park would experience some shading on winter afternoons. Those shadows would be cast by buildings that do not exceed 40 feet in height, are not subject to *Planning Code* Section 295, and, therefore, would not be considered an adverse impact. Some new shadows would be cast on Bayview Park; these would have a less-than-significant effect on that park. The CPSRA would be affected by new shade in the afternoon but most areas would experience limited to no new shadow from development under Alternative 2. At HPS Phase II, the existing public open space, India Basin Shoreline Park and India Basin Open Space, would not be affected by new shading from development under Alternative 2. New shadows cast by development under Alternative 2 on proposed new parks throughout the year would range from little or no shading to large areas of certain parks receiving new shade, particularly in the late afternoon during the vernal and autumnal equinoxes. The extent and duration of shadow on new public sidewalks would increase along street corridors of Alternative 2. Similar to the Project, this new shadow would not be in excess of that which would be expected in an urban area. New shade created by implementation of Alternative 2 would occur at limited times of the day and year, and would not substantially affect the use of outdoor recreational facilities or open space. Similar to the Project, this impact would be less than significant.

Wind

Development under Alternative 2 would include structures above 100 feet in height, ranging up to 420 feet, which would extend well above surrounding buildings and intercept a large volume of wind.

Because of the exposure of the tall structures to wind, the tower structures would have the potential to accelerate winds in nearby pedestrian sidewalk areas or public open space areas. The degree of change in pedestrian-level wind conditions would be influenced by building design, such as building height, shape, massing, setbacks, and location of pedestrian areas. Structures nearing or over 100 feet in height could have effects on pedestrian-level conditions such that the wind hazard criteria of 26 miles per hour for a single hour of the year would be exceeded. Similar to the Project, the street grid of Alternative 2 would not align with predominant west and west-northwest wind directions and would, therefore, not result in channeling of winds along street corridors. The street grid would orient building faces such that they would not face into the prevailing wind direction; that orientation would reduce potentially significant pedestrian-level wind acceleration at the Project site.

Implementation of the identified mitigation measure (MM W-1a) would reduce the potential impact from wind for development of Alternative 2 by requiring review of all buildings that could result in adverse wind impacts by a qualified wind consultant. If the review identifies exceedance of the wind hazard criteria, the design must be revised to reduce the impact below the established threshold. Implementation of required design changes, if any, would reduce potential hazardous wind effects at the pedestrian level by forcing wind downwash to tops of podium areas and/or into the street and away from pedestrian areas. Compliance with the mitigation measures would ensure pedestrian safety in pedestrian-access areas. Similar to the Project, through implementation of the identified mitigation measure, wind impacts would be less than significant. Elimination of the bridge would not change any of the Project's potential wind impacts.

Air Quality

As the footprint of development, the total amount of development, and the land uses provided with Alternative 2 would be virtually the same as the Project, air quality impacts of Alternative 2 would also be the same as the Project.

Construction activities for Alternative 2 would generate dust; however, they would need to comply with the San Francisco Health Code and BAAQMD requirements. Implementation of MM HZ-15, which would require the Applicant to ensure that construction contractors comply with the dust control strategies included in an approved dust control plan as part of a site-specific dust control plan, would reduce the impacts caused by construction dust to a less-than-significant level. This impact would be the same as for the Project.

Construction activities could also create DPM; however, as the development of Alternative 2 would be substantially the same as the Project, implementation of mitigation measures MM AQ-2.1 and MM AQ-2.2, accelerated emission control implementation on construction equipment, would keep this impact less than significant. Construction activities could also generate TAC-containing PM₁₀; however, as construction activities for Alternative 2 would be substantially the same as for the Project, this impact would be less than significant.

Operational emissions associated with Alternative 2 would be the same as those of the Project, therefore the mass emissions would exceed the BAAQMD CEQA thresholds, and this impact would remain significant and unavoidable, similar to the Project. Alternative 2 has the same R&D square footage, therefore potential TAC emissions from facilities in R&D areas would be the same as the Project. With

the implementation of mitigation measures MM AQ-6.1 and MM AQ-6.2, this impact would be less than significant and the same as for the Project.

Additionally, as the scale of Alternative 2 is the same as the Project, the impacts from Alternative 2 traffic (e.g., carbon monoxide and PM_{2.5}) would be the same as for Project and less than significant.

According to the current BAAQMD CEQA Guidelines, odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that the BAAQMD regards as having potential to generate considerable odors include: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, oil refineries, and chemical plants. Alternative 2 would be a large mixed-use development containing residential, office, retail, R&D, recreational, and entertainment uses. Although there may be some potential for small-scale, localized odor issues to emerge around proposed sources such as solid waste collection, food preparation, etc., substantial odor sources and consequent effects on on-site and off-site sensitive receptors would be unlikely and would be resolved by interventions after receipt of any complaints. This would be a less-than-significant impact, the same as for the Project.

The Project is consistent with regional air quality plans. Since Alternative 2 would have essentially the same footprint and generate the same amount of traffic, Alternative 2 would also be consistent with these plans. Alternative 2 promotes the use of alternative transportation modes, such as transit, biking and walking. In addition, it puts housing in close proximity with jobs and retail establishments, reducing the length of trips and further reducing reliance on single-occupancy vehicles. Therefore, Alternative 2 conforms to the regional air quality plan and there would be a less-than-significant impact, the same as for the Project.

Noise

As the footprint of development, the total amount of development, and the land uses provided with Alternative 2 would be the similar to the Project, noise impacts of Alternative 2 would be substantially similar to the impacts of the Project.

Construction activities for Alternative 2 would expose sensitive receptors to increased noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to comply with the San Francisco Noise Ordinance, which generally prohibits construction between 8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. The Yosemite Slough bridge would be eliminated and noise resulting from bridge construction would be avoided. Implementation of mitigation measures MM NO-1a.1 and MM NO-1a.2, which would require implementation of construction Best Management Practices to reduce construction noise and the use of noise-reducing pile driving techniques, would reduce any potentially significant impacts to less-than-significant levels, similar to the Project.

Construction activities for Alternative 2 would result in a temporary or periodic increase in ambient noise that would be noticeable and likely cause for human annoyance. Construction activities would occur within 25 feet of existing and future residential uses. Pile driving activities could result in substantial noise levels of up to 107 dBA at new residential uses on the site or at adjacent existing residences.

Construction-related temporary increases in ambient noise levels would be considered significant and unavoidable, the same as for the Project.

Construction activities could also create excessive ground-borne vibration levels in existing residential neighborhoods adjacent to the site and at proposed on-site residential uses, should the latter be occupied before construction activity on adjacent parcels is complete. Mitigation measures MM NO-1a.1, MM NO-1a.2, and MM NO-2a would require implementation of construction Best Management Practices, noise-reducing pile driving techniques as feasible, and monitoring of buildings within 50 feet of pile driving activities. Implementation of these measures would reduce vibration impacts under Alternative 2, but not to a less-than-significant level, as vibration levels from pile driving activities could be as high as 103 VdB for the residential uses within the HPS North District; therefore, this impact would remain significant and unavoidable, similar to the Project.

Daily operation of Alternative 2, such as mechanical equipment and delivery of goods, would not expose noise-sensitive land uses on or off site to noise levels that exceed the standards established by the City of San Francisco. This impact would be less than significant, similar to the Project. Operation activities associated with Alternative 2, such as truck deliveries, would not generate or expose persons on or off site to excessive groundborne vibration. This impact would also be less than significant, similar to the Project.

Operation of Alternative 2 would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes. Impacts would be significant along Carroll Avenue, Gilman Avenue, and Jamestown Avenue, similar to the Project.

Football games and concerts at the proposed stadium with Alternative 2 would generate noise that would adversely affect surrounding residents, similar to the Project. Implementation of mitigation measures MM NO-7.1 and MM NO-7.2 would ensure that nearby residential uses do not experience temporary increases in ambient noise levels within their homes that would exceed 60 dBA L_{max} ; however, as with the Project, the feasibility and practicality of mitigation measures MM NO-7.1 and MM NO-7.2 cannot be determined at this time, and, therefore, this impact would remain significant and unavoidable.

Cultural Resources

Similar to the Project, implementation of Alternative 2 would retain Drydocks 2 and 3 and rehabilitate Buildings 140, 204, 205, and 207 at the HPS Phase II site in accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. However, development under Alternative 2 would result in the demolition of Buildings 211, 231, and 253, which are historic resources in the potential CRHR-eligible Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. This would result in a significant impact because the proposed actions would materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR. Implementation of the identified mitigation measures (MM CP-1b.1 and MM CP-1b.2) would reduce those impacts; however, this alternative would not reduce impacts to a less-than-significant level. Therefore, similar to the Project, the impacts to these historical resources would be significant and unavoidable.

Construction activities associated with Alternative 2 could result in a substantial adverse change in the significance of archaeological resources. The Project site overall is likely to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods. The Yosemite Slough bridge would be eliminated and potential disturbance of archaeological resources resulting from bridge construction would be avoided. Similar to the Project, construction activities associated with Alternative 2 could disturb archaeological resources, and result in potentially significant impacts. Implementation of the identified mitigation measure (MM CP-2a) would reduce the effects on archaeological resources to a less-than-significant level for development under Alternative 2, similar to the Project.

Construction activities associated with Alternative 2 could result in a substantial adverse change in the significance of paleontological resources. The Bay mud underlying portions of the fill is expected to contain paleontological resources. Similar to the Project, implementation of the identified mitigation measure (MM CP-3a) would reduce the effects of construction-related activities to potential paleontological resources in in-water and off-site areas to a less-than-significant level. The impact under this alternative would be similar to the Project.

Hazards and Hazardous Materials

Under Alternative 2, the construction impacts associated with Hazards and Hazardous Materials would be slightly reduced as compared to the Project because the overall development footprint would be reduced with the elimination of the Yosemite Slough Bridge, resulting in a smaller area subject to disturbance.

Site preparation would include deep excavations for large structures such as for residential towers, with plans to use the cut material elsewhere within the Project site as fill, trenching for utility lines, dewatering, grading and compaction and other earth-disturbing activities. As portions of the site are known to contain elevated levels of chemicals in the soil, construction activities could result in exposure of construction workers, the public or the environment to unacceptable levels of hazardous materials if not handled appropriately. MM HZ-1a would reduce effects related to exposure of known contaminants at Candlestick Point by requiring compliance with Article 22A or an equivalent process. At HPS Phase II, potential effects related to exposure to hazardous materials from construction activities would be mitigated through requirements to comply with restrictions imposed on the property through the federal site clean-up process (MM HZ-1b, MM HZ-9, and MM HZ-12). Disturbance of contaminated soil would be reduced with elimination of the Yosemite Slough bridge but would still occur. MM HZ-10b would ensure approval of workplans by the Navy and regulatory agencies prior to any work in the shoreline areas. In addition, mitigation measures MM HY-1a.1, MM HY-1a.2, MM BI-4a.1, MM BI-4a.2, and MM BI-5b.4 would reduce water quality and biological resources impacts from disturbance of contaminated soil, groundwater and sediments.

At both Candlestick Point and HPS Phase II, compliance with MM HZ-2a.1 would require the preparation and implementation of contingency plans to address unknown contaminants that might be encountered during construction, and compliance with MM HZ-2a.2 would require preparation and implementation of health and safety plans to protect construction workers from exposure to hazardous materials during construction activities. Construction activities could require off-site transport of

contaminated soil or groundwater; compliance with federal, state, and local regulations would ensure that no unacceptable exposure to chemicals occur as a result of these activities. Further, mitigation measures MM HY-1a.1, MM HY-1a.2, and MM HY-1a.3 would ensure that no unacceptable levels of hazardous materials in soil in surface runoff or in groundwater are discharged to the sewer system or discharged from the site to the Bay. Hazardous materials impacts from all of the above construction-related activities would be reduced to less than significant with the implementation of the mitigation measures identified above, the same as for the Project.

Development under Alternative 2, as for the Project, would require the installation of foundation support piles, which could, under certain soil conditions, create a vertical conduit for chemicals occurring in shallow groundwater to migrate to the deeper groundwater aquifer. However, MM HZ-5a, which requires preparation of a plan for pilot boreholes for each pile to prevent disturbance of potentially contaminated fill materials and would reduce this potential impact from pile driving to less than significant, the same as for the Project.

Elimination of construction of the Yosemite Slough Bridge would avoid impacts associated with disturbance of potentially radiologically impacted soils at HPS Phase II in the vicinity of Parcels E and E-2, thus reducing the potential for exposure to hazardous materials in soil or groundwater in this area.

All other development at HPS Phase II would be the same as that proposed for the Project and remedial activities would be the same for Alternative 2 as for the Project. Any remedial activities undertaken as part of the construction process would be subject to the requirements in MM HZ-1b, which requires construction activities at HPS Phase II to be done in accordance with all restrictions imposed on the site by the federal regulatory clean-up process and these impacts would be less than significant, the same as for the Project.

Potential impacts associated with disturbance of naturally occurring asbestos would be similar to those associated with the Project and would be mitigated through MM HZ-15, which requires the preparation of dust control plans as required by BAAQMD and DPH. Alternative 2 would involve the demolition of existing structures that may contain asbestos-containing building materials, lead-based paint and other hazardous materials, the same as the Project. The existing regulatory framework and approval process would avoid potential hazards from demolition or building preservation activities and impacts would be less than significant, the same as the Project.

Alternative 2 would involve off-site roadway improvements, which could result in disturbance of hazardous material in soil or groundwater. Unacceptable exposures would be controlled as for the Project by implementation of MM HZ-1a, and hazardous materials impacts from these activities would be less than significant.

Project operations would involve routine use, storage, transport, or disposal of hazardous materials. The use of such materials would be the same as for the Project, as the development program is essentially the same. Compliance with applicable federal, state, and local regulations related to the use, storage and transport of such materials would result in a less-than-significant impact from hazardous materials usage, the same as for the Project.

Geology and Soils

Construction activities, such as removal of paved areas, grading, and excavation, could remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, could be subject to soil loss and erosion by wind and stormwater runoff. However, requirements to control surface soil erosion during and after construction of Alternative 2 would be implemented through the requirements of the identified mitigation measure (MM HY-1a.1), and adverse effects on the soil such as soil loss from wind erosion and stormwater runoff would be reduced to a less-than-significant level. Soil erosion impacts associated with construction of the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 2.

Construction activities would have the potential to affect groundwater levels. Construction may include dewatering procedures during excavation, construction, and operation of foundations and buried utilities. The dewatering could cause settlement of adjacent soils that could damage the overlying foundations of existing buildings. With implementation of the dewatering techniques, groundwater level monitoring, and subsurface controls as specified in the SFBC and required by the identified mitigation measure (MM GE-2a), groundwater levels in the area would not be lowered such that unacceptable settlement at adjacent or nearby properties would occur. Similar to the Project, settlement hazards related to dewatering would be less than significant for development under Alternative 2.

Development of Alternative 2 would require rock removal activities at the Alice Griffith and Jamestown districts that could result in damage to structures from vibration or settlement caused by the fracturing of bedrock for excavation. With implementation of the identified mitigation measure (MM GE-3), vibration from controlled rock fragmentation in the area would not cause unacceptable settlement at adjacent or nearby properties. Similar to the Project, settlement hazards related to controlled rock fragmentation would be less than significant for development under Alternative 2.

The potential for exposure to adverse affects caused by seismic groundshaking and seismically induced ground failure such as liquefaction, lateral spreading, landslides and settlement exists at the Project site. The identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-5a, and MM GE-6a) would require design-level geotechnical investigations for development under Alternative 2. Design-level geotechnical investigations must include site-specific seismic analyses to evaluate the peak ground accelerations for design of structures, as required by the SFBC through review by DBI. The structural design review would ensure that all necessary mitigation methods and techniques are incorporated in the design for foundations and structures to reduce potential impacts from ground failure or liquefaction to a less-than-significant level for development under Alternative 2. Seismic-related groundshaking hazards associated with the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 2, although these impacts are mitigated to less than significant under the Project.

The existing shoreline exhibits active erosion and consists of areas of unprotected slopes and dilapidated naval pier and wharf structures. Similar to the Project, Alternative 2 would include numerous shoreline improvements, including additional concrete revetments, creation of new beach and tidal habitat, and some grading and importation of fill at certain locations. These improvements would increase the stability of the shoreline. Therefore, Alternative 2 would not result in the exposure of structures and

facilities at the Project site to substantial adverse effects caused by shoreline instability. Similar to the Project, the impact would be less than significant.

The potential for adverse affects caused by landslides, settlement, expansive and corrosive soils, exists at the Project site. Site-specific, design-level geotechnical investigations would be required to be submitted to DBI in connection with permit applications for individual elements of development for Alternative 2, as specified in the identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-5a, MM GE-6a, MM GE-10a, MM GE-11a) for the Project. The site-specific analyses must assess these conditions and prescribe the requirements for foundations on slopes in accordance with the SFBC. All geotechnical investigations and permits must be approved by DBI. With implementation of those mitigation measures, impacts with regards to landslides, settlement, and expansive and corrosive soils would be less than significant. Potential ground failure impacts associated with the Yosemite Slough bridge would be avoided because no bridge would be constructed under Alternative 2, although these impacts are mitigated to less than significant under the Project.

Hydrology and Water Quality

The footprint of development for Alternative 2 would be the same as for the Project, although the Yosemite Slough Bridge would not be constructed. As such, impacts from construction of Alternative 2 would be similar to the Project. As the footprint of development, the total amount of development, and land uses would be the same as the Project, operational impacts to hydrology and water quality would be the same as with the Project.

With adherence to applicable regulatory requirements, construction activities associated with Alternative 2 would not violate water quality standards, cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements due to sediment-laden runoff, contaminated groundwater from dewatering activities, or the incidental or accidental release of construction materials. As the footprint of development, and the total amount of development would be the same as the proposed project with the exception of the construction of the Yosemite Slough Bridge, impacts would be similar to the Project. With implementation of mitigation measures MM HY-1a.1 (preparation of a SWPPP for discharges to the combined sewer system), MM HY-1a.2 (SWPPP preparation for separate storm sewer systems), and MM HY-1a.3 (construction dewatering plan) impacts would be less than significant, similar to the Project. Groundwater would not be used for any construction activities such as dust control or irrigation of vegetated erosion control features; no groundwater wells would be developed as part of the Project or and no on-site groundwater wells would be used for water supplies. Short-term construction groundwater dewatering may be necessary at certain locations (e.g., for installation of building foundations or underground utilities), but dewatering would have only a minor temporary effect on the groundwater surface table elevation in the immediate vicinity, and would not measurably affect groundwater supplies. Under Alternative 2, the extent of impervious surfaces would be the same as the Project, and would not 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. This impact would be less than significant, similar to the Project.

No streams or rivers are currently located within the Project site and thus no streams or rivers would be altered by construction activities. Under existing conditions, stormwater typically drains to storm drains

(which include both combined and separate systems) or directly to the Bay via surface runoff (generally only along portions of the shoreline). During construction of Alternative 2, the existing drainage patterns within the area would generally be preserved. Construction activities associated with Alternative 2 would not substantially alter the existing drainage pattern of the site or alter the course of a stream or river in ways that would result in substantial erosion, siltation, or flooding on or off site. Impacts would be less than significant, similar to the Project.

Construction activities associated Alternative 2, including site clearance, grading, and excavation, would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff. During construction, existing stormwater drainage facilities would be replaced by a new storm sewer system that would collect and treat on-site stormwater flows and would be sized to accommodate projected flows from upstream contributing areas. With compliance with regulatory requirements, as required by mitigation measures MM HY-1a.1 and MM HY-1a.2, (preparation of a SWPPP) impacts would be less than significant, similar to the Project.

Operation of Alternative 2 would not contribute to violations of water quality standards or waste discharge requirements or otherwise degrade water quality. Compliance with the requirements of the Municipal Stormwater General Permit, the Recycled Water General Permit, and the Industrial General Permit would reduce potential water quality impacts associated with implementation of Alternative 2. In addition, this alternative would be required to comply with the San Francisco SWMP, the Draft San Francisco Stormwater Design Guidelines, and the San Francisco Green Building Ordinance. Compliance with these requirements would be demonstrated in the SDMP or SCP for the Project site, as required by mitigation measure MM HY-6a.1. Compliance with the Recycled Water General Permit would be required by implementation of mitigation measure MM HY-a.2. To reduce the potential for stormwater infiltration to mobilize historic soil contaminants at HPS Phase II, the use of infiltration BMPs would be prohibited by mitigation measure MM HY-6b.1. To reduce stormwater runoff impacts associated with industrial activities at HPS Phase II, compliance with the Industrial General Permit would be required by implementation of mitigation measure MM HY-6b.2. To reduce stormwater impacts associated with maintenance dredging of the marina, compliance with the DMMO regulatory requirements would be required by implementation of mitigation measure MM HY-6b.3. Compliance with the Clean Marinas California Program would be required by implementation of mitigation measure MM HY-6b.4. As the extent of impervious surfaces for Alternative 2 is the same as the Project, impacts would be the same as the Project. Development of Alternative 2 would not utilize groundwater as a source of water supply nor interfere substantially with groundwater recharge. Thus, there would be no net deficit in aquifer volume or a lowering of the local groundwater table level and no impact would occur, similar to the Project.

Operation of Alternative 2 could alter the existing drainage pattern of the site, but would not alter the course of a stream or river, as none exist at or near the site currently, or result in substantial erosion, siltation, or flooding on or off site, similar to the project. Implementation of Alternative 2 would not contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff, as development would include a separate stormwater system that would be sized to accommodate estimated runoff flows and treat runoff prior to discharge to the Bay. Compliance with regulatory requirements, including the submission of a

Stormwater Drainage Master Plan (SDMP) and Stormwater Control Plan (SCP) to the SFPUC for approval, as required by mitigation measure MM HY-6a.1, would ensure that this impact would be less than significant, similar to the Project.

Implementation of Alternative 2 would not place housing and other structures within a 100-year flood zone or otherwise include development that would impede or redirect flood flows. Implementation of mitigation measures MM HY-12a.1 (Finished Grade Elevations above Base Flood Elevation) and MM HY-12a.2 (Shoreline Improvements for Future Sea-Level Rise) would reduce this impact to a less-than-significant level, similar to the Project.

Implementation of Alternative 2 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. Implementation of mitigation measure MM HY-14 (Shoreline Improvements to Reduce Flood Risk) would reduce impacts to a less-than-significant level. Based on historical records and the location of development, Alternative 2 would not expose people or structures to inundation by seiche, tsunami, or mudflow. These impacts would be less than significant, similar to the Project.

Biological Resources

Similar to the Project, Alternative 2 would involve removal and/or modification of areas that have the potential to contain special-status species, including: seven potentially breeding avian species, one bat species, and four fish species (green sturgeon, Chinook, steelhead, and longfin smelt). Alternative 2 would also have the potential to affect designated critical habitat of the green sturgeon and Central California Coast steelhead and thus, directly impact threatened and/or endangered species through habitat conversion or unauthorized take. In addition, activities would occur within habitats of locally rare or sensitive species such as Pacific herring and Olympia oysters, as well as avian species protected by the *Migratory Bird Treaty Act* (MBTA). Alternative 2 would include implementation of the ecological design features described in the Project's Draft Parks, Open Space, and Habitat Concept Plan that would result in multiple measures to avoid, limit, and mitigate for impacts to special-status and legally protected species. Specifically, the design components would remove invasive species; restore, preserve, and enhance wetland, aquatic, and grassland habitats; revegetate the site with extensive planting of trees and shrubs; increase the vegetative cover for foraging and dispersing animals; and maintain and enhance habitat connectivity along the shoreline. Alternative 2, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-6a.1, MM BI-6a.2, MM BI-6b, MM BI-7b, MM BI-9b, MM BI-18b.1, and MM BI-18b.2) and ecological design features, would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or United States Fish and Wildlife Service (USFWS). Similar to the Project, this impact would be less than significant after mitigation for development under Alternative 2. However, impacts to such species would be less than the Project due to the avoidance of impacts associated with bridge construction and operation.

Similar to the Project, development of Alternative 2 could have a substantial adverse effect on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG or USFWS. The only sensitive habitats other than wetlands and aquatic habitats are eelgrass and areas

designated as Essential Fish Habitat (EFH). Shoreline improvements, shoreline abutments for the proposed marina and installation of the breakwater at HPS Phase II could have substantial adverse impact to the communities. However, with implementation of the identified mitigation measures (MM BI-4a.2, MM BI-5b.1 through MM BI-5b.4, MM BI-12b.1, MM BI-12b.2, MM BI-12b.3, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1, and MM BI-19b.2), impacts of Alternative 2 on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG, NMFS, or USFWS would be reduced to a less-than-significant level. Potential impacts to eelgrass beds would be the same as the Project (eelgrass beds are not located near Yosemite Slough), while impacts to EFH would be less than the Project since construction associated with Yosemite Slough bridge would be avoided and, thus, EFH would not be impacted through the construction of pilings required to support the bridge.

The shoreline improvements included in Alternative 2 would be similar to the Project and could have substantial temporary and permanent adverse effect on federally protected wetlands and other waters as defined by Section 404 of the *Clean Water Act* (CWA) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Those impacts would be reduced (0.01 acre of tidal salt marsh, 0.70 acre of other waters, and 0.96 acre of shadow fill) compared to the Project because the Yosemite Slough bridge would not be constructed. Therefore, potential impacts to federally protected wetlands and other waters would be less than the Project. The identified mitigation measures would reduce the effects of construction-related activities to wetlands and other waters by mitigating for the temporary and permanent loss of the wetlands and jurisdictional waters through avoidance of impacts, requiring compensatory mitigation (i.e., creation, preservation, and/or restoration), obtaining permits from the US Army Corps of Engineers (USACE), the San Francisco Regional Water Quality Control Board (SFRWQCB), and BCDC that are designed to protect wetlands and jurisdictional waters, and implementing construction BMPs to reduce and/or prevent impacts to waters of the United States, including wetlands and navigable waters. With implementation of the identified mitigation measures (MM BI-4a.1 and MM BI-4a.2), the impacts of development under Alternative 2 to federally protected wetlands and other waters as defined by Section 404 of the CWA would be reduced to a less-than-significant level.

Development of Alternative 2 could interfere substantially with the movement of 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. The Project site is surrounded by open water and urban development and no major drainages, canyon bottoms, ridgetops, rivers, creeks or areas that provide substantial movement corridors or migratory pathways occur within the Project site. However, similar to the Project, implementation of Alternative 2 would place new residential towers and a stadium with light towers along a portion of the San Francisco Bay shoreline. The increase in strike hazards from the tall buildings and the potential for lighted stadium towers to alter flight paths could substantially interfere with migratory avian flight paths, which would be considered a potentially significant impact to migratory birds. With respect to aquatic species, although migratory fish could continue to move through the open water and Yosemite Slough, the Project site does not contain any substantial migratory fish pathways such as anadromous fish streams. However, construction of breakwaters and other shoreline treatments in HPS Phase II would occur near eelgrass beds, which could directly or indirectly impact eelgrass beds such that productivity and survival of these habitats would be substantially reduced. Similar to the

Project, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-20a.1, and MM BI-20a.2), the potential impacts of Alternative 2 would be reduced to a less-than-significant level 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.

Similar to the Project, Alternative 2 would be required to comply with mitigation measure MM BI-14a to ensure that Project development would not result in conflicts with the City's tree protection ordinances. With implementation of MM BI-14a, Alternative 2 would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant, similar to the Project.

Public Services

Police Protection

During construction of Alternative 2, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. The purpose of a CTMP is to ensure that the impacts of construction on the public domain, in particular with respect to temporary interruptions to vehicular and pedestrian traffic, are considered and addressed. Because Alternative 2 would include the same mitigation as the Project, there would be a similar requirement to prepare a CTMP for Alternative 2 that would address temporary impacts on circulation during construction. The CTMP would provide necessary information to various contractors and agencies as to how to maximize the opportunities for complementing construction management measures and to minimize the possibility of conflicting impacts on the roadway system, while safely accommodating the traveling public in the area. Construction activities associated with implementation of Alternative 2 also could increase demand for SFPD services if the site is not adequately secured, providing increased opportunity for criminal activity. To ensure adequate site security, mitigation measure MM PS-1 would require the Project Applicant to provide security during construction. Therefore, this impact would be less than significant, the same as for the Project.

Implementation of Alternative 2 would increase resident and employee population at the Project site, resulting in a potential increase in the need for 53 additional police personnel to provide a comparable level of service to existing conditions, the same as for the Project. The SFPD evaluates the need for additional officers by sector, and not station or district needs. While it is unlikely that 53 new officers would be needed, some redistribution of the police presence in the southeastern portion of the City would be warranted by development of Alternative 2.

If the SFPD determines that the reconfiguration of the Bayview Station would not be sufficient to accommodate additional officers, a new station or facility of approximately 6,000 square feet (sf) could be constructed within the Project site, on land designated for community-serving uses. As part of this alternative, up to 100,000 gross square feet (gsf) divided equally between Candlestick Point and HPS Phase II would be designated for community-serving uses, including a police station. Construction of a new SFPD facility (counter, storefront, or other configuration) within these community services uses and/or the reconfiguration or expansion of the existing Bayview Station would be funded by the Project Applicant. Similar to the Project, Alternative 2 includes community service use areas, and as construction

would be funded by the Project Applicant, the SFPD would maintain acceptable levels of police service. Therefore, development of this Alternative would not require new or physically altered police facilities beyond the scope of the Project in order to maintain acceptable police services. This impact is considered less than significant, similar to the Project.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Fire and Emergency Medical Services

During construction of Alternative 2, emergency access to the Project site would be maintained through compliance with the CTMP, required by mitigation measure MM TR-1. Alternative 2 would add 10,500 residential units and substantially increase employment-generating uses, resulting in an employment population of 10,730. The increase in the residential and daytime employment population (for a total population of 35,195, including a residential population of 24,465 plus 10,730 employees), combined with an increase in the intensity of physical development on the Project site, would result in new demand for fire protection and emergency medical services. As Alternative 2 would implement the same land use program as the Project, the demand for emergency services would be the same as for the Project.

Construction of a new SFFD facility on land designated for community-serving uses on the Project site (where costs would be borne by the Project Applicant), would allow the SFFD to maintain acceptable response times for fire protection and emergency medical services. Similar to the Project, construction of 100,000 gsf of community facilities, which would include a new SFFD facility, would be included as a component of Alternative 2. Similar to the Project, prior to construction of new land uses at HPS Phase II, review of access strategies for game day and non-game day scenarios would be required pursuant to the SFFD's plan review requirements.¹³²⁷ Therefore, development under Alternative 2 would not require new or physically altered fire protection facilities to maintain acceptable response times. Additionally, compliance with all applicable provisions of the *San Francisco Fire Code* would ensure that this impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Schools

A total of approximately 2,131 school-age children would live within the Project site following full build-out of Alternative 2. While schools in the Project vicinity have approximately 49 percent capacity remaining in the 2008/09 school year, it is likely that a 12 percent overcapacity of SFUSD as a result of citywide population growth by 2030 would occur. Similar to the Project, the payment of school impact

¹³²⁷ San Francisco Fire Department, Plan Check website. http://www.sfgov.org/site/sffd_page.asp?id=57395 (accessed August 2009).

fees pursuant to SB 50 would constitute full mitigation for any potential schools impacts. This impact is considered less than significant for development under Alternative 2, the same as for the Project.

Libraries

Construction of Alternative 2 would not result in impacts to the San Francisco Public Library system (SFPL). No library branches are located on the Project site. All library services would be available to the community throughout the duration of construction. As such, no impact to library services during construction of Alternative 2 would occur.

Residential and nonresidential development associated with Alternative 2 would increase demand for local library services in the Bayview neighborhood. Although this alternative would result in a substantial direct and indirect population increase within the Bayview neighborhood, library branches serving the Project site, including the Portola, Visitacion Valley, and the Bayview branches would continue to meet the demands of the community. In addition to the three library branches serving Alternative 2, the proposed development would include space dedicated to library services to supplement the Bayview branch library. As part of Alternative 2, a 1,500 gsf reading room and automated book-lending machines would be integrated into the community retail and public facilities uses. The SFPL branches, and the dedication of space to accommodate library services on the Project site in order to supplement SFPL branches, would accommodate increased demand from development under this Alternative. No additional library facilities would be required to accommodate development of Alternative 2. Therefore, no new or physically altered library facilities would be required in order to maintain acceptable service ratios and this impact is considered less than significant for development under Alternative 2, the same as for the Project.

Recreation

Implementation of Alternative 2 would include the same parks and open space areas as the Project. Similar to the Project, Alternative 2 would also include a land agreement with the CPSRA, which would result in improvements to the CPSRA. Construction activities associated with the proposed parks and recreational facilities are considered part of the overall development footprint. Since this Alternative is so similar to the Project, construction impacts anticipated to result from implementation of this Alternative are analyzed throughout the technical sections of this EIR. Such impacts would be temporary and would be mitigated by measures identified in Section III.D (Transportation and Circulation), Section III.H (Air Quality), Section III.I (Noise), and Section III.K, Section III.M, and Section III.N (Biological Resources). These measures address construction-related impacts including, but not necessarily limited to, traffic and circulation, air quality, noise, exposure to hazardous material, and soil erosion, which would help reduce potential impacts to recreational resources. Construction impacts associated with development of new parks and recreational facilities would, therefore, be less than significant as demonstrated in the sections referred to above, the same as for the Project.

At build-out of Alternative 2, the projected population within the Project site would increase from approximately 1,113 residents to approximately 24,465 residents, while employment would increase from 529 jobs to approximately 10,730 jobs. Similar to the Project, parks and open space included in Alternative 2 would provide a ratio of about 14 acres of parkland per thousand residents, which is substantially higher than the benchmark ratio of 5.5 acres per thousand residents (refer to Section III.P).

The increase in population and employment could result in an increase in the use of existing parks, recreational facilities, and open space. However, similar to the Project, new and improved parks, recreational facilities, and open space would be provided as part of this alternative and would meet the increase in demand created by new residents and employees. During a given phase, however, park construction could lag behind residential development, leading the parkland-to-population ratio to drop below an acceptable level. Moreover, the development plan is conceptual, and could be modified during the entitlement and development process. Mitigation measure MM RE-2 would ensure that the parks and recreational amenities are constructed as residential and employment-generating uses are developed. Therefore, Alternative 2 would not result in substantial physical deterioration of existing parks and recreational facilities and impacts associated with the increase in demand for parks and open space would be less than significant, the same as for the Project.

The high-frequency BRT route around Yosemite Slough, rather than over the slough on the Yosemite Slough bridge as proposed under the Project, presents more at-grade bicycle and pedestrian conflicts for residents of the Bayview District seeking access to the slough and the Bay Trail. In the Project, the BRT is physically separated from the Bay Trail and connecting bicycle/pedestrian trails, eliminating crossing conflicts between the Bay Trail and the Bayview. This is a potentially significant impact that would not occur under the Project.

A windsurfing launch site is located in CPSRA. The tower plan at Candlestick Point would be the same as the Project. Windsurfing could potentially be impacted by the construction of tall structures at Candlestick Point in close proximity to the Bay that affect wind patterns and direction. Similar to the Project, windsurfing would not be substantially affected by build-out of Alternative 2.

Utilities

Water Supply

Alternative 2 would include the same water infrastructure as the Project. Impacts of construction activities associated with this infrastructure, including demolition and installation of new utility infrastructure, are discussed in Section III.D, Section III.H, Section III.I, Section III.J (Cultural Resources and Paleontological Resources), Section III.K, Section III.L (Geology and Soils), Section III.M, Section III.O (Public Services), and Section III.S (Greenhouse Gas Emissions) of this EIR. No new construction impacts beyond those identified in those sections would occur with construction of water conveyance or treatment infrastructure associated with the Project. The water required for construction activities is assumed to be supplied by water trucks and/or existing sources. No construction-related impacts associated with the consumption of water would occur with Alternative 2.

Alternative 2 would have the same residential and non-residential build-out as the Project and generate a total demand of approximately 1.67 mgd. As current water use from existing land uses at the Project site is approximately 0.3 mgd, the net effect of the Alternative 2 on water demand would be an increase of approximately 1.37 mgd.¹³²⁸ As stated in the Water Supply Assessment provided for the Project, the SFPUC projects that adequate supply would be available to satisfy all retail demand, including Project-

¹³²⁸ Water demand for this alternative was estimated by prorating water demand for the Project (presented in Table III.Q-4) based on build-out of Alternative 2.

related demand, under normal conditions (refer to Appendix Q1). Therefore, there would be sufficient water supplies to accommodate the water demand of Alternative 2. This is considered to be a less-than-significant impact. Similar to the Project, implementation of Alternative 2 would not require or result in the construction of new or expanded water treatment facilities, and this impact would be less than significant.

Implementation of Alternative 2 would require expansion of the existing off-site AWSS by providing an AWSS loop at Candlestick Point that would connect to the planned extension of the existing off-site AWSS on Gilman Street from Ingalls Street to Candlestick Point. At HPS Phase II, the AWSS would be connected to the existing AWSS system at the intersection of Earl Street and Innes Avenue and at the Palou Avenue and Griffith Avenue intersection with a looped service along Spear Avenue/Crisp Road. Implementation of the identified mitigation measure (MM UT-2) would ensure the provision of adequate water for on-site fire-fighting purposes, and the Project would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements for water to fight fires. The impact is less than significant with implementation of this mitigation measure, the same as for the Project.

Wastewater

Under Alternative 2, the Candlestick Point development would discharge a maximum peak flow of 1,479 gpm to the Candlestick tunnel sewer, which has an existing unused capacity of 28,035 gpm in dry weather. This flow would combine with a maximum peak flow of 979 gpm from the HPS Phase II into the Hunters Point tunnel sewer. The total maximum peak Project flows of 2,458 gpm would combine in the Hunters Point tunnel sewer, which has an existing unused capacity of 69,853 gpm in dry weather. This represents 3.5 percent of the available capacity of the Hunters Point tunnel sewer, which could be accommodated by the existing off-site infrastructure.

The wastewater generated under Alternative 2 would be the same as the Project. As with the Project, it is possible that a temporary increase in CSO volume could occur during wet weather if structures are occupied and contribute wastewater to the Combined Sewer System prior to completion of the separate stormwater and wastewater infrastructure of Alternative 2. Implementation of the identified mitigation measure (MM UT-3a) would ensure that there would be no increase in CSO flows as a result of the Project by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for the Project. The impact on the Combined Sewer System would be reduced to less than significant, the same as the Project.

The wastewater generated under Alternative 2 would be the same as the Project. The current remaining treatment capacity of the SWPCP would accommodate the increase in wastewater flows from the Project development. Overall flows during wet weather would decrease, indicating that the proposed diversion of wet-weather flows away from the combined system would offset the increase in dry-weather flows, assuming completion of utility infrastructure prior to occupancy of Alternative 2. Based on this analysis, the overall volumes in the Bayside system during wet weather would be less than under existing conditions with implementation of the Project. It is possible that a temporary increase in CSO volume could occur (which could affect the capacity of the SWPCP for treatment) during wet weather, as noted, above. Implementation of the identified mitigation measure (MM UT-3a) would reduce this impact to

less than significant by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for the Project. Thus, the Project would not result in any net increase in CSO volume in the Bayside system during wet weather. A less-than-significant impact to existing off-site treatment facilities would occur, the same as the Project

Development associated with Alternative 2 would incrementally contribute wastewater during dry and wet-weather events to the Combined Sewer System operated by the SFPUC, but overall, wet-weather volumes would decrease in the Bayside system with construction of the Project's separate stormwater and wastewater systems. Compliance with any applicable permit requirements, as monitored and enforced by the SFPUC, would ensure that the Alternative 2 would not exceed the applicable wastewater treatment requirements of the RWQCB. In addition, Alternative 2 would not cause the City to exceed the requirements of the NPDES permit for the reasons previously stated and because the flows during wet weather would actually decline compared to existing flows from the Project site. This impact would be less than significant, the same as the Project.

Solid Waste

Demolition of existing facilities within the Project site under Alternative 2 would generate approximately 971,785 tons of construction debris. Some construction and demolition debris would be reused on site, while other materials would be transported off site for separation. Materials that cannot be reused or recycled would be transported to the landfills in the area. With implementation of the identified mitigation measure (MM UT-5a), the Project Applicant would be required to submit a Waste-Diversion Plan demonstrating strategies to divert at least 75 percent of total construction wastes before receiving building permits. This would reduce construction debris transported to the landfill to 25 percent, or 242,946 tons. At an average density of 1 ton per cubic yard, this equals 242,946 cubic yards, or 0.5 percent of the available capacity at Altamont Landfill as of 2009.

At current disposal rates, the Altamont Landfill would be expected to reach capacity in January 2032; however, it may close three years earlier, in January 2029.¹³²⁹ Under Alternative 2, demolition activities, which generate construction debris, are expected to conclude in 2024 at Candlestick Point and in 2021 at HPS Phase II, a minimum of five years before the landfill is expected to close. Further, the City requires the diversion of at least 65 percent of construction waste, as also required by MM UT-5a, which would reduce the amount of waste interred at the landfill. Further, the City continues to actively explore various waste-reduction strategies with the goal of moving towards zero waste. If the City achieves this goal, the impact of construction of the Alternative 2 on solid waste would be further reduced. The impact of the construction waste generated by the Alternative 2 on the capacity of the Altamont Landfill would be less than significant, substantially similar to the Project.

Construction activities, including demolition and excavation, could require disposal of hazardous wastes such as asbestos, lead-based paint, and contaminated soils. These would require disposal by a licensed transporter to a TSD authorized to treat such hazardous waste. Disposal of these wastes would occur intermittently during the construction period, and would not likely represent a substantial amount of hazardous waste in a given year. Currently, TSDs in California and adjoining states have sufficient capacity to accommodate all hazardous wastes (refer to Setting). Depending on a number of factors,

¹³²⁹ CIWMB, 2009.

some soil would be transported off site for disposal and some soil may be transported to other areas of the site. Contaminated soils may require transportation off site and treatment at authorized TSDs. Because the TSDs in California and adjoining states have sufficient capacity to treat hazardous wastes, construction of Alternative 2 would not generate hazardous wastes (construction debris or contaminated soil) that would exceed the capacity of TSDs authorized to treat such waste. This would be a less-than-significant impact, substantially similar to the Project.

At full build-out, Alternative 2 would generate approximately 21,827 tons annually when all uses are fully operational and assuming no waste-reduction measures. This would represent approximately 3.7 percent of the total waste generated in San Francisco as of 2008 (approximately 594,732 tons). All residents and businesses of Alternative 2 would be required to comply with the City's mandatory recycling and composting ordinance. In addition, consistent with the City's goal of achieving zero waste by the year 2020, the Project Applicant would prepare a Site Waste Management Plan as required by the identified mitigation measure (MM UT-7a.1) that would specify the methods by which the Alternative 2 would divert operational solid waste to assist the City in achieving its diversion goals. The impact of operational solid waste generated by Alternative 2 on the capacity of the Altamont Landfill (and/or the landfill with which the City contracts at the close of the current selection process) would be less than significant, the same as the Project.

Nearly all uses under Alternative 2 would involve the routine use of hazardous materials at varying levels that would require disposal. Quantification of precise amounts of additional hazardous materials use associated with new proposed uses is not practical at this stage of Project development. Therefore, it is assumed that a variety of hazardous materials could be used in small quantities, ranging from R&D in which a wide variety of hazardous materials would be used, to facilities such as the proposed stadium, where fuels and maintenance products would comprise the majority of hazardous materials, to smaller-scale users, such as artists' studios, and the marina, where small quantities of fuel could be utilized. The amounts of hazardous waste that would be generated by such uses would not be substantial. In addition, new residents and businesses would be expected to comply with all hazardous waste regulations, including the disposal of household hazardous waste. Because the minimal amount of hazardous waste that would be generated by the Alternative 2 could be accommodated by existing TSD facilities, this impact would be less than significant, the same as the Project.

Electricity, Natural Gas, and Telecommunications

The proposed utility infrastructure improvements for Alternative 2 would include the construction of a joint trench for electrical, natural gas, cable TV, and telecommunications, the same as for the Project. As the only difference between this alternative and the Project is the elimination of the Yosemite Slough bridge and diversion of traffic around the Yosemite Slough instead of across it, utility infrastructure would not be substantially different from that proposed under the Project. Therefore, impacts would remain the same as the Project, and less than significant.

Energy

Construction activities associated with implementation of Alternative 2 would require energy sources including electricity, diesel, and gasoline. Similar to the Project, the construction activities for Alternative 2 would not include unusual or atypical activities that would result in a higher-than-average

demand for fuels. Construction would consist of temporary activities that would not generate a prolonged demand for energy and would be subject to requirements to minimize wasteful fuel consumption. Energy use during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge would not occur. Furthermore, given the type of development proposed under this Alternative, the energy demand created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related energy use associated with development under Alternative 2 would be considered less than significant.

Implementation of Alternative 2 would result in baseline electricity consumption similar to the Project and would include the energy savings associated with the Project Applicant's commitment to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, those efficiency measures would result in consumption of at least 5.4 percent less electricity than a project that would not implement such measures. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential electricity use impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, and MM GC-4, which would require installation of energy efficient lighting, would reduce electricity consumption impacts of Alternative 2 to less than significant.

Implementation of Alternative 2 would result in baseline natural gas consumption similar to the Project and would include efficiency measures similar to the Project resulting in the use of approximately 13 percent less natural gas than a development project without such measures. Those efficiency measures would result in consumption of at least 13 percent less natural gas than a development project without such measures. In addition, the Project Applicant will also implement renewable energy strategies, such as the use of photovoltaic cells to provide electricity and the use of solar thermal energy to provide space cooling with the use of absorption systems and/or water for space heating and domestic water systems. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential natural gas consumption impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, and mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, would reduce natural gas consumption impacts to less than significant.

Alternative 2 would increase trips to and from the Project site, increasing the use of petroleum fuels. Based on average fuel efficiencies for the City and a VMT similar to that of the Project, this Alternative would result in a demand for 14.01 million gallons of gasoline and 0.93 million gallons of diesel annually.

Similar to the Project, fuel consumption resulting from travel to and from the Project site would be five times as high as under existing conditions, indicating a large increase in consumption. However, this consumption would not be wasteful because (1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel. However, Alternative 2 lacks the direct, grade-separated BRT connection between Candlestick Point and HPS Phase II that the Yosemite Slough bridge would provide in the Project. This would result in an estimated delay of up to 7 minutes in transit travel times, which would result in fewer transit trips and more automobile trips and an increase in consumption of energy. Similarly, reductions in walking and bicycle trips between Candlestick Point and HPS Phase II that would be accommodated on the Project's bridge could result in increased drive trips and energy use.

Nevertheless, these reductions in transit, bicycle, and pedestrian trips and resulting increases in automobile trips would not likely create a significant energy consumption impact when compared to the Project. Therefore, similar to the Project, Alternative 2 would not be wasteful with respect to petroleum fuel consumption, and impacts are considered less than significant.

Greenhouse Gas Emissions

Similar to the Project, construction activities associated with implementation of Alternative 2 would emit GHGs associated with diesel and gasoline consumption. Similar to the Project, the construction activities for Alternative 2 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not be a prolonged source of GHG emissions. GHG emissions during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge would not occur. Furthermore, given the type of development proposed under this Alternative, the GHG emissions created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related GHG emissions and climate change associated with development under Alternative 2 would be considered less than significant.

Implementation of Alternative 2 would result in baseline GHG emissions similar to the Project and would include the GHG emission reductions associated with mitigation measures, including MM GC-1 through MM GC-4, which require the implementation of the Project Applicant's conceptual commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, Alternative 2 would increase trips to and from the Project site compared to existing conditions, increasing the GHG emissions associated with transportation. However, this Alternative would also include the Project Applicant's commitment to reduce transportation related GHG emissions: (1) this Alternative would include measures to minimize

transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of GHGs emitted by shortening trip lengths and shifting trips from vehicular modes of travel. Similar to the Project, those efficiency measures would result in approximately 51 percent less GHG emissions than a project that would not implement such measures. However, Alternative 2 lacks the direct, grade-separated BRT connection between Candlestick Point and HPS Phase II that the Yosemite Slough bridge would provide in the Project. This would result in an estimated delay of up to 7 minutes in transit travel times, which would result in fewer transit trips and more automobile trips and an increase in consumption of energy. Similarly, reductions in walking and bicycle trips between Candlestick Point and HPS Phase II that would be accommodated on the Project's bridge could result in increased drive trips and energy use.

Nevertheless, these reductions in transit, bicycle, and pedestrian trips and resulting increases in automobile trips would not likely create a significant energy consumption impact when compared to the Project. Similar to the Project, Alternative 2 would not be wasteful with respect to petroleum fuel consumption. Thus, GHG emissions at the Project site under development of Alternative 2 would not inhibit the achievement of the goals of AB 32 or the SFCAP. Similar to the Project, GHG emissions and climate change impacts would be less than significant.

BAAQMD is considering the future adoption of quantitative CEQA thresholds of significance for operational-related GHG emission impacts. At present, two options relevant to the Project are under consideration for operational GHG emission thresholds; the lead agency can choose either option. Option 1 is based on a project's total operational GHG emissions of 1,100 metric tonnes CO₂e per year. The Project's total operational emissions would exceed this level, which means that if this was used, the Project would be significant. Option 2 is based on the amount of a project's operational GHG emissions per service population, set at 4.6 metric tonnes CO₂e per year. In anticipation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the Project's operational GHG emissions under the proposed thresholds of significance identified above. The BAAQMD thresholds stated above are still in draft form and may undergo additional changes before being finalized; a revised version is expected Monday, November 2nd. The methodologies presented in this EIR for quantification of GHG operational emissions is based on using more refined data sources than indicated in the BAAQMD guidance and are the most appropriate to use for Alternative 2 and the Project.

With mitigation, the Project-related operational emissions of 154,639 result in 4.5 tonnes CO₂e per service population per year based on a service population of 34,242 (this accounts for 23,869 net new residents and all jobs except for the stadium jobs, which already exist, 10,373). Therefore, the Project-related operational emissions would be less than 4.6 tonnes CO₂e per service population per year and would result in a less-than-significant impact on climate change. Alternative 2 would not measurably change the parameters of the Project land use program, and thus this analysis applies to Alternative 2.

■ Attainment of Project Objectives

Alternative 2 would meet most of the Project objectives, although it would meet transportation-related objectives to a lesser extent than the Project because this Alternative would not include the Yosemite Slough bridge. Refer to Table VI-4 (Attainment of Project Objectives Alternative 2) below for a discussion of each objective.

Table VI-4 Attainment of Project Objectives Alternative 2

Objective	Meets Project Objective?	Analysis
1. The integrated development should produce tangible community benefits for the Bayview and the City.	Y-	Alternative 2 would include the same development program and uses as the Project, resulting in the same range of job and economic development opportunities. This alternative would renovate and replace the artist studios at HPS Phase II and create a permanent space for artists. Alternative 2 would include the same shoreline improvements and open space network including a Bay Trail extension along the shoreline and the same improvements to the CPSRA as the Project. However, there would be no grade-separated, direct transit connection and no continuous shoreline and open space access between Candlestick Point and HPS Phase II because the Yosemite Slough bridge would not be constructed. Therefore, while Alternative 2 would meet this Project objective, it would not meet it to as great an extent as the Project.
2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents.	Y-	Alternative 2 would include the same development program and uses as the Project. The proposed mix of uses and urban design concepts would provide a direct physical, visual, and architectural connection to the Bayview neighborhood and City. This alternative also includes extension of the transportation network into the Project site. Those connections would allow residents of the Bayview neighborhood and City to access the commercial, cultural, and institutional opportunities at the Project site. However, this alternative would not include the Yosemite Slough bridge (thereby precluding a direct connection between CP and HPS, particularly for transit). Therefore, while Alternative 2 would meet this Project objective, it would not meet it to as great an extent as the Project.
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourages the rebuilding of Alice Griffith Public Housing.	Y	Alternative 2 would include a variety of unit types, sizes, and structures, and a wide range of affordability levels. This alternative would also include the redevelopment of the Alice Griffith Public Housing site. Therefore, Alternative 2 would meet this Project objective.
4. The integrated development should incorporate environmental sustainability concepts and practices.	Y	Alternative 2 would include the same sustainability principles and concepts as the Project. Therefore, Alternative 2 would meet this Project objective.
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure.	N	Alternative 2 would provide automobile, public transportation, and pedestrian connections similar to the Project. However, this alternative would not include construction of the Yosemite Slough bridge. Therefore, this Alternative 2 would not facilitate the efficient handling of game day traffic to as great an extent as the Project. Therefore, Alternative 2 would not meet this Project objective.
6. The integrated development should be fiscally prudent, with or without a new stadium.	Y	Development of Alternative 2 would increase sales tax revenue to the City to a similar extent compared to the Project and include a development program that would encourage substantial private capital investment. Alternative 2 would meet this Project objective.

Y = Alternative does meet Project objective.

Y- = Alternative meets Project objective, but to a lesser extent than the Project.

Y- = Alternative meets Project objective, but to a significantly lesser extent than the Project.

N = Alternative does not meet Project objective.

VI.C.3 Alternative 3: Reduced CP-HPS Phase II Development; San Francisco 49ers Stay at Existing Candlestick Park Stadium; Limited State Parks Agreement; Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

■ Summarized Description

Alternative 3 is a reduced-development alternative, including a reduction in residential units by approximately 50 percent and by approximately 28 percent in commercial development. This alternative assumes that the 49ers football team would continue to use the existing Candlestick Park stadium and HPS Phase II would not include a new stadium. Consequently, the population growth anticipated under this alternative would be approximately 12,319 compared to approximately 24,465 under the Project. A limited State Parks agreement would occur to allow redevelopment of the Alice Griffith Public Housing site and construction of the Yosemite Slough bridge and approach. Alternative 3 would not include other new development at Candlestick Point.

Table VI-5 (Comparison of Alternative 3 and Project Build-Out) presents a comparison of the uses proposed on the Project site under the Project and Alternative 3. Figure VI-2 (Alternative 3 Land Use Plan) illustrates the land use plan for Alternative 3.

■ Detailed Description

Candlestick Point

New development at Candlestick Point with Alternative 3 would include replacement of the Alice Griffith Public Housing and the construction of 1,210 additional housing units at the site. Alternative 3 would include a limited State Park agreement to provide a right-of way for transit, bike, and pedestrians on the Yosemite Slough bridge because the bridge approach at Candlestick Point would cross the CPSRA. The agreement would also allow for the redevelopment of the Alice Griffith Public Housing site, including 2.43-acres of State Parks–owned land. Compared to the Project, no retail, community service, hotel, or parks and open space uses would be developed. The existing Candlestick Park stadium and parking would remain. Besides the limited State Parks agreement, the CPSRA would remain and retain its existing configuration. All other existing uses at Candlestick Point would remain.

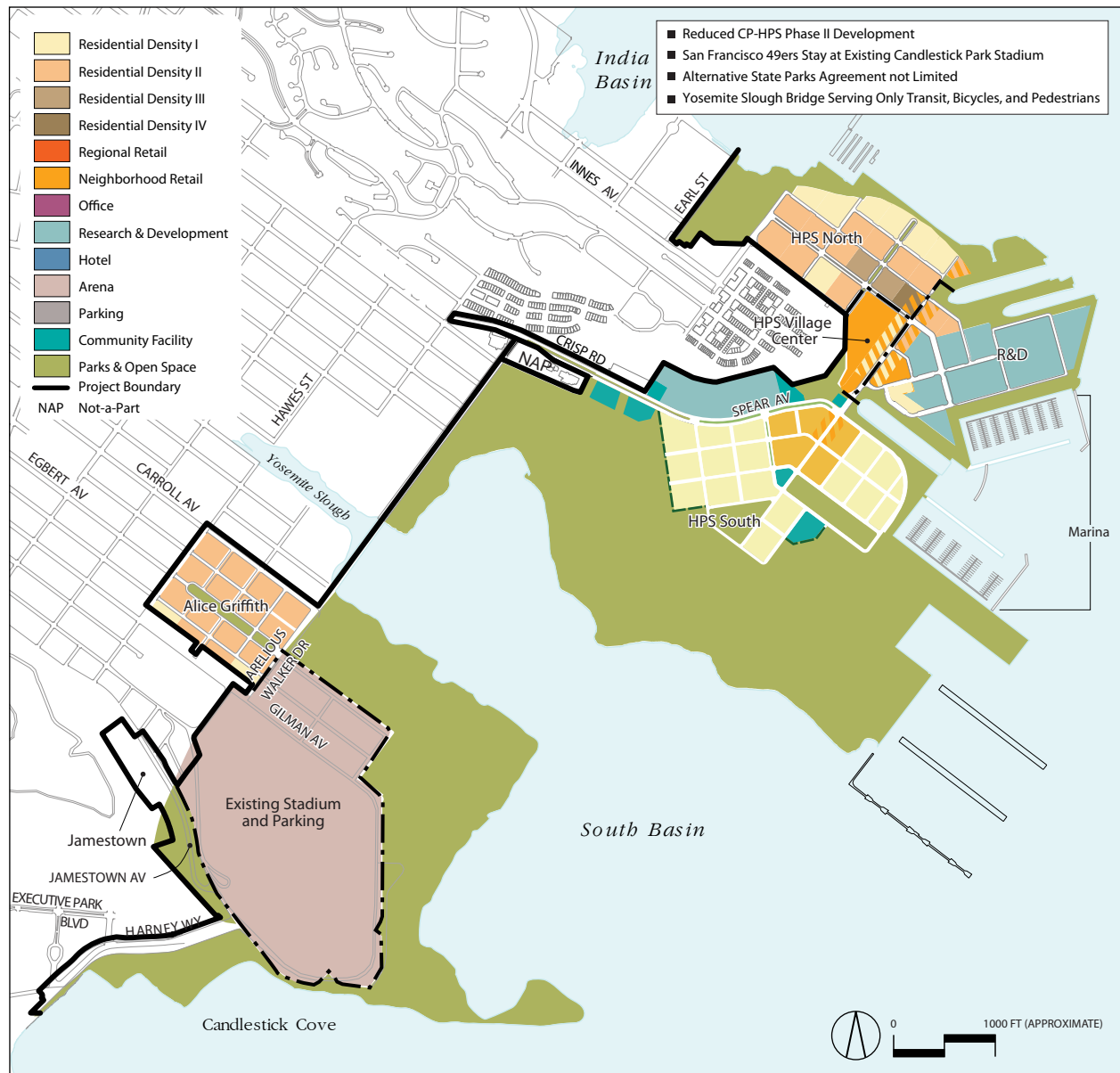
HPS Phase II

The Alternative 3 land use program at HPS Phase II would include development of 4,000 housing units, 1,350 more units than proposed at the HPS Phase II site with the Project. The additional housing would be in the HPS South district, the site of the proposed stadium under the Project. All other uses would be the same as the Project, including retail, R&D, artists' studios, community services, marina, and parks and open space. Figure VI-2 illustrates the land use plan for Alternative 3.

Table VI-5 Comparison of Alternative 3 and Project Build-Out			
<i>Use</i>	<i>Alternative 3</i>	<i>Project</i>	<i>Comparison to Project</i>
Candlestick Point			
Residential (units)	1,210	7,850	-6,640
Retail (gsf):	0		
Regional Retail	0	635,000	-635,000
Neighborhood Retail	0	125,000	-125,000
Community Services	0	50,000	-50,000
Hotel (gsf)	0	150,000	-150,000
Office (gsf)	0	150,000	-150,000
10,000-seat Arena (gsf)	0	75,000	-75,000
Football Stadium (seats)	70,000 (existing)	0	70,000
HPS Phase II			
Residential (units)	4,000	2,650	+1,350
Neighborhood Retail (gross square feet - gsf)	125,000	125,000	0
Research & Development (gsf)	2,500,000	2,500,000	0
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Community Services	50,000	50,000	0
Football Stadium (seats)	0	69,000	-69,000
Marina (slips)	300	300	0
Totals			
Residential (units)	5,210	10,500	-5,290
Retail (gsf)	125,000	885,000	-760,000
Community Services	50,000	100,000	-50,000
Research & Development (gsf)	2,500,000	2,500,000	0
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Other Elements			
Yosemite Slough bridge	Transit, bike, and pedestrians only	Yes	—
Football stadium (seats)	0	69,000	-69,000
Shoreline Improvements	Yes	Yes	—
State Park Agreement/total acres of State Parkland	Yes/117.2 ^a	Yes/96.7	+21.5

SOURCE: Lennar Urban, PBS&J, 2009.

a. Limited exchange of 3.03 acres to construct BRT/pedestrian only Yosemite Slough bridge and Alice Griffith Public Housing



SOURCE: Lennar Urban, 2009.

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FIGURE VI-2

Candlestick Point — Hunters Point Shipyard Phase II EIR
ALTERNATIVE 3 LAND USE PLAN

■ **Transportation and Circulation (with Transit, Bike, and Pedestrian-Only Yosemite Slough Bridge)**

A new Yosemite Slough bridge serving transit, bike, and pedestrian traffic only would extend Arelious Walker Drive from Candlestick Point to HPS Phase II. The bridge would be approximately 40 feet wide and would cross the Slough at its narrowest point at the same location as the Project. The bridge and its approach streets would have two dedicated transit lanes and a separate Class I bicycle and pedestrian lane, which would be open at all times.

The primary roadway connection for automobiles and other vehicular traffic between Candlestick Point and HPS Phase II would be west on Carroll Avenue to Ingalls Street, north along Ingalls Street to Thomas Avenue, and east on Thomas to Griffith Street. Ingalls Street would remain an industrial mixed-use street with two auto lanes and parking and loading zones on its northern and southern sides. The width of sidewalks on that portion of Ingalls Street from Carroll Avenue to Yosemite Avenue would be decreased from 16 feet to 11 feet to create a uniform street width to accommodate the auto lanes, parking, and loading.

■ **Basis for Impact Analysis**

For the Project, the potential impacts are generally based on the parameters of the Project, which include the size, bulk, and type of development, the footprint of development, and the number of residents, employees, and visitors to the Project site. For Alternative 3, the impacts of the Project are compared to the impacts of a reduced development program. The development program of Alternative 3 would be the same as the development program of the Project, with the following exceptions:

- Construction of 5,210 residential units, which is approximately 50 percent less than the Project
- Construction of 125,000 gsf of neighborhood retail and 50,000 gsf of community services space, which is 50 percent less than the Project
- No construction of regional retail, office, hotel, or arena uses
- Development at Candlestick Point would only include redevelopment of the Alice Griffith Public Housing site and the bridge approach to the Yosemite Slough
- A limited State Parks land agreement that allows for redevelopment of the Alice Griffith Public Housing site and construction of the south approach to the Yosemite Slough bridge
- The San Francisco 49ers stadium at HPS Phase II would not be constructed and the existing Candlestick Park stadium would remain
- Development at the proposed San Francisco 49ers stadium site at HPS Phase II would include residential and retail uses
- Construction of the Yosemite Slough bridge for transit, bicycle, and pedestrian use only (no automobile use)

With a limited State Parks land agreement, there would be a reduced funding mechanism for future maintenance of the parks on site. Additionally, approximately 21 acres of State Parks land would not be transferred for development at Candlestick Point compared to the Project.

■ Potential Impacts

Land Use and Plans

Implementation of Alternative 3 would require amendments similar to the Project for the following planning documents: *City of San Francisco General Plan*, *Bayview Hunters Point Redevelopment Plan*, *Hunters Point Shipyard Redevelopment Plan*, *Bay Plan*, *San Francisco Bay Area Seaport Plan*, and *CPSRA General Plan*. However, with implementation of the requirements and mitigation measures identified for the Project in Section III.C through Section III.S of this EIR, development under Alternative 3 would not conflict with any applicable land use plans, policies, or regulations (of an agency with jurisdiction) adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, development under this Alternative would not conflict with any of the policies, goals, and strategies analyzed for the Project. Similar to the Project, this impact would be less than significant.

Implementation of Alternative 3 would not result in a substantial adverse change in the existing land use character. While Alternative 3 would provide 50 percent fewer residential units than the Project, development under this Alternative would still improve the character of the Alice Griffith Public Housing site and substantially change HPS Phase II from industrial uses to an urbanized area representative of other areas in San Francisco. This change would improve deteriorated conditions and connectivity, as well as provide numerous areas of open space, extensive landscaped areas, pleasing architecture, and shoreline improvements, all of which would improve the character of the site. Furthermore, without construction of the San Francisco 49ers stadium and the continuance of Candlestick Park stadium, changes to the existing land use character would be less than those created by the Project. Therefore, changes resulting from development under Alternative 3 would not be considered adverse changes. Furthermore, the transition in scale between adjacent neighborhoods and development under this Alternative, as well as the varied range of proposed uses at HPS Phase II would not result in a substantial adverse change in the existing land use character of the Project area. Similar to the Project, this impact would be less than significant.

With a limited State Parks land agreement, there would be minimal changes to State Parks land use within the Project site; the agreement only provides enough land to redevelop the Alice Griffith Public Housing site and the south approach to the Yosemite Slough bridge. Approximately 21 acres of State Parks land would not be transferred for development at Candlestick Point compared to the Project. Therefore, there would be minimal impacts to the land use character of State Parks, which would be less than the Project.

Population, Housing, and Employment

Construction activities associated with implementation of Alternative 3 would induce direct job growth at the site. In comparison to the Project, the number of construction workers would be substantially reduced because the development at Candlestick Point would be limited to redevelopment of the Alice Griffith Public Housing site. The limited State Parks land agreement would allow for lesser development than the Project, and the San Francisco 49ers stadium would not be constructed. It is anticipated that construction employees would commute from elsewhere in the region, rather than relocate to the Bayview Hunters Point neighborhood for a temporary construction assignment. Thus, construction of

this Alternative would not generate a substantial, unplanned population increase. Impacts associated with construction employment would be less than significant.

Implementation of Alternative 3 would induce direct and indirect population growth, but this growth would not be considered substantial. Compared to the Project, which would develop a total of 10,500 residential units, this Alternative would develop 1,210 residential units at Candlestick Point and 4,000 residential units at HPS Phase II, for a total of 5,210 residential units. Employment growth would result in the demand for approximately 7,620 residential units, which would be greater than the total number of units being provided (approximately 7,005 jobs and 5,210 housing units). It is expected that approximately 55 percent of the workers would seek housing in the City (4,191 units). Based on existing commuting patterns, housing demand in other communities is estimated to be 45 percent of total housing demand (3,429 units).¹³³⁰ This would result in a surplus of jobs that could lead to an increased demand for housing units and adverse impacts to the Bayview neighborhood or other areas of the City that would not occur under the Project.

Transportation and Circulation

Alternative 3, with reduced development, residential development would be decreased and retail and arena uses would not be developed at Candlestick Point. At HPS Phase II, housing would be increased; other uses at HPS Phase II would be similar to the Project. The new Yosemite Slough bridge serving only transit, bike, and pedestrian traffic would extend Arellous Walker Drive from Candlestick Point to HPS Phase II. This alternative assumes that the 49ers football team would continue to use the existing Candlestick Park stadium.

The Transportation Study analyzed Alternative 3 and conclusions from the Transportation Study are presented below.

Construction Impacts

Construction activities associated with Alternative 1 would be similar reduced compared to effects with the Project. Localized construction-related traffic impacts would remain significant and unavoidable.

Intersection LOS

Alternative 3 would have reduced project and cumulative effects at some study intersections. Section III.D discusses traffic effects at those intersections, and the feasibility of mitigation measures. In general, intersection conditions would be significant and unavoidable effects of Alternative 3.

Game day traffic conditions would continue to occur at existing Candlestick Park stadium.

Freeway Conditions

Alternative 3 freeway mainline sections effects, freeway ramp junctions conditions, and ramp queuing effects would generally be similar to the Project conditions. Alternative 3 would have reduced effects at

¹³³⁰ Total employment was estimated using the employment factors presented in Table III.C-7 of this EIR and a total population of 12,239. Based on existing commuting patterns, housing demand in San Francisco is estimated to be 55 percent of total housing demand housing demand in other communities is estimated to be 45 percent of total housing demand.

the US-101/Alemany northbound on-ramp (LOS E compared to LOS F with the Project); US-101/Alana/Harney/Geneva southbound on-ramp (LOS C compared to LOS F); US-101/Harney northbound on-ramp Sunday PM (LOS D compared to LOS E); US-101/Bayshore/Chavez northbound on-ramp (LOS D compared to LOS F). Queues on the US-101/Harney northbound off-ramp would not extend onto the mainline segment in Sunday PM conditions. Other freeway impacts with Alternative 3 would be significant and unavoidable.

Transit Impacts

Alternative 3 transit conditions assume implementation of Project-related transit improvements. Alternative 3 would have a less than significant impact on local and regional transit capacity. However, as with the Project, transit impacts would occur from traffic congestion delay. Overall, those transit delay conditions with Alternative 3 would affect the same lines as with the Project as presented in Section III.D, Impact TR-21 to Impact TR-30. As concluded in Section III.D, the transit delay effects would remain significant and unavoidable. During the AM and PM peak hour, Alternative 3 would require 20 additional vehicles on the same routes as the Project, compared to up to 28 vehicles with the Project.

Bicycle Impacts

The Alternative 3 bicycle trips would be accommodated within the proposed street and network; impacts on bicycle circulation would be less than significant.

Pedestrian Impacts

The Alternative 3 pedestrian trips would be accommodated within the proposed sidewalk and pedestrian network; impacts on pedestrian circulation would be less than significant.

Parking Impacts

Alternative 3 would result in a demand for about 10,835 spaces, compared with a maximum permitted supply of about 8,990 spaces; therefore, the maximum off-street parking supply would be about 1,845 spaces fewer than the estimated peak demand. The Project would have a demand for 21,233 spaces and maximum supply of 16,874 spaces, about 4,360 spaces fewer than estimated peak demand. As noted for the Project, it is possible that some drivers may seek available parking in adjacent Bayview residential areas to the west. The potential increase in parking demand in adjacent neighborhoods would likely spill over to streets with existing industrial uses in the vicinity, which could, in turn, increase demand for parking in nearby Bayview residential areas. The loss of parking may cause potential secondary effects, which would include cars circling and looking for a parking space in neighboring streets. The secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to some drivers, who are aware of constrained parking conditions in a given area, shifting to other modes. Hence, any secondary environmental impacts that may result from a shortfall in parking would be minor. Therefore, the parking shortfall would not result in significant parking impacts, and Alternative 3 impacts on parking would be less than significant.

This alternative would have less than significant effects on other transportation conditions (loading, air traffic, emergency access).

Aesthetics

The construction period and intensity associated with implementation of Alternative 3 would be reduced compared to the Project because the only development at Candlestick Point would be redevelopment of the Alice Griffith Public Housing site and the San Francisco 49ers football stadium would not be constructed at HPS Phase II. Instead, residential and retail uses would be constructed on the stadium site. Additionally, development under Alternative 3 would result in the construction of 5,210 residential units, which is approximately 50 percent less than the Project. However, construction under Alternative 3 would involve similar types of construction activities compared to the Project. Like the Project, those activities would be visible to surrounding land uses and could impact views of scenic vistas and scenic resources in the area. However, any impacts to views would be temporary visual distractions typically associated with construction activities and commonly encountered in developed areas. The development area of Alternative 3 is substantially reduced compared to the Project, so temporary impacts on scenic vistas would be reduced compared to the Project. Like the Project, construction activities associated with Alternative 3 would have a less-than-significant impact on scenic vistas.

The Project site contains no scenic resources that would be permanently adversely affected by construction activities. As with the Project, construction activities for Alternative 3 would result in exposed trenches, roadway bedding (soil and gravel), spoils/debris piles, and possibly steel plates that would be visible during construction of the utility infrastructure improvements. Although these activities would take place primarily on site, views of the activities could be available from surrounding land uses. As with the Project, implementation of the identified mitigation measure (MM AE-2) would require the Project developer of Alternative 3 to screen construction sites from public view at street level, provide for appropriate staging of construction equipment, and maintain the cleanliness of construction equipment. The San Francisco 49ers stadium would not be constructed. Therefore, the potential impacts of construction activities on the visual character or quality of the site would be less than the Project, and less than significant.

The development area of Alternative 3 would be substantially reduced compared to the Project, with the majority of development occurring at HPS Phase II and no construction of the San Francisco 49ers stadium. Residential and retail uses would be constructed on the stadium site instead. Similar to the Project, construction of Alternative 3 would occur during daylight hours, and, therefore, glare could be created as a result of reflection of sunlight off windows of trucks and other construction materials that have the potential to generate glare (i.e., glass); however, similar to the Project, the glare created by construction activities at the Project site would not be substantial enough to affect daytime views in the area. Security lighting would be provided after hours on all construction sites, but this lighting would be minimal, restricted to the Project site, and would not exceed the level of existing night lighting levels in other urban areas of San Francisco. Construction activity under development of Alternative 3 would be less than the Project, therefore, creating less potential for glare impacts. In addition, construction lighting would comply with all City lighting requirements. Therefore, construction activities for development under Alternative 3 would have less-than-significant light and glare impacts, similar to the Project.

Development at HPS Phase II would not substantially block views of scenic vistas, including the Bay. Views of the East Bay and the Bay from HPS Phase II would be maintained on the site and within public access areas, such as from HPS Phase I Hilltop Park. While development of Alternative 3 would include

high-rise towers similar to the Project at HPS Phase II, those towers would not substantially obstruct views of the Bay or beyond from any long-range viewpoints. The Yosemite Slough bridge as proposed under the Project would not adversely impact long- or short-range views of the Bay or other scenic vistas. The Yosemite Slough bridge would be constructed with a narrower footprint compared to the Project and would not substantially impact to scenic vistas. Redevelopment of the Alice Griffith Public Housing site at Candlestick Point would not obstruct scenic vistas because the maximum height of development would be limited to 65 feet. Therefore, similar to the Project, development under Alternative 3 would not substantially obstruct any scenic vistas, and this impact would be less than significant.

Development under Alternative 3 would not substantially damage scenic resources that contribute to a scenic public setting. Scenic resources at HPS Phase II would be retained, including the Re-gunning crane. Shoreline improvements at HPS Phase II would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 3 would not damage or remove any identified scenic resources that contribute to a scenic public setting and the impact would be less than significant.

Development under Alternative 3 would result in fewer changes to the existing visual character of the Project site. In any event, such changes would be the same as for the Project, i.e., conversion of a degraded industrial area and open space to a more developed urban setting, which change would not be considered adverse. Alternative 3 would not substantially degrade the visual character or quality of the Project site area or its surroundings, the same as the Project. In fact, development under Alternative 3 would improve the degraded and deteriorated conditions at the HPS Phase II and Alice Griffith Public Housing sites. Shoreline improvements at HPS Phase II would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 3 would not substantially degrade the visual character or quality of the Project site or its surroundings. The impact would be less than significant, the same as for the Project.

Development under Alternative 3 would increase lighting on the Project site. However, the amount of new lighting would be substantially reduced because none of the Candlestick Point site would be developed with the exception of the Alice Griffith Public Housing. Furthermore, with a limited State Parks land agreement, a smaller portion of State Parks land would be developed; 21 fewer acres than with the Project. The San Francisco 49ers stadium would also not be constructed. Relative to existing outdoor lighting, new building surfaces at the HPS Phase II site and the Alice Griffith Public Housing site would increase the level of illumination in the area. Area lighting would illuminate larger areas that are well traveled so as to promote way finding and provide for a safe environment. In addition to area lighting, building lighting would be angled towards building surfaces for aesthetic purposes and/or to illuminate signs. Like the Project, both types of lighting would be designed to avoid direct visibility of the light source. City Resolution 9212 prohibits the use of highly reflective or mirrored glass in new construction. Implementation of the identified mitigation measures (MM AE-7a.1, MM AE-7a.2, MM AE-7a.3, and MM AE-7a.4) and compliance with City Resolution 9212 would reduce impacts from light and glare to a less-than-significant level by shielding lighting fixtures, minimizing spill light, screening vehicle headlights to the maximum extent feasible, and eliminating or minimizing increased glare by the use of non-

reflective glass and non-reflective textured surfaces within the proposed development area. Potential stadium lighting impacts would be avoided because the San Francisco 49ers stadium would not be constructed. Therefore, impacts from light and glare would be less than significant, and somewhat less than with the Project.

With a limited State Parks land agreement, there would be a limited established funding mechanism for future maintenance of the State Parks on site from the Project Applicant. Furthermore, as described in Recreation, below, increased use of the CPSRA as a result of population and employment growth associated with Alternative 3 is anticipated. Therefore, increased use of the CPSRA with only a limited established mechanism for future maintenance of the CPSRA could result in deterioration of the CPSRA. This could potentially result in a substantial adverse impact on the visual character and quality of the Project site. Without a greater funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. Therefore, development of Alternative 3 could result in a new adverse impact to the visual character and quality of the CPSRA, unless a funding mechanism is established. This impact would be greater than for the Project.

Shadows

Development under Alternative 3 would include similar heights, layouts, and orientations of buildings as the Project. However, as discussed above, the development program under Alternative 3 would be reduced. A limited State Parks land agreement would only allow for redevelopment of the Alice Griffith Public Housing site at Candlestick Point along with the bridge approach to the Yosemite Slough. New structures in the Alice Griffith Public Housing site would have maximum heights of 65 feet and Gilman Park would experience no new shading. The CPSRA would be affected by new shade in the afternoon from the Alice Griffith Public Housing site, but new shading would be limited and less than the Project. At HPS Phase II, the existing public open space, India Basin Shoreline Park and India Basin Open Space, would not be affected by new shading from development under Alternative 3. Under Alternative 3, a stadium would not be constructed at HPS Phase II. The extent and duration of shadow on new public sidewalks would increase along street corridors of HPS Phase II and the Alice Griffith Public Housing sites. Similar to the Project, this new shadow would not be in excess of that which would be expected in comparable San Francisco neighborhoods. New shade created by implementation of Alternative 3 would occur at limited times of the day and year, and would not substantially affect the use of outdoor recreational facilities or open space. Similar to the Project, this impact would be less than significant.

Wind

Development at HPS Phase II under Alternative 3 would include tower structures above 100 feet in height, which would extend above surrounding buildings and intercept a large volume of wind. Because of the exposure of tall structures to wind, the tower structures proposed under Alternative 3 would have the potential to accelerate winds in nearby pedestrian sidewalk areas or public open space areas. The degree of change in pedestrian-level wind conditions would be influenced by building design, such as building height, shape, massing, setbacks, and location of pedestrian areas. Structures nearing or over 100 feet in height could have effects on pedestrian-level conditions such that the wind hazard criteria of 26 miles per hour for a single hour of the year would be exceeded. Similar to the Project, the street grid at HPS Phase II would not align with predominant west and west-northwest wind directions and would,

therefore, not result in channeling of winds along street corridors. The street grid would orient building faces such that they would not face into the prevailing wind direction; that orientation would reduce potentially significant pedestrian-level wind acceleration at the HPS Phase II site. Development of the Alice Griffith Public Housing site would be limited to 65 feet and would, therefore, not affect pedestrian-level wind conditions.

Implementation of the identified mitigation measure (MM W-1a) for development at HPS Phase II would reduce the potential impact from wind for development of Alternative 3 by requiring review of all buildings with potential significant adverse wind impacts by a qualified wind consultant. The *Planning Code* requires that for any such exceedances of the wind hazard criteria would require revised design to reduce the impact below the established threshold. Implementation of required design changes, if any, would reduce potential hazardous wind effects at the pedestrian level by forcing wind downwash to tops of podium areas and/or into the street and away from pedestrian areas. Compliance with the mitigation measures would ensure pedestrian safety in pedestrian-access areas. Similar to the Project, through implementation of the identified mitigation measure, wind impacts at the HPS Phase II and Alice Griffith sites would be less than significant.

Air Quality

The footprint of development, the total amount of development, and the land uses provided with Alternative 3 would be reduced compared to the Project, Alternative 3 involves limited development at Candlestick Point, and considerably less development would occur at HPS Phase II. No new stadium would be constructed, and the State Parks agreement would not occur. As development would be considerably less than under the Project, the potential air quality impacts would less than the Project.

Construction activities for Alternative 3 would generate dust; however, they would need to comply with the San Francisco Health Code and BAAQMD requirements. Implementation of MM HZ-15, which would require the Applicant to ensure that construction contractors comply with the dust control strategies included in an approved dust control plan as part of a site-specific dust control plan, would reduce the impacts caused by construction dust to a less-than-significant level.

Construction activities could also create DPM; however, as the development of Alternative 3 would be considerably smaller than under the Project, implementation of MM AQ-2.1 and MM AQ-2.2, accelerated emission control implementation on construction equipment, would keep this impact less than significant. Construction activities could also generate TAC containing PM₁₀; however, as construction activities for Alternative 3 would be fewer than for the Project, this impact would be less than significant.

Though operational emissions associated with Alternative 3 would be much lower than with the Project, due to the smaller scale of Alternative 3, the mass emissions would exceed the BAAQMD CEQA thresholds and therefore this impact would remain significant and unavoidable, similar to the Project. Alternative 3 has the same R&D square footage as the Project, therefore potential TAC emissions from facilities in R&D areas would be similar to the Project. With the implementation of MM AQ-6.1 and MM AQ-6.2, this impact would be less than significant, same as the Project.

Additionally, as the scale of Alternative 3 is smaller than the Project, the impacts from Alternative 3 traffic (e.g., carbon monoxide and PM_{2.5}) would be less than the Project and less than significant.

According to the current BAAQMD CEQA Guidelines, odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that the BAAQMD regards with potential to generate considerable odors include: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, oil refineries and chemical plants. Alternative 3 would be a large mixed-use development containing residential, office, retail, R&D, recreational, and entertainment uses. Although there may be some potential for small-scale, localized odor issues to emerge around proposed sources such as solid waste collection, food preparation, etc., substantial odor sources and consequent effects on on-site and off-site sensitive receptors would be unlikely and would be resolved by interventions after receipt of any complaints. This would be a less-than-significant impact, the same as for the Project.

The Project is consistent with regional air quality plans; therefore, as Alternative 3 is smaller than the Project, it would remain consistent with these plans. Alternative 3 promotes the use of alternative transportation modes, such as transit, biking and walking. In addition, it puts housing in close proximity with jobs and retail establishments, reducing the length of trips and further reducing reliance on single-occupancy vehicles. Therefore, Alternative 3 conforms to the regional air quality plan and there would be a less-than-significant impact, the same as for the Project.

Noise

As the footprint of development, the total amount of development, and the land uses provided with Alternative 3 would be reduced compared to the Project, noise impacts of Alternative 4 would be the less than the Project.

Construction activities for Alternative 3 would expose sensitive receptors to increased noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to comply with the San Francisco Noise Ordinance, which generally prohibits construction between 8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. Implementation of mitigation measures MM NO-1a.1 and MM NO-1a.2, which would require implementation of construction Best Management Practices to reduce construction noise and the use of noise-reducing pile driving techniques, would reduce any potentially significant impacts to less-than-significant levels, similar to the Project.

Construction activities for Alternative 3 would result in a temporary or periodic increase in ambient noise levels that would be noticeable and likely cause for human annoyance. Construction activities would occur within 25 feet of existing and future residential uses. Pile driving activities could result in substantial noise levels of up to 107 dBA at new residential uses on the site or at adjacent existing residences. Construction-related temporary increases in ambient noise levels would be considered significant and unavoidable, the same as for the Project.

Construction activities for Alternative 3 would create a substantial temporary increase in ambient noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to comply with the San Francisco Noise Ordinance, which prohibits construction between

8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. Implementation of mitigation measures MM NO-1a.1 and MM NO-1a.2, which would require implementation of construction Best Management Practices to reduce construction noise and the use of noise-reducing pile driving techniques, would reduce any potentially significant impacts to less-than-significant levels.

Construction activities could also create excessive ground-borne vibration levels in existing residential neighborhoods adjacent to the site and at proposed on-site residential uses, should the latter be occupied before construction activity on adjacent parcels is complete. Implementation of mitigation measures MM NO-1a.1, MM NO-1a.2, and MM NO-2a would require implementation of construction Best Management Practices, noise-reducing pile driving techniques as feasible, and monitoring of buildings within 50 feet of pile driving activities. Implementation of these measures would reduce vibration impacts under Alternative 3, but not to a less-than-significant level as vibration levels from pile driving activities would be similar to the Project for the residential uses within the HPS North District; therefore, this impact would remain significant and unavoidable, similar to the Project.

Daily operation of Alternative 3, such as mechanical equipment and delivery of goods, would not expose noise-sensitive land uses on- or off- site to noise levels that exceed the standards established by the City of San Francisco. This impact would be less than significant, similar to the Project. Operation activities associated with Alternative 3, such as delivery trucks, would not generate or expose persons on or off site to excessive groundborne vibration. This impact would also be less than significant, similar to the Project.

Operation of Alternative 3 would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes. Although considerably less development would occur under Alternative 3, significant impacts identified for the Project along Carroll Avenue, Gilman Avenue, and Jamestown Avenue, would remain with implementation of Alternative 3. Because the Alternative 3 would not include a football stadium at HPS Phase II and the stadium at Candlestick Point, noise impacts identified for the Project from football games and concerts would not occur with implementation of Alternative 3. Noise generated from the existing stadium is considered an existing condition and would not be considered an impact of the Project.

The Project site is not located within an airport land use plan area or near a private airstrip. Furthermore, Alternative 3 does not include an aviation component. Therefore, Alternative 3 would not result in the exposure of people to excessive aircraft noise levels. Impacts would be less than significant, similar to the Project.

Cultural Resources

Alternative 3 would not change the significance of any historic structures at Candlestick Point because no historic resources have been identified at Candlestick Point. Similar to the Project, implementation of Alternative 3 would retain Drydocks 2 and 3 and rehabilitate Buildings 140, 204, 205, and 207 at the HPS Phase II site in accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. However, development under Alternative 3 would result in the demolition of Buildings 211, 231, and 253, which are historic resources in the expansion of the Hunters

Point Commercial Dry Dock and Naval Shipyard Historic District to include Drydock 4 and contributing buildings. This would result in a significant impact because the proposed actions would materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR. Implementation of the identified mitigation measures (MM CP-1b.1 and MM CP-1b.2) would reduce those impacts; however, the demolition of historic resources would not reduce impacts to a less-than-significant level. Therefore, similar to the Project, the impacts to these historical resources, created by developing Alternative 3, would be a significant and unavoidable.

Construction activities associated with Alternative 3 within the Alice Griffith Public Housing site and HPS Phase II site could result in a substantial adverse change in the significance of archaeological resources. The Project site overall is likely to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods. Similar to the Project, construction activities associated with Alternative 3 could disturb those archaeological resources, and result in potentially significant impacts. Implementation of the identified mitigation measure (MM CP-2a) would reduce the effects on archaeological resources to a less-than-significant level.

Construction activities associated with Alternative 3 could result in a substantial adverse change in the significance of paleontological resources. Compared to the Project, these potential impacts would be limited to the HPS Phase II and Alice Griffith Public Housing sites. Under Alternative 3, the development footprint at Candlestick Point would be substantially smaller than the Project and the development footprint at HPS Phase II would be greater than the Project. The Bay mud underlying portions of the fill is likely to contain paleontological resources. Similar to the Project, implementation of the identified mitigation measure (MM CP-3a) would reduce the effects of construction-related activities to potential paleontological resources in in-water and off-site areas to a less-than-significant level for development under Alternative 3.

Hazards and Hazardous Materials

Under Alternative 3, the construction impacts associated with Hazards and Hazardous Materials would be reduced as compared to the Project because the overall development footprint would be smaller. There would be no new development on Candlestick Point, and the new stadium would not be constructed. The Yosemite Slough bridge would have a smaller footprint than with the Project, as it would be designed to accommodate BRT, bicycles, and pedestrians only. This reduced development would result in a smaller area subject to disturbance.

Site preparation would include deep excavations for large structures such as for residential towers, with plans to use the cut material elsewhere within the Project site as fill, trenching for utility lines, dewatering, grading and compaction and other earth-disturbing activities. As portions of the site are known to contain elevated levels of chemicals in the soil, construction activities could result in exposure of construction workers, the public or the environment to unacceptable levels of hazardous materials if not handled appropriately. MM HZ-1a would reduce effects related to exposure of known contaminants at Alice Griffith by requiring compliance with Article 22A or an equivalent process. At HPS Phase II, potential effects related to exposure to hazardous materials from construction activities would be mitigated through requirements to comply with restrictions imposed on the property through the federal

site clean-up process (MM HZ-1b, MM HZ-9, and MM HZ-12). Disturbance of contaminated soil would be reduced with elimination of the Yosemite Slough bridge and new stadium, but would still occur. MM HZ-10b would ensure approval of workplans by the Navy and regulatory agencies prior to any work in the shoreline areas. In addition, mitigation measures MM HY-1a.1, MM HY-1a.2, MM BI-4a.1, MM BI-4a.2, and MM BI-5b.4 would reduce water quality and biological resources impacts from disturbance of contaminated soil, groundwater and sediments.

At both Candlestick Point and HPS Phase II, compliance with MM HZ-2a.1 would require the preparation and implementation of contingency plans to address unknown contaminants that might be encountered during construction, and compliance with MM HZ-2a.2 would require preparation and implementation of health and safety plans to protect construction workers from exposure to hazardous materials during construction activities. Construction activities could require off-site transport of contaminated soil or groundwater; compliance with federal, state, and local regulations would ensure that no unacceptable exposure to chemicals occur as a result of these activities. Further, mitigation measures MM HY-1a.1, MM HY-1a.2, and MM HY-1a.3 would ensure that no unacceptable levels of hazardous materials in soil in surface runoff or in groundwater are discharged to the sewer system or discharged from the site to the Bay. Hazardous materials impacts from all of the above construction-related activities would be reduced to less than significant with the implementation of the mitigation measures identified above, the same as for the Project.

Development under Alternative 3, as for the Project, would require the installation of foundation support piles, which could, under certain soil conditions, create a vertical conduit for chemicals occurring in shallow groundwater to migrate to the deeper groundwater aquifer. However, MM HZ-5a, which requires preparation of a plan for pilot boreholes for each pile to prevent disturbance of potentially contaminated fill materials and would reduce this potential impact from pile driving to less than significant, the same as for the Project.

Elimination of construction of the Yosemite Slough bridge would avoid impacts associated with disturbance of potentially radiologically impacted soils at HPS Phase II in the vicinity of Parcels E and E-2, thus reducing the potential for exposure to hazardous materials in soil or groundwater in this area.

Alternative 3 would place housing on the HPS Phase II site. The Navy's cleanup plan is designed to remediate the HPS site to levels acceptable for the planned uses in the existing HPS Redevelopment Plan. To the extent that Alternative 3 proposes to place housing in areas not designated for residential use in the existing HPS Redevelopment Plan, additional hazardous materials remedial work could be required, which could result in some increased risk to workers, the public and environment from exposure to hazardous materials during the construction process. Any property that has not been remediated for unrestricted use at the time of transfer will have use restrictions placed on the property in compliance with the federal clean-up process. For use restrictions to be removed, the Project Applicant would be required by the transfer documents to obtain approval from the regulatory agencies overseeing the clean-up process before residential uses could be placed on these portions of the site. Any remedial activities undertaken as part of the construction process would be subject to the requirements in MM HZ-1b, which requires construction activities at HPS Phase II to be done in accordance with all restrictions imposed on the site by the federal regulatory clean-up process and these impacts would be less than significant, the same as for the Project.

Potential impacts associated with disturbance of naturally occurring asbestos would be similar to those associated with the Project and would be mitigated through MM HZ-15, which requires the preparation of dust control plans as required by BAAQMD and DPH. Alternative 3 would involve the demolition of existing structures that may contain asbestos-containing building materials, lead-based paint and other hazardous materials, the same as the Project. The existing regulatory framework and approval process would avoid potential hazards from demolition or building preservation activities and impacts would be less than significant, the same as the Project.

Alternative 3 would involve off-site roadway improvements, which could result in disturbance of hazardous material in soil or groundwater. Unacceptable exposures would be controlled as for the Project by implementation of MM HZ-1a, and hazardous materials impacts from these activities would be less than significant.

Project operations would involve routine use, storage, transport, or disposal of hazardous materials. The use of such materials would be the same as for the Project, as the development program is essentially the same. Compliance with applicable federal, state, and local regulations related to the use, storage and transport of such materials would result in a less-than-significant impact from hazardous materials usage, the same as for the Project.

Geology and Soils

Compared to the Project, potential construction-related geology and soils impacts of Alternative 3 would occur as a result of construction activities at the HPS Phase II, Alice Griffith Public Housing, and Yosemite Slough bridge sites. Under Alternative 3, the development footprint at Candlestick Point would be substantially smaller than the Project (limited to only the Alice Griffith Public Housing site and the Yosemite Slough bridge approaches) and the development footprint at HPS Phase II would be greater than the Project. Additionally, because the State Parks land agreement would be limited, less land would be available for development under Alternative 3. The San Francisco 49ers stadium would also not be built under the Alternative.

Construction activities, such as removal of paved areas, grading, and excavation, could remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, could be subject to soil loss and erosion by wind and stormwater runoff. This includes construction of the Yosemite Slough bridge. However, requirements to control surface soil erosion during and after construction of Alternative 3 would be implemented through the requirements of the identified mitigation measure (MM HY-1a.1), and adverse effects on the soil such as soil loss from wind erosion and stormwater runoff would be reduced to a less-than-significant level, the same as for the Project.

Construction activities would have the potential to affect groundwater levels. Construction may include dewatering procedures during excavation, construction, and operation of foundations and buried utilities. The dewatering could cause settlement of adjacent soils that could damage the overlying foundations of existing buildings. With implementation of the dewatering techniques, groundwater level monitoring, and subsurface controls as specified in the SFBC and required by the identified mitigation measure (MM GE-2a), groundwater levels in the area would not be lowered such that unacceptable settlement at adjacent or nearby properties would occur. Similar to the Project, settlement hazards related to dewatering would be less than significant for development under Alternative 3.

Development of Alternative 3 would require rock removal activities at the Alice Griffith Public Housing site that could result in damage to structures from vibration or settlement caused by the fracturing of bedrock for excavation. Compared to the Project, Alternative 3 would not require rock removal at the Jamestown district because that area would not be developed. With implementation of the identified mitigation measure (MM GE-3), vibration from controlled rock fragmentation in the area would not cause unacceptable settlement at adjacent or nearby properties. Similar to the Project, settlement hazards related to controlled rock fragmentation would be less than significant for development under Alternative 3.

The potential for exposure to adverse affects caused by seismic groundshaking and seismically induced ground failure such as liquefaction, lateral spreading, landslides and settlement exists at the Project site. The identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-4a.3, MM GE-5a, and MM GE-6a) would require design-level geotechnical investigations for development under Alternative 3. Design-level geotechnical investigations must include site-specific seismic analyses to evaluate the peak ground accelerations for design of structures, as required by the SFBC through review by DBI. The structural design review would ensure that all necessary mitigation methods and techniques are incorporated in the design for foundations and structures to reduce potential impacts from ground failure or liquefaction to a less-than-significant level for development under Alternative 3, the same as for the Project.

The existing shoreline exhibits active erosion and consists of areas of unprotected slopes and dilapidated naval pier and wharf structures. At HPS Phase II, Alternative 3 would include numerous shoreline improvements, including additional concrete revetments, creation of new beach and tidal habitat, and some grading and importation of fill at certain locations. These improvements would improve the stability of the shoreline. Therefore, Alternative 3 would not result in the exposure of structures and facilities at the HPS Phase II site to substantial adverse effects caused by shoreline instability. Similar to the Project, the impact would be less than significant.

The potential for adverse affects caused by landslides, settlement, expansive and corrosive soils, exists at the HPS Phase II, Alice Griffith Public Housing site, and the Yosemite Slough bridge. Site-specific, design-level geotechnical investigations would be required to be submitted to DBI in connection with permit applications for individual elements of development for Alternative 3, as specified in the identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-4a.3, MM GE-5a, MM GE-6a, MM GE-10a, MM GE-11a) for the Project. The site-specific analyses must assess these conditions and prescribe the requirements for foundations on slopes in accordance with the SFBC. All geotechnical investigations and permits must be approved by DBI. With implementation of those mitigation measures, impacts with regards to landslides, settlement, and expansive and corrosive soils would be less than significant. Impacts associated with construction of the stadium would be avoided because the stadium would not be constructed under Alternative 3.

Hydrology and Water Quality

The footprint and amount of development for Alternative 3 would be considerably reduced compared to the Project, because a limited State Parks agreement would occur, the Candlestick Park Stadium would remain, development at Candlestick Point would be limited to the redevelopment of the Alice Griffith

Public Housing site and the construction of a reduced number of housing units, and a new stadium at HPS Phase II would not be constructed. The extent of impervious surfaces would also be reduced as less development would occur. As such, impacts from construction and operation of the Alternative 3 would be less than the Project.

With adherence to applicable regulatory requirements, construction activities associated with Alternative 3 would not violate water quality standards, cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements due to sediment-laden runoff, contaminated groundwater from dewatering activities, or the incidental or accidental release of construction materials. With reduced overall development, impacts would be less than the Project, however mitigation measures proposed under the Project would be still be applicable. With implementation of mitigation measures MM HY-1a.1 (preparation of a Storm Water Pollution Prevention Plan—SWPPP—for discharges to the combined sewer system), MM HY-1a.2 (SWPPP preparation for separate storm sewer systems), and MM HY-1a.3 (construction dewatering plan) impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 3 would include excavation for building foundations and underground utilities which could require short-term and/or long-term dewatering of the affected areas. As no extensive underground space is proposed for Alternative 3, the installation of underground building elements and utilities would not substantially alter groundwater levels, similar to the Project. As such, Alternative 3 would not substantially deplete groundwater supplies and would result in a less than significant impact, similar to the Project. As the total amount of open space under Alternative 3 is reduced compared to the Project, the amount of permeable surface within the Project footprint would also be less. However, a limited State Parks agreement would occur, and existing open space accounted for under the Project would remain. Therefore, Alternative 3 would not 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. This impact would be less than significant, similar to the Project.

No streams or rivers are currently located within Alternative 3 site and thus no streams or rivers would be altered by construction activities. Under existing conditions, stormwater typically drains to storm drains (which include both combined and separate systems) or directly to the Bay via surface runoff (generally only along portions of the shoreline). During construction of Alternative 3, the existing drainage patterns within the area would generally be preserved. Construction activities associated with Alternative 3 would not substantially alter the existing drainage pattern of the site or alter the course of a stream or river in ways that would result in substantial erosion, siltation, or flooding on or off site. Impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 3, including site clearance, grading, and excavation, would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff. During construction, existing stormwater drainage facilities would be replaced by a new storm sewer system that would collect and treat on-site stormwater flows and would be sized to accommodate projected flows from upstream contributing areas. With compliance with regulatory requirements, as required by mitigation measures MM HY-1a.1 and MM HY-1a.2 (preparation of an SWPPP) impacts would be less than significant, similar to the Project.

Operation of Alternative 3 would not contribute to violations of water quality standards or waste discharge requirements or otherwise degrade water quality. Compliance with the requirements of the Municipal Stormwater General Permit, the Recycled Water General Permit, and the Industrial General Permit would reduce potential water quality impacts associated with implementation of Alternative 3. In addition, Alternative 3 would be required to comply with the San Francisco SWMP, the Draft San Francisco Stormwater Design Guidelines, and the San Francisco Green Building Ordinance. Compliance with these requirements would be demonstrated in the SDMP or SCP for the project site, as required by mitigation measure MM HY-6a.1. Compliance with the Recycled Water General Permit would be required by implementation of mitigation measure MM HY-6a.2. To reduce the potential for stormwater infiltration to mobilize historic soil contaminants at HPS Phase II, the use of infiltration BMPs would be prohibited by mitigation measure MM HY-6b.1. To reduce stormwater runoff impacts associated with industrial activities at HPS Phase II, compliance with the Industrial General Permit would be required by implementation of mitigation measure MM HY-6b.2. To reduce stormwater impacts associated with maintenance dredging of the marina, compliance with the DMMO regulatory requirements would be required by implementation of mitigation measure MM HY-6b.3. Compliance with the Clean Marinas California Program would be required by implementation of mitigation measure MM HY-6b.4. As the extent of impervious surfaces for Alternative 3 would be reduced than the Project, impacts would be less than the Project.

Development under Alternative 3 would also not utilize groundwater as a source of water supply nor interfere substantially with groundwater recharge. Thus, there would be no net deficit in aquifer volume or a lowering of the local groundwater table level and no impact would occur, similar to the Project.

Operation of Alternative 3 could alter the existing drainage pattern of the site, but would not alter the course of a stream or river, as none exist at or near the site currently, or result in substantial erosion, siltation, or flooding on or off site similar to the project. Implementation of Alternative 3 would not contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff, as development would include a separate stormwater system that would be sized to accommodate estimated runoff flows and treat runoff prior to discharge to the Bay. Compliance with regulatory requirements, including the submission of a SDMP and SCP to the SFPUC for approval, as required by mitigation measure MM HY-6a.1, would ensure that this impact would be less than significant, similar to the Project.

Implementation of Alternative 3 would not place housing and other structures within a 100-year flood zone or otherwise include development that would impede or redirect flood flows. Implementation of mitigation measures MM HY-12a.1 (Finished Grade Elevations above Base Flood Elevation) and MM HY-12a.2 (Shoreline Improvements for Future Sea-Level Rise) would reduce this impact to a less-than-significant level, similar to the Project.

Implementation of Alternative 3 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. Implementation of mitigation measure MM HY-14 (Shoreline Improvements to Reduce Flood Risk) would reduce impacts to a less-than-significant level. Based on historical records and the location of development, Alternative 3 would not expose people or structures to inundation by seiche, tsunami, or mudflow. These impacts would be less than significant, similar to the Project.

Biological Resources

Compared to the Project, potential construction-related biological resource impacts of Alternative 3 would occur as a result of construction activities at the HPS Phase II, Alice Griffith Public Housing, and Yosemite Slough bridge sites. Under Alternative 3, the development footprint at Candlestick Point would be substantially smaller than the Project (limited to only the Alice Griffith Public Housing site and the Yosemite Slough bridge approaches) and the development footprint at HPS Phase II would be greater than the Project. Additionally, because the State Parks land agreement would be limited, less land would be available for development under Alternative 3. The San Francisco 49ers stadium would also not be built under the Alternative.

Alternative 3 would involve removal and/or modification of areas that have the potential to contain special-status species, including: seven potentially breeding avian species, one bat species, and four fish species (green sturgeon, Chinook, steelhead, and longfin smelt). Alternative 3 would also have the potential to affect designated critical habitat of the green sturgeon and Central California Coast steelhead and thus, directly impact threatened and/or endangered species through habitat conversion or unauthorized take. In addition, activities would occur within habitats of locally rare or sensitive species such as Pacific herring and Olympia oysters, as well as avian species protected by the MBTA. Where applicable at the HPS Phase II and the Alice Griffith Public Housing sites, Alternative 3 would include implementation of the ecological design features described in the Project's Draft Parks, Open Space, and Habitat Concept Plan that would result in multiple measures to avoid, limit, and mitigate for impacts to special-status and legally protected species. Specifically, the design components would remove invasive species; restore, preserve, and enhance wetland, aquatic, and grassland habitats; revegetate the site with extensive planting of trees and shrubs; increase the vegetative cover for foraging and dispersing animals; and maintain and enhance habitat connectivity along the shoreline. Alternative 3, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-6a.1, MM BI-6a.2, MM BI-6b, MM BI-7b, MM BI-9b, MM BI-18b.1, and MM BI-18b.2) and ecological design features, would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFG or USFWS. Similar to the Project, this impact would be less than significant after mitigation. However, impacts to such species would be less than the Project since there would be less removal and/or modification of areas that have the potential to contain special-status species.

Development of Alternative 3 could have a substantial adverse effect on sensitive natural communities identified in local or regional plans, policies, and regulations, or by the CDFG or USFWS. The only sensitive habitats other than wetlands and aquatic habitats are eelgrass and areas designated as EFH. Shoreline improvements, shoreline abutments for the proposed marina and installation of the breakwater at HPS Phase II could have substantial adverse impact to the communities. However, with implementation of the identified mitigation measures (MM BI-4a.2, MM BI-5b.1 through MM BI-5b.4, MM BI-12b.1, MM BI-12b.2, MM BI-12b.3, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1, and MM BI-19b.2), the potential impacts of Alternative 3 on sensitive natural communities identified in local or regional plans, policies, and regulations, or by the CDFG, NMFS, or USFWS, would be reduced to a less-than-significant level. Potential impacts to eelgrass beds would be the same as the Project (eelgrass beds are not located near Yosemite Slough), while impacts to EFH would be less than the Project since

the footprint of Yosemite Slough bridge would be reduced and, thus, potential impacts to EFH would also be reduced.

Development of the Yosemite Slough bridge under Alternative 3 would have a smaller footprint compared to the Project because the width of the bridge would be narrower, due to automobiles not using the bridge. Therefore, the temporary and permanent adverse effects of Alternative 3 on wetlands and federally protected waters would be reduced compared to the Project. However, as with the Project, Alternative 3 would implement compensatory mitigation for wetland loss. The shoreline improvements at HPS Phase II included Alternative 3 would be similar to the Project and could have substantial temporary and permanent adverse effect on federally protected wetlands and other waters as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. The identified mitigation measures (MM BI-4a.1 and MM BI-4a.2) would reduce the effects of construction-related activities to wetlands and other waters by mitigating for the temporary and permanent loss of the wetlands and jurisdictional waters through avoidance of impacts, requiring compensatory mitigation (i.e., creation, preservation, and/or restoration), obtaining permits from the USACE, SFRWQCB, and BCDC that are designed to protect wetlands and jurisdictional waters, and implementing construction BMPs to reduce and/or prevent impacts to waters of the United States, including wetlands and navigable waters. With implementation of the identified mitigation measures, the impacts of development under Alternative 3 to federally protected wetlands and other waters as defined by Section 404 of the CWA would be reduced to a less-than-significant level, and somewhat less than the Project because of reduced development.

Development of Alternative 3 could interfere substantially with the movement of 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. The Project site is surrounded by open water and urban development and no major drainages, canyon bottoms, ridgetops, rivers, creeks or areas that provide substantial movement corridors or migratory pathways occur within the Project site. Implementation of Alternative 3 would place new residential towers along a portion of the San Francisco Bay shoreline at HPS Phase II. Compared to the Project, the amount of towers would be substantially reduced and the strike hazard related to the stadium light towers would be avoided because the stadium would not be constructed. However, the towers at HPS Phase II could potentially increase strike hazards and alter flight paths, interfering with migratory avian flight paths, which would be considered a potentially significant impact to migratory birds. With respect to aquatic species, although migratory fish could continue to move through the open water and Yosemite Slough, the Project site does not contain any substantial migratory fish pathways such as anadromous fish streams. However, construction of breakwaters and other shoreline treatments in HPS Phase II would occur near eelgrass beds, which could directly or indirectly impact eelgrass beds such that productivity and survival of these habitats would be substantially reduced. Similar to the Project, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-20a.1, and MM BI-20a.2), the potential impacts of Alternative 3 would be reduced to a less-than-significant level 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.

Similar to the Project, Alternative 3 would be required to comply with mitigation measure MM BI-14a to ensure that Project development would not result in conflicts with the City's tree protection ordinances. With implementation of MM BI-14a, Alternative 3 would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant, similar to the Project.

Public Services

Police Protection

During construction of Alternative 3, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. The purpose of a CTMP is to ensure that the impacts of construction on the public domain, in particular with respect to temporary interruptions to vehicular and pedestrian traffic, are considered and addressed. Because Alternative 2 would include the same mitigation as the Project, there would be a similar requirement to prepare a CTMP for Alternative 3 that would address temporary impacts on circulation during construction. The CTMP would provide necessary information to various contractors and agencies as to how to maximize the opportunities for complementing construction management measures and to minimize the possibility of conflicting impacts on the roadway system, while safely accommodating the traveling public in the area. Construction activities associated with implementation of Alternative 3 also could increase demand for SFPD services if the site is not adequately secured, providing increased opportunity for criminal activity. To ensure adequate site security, mitigation measure MM PS-1 would require the Project Applicant to provide security during construction. Therefore, this impact would be less than significant, the same as for the Project.

Implementation of Alternative 3 would increase resident and employee population at the Project site resulting in a potential increase in the need for 29 additional police personnel to provide a comparable level of service to existing conditions.¹³³¹ This is 24 fewer additional police officers than the Project would require. The SFPD evaluates the need for additional officers by sector, and not station or district needs. While it is unlikely that 29 new officers would be needed, some redistribution of the police presence in the southeastern portion of the City would be warranted by development of Alternative 3.

If the SFPD determines that the reconfiguration of the Bayview Station would not be sufficient to accommodate additional officers, a new station or facility of approximately 6,000 sf could be constructed within the HPS Phase II site, on land designated for community-serving uses. As part of this Alternative, up to 50,000 gsf of land at the HPS Phase II site would be designated for community-serving uses including a police station.¹³³² Construction of a new SFPD facility (counter, storefront, or other configuration) within these community services uses and/or the reconfiguration or expansion of the existing Bayview Station would be funded by the Project Applicant. Similar to the Project, Alternative 3 includes community service use areas, and as construction would be funded by the Project Applicant, the

¹³³¹ The number of required police officers need to meet comparable level of service to existing conditions was determined using the total daytime population of Alternative 3 (residential population of 12,139 plus 7,005 employees) and the ratio of officers to population presented in Table II.O-2 (1:665 officer to population).

¹³³² A total of 50,000 gsf of community services space would be developed under Alternative 3 compared to 100,000 gsf proposed under the Project.

SFPD would maintain acceptable levels of police service. With less overall development under Alternative 3, in comparison to the Project, the potential need for police protection services in general would also be less under Alternative 3. Furthermore, the stadium would also not be constructed under Alternative 3, eliminating the need for increased police services on game days. Therefore, development of this Alternative would not require new or physically altered police facilities beyond the scope of the Project in order to maintain acceptable police services. This impact is considered less than significant, the same as for the Project.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Fire and Emergency Medical Services

Alternative 3 would add 5,210 residential units and substantially increase employment-generating uses, resulting in an employment population of 7,005. The increase in the residential and daytime employment population (for a total population of 19,144, including residential population of 12,139 plus 7,005 employees), combined with an increase in the intensity of physical development on the Project site, would result in new demand for fire protection and emergency medical services, although somewhat less compared to the Project because of the alternative's smaller development.

During construction of Alternative 3, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. Construction of a new SFFD facility on land designated for community-serving uses on the HPS Phase II site (where costs would be borne by the Project Applicant) would allow the SFFD to maintain acceptable response times for fire protection and emergency medical services. However, with less overall development under Alternative 3, in comparison to the Project, the potential need for fire and emergency medical services in general would also be less under Alternative 3. Furthermore, the stadium would also not be constructed under Alternative 3, eliminating the need for increased fire and emergency medical services on game days. Similar to the Project, construction of 50,000 gsf of community facilities at HPS Phase II, which could include a new SFFD facility, would be included as a component of Alternative 3.¹³³³ Therefore, development under Alternative 3 would not require new or physically altered fire protection facilities to maintain acceptable response times. Additionally, compliance with all applicable provisions of the *San Francisco Fire Code* would ensure that this impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

¹³³³ A total of 50,000 gsf of community services space would be developed under Alternative 3 compared to 100,000 gsf proposed under the Project.

Schools

A total of approximately 1,058 school-age children would live within the Project site following full build-out of Alternative 3.¹³³⁴ Compared to the Project the amount of school-age children that would live within the Project site following full build-out of Alternative 3 would be substantially reduced. While schools in the Project vicinity have approximately 49 percent capacity remaining in the 2008-2009 school year, it is likely that a 12 percent overcapacity of SFUSD as a result of citywide population growth in 2030 would occur. Similar to the Project, the payment of school impact fees pursuant to SB50 would constitute full mitigation for any potential schools impacts. This impact is considered less than significant for development under Alternative 3, the same as for the Project.

Libraries

Construction of Alternative 3 would not result in impacts to the SFPL. No library branches are located on the Project site. All library services would be available to the community throughout the duration of construction. As such, no impact to library services during construction of Alternative 3 would occur.

Residential and nonresidential development associated with Alternative 3 would increase demand for local library services in the Bayview neighborhood, although due to a 50 percent reduction in residential units, this demand for local library services would be less than under the Project. Although this Alternative would result in a direct and indirect population increase within the Bayview neighborhood, library branches serving the Project site, including the Portola, Visitacion Valley, and the Bayview branches would continue to meet the demands of the community. In addition to the three library branches serving Alternative 3, space would be included at HPS Phase II that would be dedicated to library services to supplement the Bayview branch library. As part of Alternative 3, a 1,500-gsf reading room and automated book-lending machines would be integrated into the community retail and public facilities uses. The SFPL branches, and the dedication of space to accommodate library services on the Project site in order to supplement SFPL branches, would accommodate increased demand from development under this Alternative. No additional library facilities would be required to accommodate development of Alternative 3. Therefore, no new or physically altered library facilities would be required in order to maintain acceptable service ratios and this impact is considered less than significant for development under Alternative 3.

Recreation

Implementation of Alternative 3 would include parks and open space areas similar to the Project at HPS Phase II and within the Alice Griffith district. Alternative 3 would include a limited State Parks land agreement. The agreement would also allow for the redevelopment of the Alice Griffith Public Housing site, including 2.43-acres of State Parks–owned land. Construction activities associated with the proposed parks and recreational facilities are considered part of the overall development footprint. Parks, open space, and recreational facilities at HPS Phase II would consist of approximately 251 acres. The 1.4-acre Alice Griffith Neighborhood Park would also be constructed under this Alternative. In addition, because the State Parks land agreement would be limited to allow the Yosemite Slough bridge to cross CPSRA

¹³³⁴ For Alternative 3, 5,210 residential units multiplied by 0.203 SFUSD student generation rate would result in 1,058 students.

lands, no CPSRA acreage would be improved. Therefore, construction activities at Candlestick Point would be substantially reduced compared to the Project. Similar to the Project, construction impacts associated with development of new parks and recreational facilities would be less than significant.

At build-out of Alternative 3, the projected population within the HPS Phase II and Alice Griffith Public Housing sites would increase to approximately 12,139 residents, while employment would increase to approximately 7,005 jobs. Compared to the Project, the State Park agreement would not occur so the existing 120.2 acres would remain in the CPSRA, compared to the 23.5-acre reduction under the Project. The increase in population and employment could result in an increase in the use of existing parks, recreational facilities, and open space. During a given phase, however, park construction could lag behind residential development, leading the parkland-to-population ratio to drop below an acceptable level. Moreover, the development plan is conceptual, and could be modified during the entitlement and development process. Mitigation measure MM RE-2 would ensure that the parks and recreational amenities are constructed as residential and employment-generating uses are developed. Parks and open space at HPS Phase II would include improvements similar to the Project and would help offset the increase in demand created by new residents and employees. The 1.4-acre Alice Griffith Neighborhood Park would serve residents of the Alice Griffith Public Housing site.

With a limited State Parks land agreement, there would be a limited established funding mechanism for future maintenance of the State Parks on site from the Project Applicant. Furthermore, increased use of the CPSRA as a result of population and employment growth associated with Alternative 3 is anticipated. Therefore, increased use of the CPSRA with only a limited established mechanism for future maintenance of the CPSRA could result in deterioration of the CPSRA. This could potentially result in a substantial adverse impact on recreational facilities at the Project site. Without a greater funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. Therefore, development of Alternative 3 could result in a new adverse impact on recreational facilities, greater than the less-than-significant impact under the Project.

A windsurfing launch site is located in the CPSRA. Windsurfing could potentially be impacted by the construction of tall structures at Candlestick Point in close proximity to the Bay that affect wind patterns and direction. Alternative 3 would not include development of any towers at Candlestick Point and windsurfing conditions would not be affected.

Utilities

Water Supply

Alternative 3 would include water infrastructure similar to the Project. Impacts of construction activities associated with this infrastructure, including demolition and installation of new utility infrastructure, are discussed in Section III.D, Section III.H, Section III.I, Section III.J, Section III.K, Section III.L, Section III.M, Section III.O, and Section III.S of this EIR. No new construction impacts beyond those identified in those sections would occur with construction of water conveyance or treatment infrastructure associated with the Project. The water required for construction activities is assumed to be supplied by water trucks and/or existing sources. No construction-related impacts associated with the consumption of water would occur with the Alternative 3.

Alternative 3 would include less residential and non-residential development compared to the Project. Development at Candlestick Point would only include redevelopment of the Alice Griffith Public Housing site. Alternative 3 would generate a total demand of approximately 0.97 mgd, 0.7 mgd less than the Project. As current water use from existing land uses at the Project site is approximately 0.3 mgd, the net effect of the Alternative 3 on water demand would be an increase of approximately 0.67 mgd.¹³³⁵ As stated in the Water Supply Assessment provided for the Project, the SFPUC projects that adequate supply would be available to satisfy all retail demand, including Project-related demand, under normal conditions (refer to Appendix Q1). Therefore, there would be sufficient water supplies to accommodate the water demand of Alternative 3. This is considered to be a less-than-significant impact. Similar to the Project, implementation of Alternative 3 would not require or result in the construction of new or expanded water treatment facilities, and this impact would be less than significant.

Implementation of Alternative 3 would require expansion of the existing off-site AWSS by providing an AWSS loop at Candlestick Point that would connect to the planned extension of the existing off-site AWSS on Gilman Street from Ingalls Street to Candlestick Point. At HPS Phase II, the AWSS would be connected to the existing AWSS system at the intersection of Earl Street and Innes Avenue and at the Palou Avenue and Griffith Avenue intersection with a looped service along Spear Avenue/Crisp Road. Implementation of the identified mitigation measure (MM UT-2) would ensure the provision of adequate water for on-site fire-fighting purposes, and the Project would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements for water to fight fires. The impact is less than significant with implementation of this mitigation measure.

Wastewater

Under Alternative 3, the Alice Griffith Public Housing site would discharge a maximum peak flow of 186 gpm to the Candlestick tunnel sewer, which has an existing unused capacity of 28,035 gpm in dry weather. This flow would combine with a maximum peak flow of 858 gpm from the HPS Phase II into the Hunters Point tunnel sewer. The total maximum peak Project flows of 1,044 gpm (1,414 gpm less than the maximum peak flow of the Project) would combine in the Hunters Point tunnel sewer, which has an existing unused capacity of 69,853 gpm in dry weather.¹³³⁶ This represents 1.5 percent of the available capacity of the Hunters Point tunnel sewer, which could be accommodated by the existing off-site infrastructure.

The wastewater generated under Alternative 3 would be 1,414 gpm less than the maximum peak flow of the Project. As with the Project, it is possible that a temporary increase in CSO volume could occur during wet weather if structures are occupied and contribute wastewater to the Combined Sewer System prior to completion of the separate stormwater and wastewater infrastructure of Alternative 3. Implementation of the identified mitigation measure (MM UT-3a) would ensure that there would be no increase in CSO flows as a result of this alternative by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems. The impact on the Combined Sewer System would be reduced to less than significant.

¹³³⁵ Water demand for this alternative was estimated by prorating water demand for the Project (presented in Table III.Q-4) based on build-out of Alternative 3.

¹³³⁶ Wastewater generation for this alternative was estimated by using the generation rates presented in Table III.Q-5 based on build-out of Alternative 3.

The maximum peak flow of wastewater generated under Alternative 3 would be 1,414 gpm less than the maximum peak flow of the Project. The current remaining treatment capacity of the SWPCP would accommodate the increase in wastewater flows from the development of Alternative 3. Overall flows during wet weather would decrease, indicating that the proposed diversion of wet-weather flows away from the combined system would offset the increase in dry-weather flows, assuming completion of utility infrastructure prior to occupancy of Alternative 3. Based on this analysis, the overall volumes in the Bayside system during wet weather would be less than under existing conditions with implementation of the Alternative 3. It is possible that a temporary increase in CSO volume could occur (which could affect the capacity of the SWPCP for treatment) during wet weather, as noted, above. Implementation of the identified mitigation measure (MM UT-3a) would reduce this impact to less than significant by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for the Alternative 3. Thus, Alternative 3 would not result in any net increase in CSO volume in the Bayside system during wet weather. A less-than-significant impact to existing off-site treatment facilities would occur.

Development associated with Alternative 3 would incrementally contribute wastewater during dry and wet-weather events to the Combined Sewer System operated by the SFPUC, but overall, wet-weather volumes would decrease in the Bayside system with construction of the alternative's separate stormwater and wastewater systems. In addition, the maximum peak flow of wastewater generated under Alternative 3 would be 1,414 gpm less than the maximum peak flow of the Project. Compliance with any applicable permit requirements, as monitored and enforced by the SFPUC, would ensure that the Alternative 3 would not exceed the applicable wastewater treatment requirements of the RWQCB. In addition, Alternative 3 would not cause the City to exceed the requirements of the NPDES permit for the reasons previously stated and because the flows during wet weather would actually decline compared to existing flows from the Project site. This impact would be less than significant.

Solid Waste

Demolition of existing facilities within the Project site under Alternative 3 would be substantially less than the Project because the only construction and demolition activity at Candlestick Point would occur at the Alice Griffith Public Housing site and the approach to the Yosemite Slough bridge. Candlestick Park stadium would not be demolished. Similar to the Project, some construction and demolition debris would be reused on site, while other materials would be transported off site for separation. Materials that cannot be reused or recycled would be transported to the landfills in the area. With implementation of the identified mitigation measure (MM UT-5a), the Project Applicant would be required to submit a Waste-Diversion Plan demonstrating strategies to divert at least 75 percent of total construction wastes before receiving building permits. This impact would be less than significant.

At current disposal rates, the Altamont Landfill would be expected to reach capacity in January 2032; however, it may close three years earlier, in January 2029.¹³³⁷ Under Alternative 3, demolition activities, which generate construction debris, are expected to conclude in 2024 at Candlestick Point and in 2021 at HPS Phase II, a minimum of five years before the landfill is expected to close. Further, the City requires the diversion of at least 65 percent of construction waste, as also required by mitigation measure

¹³³⁷ CIWMB, 2009.

MM UT-5a, which would reduce the amount of waste interred at the landfill. Further, the City continues to actively explore various waste-reduction strategies with the goal of moving towards zero waste. If the City achieves this goal, the impact of construction of the Alternative 3 on solid waste would be further reduced. Under Alternative 3, the only construction and demolition activity at Candlestick Point would occur at the Alice Griffith Public Housing site, the Yosemite Slough bridge approach. The Candlestick Park stadium would not be demolished and substantially less construction waste would be generated. The impact of the construction waste generated by the Alternative 4 on the capacity of the Altamont Landfill would be less than significant.

Construction activities, including demolition and excavation, could require disposal of hazardous wastes such as asbestos, lead-based paint, and contaminated soils. The amount of these materials would be that could be disturbed would be less than the Project because the stadium would not be constructed and the overall development program would be reduced requiring less construction and demolition compared to the Project. Hazardous waste would require disposal by a licensed transporter to a TSD authorized to treat such hazardous waste. Disposal of these wastes would occur intermittently during the construction period, and would not likely represent a substantial amount of hazardous waste in a given year. Currently, TSDs in California and adjoining states have sufficient capacity to accommodate all hazardous wastes. Depending on a number of factors, some soil would be transported off site for disposal and some soil may be transported to other areas of the site. Contaminated soils may require transportation off site and treatment at authorized TSDs. Because the TSDs in California and adjoining states have sufficient capacity to treat hazardous wastes, construction of Alternative 3 would not generate hazardous wastes (construction debris or contaminated soil) that would exceed the capacity of TSDs authorized to treat such waste. This would be a less-than-significant impact.

At full build-out, Alternative 3 would generate approximately 9,003.2 tons annually when all uses are fully operational and assuming no waste reduction measures. The amount of solid waste generated under Alternative 3 would be 12,823.8 tons less than the Project because the development program would be substantially reduced. Solid waste generated under Alternative 3 would represent approximately 1.5 percent (compared to 3.7 percent under the Project) of the total waste generated in San Francisco as of 2008 (approximately 594,732 tons).¹³³⁸ All residents and businesses of Alternative 3 would be required to comply with the City's mandatory recycling and composting ordinance. In addition, consistent with the City's goal of achieving zero waste by the year 2020, the Project Applicant would prepare a Site Waste Management Plan as required by the identified mitigation measure (MM UT-7a.1) that would specify the methods by which the Alternative 3 would divert operational solid waste to assist the City in achieving its diversion goals. The impact of operational solid waste generated by Alternative 3 on the capacity of the Altamont Landfill (and/or the landfill with which the City contracts at the close of the current selection process) would be less than significant.

Nearly all uses under Alternative 3 would involve the routine use of hazardous materials at varying levels that would require disposal. Quantification of precise amounts of additional hazardous materials use associated with new proposed uses is not practical at this time. The use of hazardous materials would be less than the Project because the development program would be reduced. The minimal amount of

¹³³⁸ Solid waste generation for this alternative was estimated using the solid waste generation rates presented in Table III.Q-8.

hazardous waste that would be generated by the Alternative 3 could be accommodated by existing TSD facilities. Similar to the Project, this impact would be less than significant.

Electricity, Natural Gas, and Telecommunications

The proposed utility infrastructure improvements for Alternative 3 would include the construction of a joint trench for electrical, natural gas, cable TV, and telecommunications, the same as for the Project. This alternative would not include the new stadium, improvements to the CPSRA, or the full Yosemite Slough bridge. As the development would be smaller than the Project, less electricity, natural gas, and telecommunications services would be required. Infrastructure expansion would not be as extensive as required for the Project. However, these differences between Alternative 3 and the Project would not substantially affect the infrastructure plan as presented for the Project and, therefore, impacts would be the same as for the Project, and less than significant.

Energy

Construction activities associated with implementation of Alternative 3 would require energy sources including electricity, diesel, and gasoline. Construction activities would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not generate a prolonged demand for energy and would be subject to requirements to minimize wasteful fuel consumption. Alternative 3 would include much smaller development program compared to the Project, with the majority of development occurring at HPS Phase II, and, therefore, the energy use during the construction period would be substantially reduced. The San Francisco 49ers stadium would also not be constructed, which would substantially reduce energy use at the site over the Project. Furthermore, given the type of development proposed under this Alternative, the energy demand created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related energy use associated with development under Alternative 3 would be considered less than significant.

Implementation of Alternative 3 would result in baseline electricity consumption substantially less than the Project. In addition, Alternative 3 would include the energy savings associated with the Project Applicant's commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, those efficiency measures would result in consumption of at least 5.4 percent less electricity than a project that would not implement such measures. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential electricity use impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, and MM GC-4, which would require installation of energy efficient lighting, would reduce electricity consumption impacts of Alternative 3 to

less than significant. The San Francisco 49ers stadium would not be constructed at the HPS Phase II site resulting in a further reduction in electricity demand compared to the Project.

Implementation of Alternative 3 would result in baseline natural gas consumption substantially less than the Project. In addition, Alternative 3 would include efficiency measures similar to the Project resulting in the use of approximately 13 percent less natural gas than a development project without such measures. Those efficiency measures would result in consumption of at least 13 percent less natural gas than a development project without such measures. In addition, the Project Applicant would also implement renewable energy strategies, such as the use of photovoltaic cells to provide electricity, the use of solar thermal energy to provide space cooling with the use of absorption systems, and/or water for space heating and domestic water systems. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential natural gas consumption impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, and mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, would reduce natural gas consumption impacts of Alternative 3 to less than significant. In addition, the San Francisco 49ers stadium would not be constructed at HPS Phase II resulting in reduced natural gas demand compared to the Project.

Alternative 3 would increase trips to and from the Project site, increasing the use of petroleum fuels. However, new trips to the Project site under this Alternative would be substantially less than the Project because the development program would be reduced. Without a stadium at HPS Phase II, game day and event-related fuel consumption would be avoided. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel. These programs would be similar to the Project, but would not be as effective because the entire transportation proposed under the Project may not be developed. The transportation system and TDM programs were designed to work for development of Candlestick Point and HPS Phase II as proposed under the Project. Efficiencies of the system would be reduced compared to the Project because the focus of such improvements would primarily occur at HPS Phase II. However, the Yosemite Slough bridge would serve BRT, bikes and, pedestrians and would result in an overall reduction of automobile trips and petroleum fuel consumption. Similar to the Project, Alternative 3 would not be wasteful with respect to petroleum fuel consumption, and impacts are considered less than significant.

Greenhouse Gas Emissions

Similar to the Project, construction activities associated with implementation of Alternative 3 would emit GHGs associated with diesel and gasoline consumption. Similar to the Project, the construction activities for Alternative 3 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not be a prolonged source of GHG emissions. Alternative 3 would include a much smaller development program compared to the Project, with the majority of development occurring at HPS Phase II, and, therefore,

the GHG emissions associated with the construction period would be substantially reduced. The San Francisco 49ers stadium would also not be constructed, which would substantially reduce GHG emissions at the site over the Project. Furthermore, given the type of development proposed under this Alternative, the GHG emissions created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related GHG emissions and climate change associated with development under Alternative 3 would be considered less than significant.

Implementation of Alternative 3 would result in baseline GHG emissions similar to the Project for the HPS Phase II portion, but significantly less at the Candlestick Point portion due to the decrease in the number of dwelling units and absence of commercial uses at Candlestick Point. Alternative 3 would include the GHG emission reductions associated with mitigation measures, including MM GC-1 through MM GC-4, which require the implementation of the Project Applicant's conceptual commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, Alternative 3 would increase trips to and from the Project site, increasing the GHG emissions associated with transportation. However, this Alternative would also include the Project Applicant's commitment to reduce transportation related GHG emissions: (1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. These programs would be similar to the Project, but would not be as effective because the entire transportation system proposed under the Project may not be developed. The transportation system and TDM programs were designed to work for development of Candlestick Point and HPS Phase II as proposed under the Project. Efficiencies of the system would be reduced compared to the Project because the focus of such improvements would primarily occur at HPS Phase II. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of GHGs emitted by shortening trip lengths and shifting trips from vehicular modes of travel. Similar to the Project, those efficiency measures would result in reductions in GHG emissions compared to a project that would not implement such measures. Thus, GHG emissions at the Project site under development of Alternative 3 would not inhibit the achievement of the goals of AB 32 or the SFCAP. Similar to the Project, GHG emissions and climate change impacts would be less than significant.

BAAQMD is considering the future adoption of quantitative CEQA thresholds of significance for operational-related GHG emission impacts. At present, two options relevant to the Project are under consideration for operational GHG emission thresholds; the lead agency can choose either option. Option 1 is based on a project's total operational GHG emissions of 1,100 metric tonnes CO₂e per year. The Project's total operational emissions would exceed this level, which means that if this was used, the Project would be significant. Option 2 is based on the amount of a project's operational GHG emissions per service population, set at 4.6 metric tonnes CO₂e per year. In anticipation of proposed new

BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the Project's operational GHG emissions under the proposed thresholds of significance identified above. The BAAQMD thresholds stated above are still in draft form and may undergo additional changes before being finalized; a revised version is expected Monday, November 2. The methodologies presented in this EIR for quantification of GHG operational emissions is based on using more refined data sources than indicated in the BAAQMD guidance and are the most appropriate to use for Alternative 3 and the Project.

With mitigation, the Project-related operational emissions of 154,639 result in 4.5 tonnes CO₂e per service population per year based on a service population of 34,242 (this accounts for 23,869 net new residents and all jobs except for the stadium jobs, which already exist, 10,373). Therefore, the Project-related operational emissions would be less than 4.6 tonnes CO₂e per service population per year and would result in a less-than-significant impact on climate change. Alternative 3 would reduce total development compared to the Project. Alternative 3 would decrease the housing density and alter the service population which would impact the amount of GHG emissions per service population. Without a quantitative analysis, the comparison to the BAAQMD threshold cannot be judged, and Alternative 3 may not be below the proposed threshold.

■ Attainment of Project Objectives

Alternative 3 would not meet several of the Project objectives entirely because it would include minimal development at Candlestick Point compared to the Project. Alternative 3 would partially meet the remaining Project objectives because it would include a development program for HPS Phase II similar to the Project. Refer to Table VI-6 (Attainment of Project Objectives Alternative 3) below for a discussion of each objective.

Table VI-6 Attainment of Project Objectives Alternative 3		
Objective	Meets Project Objective?	Analysis
1. The integrated development should produce tangible community benefits for the Bayview and the City.	Y-	Alternative 3 would include some community benefits because development would occur at HPS Phase II. However, compared to the Project, Alternative 3 would include substantially less economic development, affordable housing, parks and open space amenities, and improved connection to the existing Bayview neighborhood. Therefore, Alternative 3 would meet this objective to a lesser extent than the Project.
2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents.	Y-	Alternative 3 would include a mix of uses and urban design concepts would provide a direct physical, visual, and architectural connection to the Bayview neighborhood and City. However, the majority of development would occur at HPS Phase II. Alternative 3 would include a reduced amount of affordable housing, jobs, and economic opportunities compared to the Project and Alternative 3 would meet this objective to a lesser extent than the Project.
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourages the rebuilding of Alice Griffith Housing.	Y-	Alternative 3 would include a variety of unit types, sizes, and structures, and a wide range of affordability levels. This Alternative would include the redevelopment of the Alice Griffith Public Housing site. Overall there would be a reduced amount of affordable housing units developed under Alternative 3. Therefore, Alternative 3 would not meet this objective to the same extent as the Project.
4. The integrated development should incorporate environmental sustainability concepts and practices.	Y	Although the overall development program would be reduced, Alternative 3 would include similar sustainability principles compared to the Project. Therefore, Alternative 3 would meet this Project objective.
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure.	N	Alternative 3 would not include construction of a new stadium and would not meet this Project objective.
6. The integrated development should be fiscally prudent, with or without a new stadium.	Y-	Development of Alternative 3 would increase sales tax revenue to the City and would include a development program that would encourage substantial private capital investment at the HPS Phase II site. However, the amount of sales tax generating use and potential private investment would be substantially less than the Project and would meet this objective to a lesser extent than the Project.

Y = Alternative does meet Project objective.

Y- = Alternative meets Project objective, but to a lesser extent than the Project.

Y- = Alternative meets Project objective, but to a significantly lesser extent than the Project.

N = Alternative does not meet Project objective.

VI.C.4 Alternative 4: Reduced CP-HPS Phase II Development; Historic Preservation; No HPS Phase II Stadium, Marina, or Yosemite Slough Bridge

■ Summarized Description

Alternative 4 is a reduced-development alternative. A total of 7,350 residential units would be constructed under this alternative, about 30 percent less than proposed with the Project. Consequently, the population growth anticipated under this alternative would be approximately 17,126 compared to approximately 24,465 under the Project. Land uses proposed under Alternative 4 would be similar to those proposed under the Project; however, residential densities and commercial intensities for most uses would be approximately 30 percent less at full build-out in comparison to build-out of the Project. This alternative also includes preservation of three potentially historic structures at HPS Phase II. This alternative would not include construction of a bridge over Yosemite Slough. The State Parks agreement would occur, but no stadium or marina would be constructed. Table VI-7 (Comparison of Alternative 4 and Project Build-Out) provides a comparison of the uses proposed on the Project site under the Project and Alternative 4. Figure VI-3 (Alternative 4 Land Use Plan) illustrates the land use plan for Alternative 4.

■ Detailed Description

Candlestick Point

New development at Candlestick Point with Alternative 4 would include a 30 percent reduction in residential, retail, hotel, and office uses. A total of 5,495 residential units would be constructed at Candlestick Point at higher densities than the Project, resulting in more mid-rise structures and towers than under the Project. The performance arena and community service uses would remain as proposed under the Project.

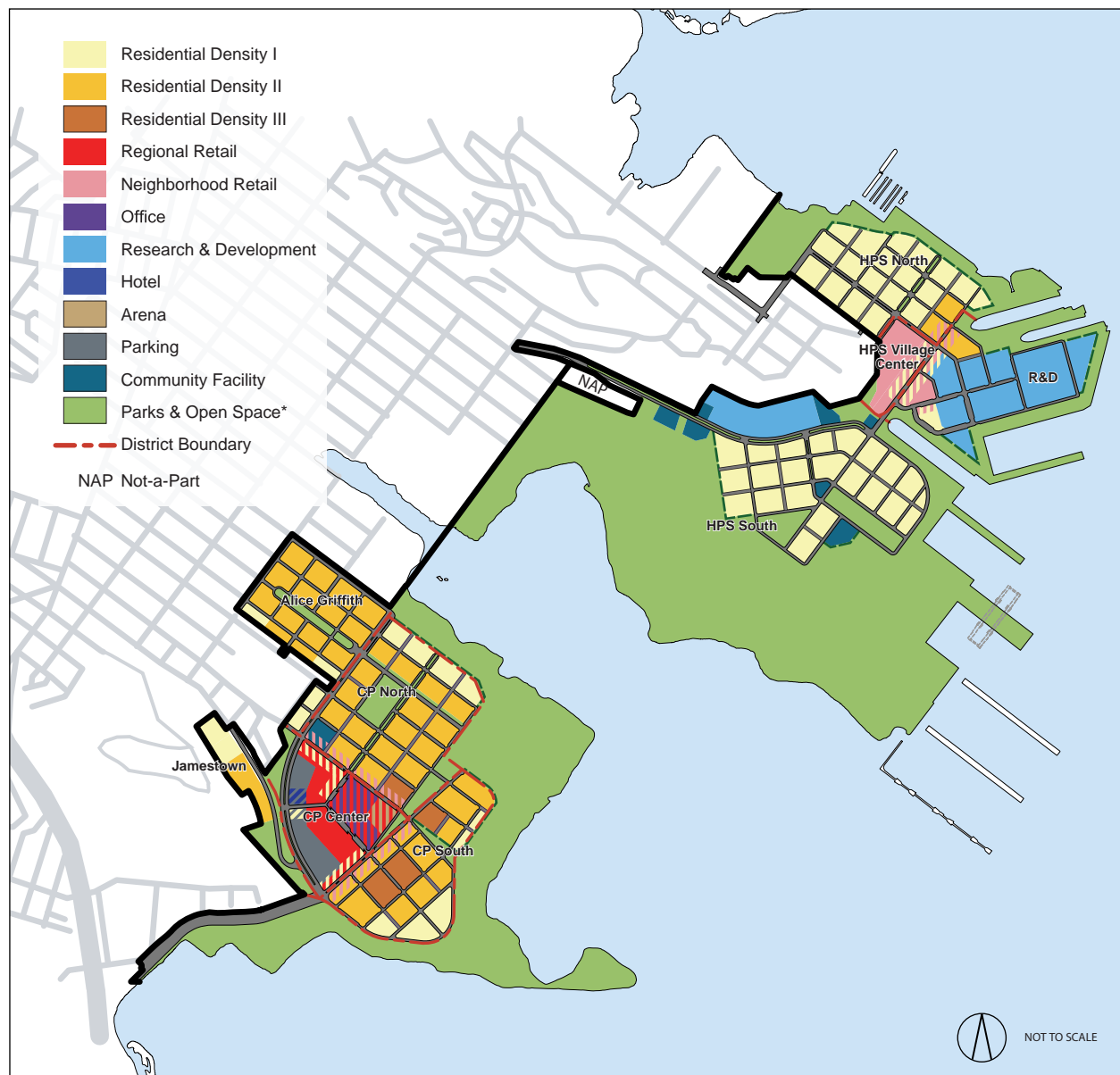
HPS Phase II

As stated above, retail and R&D floor area would be approximately 30 percent less under this alternative in comparison to the Project. This alternative proposes the expansion of the existing historic district at Drydocks 2 and 3 to include Drydock 4 and Buildings 211, 231, and 253. These buildings would be rehabilitated under Secretary of Interior Standards to accommodate a mix of uses, primarily R&D (refer to Section III.J for more information on buildings 211, 231, and 253 as historic resources). The buildings occupy approximately 10 acres in the R&D district and would consist of approximately 880,000 gsf of floor area. Housing at HPS Phase II would be reduced by 30 percent. The floor areas for the artists' studios, community services, and performance venue, however, would be the same as for the Project. No stadium or marina would be constructed. No in-water or shoreline improvements associated with a marina would be made.

Table VI-7 Comparison of Alternative 4 and Project Build-Out			
<i>Use</i>	<i>Alternative 4</i>	<i>Project</i>	<i>Comparison to Project^a</i>
Candlestick Point			
Residential (units)	5,495	7,850	-2,355
Retail (gsf):			
Regional Retail	444,500	635,000	-190,500
Neighborhood Retail	87,500	125,000	-37,500
Community Services	50,000	50,000	0
Hotel (gsf)	105,000	150,000	-45,000
Office (gsf)	105,000	150,000	-45,000
10,000-seat Arena (gsf)	75,000	75,000	0
Football stadium (seats)	0	0	0
HPS Phase II			
Residential (units)	1,855	2,650	-795
Neighborhood Retail (gross square feet - gsf)	87,500	125,000	-37,500
Research & Development (gsf)	1,750,000	2,500,000	-750,000
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Community Services	50,000	50,000	0
Football Stadium (seats)	0	69,000	-69,000
Marina (slips)	0	300	-300
Totals			
Residential (units)	7,350	10,500	-3,150
Retail (gsf)	619,500	885,000	-265,500
Community Services	100,000	100,000	0
Research & Development (gsf)	1,750,000	2,500,000	-750,000
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Other Elements			
Yosemite Slough bridge	No	Yes	—
Shoreline Improvements	Yes	Yes	
State Park Agreement/total acres of State Parkland	Yes/96.7	Yes/96.7	0

SOURCE: Lennar Urban, PBS&J, 2009.

a. Community services, arena, artists' space, and football stadium would remain as proposed under the Project.



SOURCE: Lennar Urban, 2009.

PBS&J 11.1.09 08068 | JCS| 09

FIGURE VI-3

Candlestick Point — Hunters Point Shipyard Phase II EIR
ALTERNATIVE 4 LAND USE PLAN

Transportation and Circulation (without Yosemite Slough Bridge)

Under Alternative 4, motorized and non-motorized traffic, including BRT, would be required to circumnavigate Yosemite Slough. The circulation network around Yosemite Slough would be the same as for Alternative 2, as illustrated in Figure VI-1. The primary roadway connection for automobiles and other vehicular traffic between Candlestick Point and HPS Phase II would be west on Carroll Avenue to Ingalls Street, north along Ingalls Street to Thomas Avenue, and east on Thomas Avenue to Griffith Street. Ingalls Street would remain an industrial mixed-use street with two auto lanes and parking and loading zones on its northern and southern sides. The width of sidewalks on that portion of Ingalls Street from Carroll Avenue to Yosemite Avenue would be decreased from 16 feet to 11 feet to create a uniform street width to accommodate the auto lanes, parking, and loading.

Between the intersection of Carroll Avenue/Arelious Walker Drive and Crisp Road within HPS Phase II, the proposed BRT line would be routed on Carroll Avenue between Arelious Walker Drive and Hawes Street; on Hawes Street between Carroll Avenue and Armstrong Avenue (currently unimproved); and on Armstrong Avenue between Hawes Street and the Navy rail right-of-way; along the Navy rail right-of-way between Armstrong Avenue and Shafter Avenue; along Shafter Avenue between the Navy rail right-of-way and Arelious Walker Drive; and on Arelious Walker Drive between Shafter Avenue and Crisp Road (currently unimproved).

On Carroll Avenue, Hawes Street, and Armstrong Avenue to the Navy rail right-of-way the BRT line would operate within an exclusive BRT lane, one of the two travel lanes in each direction would be transit-only. Hawes Avenue between Carroll Avenue and Armstrong Avenue, and Arelious Walker Drive between Shafter Avenue and Crisp Road are currently unimproved streets and would be built out to accommodate one transit-only travel lane in each direction. The Navy rail right-of-way between Armstrong Avenue and Shafter Avenue would be improved to provide one transit-only travel lane in each direction. Shafter Avenue between the rail right-of-way and Arelious Walker Drive would be reconfigured to provide four travel lanes, with BRT operating in the center lanes.

■ Basis for Impact Analysis

The potential impacts of Alternative 4 are generally based on the parameters of the Project, which include reduced size, bulk, and type of development. For Alternative 4, the impacts of the Project are compared to the impacts of a similar mix of land uses and improvements, except for the following:

- The Yosemite Slough bridge would not be constructed
- Approximately 30 percent fewer residential units would be developed at Candlestick Point and HPS Phase II (a reduction of 3,150 units) for a total of 7,350 units
- An approximate 30 percent reduction in non-residential uses at Candlestick Point and HPS Phase II, excluding community services, arena capacity, and artist space
- Potential historic resources at HPS Phase II would not be demolished
- The marina and stadium at HPS Phase II would not be constructed

The footprint of development at Candlestick Point would be reduced in comparison to the Project. The footprint of development at HPS Phase II would also be smaller compared to the Project, as the stadium

would not be constructed. The overall development program would be reduced, with a total of 7,350 residential units constructed under this alternative, approximately 30 percent less than proposed with the Project. Non-residential land uses would also be reduced by approximately 30 percent with the exception of community service uses and artist space. No marina and related shoreline and in-water improvements would be made.

■ Potential Impacts

Land Use and Plans

Implementation of Alternative 4 would require amendments similar to the Project for the following planning documents: *City of San Francisco General Plan*, *Bayview Hunters Point Redevelopment Plan*, *Hunters Point Shipyard Redevelopment Plan*, *Bay Plan*, and *San Francisco Bay Area Seaport Plan*. An amendment to the *CPSRA General Plan* would not be required because there would no State Parks land agreement. With implementation of the requirements and mitigation measures identified for the Project in Section III.C through Section III.S of this EIR, development under Alternative 4 would not conflict with any applicable land use plans, policies, or regulations (of an agency with jurisdiction) adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, development under this Alternative would not conflict with any of the policies, goals, and strategies analyzed for the Project. Although the Project is consistent with the Bay Plan policies with regards to Bay fill, it should be noted that development under Alternative 4 would reduce the amount of Bay fill compared to the Project, because the Yosemite Slough bridge and marina would not be constructed. Similar to the Project, this impact would be less than significant.

Implementation of Alternative 4 would not result in a substantial adverse change in the existing land use character. Development under Alternative 4 would substantially change the character of the site from open space and industrial uses to an urbanized area representative of other areas in San Francisco. This change would improve deteriorated conditions and connectivity, as well as provide numerous areas of open space, extensive landscaped areas, and pleasing architecture, all of which would improve the character of the site. Furthermore, with a 30 percent reduction in residential and most non-residential development, no Yosemite Slough bridge, stadium or marina, the changes to the existing land use character would be less substantial than those created by the Project. Therefore, changes resulting from development under Alternative 4 would not be considered adverse. Furthermore, the transition in scale between adjacent neighborhoods and development under this Alternative, as well as the varied range of proposed uses, would not represent a substantial adverse change in the existing land use character of the Project area. Similar to the Project, this impact would be less than significant.

Without a State Parks land agreement, there would be no changes to State Parks land use within the Project site and no development would occur on the CPSRA. Therefore, because State Parks land would not be developed with any structural uses under Alternative 4, there would be no impacts to the land use character of State Parks, which would be less than the Project. Also worth noting is that the land use character of the CPSRA would not benefit from the improvements as proposed under the Project. However, because all of the existing State Parks land would ultimately remain undeveloped, this is considered a lesser impact than the Project from a visual standpoint.

Population, Housing, and Employment

Construction activities associated with implementation of Alternative 4 would induce direct job growth at the Project site. The number of construction workers that would be employed during the construction period would be reduced compared to the Project because less residential and non-residential development would occur, and construction of the Yosemite Slough bridge, stadium, and marina at HPS Phase II would not occur. It is anticipated that construction employees would commute from elsewhere in the region, rather than relocate to the Bayview Hunters Point neighborhood for a temporary construction assignment. Thus, construction under this Alternative would not generate a substantial, unplanned population increase. Direct and indirect impacts associated with construction employment would be less than significant.

Implementation of Alternative 4 would induce direct and indirect population growth, but this growth would not be considered substantial. Compared to the Project, development under this Alternative would result in 5,495 housing units at Candlestick Point and 1,855 units at HPS Phase II, for a total of 7,350 new housing units at the Project site. The jobs and housing units that would be provided at the site would be closely balanced (approximately 7,219 jobs and 7,350 housing units) so that neither a surplus of housing nor jobs would occur, resulting in indirect residential or employment growth. Housing demand based on employment under Alternative 4 (at 0.74 dwelling units per worker) would total 5,608 dwelling units. Housing provided under Alternative 4 would be greater than the employment-generated demand. Based on existing commuting patterns, housing demand in other communities is estimated to be 45 percent of total housing demand (3,249 units).¹³³⁹ Approximately 55 percent of the workers would seek housing in the City (3,970 units). As a result, similar to the Project, the population and employment increase associated with development under Alternative 4 would not be substantial. This impact is considered less than significant.

Transportation and Circulation

Alternative 4, with reduced development at Candlestick Point, residential development and regional retail uses would be decreased and arena uses would not be developed. At HPS Phase II, uses would be decreased. This alternative assumes that the 49ers football team would continue to use the existing Candlestick Park stadium. There would be no Yosemite Slough bridge.

The Transportation Study analyzed Alternative 4 and conclusions from the Transportation Study have been presented below.

Construction Impacts

Construction activities associated with Alternative 1 would be similar reduced compared to effects with the Project. Localized construction-related traffic impacts would remain significant and unavoidable.

¹³³⁹ Total employment was estimated using the employment factors presented in Table II.C-7 of this EIR and a total population of 17,126. Based on existing commuting patterns, housing demand in San Francisco is estimated to be 55 percent of total housing demand housing demand in other communities is estimated to be 45 percent of total housing demand.

Intersection Conditions

Alternative 4 would have reduced project and cumulative effects at some study intersections. Section III.D discusses traffic effects at those intersections, and the feasibility of mitigation measures. In general, intersection conditions would be significant and unavoidable effects of Alternative 4.

Game day traffic conditions would continue to occur at existing Candlestick Park stadium.

Freeway Conditions

Alternative 4 freeway mainline sections effects, freeway ramp junctions conditions, and ramp queuing effects would generally be similar to the Project conditions. Alternative 4 would have reduced effects at the US-101/Harney northbound on-ramp Sunday PM (LOS D compared to LOS E with the Project); US-101/Bayshore/Chavez northbound on-ramp (Sunday PM LOS D compared to LOS F). Queues on the US-101/Harney northbound off-ramp would not extend onto the mainline segment in Sunday PM conditions. Other freeway impacts with Alternative 4 would be significant and unavoidable.

Transit Impacts

Alternative 4 transit conditions assume implementation of Project-related transit improvements. Alternative 4 would have a less than significant impact on local and regional transit capacity. However, as with the Project, transit impacts would occur from traffic congestion delay. Overall, those transit delay conditions with Alternative 4 would affect the same lines as with the Project as presented in Section III.D, Impact TR-21 to Impact TR-30. As concluded in Section III.D, the transit delay effects would remain significant and unavoidable. During the AM and PM peak hour, Alternative 4 would require up to 28 additional vehicles, the same as with the Project.

Although the alternative BRT route around Yosemite Slough would be technically feasible, it would not be an optimal configuration for a BRT system. BRT service would provide direct, fast, and reliable travel in a dedicated right-of-way, typically with signal priority for VRT vehicles. When these elements are combined, the BRT service takes on a higher quality character than typical local bus service. The Yosemite Slough bridge would provide a dedicated right-of-way and most direct route between Hunters Point Shipyard and points to the west, including Candlestick point, the Bayshore Caltrain Station, and Balboa Park BART. Alternative 4 would not accommodate the BRT route on the bridge proposed with the Project.

Bicycle Impacts

The Alternative 4 bicycle trips would be accommodated within the proposed street and network, although there would not be a Yosemite Slough bicycle and pedestrian route; impacts on bicycle circulation would be less than significant.

Pedestrian Impacts

The Alternative 4 pedestrian trips would be accommodated within the proposed sidewalk and pedestrian network, although there would not be a Yosemite Slough bicycle and pedestrian route; impacts on pedestrian circulation would be less than significant.

Parking Impacts

Alternative 4 would result in a demand for about 16,750 spaces, compared with a maximum permitted supply of about 13,040 spaces; therefore, the maximum off-street parking supply would be about 3,710 spaces fewer than the estimated peak demand. The Project would have a demand for 21,233 spaces and maximum supply of 16,874 spaces, about 4,360 spaces fewer than estimated peak demand. As noted for the Project, it is possible that some drivers may seek available parking in adjacent Bayview residential areas to the west. The potential increase in parking demand in adjacent neighborhoods would likely spill over to streets with existing industrial uses in the vicinity, which could, in turn, increase demand for parking in nearby Bayview residential areas. The loss of parking may cause potential secondary effects, which would include cars circling and looking for a parking space in neighboring streets. The secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to some drivers, who are aware of constrained parking conditions in a given area, shifting to other modes. Hence, any secondary environmental impacts that may result from a shortfall in parking would be minor. Therefore, the parking shortfall would not result in significant parking impacts, and Alternative 4 impacts on parking would be less than significant.

This alternative would have less than significant effects on other transportation conditions (loading, air traffic, emergency access).

Aesthetics

Construction activities associated with implementation of Alternative 4 would occur during a similar build-out period and involve similar activities as the Project. Like the Project, those activities would be visible to surrounding land uses and could impact views of scenic vistas and scenic resources in the area. However, any impacts to views would be temporary visual distractions typically associated with construction activities and commonly encountered in developed areas. Mitigation for the Project would also be implemented with this alternative that would reduce visual construction impacts to less than significant. Therefore, impacts to scenic vistas during construction of Alternative 4 would be the same as under the Project, and less than significant. Construction activities associated with Alternative 4 would not result in adverse effects on any scenic vistas and the impact would be less than significant, the same as for the Project.

There are no scenic resources on the Project site that would be permanently adversely affected by construction of Alternative 4. The Yosemite Slough bridge, stadium, and marina would not be constructed as part of Alternative 4, and temporary impacts to the slough and Bay as scenic resources would be avoided. Therefore, impacts to views of scenic vistas during construction of Alternative 4 would be less than the Project. Construction activities associated with Alternative 4 would have a less-than-significant impact on scenic resources.

As with the Project, construction activities for Alternative 4 would result in exposed trenches, roadway bedding (soil and gravel), spoils/debris piles, and possibly steel plates that would be visible during construction of the utility infrastructure improvements. Although these activities would take place primarily on site, views of the activities could be available from surrounding land uses. As with the Project, implementation of the identified mitigation measure (MM AE-2) would require the Project developer of Alternative 4 to screen construction sites from public view at street level, provide for

appropriate staging of construction equipment, and maintain the cleanliness of construction equipment. Furthermore, without the construction of the Yosemite Slough bridge, marina, or stadium, the number and duration of construction sites under development of Alternative 4 would be less than the Project. Since less development would occur, Alternative 4 would have a reduced construction impact compared to the Project on the visual character or quality of the site and impacts would be less than significant.

Construction of Alternative 4 would occur during daylight hours, and, therefore, glare could be created as a result of reflection of sunlight off windows of trucks and other construction materials that have the potential to generate glare (i.e., glass); however, similar to the Project, the glare created by construction activities at the Project site would not be substantial enough to affect daytime views in the area. Security lighting would be provided after-hours on all construction sites, but this lighting would be minimal, restricted to the Project site, and would not exceed the level of existing night lighting levels in other urban areas in San Francisco. Furthermore, compared to the Project, approximately 30 percent fewer residential units would be constructed, and construction of the Yosemite Slough bridge, stadium, and marina would not occur. Therefore, construction activity under development of Alternative 4 would be less than the Project, creating less potential for glare impacts. In addition, similar to the Project, construction lighting would comply with all City lighting requirements. Therefore, construction activities for development under Alternative 4 would have less-than-significant light and glare impacts.

Vertical development under Alternative 4 would have a reduced bulk and mass compared to the Project. Alternative 4 would include four towers at Candlestick Point, compared to 11 towers with the Project, and the average tower height would be similar under Alternative 4. There would be no towers at HPS Phase II.¹³⁴⁰ Alternative 4 would change views of the Project site from surrounding public viewpoints, but would not substantially obstruct any scenic vistas. This Alternative would have a lesser degree of impacts than the Project in relation to scenic vistas because the Yosemite Slough bridge, the stadium, and the marina would not be constructed. Similar to the Project, development of the Project would not block publicly accessible views of the Bay or other scenic vistas. Views of the East Bay and the Bay from the Project site would be maintained within public access areas, as well as at City and State parks located within Candlestick Point. Additionally, such views from HPS Phase II would be maintained on the site and within public access areas, such as from HPS Phase I Hilltop Park. While development of Alternative 4 would include high-rise towers at Candlestick Point, those towers would be shorter compared to the Project, and because they would not be clustered together, the development would not substantially obstruct views of the Bay or beyond from any long-range viewpoints. The visually prominent new stadium would not appear on the HPS Phase II site. Therefore, similar to the Project, development under Alternative 4 would not substantially obstruct any scenic vistas, and this impact would be less than significant. This impact would be less than under the Project, however, because of the removal of several towers.

Vertical development under Alternative 4 would have a reduced bulk and mass compared to the Project, as described above, due to the 30 percent reduction in residential units and most non-residential uses throughout the Project site. Alternative 4 would also not include construction of the Yosemite Slough bridge stadium, or the marina. Development under Alternative 4 would not substantially damage scenic

¹³⁴⁰ The average tower height at Candlestick Point was estimated to be similar to the Project, due to the 30 percent reduction in residential units and most non-residential uses and the reduced development footprint at Candlestick Point.

resources that contribute to a scenic public setting. Alternative 4 would include redevelopment of the Park stadium area and associated paved and unpaved parking lots by replacing degraded urban areas and outdated residential development with new, well-designed urban development and integrated public parks. The Yosemite Slough bridge and roadway approaches would also not be constructed and the appearance of the slough would be unchanged. Scenic resources at HPS Phase II would be retained, including the Re-gunning crane. Shoreline improvements at Candlestick Point and HPS Phase II would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 4 would not damage or remove any identified scenic resources that contribute to a scenic public setting and the impact would be less than significant.

Alternative 4 would result in a reduced development program compared to the Project, with a 30 percent reduction in residential uses and most non-residential uses and no development of the Yosemite Slough bridge, stadium, or marina. Alternative 4 would change the visual character of the Project site. However, similar to the Project, Alternative 4 would not substantially degrade the visual character or quality of the Project site area or its surroundings. In fact, development under Alternative 4 would improve the degraded and deteriorated condition of much of the Project site. Development under Alternative 4 would replace the existing conditions with a more dense urban setting, and would not represent an adverse change. The proposed shoreline improvements would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 4 would not substantially degrade the visual character or quality of the Project site or its surroundings. The impact would be less than significant.

Without a State Parks land agreement, there would be no established funding mechanism for future maintenance of the State Parks on site from the Project Applicant, and no development or park improvements would occur in the CPSRA. The CPSRA would essentially remain in its current condition. However, increased use of the CPSRA as a result of population and employment growth associated with Alternative 4 could result in deterioration of the areas currently used by the public for recreation activities in the CPSRA. This could potentially result in a substantial adverse impact on the visual character and quality of the Project site. Without an established funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. In addition, new and improved parkland in the CPSRA would not occur as proposed under the Project. Therefore, development of Alternative 4 would result in greater impacts to the visual character of CPSRA compared to the Project, unless a funding mechanism is established.

Development under Alternative 4 would increase lighting on the Project site relative to existing outdoor lighting, and new building surfaces would increase the level of illumination in the area. However, vertical development under Alternative 4 would have a reduced bulk and mass compared to the Project due to the 30 percent reduction in residential uses and most non-residential uses. Nighttime lighting would be reduced compared to the Project as a result of the reduced development potential and because lighting for the marina, stadium, and CPSRA improvements would not be installed. Therefore, lighting and glare impacts would be reduced compared to the Project and the lighting impact from the stadium, although less than significant for the Project, would be eliminated under this alternative. Area lighting would illuminate larger areas that are well traveled so as to promote way finding and provide for a safe

environment. In addition to area lighting, building lighting would be angled towards building surfaces for aesthetic purposes and/or to illuminate signs. Like the Project, both types of lighting would be designed to avoid direct visibility of the light source. Resolution 9212 prohibits the use of highly reflective or mirrored glass in new construction. Implementation of the identified mitigation measures (MM AE-7a.1, MM AE-7a.2, MM AE-7a.3, and MM AE-7a.4) and compliance with Resolution 9212 would reduce impacts from light and glare to a less-than-significant level by shielding lighting fixtures, minimizing spill light, screening vehicle headlights to the maximum extent feasible, and eliminating or minimizing increased glare by the use of non-reflective glass and non-reflective textured surfaces within the proposed development area. Impacts would be less than significant under Alternative 4.

Shadows

The State Parks agreement would not occur under Alternative 4, which would result in a reduced density of development at Candlestick Point compared to the Project because the development area would be smaller and the development program would be reduced. Vertical development under Alternative 4 would have a reduced bulk and mass compared to the Project. Alternative 4 would include four towers at Candlestick Point, compared to 11 towers with the Project, and the average tower height would be similar under Alternative 4. There would be no towers at HPS Phase II.¹³⁴¹ The stadium would not be constructed. The buildings developed under Alternative 4 would include a similar layout and orientation compared to the Project. At Candlestick Point, the existing public open space, Bayview Park and Gilman Park, would not be affected by new shading from development under Alternative 4. Gilman Park would experience some shading on winter afternoons. Those shadows would be cast by buildings that do not exceed 40 feet in height, are not subject to *Planning Code* Section 295, and, therefore, would not be considered an adverse impact. Some new shadows would be cast on Bayview Park; these would have a less-than-significant effect on that park.

The CPSRA would be affected by new shade in the afternoon but most areas would experience limited to no new shadow from development under Alternative 4. Fewer shadows would be cast in the CPSRA compared to the Project because the adjacent development would have reduced bulk and mass compared to the Project. At HPS Phase II, the existing public open space, India Basin Shoreline Park and India Basin Open Space, would not be affected by new shading from development under Alternative 4. New shadows cast by development under Alternative 4 on proposed new parks throughout the year would range from little or no shading to large areas of certain parks receiving new shade, particularly in the late afternoon during the vernal and autumnal equinoxes. The extent and duration of shadow on new public sidewalks would increase along street corridors of Alternative 4. Compared to the Project, this new shadow would be reduced and not exceed that which would be expected in a more urban area. New shade created by implementation of Alternative 4 would occur at limited times of the day and year, and would not substantially affect the use of outdoor recreational facilities or open space. Since less overall development would occur under Alternative 4, shade and shadow impacts would be of a lesser degree than the Project, and this impact would be less than significant.

¹³⁴¹ The average tower height at Candlestick Point was estimated to be similar to the Project, due to the 30 percent reduction in residential units and most non-residential uses and the reduced development footprint at Candlestick Point.

Wind

Development under Alternative 4 would include only four tower structures at Candlestick Point and no tower structures at HPS Phase II. In addition, the 156-foot tall stadium would not be constructed. The remaining towers on Candlestick Point would have a similar average height to the Project towers, which would extend above surrounding buildings and intercept a large volume of wind. Because of the exposure of tall structures to wind, the tower structures proposed under Alternative 4 would have the potential to accelerate winds in nearby pedestrian sidewalk areas or public open space areas. The degree of change in pedestrian-level wind conditions would be influenced by building design, such as building height, shape, massing, setbacks, and location of pedestrian areas. Structures nearing or over 100 feet in height could have effects on pedestrian-level conditions such that the wind hazard criteria of 26 miles per hour for a single hour of the year would be exceeded. Similar to the Project, the street grid of Alternative 4 would not align with predominant west and west-northwest wind directions and would, therefore, not result in channeling of winds along street corridors. The street grid would orient building faces such that they would not face into the prevailing wind direction; that orientation would reduce potentially significant pedestrian-level wind acceleration at the Project site.

Implementation of the identified mitigation measure (MM W-1a) would reduce the potential impact from wind for development of Alternative 4 by requiring review of all buildings that could result in adverse wind impacts by a qualified wind consultant. If the review determines that would be any exceedances of the wind hazard criteria, the design must be revised to reduce the impact below the established threshold. Implementation of required design changes, if any, would reduce potential hazardous wind effects at the pedestrian level by forcing wind downwash to tops of podium areas and/or into the street and away from pedestrian areas. Compliance with the mitigation measures would ensure pedestrian safety in pedestrian-access areas. Similar to the Project, through implementation of the identified mitigation measure, wind impacts would be less than significant. Elimination of the bridge, several towers, and the stadium would reduce the potential for adverse wind effects at street level compared to the Project. However, the Project includes mitigation measures that reduce this impact to less than significant. The impact of Alternative 4 would be less than significant, and somewhat less than the Project.

Air Quality

As the footprint of development, the total amount of development, and the land uses provided with Alternative 4 would be reduced compared to the Project, air quality impacts of Alternative 4 would be less than the Project.

Construction activities for Alternative 4 would generate dust; however, they would need to comply with the San Francisco Health Code and BAAQMD requirements. Implementation of MM HZ-15, which would require the Applicant to ensure that construction contractors comply with the dust control strategies included in an approved dust control plan as part of a site-specific dust control plan, would reduce the impacts caused by construction dust to a less-than-significant level.

Construction activities could also create DPM; however, as the development of Alternative 4 would be considerably less than under the Project, implementation of MM AQ-2.1 and MM AQ-2.2, accelerated emission control implementation on construction equipment, would keep this impact less than

significant. Construction activities could also generate TAC-containing PM₁₀; however, as construction activities for Alternative 4 would be fewer than for the Project, this impact would be less than significant.

Though operational emissions associated with Alternative 4 would be much lower than with the Project, due to the scale of Alternative 4, the mass emissions would exceed the BAAQMD CEQA thresholds and this impact would remain significant and unavoidable, similar to the Project. Alternative 4 has reduced R&D square footage, and potential TAC emissions from facilities in R&D areas would also be reduced. With the implementation of MM AQ-6.1 and MM AQ-6.2, this impact would be less than significant, and less than the Project.

Additionally, as the scale of Alternative 4 is smaller than the Project, the impacts from Alternative 4 traffic (e.g., carbon monoxide and PM_{2.5}) would be less than the Project and therefore continue to be less than significant.

According to the current BAAQMD CEQA Guidelines, odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that the BAAQMD regards with potential to generate considerable odors include: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, oil refineries and chemical plants. Alternative 4 would be a large mixed-use development containing residential, office, retail, R&D, recreational, and entertainment uses. Although there may be some potential for small-scale, localized odor issues to emerge around proposed sources such as solid waste collection, food preparation, etc., substantial odor sources and consequent effects on on-site and off-site sensitive receptors would be unlikely and would be resolved by interventions after receipt of any complaints. This would be a less-than-significant impact. No mitigation is required.

The Project is consistent with regional air quality plans. As Alternative 4 would be smaller than the Project, Alternative 4 would be consistent with these plans. Alternative 4 promotes the use of alternative transportation modes, such as transit, biking and walking. In addition, it puts housing in close proximity with jobs and retail establishments, reducing the length of trips and further reducing reliance on single-occupancy vehicles. Therefore, Alternative 4 conforms to the regional air quality plan and there would be a less-than-significant impact. No mitigation is required.

Noise

As the footprint of development, the total amount of development, and the land uses provided with Alternative 4 would be reduced compared to the Project, noise impacts of Alternative 4 would be the less than the Project.

Construction activities for Alternative 4 would expose sensitive receptors to increased noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to comply with the San Francisco Noise Ordinance, which generally prohibits construction between 8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. Implementation of mitigation measures MM NO-1a.1 and MM NO-1a.2, which would require implementation of construction Best Management Practices to reduce construction noise and the use of noise-reducing pile driving techniques, would reduce any potentially significant impacts to less-than-significant levels, similar to the Project.

Construction activities for Alternative 4 would result in a temporary or periodic increase in ambient noise levels that would be noticeable and likely cause for human annoyance. Construction activities would occur within 25 feet of existing and future residential uses. Pile driving activities could result in substantial noise levels of up to 107 dBA at new residential uses on the site or at adjacent existing residences. Construction-related temporary increases in ambient noise levels would be considered significant and unavoidable, the same as for the Project.

Construction activities could also create excessive ground-borne vibration levels in existing residential neighborhoods adjacent to the site and at proposed on-site residential uses, should the latter be occupied before construction activity on adjacent parcels is complete. Implementation of mitigation measures MM NO-1a.1, MM NO-1a.2, and MM NO-2a would require implementation of construction Best Management Practices, noise-reducing pile driving techniques as feasible, and monitoring of buildings within 50 feet of pile driving activities. Implementation of these measures would reduce vibration impacts under Alternative 4, but not to a less-than-significant level, as vibration levels from pile driving activities would be similar to the Project for the residential uses within the HPS North District; therefore, this impact would remain significant and unavoidable, similar to the Project.

Daily operation of Alternative 4, such as mechanical equipment and delivery of goods, would not expose noise-sensitive land uses on- or off- site to noise levels that exceed the standards established by the City of San Francisco. This impact would be less than significant, similar to the Project. Operation activities associated with Alternative 4, such as truck deliveries, would not generate or expose persons on or off site to excessive groundborne vibration. This impact would also be less than significant, similar to the Project.

Operation of Alternative 4 would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes. Although approximately 30 percent less development would occur under Alternative 4, significant impacts identified for the Project along Carroll Avenue, Gilman Avenue, and Jamestown Avenue would remain with implementation of Alternative 4.

Because Alternative 4 would not include a football stadium at HPS Phase II and the stadium at Candlestick Point, noise impacts identified for the Project from football games and concerts would not occur with implementation of Alternative 4.

Cultural Resources

Compared to the Project, development under Alternative 4 would not result in the demolition of Buildings 211, 231, and 253, which are potential historic resources in the CRHR-eligible Hunters Point Commercial Dry Dock and Naval Shipyard Historic District (refer to Appendix V1 [Page & Turnbull Feasibility Report]). The Project Applicant would rehabilitate these buildings in accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. The buildings occupy approximately 10 acres in the R&D district and would consist of approximately 880,000 gsf of floor area. Building 211 would be rehabilitated to accommodate parking and Buildings 231 and 253 would be rehabilitated to accommodate R&D uses (refer to Appendix V2 [CBRE Consulting Financial Feasibility Analysis]). Implementation of Alternative 4 would retain Drydocks 2 and 3 and rehabilitate Buildings 140, 204, 205, and 207 at the HPS Phase II site in

accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Therefore, the impacts of developing Alternative 4 on these historical resources would be less than significant and would avoid the significant impact of the Project on historic resources.

Similar to the Project, construction activities associated with Alternative 4 could result in a substantial adverse change in the significance of archaeological resources, as the Project site is likely to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods. Implementation of the identified mitigation measure (MM CP-2a) would reduce the effects on archaeological resources to a less-than-significant level for development under Alternative 4. The Yosemite Slough bridge, marina, and stadium would be eliminated, and potential disturbance of archaeological resources resulting from construction of these components would be avoided, although the Project would mitigate this potential impact to less than significant. Overall, the impacts would be less than significant, and substantially similar to the impacts of the Project.

Construction activities associated with Alternative 4 could result in a substantial adverse change in the significance of paleontological resources. The Bay mud underlying portions of the fill is expected to contain paleontological resources, and there is a possibility of fossils being discovered during construction-related excavation associated with the shoreline improvements. Potential impacts related to construction of the Yosemite Slough bridge, stadium, and marina would be avoided under this Alternative, because these improvements would not be constructed. Similar to the Project, implementation of the identified mitigation measure (MM CP-3a) would reduce the effects of construction-related activities to potential paleontological resources in in-water and off-site areas to a less-than-significant level for development under Alternative 4.

Hazards and Hazardous Materials

Under Alternative 4, the construction impacts associated with Hazards and Hazardous Materials would be somewhat reduced as compared to the Project because the overall development footprint would be reduced, including the elimination of the Yosemite Slough Bridge, marina, and stadium, resulting in a smaller area subject to disturbance. The preservation of historic buildings in HPS Phase II would also result in less subsurface disturbance in that portion of the site. Further, the 30 percent reduction in residential and most non-residential uses and absence of the marina would reduce the risk of exposure to hazardous materials during Project operation.

The development proposed under Alternative 4, while reduced in density, would result in the same development footprint at Candlestick Point and construction-related impacts at Candlestick Point for Alternative 4 would be the same as for the Project. At HPS Phase II, the development footprint would be somewhat reduced, resulting in a comparable reduction in the potential for exposure to hazardous materials during construction as compared to the Project.

Site preparation would still include deep excavations for large structures such as for residential towers, with plans to use the cut material elsewhere within the Project site as fill, trenching for utility lines, dewatering, grading and compaction and other earth-disturbing activities. As portions of the site are known to contain elevated levels of chemicals in the soil, construction activities could result in exposure of construction workers, the public or the environment to unacceptable levels of hazardous materials if

not handled appropriately. MM HZ-1a would reduce effects related to exposure of known contaminants at Candlestick Point by requiring compliance with Article 22A or an equivalent process. At HPS Phase II, potential effects related to exposure to hazardous materials from construction activities would be mitigated through requirements to comply with restrictions imposed on the property through the federal site clean-up process (MM HZ-1b, MM HZ-9, and MM HZ-12). Disturbance of contaminated soil, sediments, and groundwater in the shoreline areas at HPS Phase II, although reduced in scope with the elimination of the marina and the Yosemite Slough Bridge, would still occur as a result of shoreline improvements. As for the Project, MM HZ-10b would ensure approval of workplans by the Navy and regulatory agencies prior to any work in the shoreline areas. In addition, mitigation measures MM HY-1a.1, MM HY-1a.2, MM BI-4a.1, MM BI-4a.2, and MM BI-5b.4 would reduce water quality and biological resources impacts from disturbance of contaminated soil, groundwater and sediments.

At both Candlestick Point and HPS Phase II, compliance with MM HZ-2a.1 would require the preparation and implementation of contingency plans to address unknown contaminants that might be encountered during construction, and compliance with MM HZ-2a.2 would require preparation and implementation of health and safety plans to protect construction workers from exposure to hazardous materials during construction activities. Construction activities could require off-site transport of contaminated soil or groundwater; compliance with federal, state, and local regulations would ensure that no unacceptable exposure to chemicals occur as a result of these activities. Further, mitigation measures MM HY-1a.1, MM HY-1a.2, and MM HY-1a.3 would ensure that no unacceptable levels of hazardous materials in soil in surface runoff or in groundwater are discharged to the sewer system or discharged from the site to the Bay. Hazardous materials impacts from all of the above construction-related activities would be reduced to less than significant with the implementation of the mitigation measures identified above, the same as for the Project.

Development under Alternative 4, as for the Project, would require the installation of foundation support piles, which could, under certain soil conditions, create a vertical conduit for chemicals occurring in shallow groundwater to migrate to the deeper groundwater aquifer. However, as for the Project, MM HZ-5a, which requires preparation of a plan for pilot boreholes for each pile to prevent disturbance of potentially contaminated fill materials and would reduce this potential impact from pile driving to less than significant, the same as for the Project.

Alternative 4 would not include construction of the Yosemite Slough Bridge, which would avoid impacts associated with disturbance of potentially radiologically impacted soils at HPS Phase II in the vicinity of Parcels E and E-2. Also, because Alternative 4 would preserve historically significant buildings on HPS Phase II proposed for demolition under the Project (Buildings 211, 231, and 253), this Alternative would result in less land disturbance in the area of the site where these buildings are located as compared to the Project, thus reducing the potential for exposure to hazardous materials in soil or groundwater in this area.

Alternative 4 would place housing in the area of the HPS Phase II site proposed for the stadium and stadium parking. The Navy's cleanup plan is designed to remediate the HPS site to levels acceptable for the planned uses in the existing HPS Redevelopment Plan. To the extent that Alternative 4 proposes to place housing in areas not designated for residential use in the existing HPS Redevelopment Plan, additional hazardous materials remedial work could be required, which could result in some increased

risk to workers, the public and environment from exposure to hazardous materials during the construction process. Any property that has not been remediated for unrestricted use at the time of transfer will have use restrictions placed on the property in compliance with the federal clean-up process. For use restrictions to be removed, the Project Applicant would be required by the transfer documents to obtain approval from the regulatory agencies overseeing the clean-up process before residential uses could be placed on these portions of the site. Any remedial activities undertaken as part of the construction process would be subject to the requirements in MM HZ-1b, which requires construction activities at HPS Phase II to be done in accordance with all restrictions imposed on the site by the federal regulatory clean-up process and these impacts would be less than significant, the same as for the Project.

Potential impacts associated with disturbance of naturally occurring asbestos would be similar to those associated with the Project and would be mitigated through MM HZ-15, which requires the preparation of dust control plans as required by BAAQMD and DPH. As for the Project, Alternative 4 would involve the demolition of existing structures that may contain asbestos-containing building materials, lead-based paint, and other hazardous materials. The preservation of historic buildings may likewise result in disturbance of such hazardous materials. The existing regulatory framework and approval process would avoid potential hazards from demolition or building preservation activities and impacts would be less than significant, the same as the Project.

Alternative 4 would involve off-site roadway improvements, which could result in disturbance of hazardous material in soil or groundwater. Unacceptable exposures would be controlled as for the Project by implementation of MM HZ-1a, and hazardous materials impacts from these activities would be less than significant.

Project operations would involve routine use, storage, transport, or disposal of hazardous materials. The use of such materials would be reduced compared to the Project, because of a 30 percent reduction in residential and most non-residential uses. In addition, the marina would not be constructed, resulting in less hazardous materials usage associated with boat cleaning and maintenance supplies. Compliance with applicable federal, state, and local regulations related to the use, storage and transport of such materials would result in a less-than-significant impact from hazardous materials usage, the same as for the Project.

Geology and Soils

Construction activities, such as removal of paved areas, grading, and excavation, could remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, could be subject to soil loss and erosion by wind and stormwater runoff. However, requirements to control surface soil erosion during and after construction of Alternative 4 would be implemented through the requirements of the identified mitigation measure (MM HY-1a.1), and adverse effects on the soil such as soil loss from wind erosion and stormwater runoff would be reduced to a less-than-significant level. Soil erosion impacts associated with construction of the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 4. Soil erosion impacts would also be reduced because the development footprint at Candlestick Point and HPS Phase II would be reduced.

Construction activities would have the potential to affect groundwater levels. Construction may include dewatering procedures during excavation, construction, and operation of foundations and buried utilities. Dewatering could cause settlement of adjacent soils that could damage the overlying foundations of

existing buildings. With implementation of the dewatering techniques, groundwater level monitoring, and subsurface controls as specified in the SFBC and required by the identified mitigation measure (MM GE-2), groundwater levels in the area would not be lowered such that unacceptable settlement at adjacent or nearby properties would occur. Similar to the Project, settlement hazards related to dewatering would be less than significant for development under Alternative 4, the same as for the Project.

Development of Alternative 4 would require rock removal activities at the Alice Griffith and Jamestown districts that could result in damage to structures from vibration or settlement caused by the fracturing of bedrock for excavation. With implementation of the identified mitigation measure (MM GE-3), vibration from controlled rock fragmentation in the area would not cause unacceptable settlement at adjacent or nearby properties. Similar to the Project, settlement hazards related to controlled rock fragmentation would be less than significant for development under Alternative 4, the same as for the Project.

The potential for exposure to adverse affects caused by seismic groundshaking and seismically induced ground failure such as liquefaction, lateral spreading, landslides and settlement exists at the Project site. The identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-5a, and MM GE-6a) would require design-level geotechnical investigations for development under Alternative 4. Design-level geotechnical investigations must include site-specific seismic analyses to evaluate the peak ground accelerations for design of structures, as required by the SFBC through review by DBI. The structural design review would ensure that all necessary mitigation methods and techniques are incorporated in the design for foundations and structures to reduce potential impacts from ground failure or liquefaction to a less-than-significant level for development under Alternative 4. Seismic-related groundshaking hazards associated with the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 4, although the Project would mitigate these potential impacts to less than significant.

The existing shoreline exhibits active erosion and consists of areas of unprotected slopes and dilapidated naval pier and wharf structures. Similar to the Project, Alternative 4 would include numerous shoreline improvements, including additional concrete revetments, creation of new beach and tidal habitat, and some grading and importation of fill at certain locations. These improvements would improve the stability of the shoreline. Therefore, Alternative 4 would not result in the exposure of structures and facilities at the Project site to substantial adverse effects caused by shoreline instability. Similar to the Project, the impact would be less than significant.

The potential for adverse affects caused by landslides, settlement, expansive and corrosive soils, exists at the Project site. Site-specific, design-level geotechnical investigations would be required to be submitted to DBI in connection with permit applications for individual elements of development for Alternative 4, as specified in the identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-4a.3, MM GE-5a, MM GE-6a, MM GE-10a, MM GE-11a) for the Project. The site-specific analyses must assess these conditions and prescribe the requirements for foundations on slopes in accordance with the SFBC. All geotechnical investigations and permits must be approved by DBI. With implementation of those mitigation measures, impacts with regards to landslides, settlement, and expansive and corrosive soils would be less than significant. Potential ground failure impacts associated with construction of the Yosemite Slough bridge would be avoided because no bridge would be constructed under Alternative 4.

Hydrology and Water Quality

Alternative 4 would be required to comply with water quality standards, the same as the Project. Therefore, construction activities associated with Alternative 4 would not violate water quality standards, cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements due to sediment-laden runoff, contaminated groundwater from dewatering activities, or the incidental or accidental release of construction materials. With implementation of mitigation measures MM HY-1a.1 (preparation of a Storm Water Pollution Prevention Plan—SWPPP—for discharges to the Combined Sewer System), MM HY-1a.2 (SWPPP preparation for separate storm sewer systems), and MM HY-1a.3 (construction dewatering plan), impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 4 would include excavation for building foundations and underground utilities that could require short-term and/or long-term dewatering of the affected areas. As no extensive underground space is proposed for Alternative 4, the installation of underground building elements and utilities would not substantially alter groundwater levels, similar to the Project. As such, Alternative 4 would not substantially deplete groundwater supplies and would result in a less-than-significant impact, similar to the Project. As the total amount of open space under Alternative 4 would be slightly greater compared to the Project, the amount of permeable surface within the Project footprint would also be greater. Therefore, Alternative 4 would not 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. This impact would be less than significant, similar to the Project.

No streams or rivers are currently located within Alternative 4 site and, thus, no streams or rivers would be altered by construction activities. Under existing conditions, stormwater typically drains to storm drains (which include both combined and separate systems) or directly to the Bay via surface runoff (generally only along portions of the shoreline). During construction of Alternative 4, the existing drainage patterns within the area would generally be preserved. Construction activities associated with Alternative 4 would not substantially alter the existing drainage pattern of the site or alter the course of a stream or river in ways that would result in substantial erosion, siltation, or flooding on or off site. Impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 4, including site clearance, grading, and excavation, would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff. During construction, existing stormwater drainage facilities would be replaced by a new storm sewer system that would collect and treat on-site stormwater flows and would be sized to accommodate projected flows from upstream contributing areas. With compliance with regulatory requirements, as required by mitigation measures MM HY-1a.1 and MM HY-1a.2 (preparation of an SWPPP) impacts would be less than significant, similar to the Project.

Operation of Alternative 4 would not contribute to violations of water quality standards or waste discharge requirements or otherwise degrade water quality. Compliance with the requirements of the Municipal Stormwater General Permit, the Recycled Water General Permit, and the Industrial General Permit would reduce potential water quality impacts associated with implementation of Alternative 4. In

addition, Alternative 4 would be required to comply with the San Francisco SWMP, the Draft San Francisco Stormwater Design Guidelines, and the San Francisco Green Building Ordinance. Compliance with these requirements would be demonstrated in the SDMP or SCP for the project site, as required by mitigation measure MM HY-6a.1. Compliance with the Recycled Water General Permit would be required by implementation of mitigation measure MM HY-6a.2. To reduce the potential for stormwater infiltration to mobilize historic soil contaminants at HPS Phase II, the use of infiltration BMPs would be prohibited by mitigation measure MM HY-6b.1. To reduce stormwater runoff impacts associated with industrial activities at HPS Phase II, compliance with the Industrial General Permit would be required by implementation of mitigation measure MM HY-6b.2. As the extent of impervious surfaces for Alternative 4 would be reduced compared to the Project, impacts would be less than the Project.

Development under Alternative 4 would not utilize groundwater as a source of water supply nor interfere substantially with groundwater recharge. Thus, there would be no net deficit in aquifer volume or a lowering of the local groundwater table level and no impact would occur, similar to the Project.

Operation of Alternative 4 could alter the existing drainage pattern of the site, but would not alter the course of a stream or river, as none exists at or near the site currently, or result in substantial erosion, siltation, or flooding on or off site, similar to the Project. Implementation of Alternative 4 would not contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff, as development would include a separate stormwater system that would be sized to accommodate estimated runoff flows and treat runoff prior to discharge to the Bay. Compliance with regulatory requirements, including the submission of a SDMP and SCP to the SFPUC for approval, as required by mitigation measure MM HY-6a.1, would ensure that this impact would be less than significant, similar to the Project.

Implementation of Alternative 4 would not place housing and other structures within a 100-year flood zone or otherwise include development that would impede or redirect flood flows. Implementation of mitigation measures MM HY-12a.1 (Finished Grade Elevations above Base Flood Elevation) and MM HY-12a.2 (Shoreline Improvements for Future Sea-Level Rise) would reduce this impact to a less-than-significant level, similar to the Project.

Implementation of Alternative 4 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. Implementation of mitigation measure MM HY-14 (Shoreline Improvements to Reduce Flood Risk) would reduce impacts to a less-than-significant level. Based on historical records and the location of development, Alternative 4 would not expose people or structures to inundation by seiche, tsunami, or mudflow. These impacts would be less than significant, similar to the Project.

Biological Resources

Alternative 4 would involve removal and/or modification of areas that have the potential to contain special-status species, including: seven potentially breeding avian species, one bat species, and four fish species (green sturgeon, Chinook, steelhead, and longfin smelt). Alternative 4 would also have the potential to affect designated critical habitat of the green sturgeon and Central California Coast steelhead and thus, directly impact threatened and/or endangered species through habitat conversion or unauthorized take. However, because Alternative 4 does not include construction of the Yosemite

Slough bridge, the stadium, and the marina, potential impacts to such species would be reduced. However, construction activities related to shoreline improvements at HPS Phase II and other development throughout the Project site could still adversely affect these species. In addition, activities would occur within habitats of locally rare or sensitive species such as Pacific herring and Olympia oysters, as well as avian species protected by the MBTA. Alternative 4 would include implementation of the ecological design features described in the Project's Draft Parks, Open Space, and Habitat Concept Plan that would result in multiple measures to avoid, limit, and mitigate for impacts to special-status and legally protected species. Specifically, the design components would remove invasive species; restore, preserve, and enhance wetland, aquatic, and grassland habitats; revegetate the site with extensive planting of trees and shrubs; increase the vegetative cover for foraging and dispersing animals; and maintain and enhance habitat connectivity along the shoreline of HPS Phase II.

With implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-6a.1, MM BI-6a.2, MM BI-6b, MM BI-7b, MM BI-9b, MM BI-18b.1, and MM BI-18b.2) and ecological design features, Alternative 4 would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFG or USFWS. Impacts related to construction of the Yosemite Slough bridge, marina, and stadium would be avoided because those improvements would not be constructed under Alternative 4. Consequently, impacts would be less than the Project, and, similar to the Project, impacts would be less than significant after mitigation.

Similar to the Project, development of Alternative 4 could have a substantial adverse effect on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG or USFWS. The only sensitive habitats other than wetlands and aquatic habitats are eelgrass and areas designated as EFH. Impacts to such communities resulting from construction of the Yosemite Slough bridge, shoreline abutments for the proposed marina, and installation of the breakwater at HPS Phase II would be avoided because those improvements would not be constructed under Alternative 4. With implementation of the identified mitigation measures (MM BI-4a.2, MM BI-5b.1 through MM BI-5b.4, MM BI-12b.1, MM BI-12b.2, MM BI-12b.3, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1, and MM BI-19b.2), impacts of Alternative 4 on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG, NMFS, or USFWS would be reduced to a less-than-significant level. Potential impacts to eelgrass beds would be the same as the Project (eelgrass beds are not located near Yosemite Slough), while impacts to EFH would be less than the Project since construction associated with the Yosemite Slough bridge would be avoided and, thus, EFH would not be impacted through the construction of pilings required to support the bridge.

The shoreline improvements included Alternative 4 could have substantial temporary and permanent adverse effect on federally protected wetlands and other waters as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. However, such impacts would be substantially reduced compared to the Project because the Yosemite Slough bridge and marina would not be constructed. As a result, impacts to approximately 3 acres of other waters, 0.01-acre tidal salt marsh, and 1 acre of shadow fill would be avoided. The identified mitigation measures (MM BI-4a.1 and MM BI-4a.2) would reduce the effects of construction-related activities to wetlands and other waters by mitigating for the temporary

and permanent loss of the wetlands and jurisdictional waters through avoidance of impacts, requiring compensatory mitigation (i.e., creation, preservation, and/or restoration), obtaining permits from the USACE, SFRWQCB, and BCDC that are designed to protect wetlands and jurisdictional waters, and implementing construction BMPs to reduce and/or prevent impacts to waters of the United States, including wetlands and navigable waters. With implementation of the identified mitigation measures, the impacts of development under Alternative 4 to federally protected wetlands and other waters as defined by Section 404 of the CWA would be reduced to a less-than-significant level, similar to the Project. However, impacts would be less than the Project.

Similar to the Project, development of Alternative 4 could interfere substantially with the movement of 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 site. The Project site is surrounded by open water and urban development and no major drainages, canyon bottoms, ridgetops, rivers, creeks or areas that provide substantial movement corridors or migratory pathways occur within the Project site. However, similar to the Project, implementation of Alternative 4 would place new residential towers (three fewer than the Project). The increase in strike hazards from the tall buildings to alter flight paths could substantially interfere with migratory avian flight paths, which would be considered a potentially significant impact to migratory birds. The potential for lighted stadium towers to present a strike hazard to migratory birds would be eliminated under Alternative 4. With respect to aquatic species, although migratory fish could continue to move through the open water and Yosemite Slough, the Project site does not contain any substantial migratory fish pathways such as anadromous fish streams. However, construction of breakwaters and other shoreline treatments in HPS Phase II would occur near eelgrass beds, which could directly or indirectly impact eels such that productivity and survival of these habitats would be substantially reduced. Alternative 4 would not include construction of the Yosemite Slough bridge, stadium, or marina, which would result in fewer potential impacts to these habitats compared to the Project. Similar to the Project, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-20a.1, and MM BI-20a.2), the potential impacts of Alternative 4 would be reduced to a less-than-significant level 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.

Similar to the Project, Alternative 4 would be required to comply with mitigation measure MM BI-14a to ensure that Project development would not result in conflicts with the City's tree protection ordinances. With implementation of MM BI-14a, Alternative 4 would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant, similar to the Project.

Public Services

Police Protection

During construction of Alternative 4, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. The purpose of a CTMP is to ensure that the impacts of construction on the public domain, in particular with respect to temporary interruptions to vehicular and pedestrian traffic, are considered and addressed. Because Alternative 4

would include the same mitigation as the Project, there would be a similar requirement to prepare a CTMP for Alternative 4 that would address temporary impacts on circulation during construction. The CTMP would provide necessary information to various contractors and agencies as to how to maximize the opportunities for complementing construction management measures and to minimize the possibility of conflicting impacts on the roadway system, while safely accommodating the traveling public in the area. Construction activities associated with implementation of Alternative 4 also could increase demand for SFPD services if the site is not adequately secured, providing increased opportunity for criminal activity. To ensure adequate site security, mitigation measure MM PS-1 would require the Project Applicant to provide security during construction. Therefore, this impact would be less than significant, the same as for the Project.

Implementation of Alternative 4 would increase resident and employee population at the Project site. However, because 30 percent fewer residential units would be constructed under this Alternative, the associated demand for additional police personnel would be reduced compared to the Project. Alternative 4 would result in a potential increase in the need for 37 additional police personnel to provide a comparable level of service to existing conditions compared to the Project's potential increase in need of 53 personnel.¹³⁴² The SFPD evaluates the need for additional officers by sector, and not station or district needs. While it is unlikely that 37 new officers would be needed, some redistribution of the police presence in the southeastern portion of the City would be warranted by development of Alternative 4.

If the SFPD determines that the reconfiguration of the Bayview Station would not be sufficient to accommodate additional officers, a new station or facility of approximately 6,000 sf could be constructed within the Project site, on land designated for community-serving uses. As part of Alternative 4, up to 100,000 gsf of land divided equally between Candlestick Point and HPS Phase II would be designated for community-serving uses including a police station. Construction of a new SFPD facility (counter, storefront, or other configuration) within these community services uses and/or the reconfiguration or expansion of the existing Bayview Station would be funded by the Project Applicant. Similar to the Project, Alternative 4 includes community service use areas, and as construction would be funded by the Project Applicant, the SFPD would maintain acceptable levels of police service. The stadium would not be constructed, which would eliminate the need for additional police services on game days. Therefore, development of this Alternative would not require new or physically altered police facilities beyond the scope of the Project in order to maintain acceptable police services. This impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

¹³⁴² The number of required police officers need to meet comparable level of service to existing conditions was determined using the total daytime population of Alternative 4 (residential population of 17,126 plus 7,578 employees) and the ratio of officers to population presented in Table II.O-2 (1:665 officer to population).

Fire and Emergency Medical Services

Alternative 4 would add 7,350 residential units and substantially increase employment-generating uses, resulting in an employment population of 7,219. The increase in the residential and daytime employment population (for a total population of 24,345, including a residential population of 17,126 plus 7,219 employees), combined with an increase in the intensity of physical development on the Project site, would result in new demand for fire protection and emergency medical services.

During construction of Alternative 4, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. Construction of a new SFFD facility on land designated for community-serving uses on the Project site (where costs would be borne by the Project Applicant), would allow the SFFD to maintain acceptable response times for fire protection and emergency medical services. Similar to the Project, construction of 100,000 gsf of community facilities, which would include a new SFFD facility, would be included as a component of Alternative 4. The stadium would not be constructed, which would eliminate the need for additional emergency services on game days. Therefore, development under Alternative 4 would not require new or physically altered fire protection facilities to maintain acceptable response times. Additionally, compliance with all applicable provisions of the *San Francisco Fire Code* would ensure that this impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Schools

A total of approximately 1,492 school-age children would live within the Project site following full build-out of Alternative 4.¹³⁴³ While schools in the Project vicinity have approximately 49 percent capacity remaining in the 2008-2009 school year, it is likely that a 12 percent overcapacity of SFUSD as a result of citywide population growth in 2030 would occur. Similar to the Project, the payment of school impact fees pursuant to SB50 would constitute full mitigation for any potential schools impacts. This impact is considered less than significant for development under Alternative 4, the same as for the Project.

Libraries

Construction of Alternative 4 would not result in impacts to the SFPL. No library branches are located on the Project site. All library services would be available to the community throughout the duration of construction. As such, no impact to library services during construction of Alternative 4 would occur.

Residential and nonresidential development associated with Alternative 4 would increase demand for local library services in the Bayview neighborhood, although due to a 30 percent reduction in residential units, this demand for local library services would be less than under the Project. Although this Alternative would result in a substantial direct and indirect population increase within the Bayview

¹³⁴³ For Alternative 4, 7,350 residential units multiplied by 0.203 SFUSD student generation rate would result in 1,492 students.

neighborhood, library branches serving the Project site, including the Portola, Visitacion Valley, and the Bayview branches would continue to meet the demands of the community. In addition to the three library branches serving Alternative 4, the proposed development would include space dedicated to library services to supplement the Bayview branch library. As part of Alternative 4, a 1,500-gsf reading room and automated book-lending machines would be integrated into the community retail and public facilities uses. The SFPL branches, and the dedication of space to accommodate library services on the Project site in order to supplement SFPL branches, would accommodate increased demand from development under this Alternative. No additional library facilities would be required to accommodate development of Alternative 4. Therefore, no new or physically altered library facilities would be required in order to maintain acceptable service ratios and this impact is considered less than significant for development under Alternative 4.

Recreation

Implementation of Alternative 4 would include parks and open space areas similar to the Project, except it would not include a State Parks land agreement, resulting in a different configuration of parks at Candlestick Point and no improvements to the CPSRA. Compared to the Project, the CPSRA would remain 120.2 acres, compared to the 23.5-acre reduction under the Project. Construction activities associated with the proposed parks and recreational facilities are considered part of the overall development footprint. Although the amount of construction would be reduced, the construction activities related to this Alternative are similar to the Project, construction impacts anticipated to result from implementation of this Alternative are analyzed throughout the technical sections of this EIR. Such impacts would be temporary and would be mitigated by measures identified in Section III.D, Section III.H, Section III.I, Section III.K, Section III.M, and Section III.N. These measures address construction-related impacts including, but not necessarily limited to, traffic and circulation, air quality, noise, exposure to hazardous material, and soil erosion, which would help reduce potential impacts to recreational resources. In addition, because the State Parks agreement would not occur, the improvements to the CPSRA as proposed under the Project would not be constructed. Therefore, construction activities at Candlestick Point would be reduced and construction impacts associated with development of new parks and recreational facilities would be less than significant.

At build-out of Alternative 4, the projected population within the Project site would increase from approximately 1,113 residents to approximately 17,126 residents, while employment would increase from 529 jobs to approximately 7,219 jobs. Similar to the Project, parks and open space included in Alternative 4 would provide a ratio of about 13.7 acres of parkland per thousand residents, which is substantially higher than the benchmark ratio of 5.5 acres per thousand residents (refer to Section III.P). A total of 5.9 acres of neighborhood parks would be constructed at Candlestick Point compared to 8.1 acres under the Project. The increase in population and employment could result in an increase in the use of existing parks, recreational facilities, and open space. During a given phase, however, park construction could lag behind residential development, leading the parkland-to-population ratio to drop below an acceptable level. Moreover, the development plan is conceptual, and could be modified during the entitlement and development process. Mitigation measure MM RE-2 would ensure that the parks and recreational amenities are constructed as residential and employment-generating uses are developed. Parks and open space at HPS Phase II would include improvements similar to the Project and would

help offset the increase in demand created by new residents and employees. The 1.4-acre Alice Griffith Neighborhood Park would serve residents of the Alice Griffith Public Housing site. The impact would be less than significant, the same as for the Project.

The high-frequency BRT route around Yosemite Slough, rather than over the slough on the Yosemite Slough bridge as proposed under the Project, presents more at-grade bicycle and pedestrian conflicts for residents of the Bayview District seeking access to the slough and the Bay Trail. In the Project, the BRT is physically separated from the Bay Trail and connecting bicycle/pedestrian trails, eliminating crossing conflicts between the Bay Trail and the Bayview. This is a potentially significant impact that would not occur under the Project.

A windsurfing launch site is located in the CPSRA. Windsurfing could potentially be impacted by the construction of tall structures in close proximity to the Bay that affect wind patterns and direction. Similar to the Project, development under Alternative 4 would include structures above 100 feet in height. Alternative 4 would include seven towers at Candlestick Point, compared to eleven towers with the Project, and the average tower height would be similar under Alternative 4. Compared to the Project, three towers would be removed from the Candlestick Point North district, one tower would be removed from the Candlestick Point South district, and the stadium would not be constructed. Therefore, due to the reduced number of towers and building heights, impacts to windsurfing would be less than significant, and less than the Project.

Utilities

Water Supply

Alternative 4 would include water infrastructure similar to the Project. Impacts of construction activities associated with this infrastructure, including demolition and installation of new utility infrastructure, are discussed in Section III.D, Section III.H, Section III.I, Section III.J, Section III.K, Section III.L, Section III.M, Section III.O, and Section III.S of this EIR. No new construction impacts beyond those identified in those sections would occur with construction of water conveyance or treatment infrastructure associated with the Project. The water required for construction activities is assumed to be supplied by water trucks and/or existing sources. No construction-related impacts associated with the consumption of water would occur with the Alternative 4.

Alternative 4 would include less residential and non-residential development compared to the Project. Alternative 4 would generate a total demand of approximately 1.21 mgd, 0.4 mgd less than the Project. As current water use from existing land uses at the Project site is approximately 0.3 mgd, the net effect of the Alternative 4 on water demand would be an increase of approximately 0.91 mgd.¹³⁴⁴ As stated in the Water Supply Assessment provided for the Project, the SFPUC projects that adequate supply would be available to satisfy all retail demand, including Project-related demand, under normal conditions (refer to Appendix Q1). Therefore, there would be sufficient water supplies to accommodate the water demand of Alternative 4. This is considered to be a less-than-significant impact. Similar to the Project,

¹³⁴⁴ Water demand for this alternative was estimated by prorating water demand for the Project (presented in Table III.Q-4) based on build-out of Alternative 4.

implementation of Alternative 4 would not require or result in the construction of new or expanded water treatment facilities, and this impact would be less than significant.

Implementation of Alternative 4 would require expansion of the existing off-site AWSS by providing an AWSS loop at Candlestick Point that would connect to the planned extension of the existing off-site AWSS on Gilman Street from Ingalls Street to Candlestick Point. At HPS Phase II, the AWSS would be connected to the existing AWSS system at the intersection of Earl Street and Innes Avenue and at the Palou Avenue and Griffith Avenue intersection with a looped service along Spear Avenue/Crisp Road. Implementation of the identified mitigation measure (MM UT-2) would ensure the provision of adequate water for on-site fire-fighting purposes, and the Project would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements for water to fight fires. The impact is less than significant with implementation of this mitigation measure.

Wastewater

Alternative 4 would discharge a maximum peak flow of 479 gpm to the Candlestick tunnel sewer, which has an existing unused capacity of 28,035 gpm in dry weather. This flow would combine with a maximum peak flow of 1,153 gpm from the HPS Phase II into the Hunters Point tunnel sewer. The total maximum peak Project flows of 1,632 gpm (826 gpm less than the maximum peak flow of the Project) would combine in the Hunters Point tunnel sewer, which has an existing unused capacity of 69,853 gpm in dry weather.¹³⁴⁵ This represents 1.2 percent of the available capacity of the Hunters Point tunnel sewer, which could be accommodated by the existing off-site infrastructure.

The maximum peak flow of wastewater generated under Alternative 4 would be 826 gpm less than the maximum peak flow of the Project. The current remaining treatment capacity of the SWPCP would accommodate the increase in wastewater flows from the development of Alternative 3. Overall flows during wet weather would decrease, indicating that the proposed diversion of wet-weather flows away from the combined system would offset the increase in dry-weather flows, assuming completion of utility infrastructure prior to occupancy of Alternative 4. Based on this analysis, the overall volumes in the Bayside system during wet weather would be less than under existing conditions with implementation of the Alternative 4. It is possible that a temporary increase in CSO volume could occur (which could affect the capacity of the SWPCP for treatment) during wet weather, as noted, above. Implementation of the identified mitigation measure (MM UT-3a) would reduce this impact to less than significant by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for Alternative 4. Thus, Alternative 4 would not result in any net increase in CSO volume in the Bayside system during wet weather. A less-than-significant impact to existing off-site treatment facilities would occur.

Development associated with Alternative 4 would incrementally contribute wastewater during dry and wet-weather events to the Combined Sewer System operated by the SFPUC, but overall, wet-weather volumes would decrease in the Bayside system with construction of the alternative's separate stormwater and wastewater systems. In addition, the maximum peak flow of wastewater generated under Alternative 4 would be 826 gpm less than the maximum peak flow of the Project. Compliance with any

¹³⁴⁵ Wastewater generation for this alternative was estimated by using the generation rates presented in Table III.Q-5 based on build-out of Alternative 4.

applicable permit requirements, as monitored and enforced by the SFPUC, would ensure that Alternative 4 would not exceed the applicable wastewater treatment requirements of the RWQCB. In addition, Alternative 4 would not cause the City to exceed the requirements of the NPDES permit for the reasons previously stated and because the flows during wet weather would actually decline compared to existing flows from the Project site. This impact would be less than significant.

Solid Waste

Demolition of existing facilities within the Project site under Alternative 4 would be similar to the Project. Similar to the Project, some construction and demolition debris would be reused on site, while other materials would be transported off site for separation. Materials that cannot be reused or recycled would be transported to the landfills in the area. With implementation of the identified mitigation measure (MM UT-5a), the Project Applicant would be required to submit a Waste-Diversion Plan demonstrating strategies to divert at least 75 percent of total construction wastes before receiving building permits. This impact would be less than significant.

At current disposal rates, the Altamont Landfill would be expected to reach capacity in January 2032; however, it may close three years earlier, in January 2029.¹³⁴⁶ Under Alternative 4, demolition activities, which generate construction debris, are expected to conclude in 2024 at Candlestick Point and in 2021 at HPS Phase II, a minimum of five years before the landfill is expected to close. Further, the City requires the diversion of at least 65 percent of construction waste, as also required by mitigation measure MM UT-5a, which would reduce the amount of waste interred at the landfill. Further, the City continues to actively explore various waste-reduction strategies with the goal of moving towards zero waste. If the City achieves this goal, the impact of construction of Alternative 4 on solid waste would be further reduced. Under Alternative 4, the only construction and demolition activity at Candlestick Point would occur at the Alice Griffith Public Housing site, the Yosemite Slough bridge approach. The Candlestick Park stadium would not be demolished and substantially less construction waste would be generated. The impact of the construction waste generated by Alternative 4 on the capacity of the Altamont Landfill would be less than significant.

Construction activities, including demolition and excavation, could require disposal of hazardous wastes such as asbestos, lead-based paint, and contaminated soils. The amount of these materials would be that could be disturbed would be less than the Project because the development program would be reduced requiring less construction compared to the Project. Potential hazardous materials exposure associated with construction of the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 4. Hazardous waste would require disposal by a licensed transporter to a TSD authorized to treat such hazardous waste. Disposal of these wastes would occur intermittently during the construction period, and would not likely represent a substantial amount of hazardous waste in a given year. Currently, TSDs in California and adjoining states have sufficient capacity to accommodate all hazardous wastes. Depending on a number of factors, some soil would be transported off site for disposal and some soil may be transported to other areas of the site. Contaminated soils may require transportation off site and treatment at authorized TSDs. Because the TSDs in California and adjoining states have sufficient capacity to treat hazardous wastes, construction of Alternative 4 would

¹³⁴⁶ CIWMB, 2009.

not generate hazardous wastes (construction debris or contaminated soil) that would exceed the capacity of TSDs authorized to treat such waste. This would be a less-than-significant impact.

At full build-out, Alternative 4 would generate approximately 16,208 tons annually when all uses are fully operational and assuming no waste-reduction measures. The amount of solid waste generated under Alternative 4 would be 5,619 tons less than the Project because the development program would be reduced. Solid waste generated under Alternative 4 would represent approximately 2.7 percent (compared to 3.7 percent under the Project) of the total waste generated in San Francisco as of 2008 (approximately 594,732 tons).¹³⁴⁷ All residents and businesses of Alternative 4 would be required to comply with the City's mandatory recycling and composting ordinance. In addition, consistent with the City's goal of achieving zero waste by the year 2020, the Project Applicant would prepare a Site Waste Management Plan as required by the identified mitigation measure (MM UT-7a.1) that would specify the methods by which the Alternative 4 would divert operational solid waste to assist the City in achieving its diversion goals. The impact of operational solid waste generated by Alternative 4 on the capacity of the Altamont Landfill (and/or the landfill with which the City contracts at the close of the current selection process) would be less than significant.

Nearly all uses under Alternative 4 would involve the routine use of hazardous materials at varying levels that would require disposal. Quantification of precise amounts of additional hazardous materials use associated with new proposed uses is not practical at this time. The use of hazardous materials would be less than the Project because the development program would be reduced. The minimal amount of hazardous waste that would be generated by Alternative 4 could be accommodated by existing TSD facilities. Similar to the Project, this impact would be less than significant.

Electricity, Natural Gas, and Telecommunications

The proposed utility infrastructure improvements for Alternative 4 would include the construction of a joint trench for electrical, natural gas, cable TV, and telecommunications, the same as for the Project. This alternative would not include the new stadium, marina, or the Yosemite Slough bridge. As the development would be smaller than the Project, less electricity, natural gas, and telecommunications serves would be required. Infrastructure expansion would not be as extensive as required for the Project. However, these differences between Alternative 4 and the Project would not substantially affect the infrastructure plan as presented for the Project and, therefore, impacts would be the same as for the Project, and less than significant.

Energy

Construction activities associated with implementation of Alternative 4 would require energy sources including electricity, diesel, and gasoline. Similar to the Project, the construction activities for Alternative 4 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not generate a prolonged demand for energy and would be subject to requirements to minimize wasteful fuel consumption. Energy use during the construction period would be similar to the Project but reduced

¹³⁴⁷ Solid waste generation for this alternative was estimated using the solid waste generation rates presented in Table III.Q-8.

because approximately 30 percent fewer residential units and non-residential space would be developed and construction of the Yosemite Slough bridge, stadium, and marina would not occur. Furthermore, given the type of development proposed under this alternative, the energy demand created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related energy use associated with development under Alternative 4 would be considered less than significant.

Implementation of Alternative 4 would result in baseline electricity consumption substantially less than the Project, because the overall development program (residential and most non-residential uses) would be reduced by approximately 30 percent. In addition, Alternative 4 would include the energy savings associated with the Project Applicant's commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, those efficiency measures would result in consumption of at least 5.4 percent less electricity than a project that would not implement such measures. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential electricity use impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, and MM GC-4, which would require installation of energy efficient lighting, would reduce electricity consumption impacts of Alternative 4 to less than significant.

Implementation of Alternative 4 would result in baseline natural gas consumption substantially less than the Project, because the overall development program (residential and most non-residential uses) would be reduced by approximately 30 percent. In addition, Alternative 4 would include efficiency measures similar to the Project resulting in the use of approximately 13 percent less natural gas than a development project without such measures. Those efficiency measures would result in consumption of at least 13 percent less natural gas than a development project without such measures. In addition, the Project Applicant would also implement renewable energy strategies, such as the use of photovoltaic cells to provide electricity; the use of solar thermal energy to provide space cooling with the use of absorption systems; and/or water for space heating and domestic water systems. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential natural gas consumption impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, and mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, would reduce natural gas consumption impacts Alternative 4 to less than significant.

Alternative 4 would increase trips to and from the Project site, increasing the use of petroleum fuels. Similar to the Project, fuel consumption resulting from travel to and from the Project site would be five

times higher than under existing conditions, indicating a large increase in consumption, although it would be less than the Project due to the 30 percent reduction in residential units. However, this consumption would not be wasteful because (1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel. However, Alternative 4 lacks the direct, grade-separated BRT connection between Candlestick Point and HPS Phase II that the Yosemite Slough bridge would provide in the Project. This would result in an estimated delay of up to 7 minutes in transit travel times, which would result in fewer transit trips and more automobile trips and an increase in consumption of energy. Similarly, reductions in walking and bicycle trips between Candlestick Point and HPS Phase II that would be accommodated on the Project's bridge could result in increased drive trips and energy use.

Nevertheless, these reductions in transit, bicycle, and pedestrian trips and resulting increases in automobile trips would not likely create a significant energy consumption impact when compared to the Project. Therefore, similar to the Project, Alternative 4 would not be wasteful with respect to petroleum fuel consumption, and impacts are considered less than significant.

Greenhouse Gas Emissions

Similar to the Project, construction activities associated with implementation of Alternative 4 would emit GHGs associated with diesel and gasoline consumption. Similar to the Project, the construction activities for Alternative 4 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not be a prolonged source of GHG emissions. GHG emissions during the construction period would be similar to the Project but reduced because approximately 30 percent fewer residential units and non-residential space would be developed and construction of the Yosemite Slough bridge, stadium, and marina would not occur. Therefore, construction-related GHG emissions and climate change impacts associated with development under Alternative 4 would be considered less than significant.

Implementation of Alternative 4 would result in baseline GHG emissions substantially less than the Project, because the overall development program (residential and most non-residential uses) would be reduced by approximately 30 percent. In addition, Alternative 4 would include the GHG emission savings associated with mitigation measures, including MM GC-1 through MM GC-4, which require the implementation of the Project Applicant's conceptual commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*.

Similar to the Project, Alternative 4 would increase trips to and from the Project site, increasing the use of petroleum fuels. Similar to the Project, fuel consumption resulting from travel to and from the Project

site would be five times higher than under existing conditions, indicating a large increase in consumption, although it would be less than the Project due to the 30 percent reduction in residential units. However, this Alternative would also include the Project Applicant's commitment to reduce transportation related GHG emissions: (1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. These programs would be similar to the Project, but would not be as effective because the entire transportation system proposed under the Project may not be developed. The transportation system and TDM programs were designed to work for development of Candlestick Point and HPS Phase II as proposed under the Project. Efficiencies of the system would be reduced compared to the Project. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel.

However, Alternative 4 lacks the direct, grade-separated BRT connection between Candlestick Point and HPS Phase II that the Yosemite Slough bridge would provide in the Project. This would result in an estimated delay of up to 7 minutes in transit travel times, which would result in fewer transit trips and more automobile trips and an increase in consumption of energy. Similarly, reductions in walking and bicycle trips between Candlestick Point and HPS Phase II that would be accommodated on the Project's bridge could result in increased drive trips and energy use.

Nevertheless, these reductions in transit, bicycle, and pedestrian trips and resulting increases in automobile trips would not likely create a significant energy consumption impact when compared to the Project. Similar to the Project, Alternative 4 would not be wasteful with respect to petroleum fuel consumption. Thus, GHG emissions at the Project site under development of Alternative 4 would not inhibit the achievement of the goals of AB 32 or the SFCAP. Similar to the Project, GHG emissions and climate change impacts would be less than significant.

BAAQMD is considering the future adoption of quantitative CEQA thresholds of significance for operational-related GHG emission impacts. At present, two options relevant to the Project are under consideration for operational GHG emission thresholds; the lead agency can choose either option. Option 1 is based on a project's total operational GHG emissions of 1,100 metric tonnes CO₂e per year. The Project's total operational emissions would exceed this level, which means that if this was used, the Project would be significant. Option 2 is based on the amount of a project's operational GHG emissions per service population, set at 4.6 metric tonnes CO₂e per year. In anticipation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the Project's operational GHG emissions under the proposed thresholds of significance identified above. The BAAQMD thresholds stated above are still in draft form and may undergo additional changes before being finalized; a revised version is expected Monday, November 2nd. The methodologies presented in this EIR for quantification of GHG operational emissions is based on using more refined data sources than indicated in the BAAQMD guidance and are the most appropriate to use for Alternative 4 and the Project.

With mitigation, the Project-related operational emissions of 154,639 result in 4.5 tonnes CO₂e per service population per year based on a service population of 34,242 (this accounts for 23,869 net new residents and all jobs except for the stadium jobs, which already exist, 10,373). Therefore, the Project-related operational emissions would be less than 4.6 tonnes CO₂e per service population per year and would result in a less-than-significant impact on climate change. Alternative 4 would reduce a similar mix of land use proposed with the Project; however, Alternative 4 would decrease the housing density and alter the service population which would impact the amount of GHG emissions per service population. Without a quantitative analysis, the comparison to the BAAQMD threshold cannot be judged, and Alternative 4 may not be below the proposed threshold.

■ Attainment of Project Objectives

Alternative 4 would fail to meet several of the Project objectives because it would include a reduced development program, including a 30 percent reduction in residential and most non-residential uses, no State Lands agreement, no development of the Yosemite Slough bridge or stadium, and no development of the marina compared to the Project. Refer to Table VI-8 (Attainment of Project Objectives Alternative 4) below for a discussion of each objective.

Table VI-8 Attainment of Project Objectives Alternative 4

<i>Objective</i>	<i>Meets Project Objective?</i>	<i>Analysis</i>
1. The integrated development should produce tangible community benefits for the Bayview and the City.	Y-	Alternative 4 would include opportunities for job and economic development. However, compared to the Project, such opportunities would be reduced because most of the employment-generating uses would be reduced by 30 percent. There would be no grade-separated, direct transit connection between Candlestick Point and HPS Phase II. In addition, it would include substantially less parks and open space amenities compared to the Project. Alternative 4 would not meet this objective to the same extent as the Project.
2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents.	Y-	The proposed mix of uses and urban design concepts would provide a direct physical, visual, and architectural connection to the Bayview neighborhood and City. This alternative also includes extension of the transportation network into the Project site, particularly for transit. Those connections would allow residents of the Bayview neighborhood and City to access the commercial, cultural, and institutional opportunities at the Project site. The Alternative 4 development program would be reduced compared to the Project. Therefore, Alternative 4 would not meet this objective to the same extent as the Project.
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourage the rebuilding of Alice Griffith Housing.	Y-	Alternative 4 would include a variety of unit types, sizes, and structures, and a wide range of affordability levels. This alternative would include the redevelopment of the Alice Griffith Public Housing site. However, overall there would be a reduced amount of affordable housing units developed under Alternative 4, because the residential development would be reduced by 30 percent. Therefore, Alternative 4 would not meet this objective to the same extent as the Project.
4. The integrated development should incorporate environmental sustainability concepts and practices.	Y	Although the overall development program would be reduced, Alternative 4 would include similar sustainability principles compared to the Project. Therefore, Alternative 4 would meet this Project objective.
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure.	N	Alternative 4 would not construct a new stadium for the 49ers. Therefore, Alternative 4 would not meet this Project objective.
6. The integrated development should be fiscally prudent, with or without a new stadium.	Y-	Development of Alternative 4 would increase sales tax revenue to the City. However, the amount of sales tax generating use would be less than the Project and would meet this objective to a lesser extent than the Project. Alternative 4 would include a development program that would encourage substantial private capital investment. The overall development program would be reduced and Alternative 4 would meet this objective to a lesser extent than the Project.

Y = Alternative does meet Project objective.

Y- = Alternative meets Project objective, but to a lesser extent than the Project.

Y- = Alternative meets Project objective, but to a significantly lesser extent than the Project.

N = Alternative does not meet Project objective.

VI.C.5 Alternative 5: Reduced CP-HPS Phase II Development; No HPS Phase II Stadium, State Parks Agreement, or Yosemite Slough Bridge

■ Summarized Description

Alternative 5 would have the same overall land use program as the Project. The total number of housing units would be the same as for the Project. However, approximately 1,350 units would be shifted from Candlestick Point to HPS Phase II, because no State Parks agreement would occur, resulting in a smaller development footprint at Candlestick Point. No Yosemite Slough bridge would be constructed and there would be no stadium at HPS Phase II.

Table VI-9 (Comparison of Alternative 5 and Project Build-Out) provides a comparison of the uses proposed in the Project area under the Project and Alternative 5. Figure VI-4 (Alternative 5 Land Use Plan) illustrates the land use plan for Alternative 5.

■ Detailed Description

Candlestick Point

Alternative 5 would retain the existing configuration of the State Park boundary, and would not include improvements or ongoing funding for operations and maintenance as provided by the Project. As a result, the land area available for development at Candlestick Point would be smaller and 1,350 housing units would be shifted to HPS Phase II. A total of 6,500 residential units would be constructed at Candlestick Point with higher densities, resulting in more mid-rise structures and towers than under the Project. The amount of retail, office, community service, hotel, arena uses would remain as proposed under the Project.

HPS Phase II

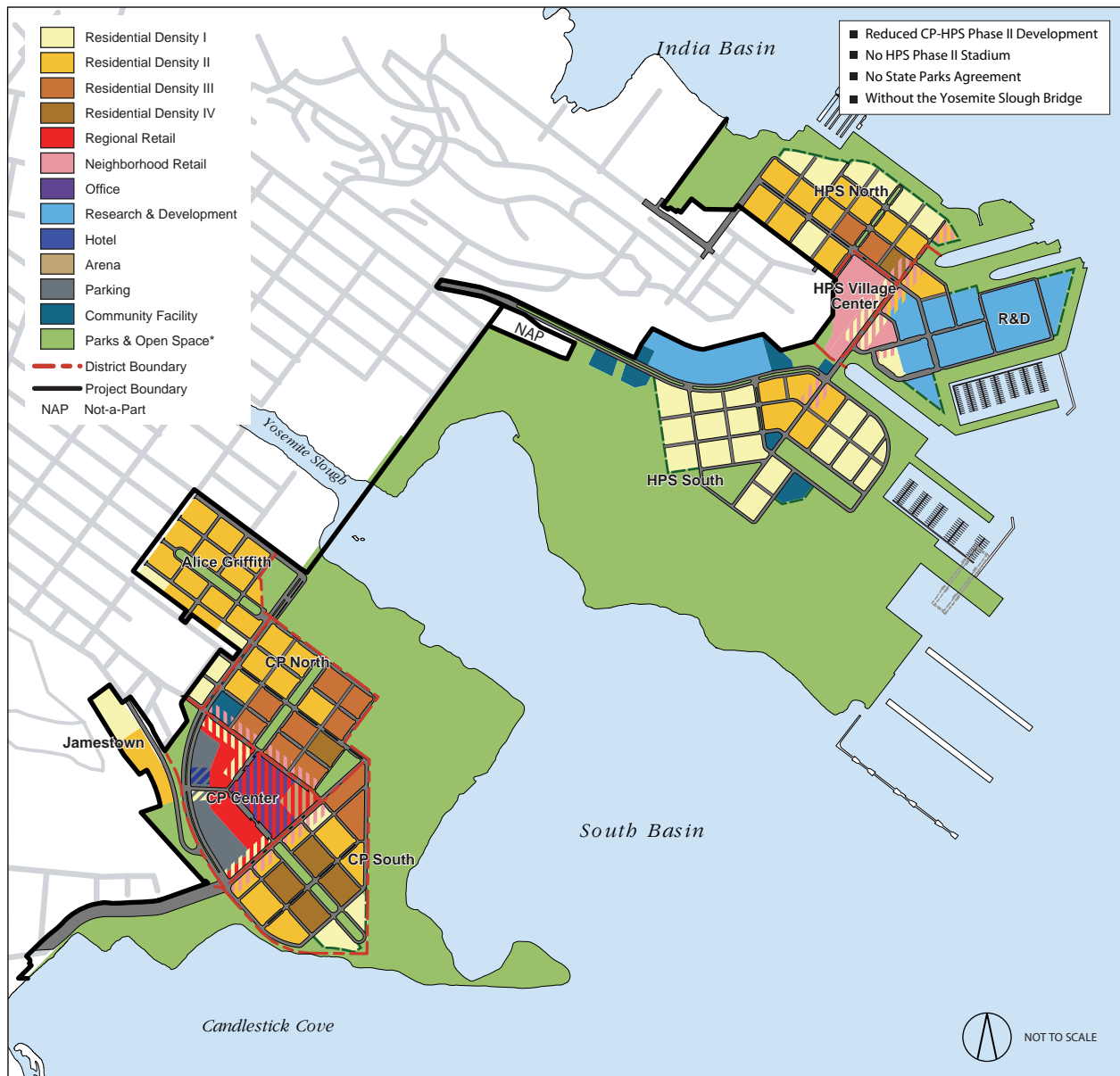
Research and development uses, neighborhood retail, community-serving uses, the artists' studios, and marina proposed by the Project are also proposed under Alternative 5. Residential development would increase by 1,350 units, for a total of 4,000 units. The San Francisco 49ers football stadium would not be constructed at HPS Phase II.

Transportation and Circulation (without Yosemite Slough Bridge)

Under Alternative 5, motorized and non-motorized traffic, including BRT, would be required to circumnavigate Yosemite Slough. The circulation network around Yosemite Slough would be the same as Alternatives 2 and 4, as illustrated in Figure VI-1. The primary roadway connection for automobiles and other vehicular traffic between Candlestick Point and HPS Phase II would be west on Carroll Avenue to Ingalls Street, north along Ingalls Street to Thomas Avenue, and east on Thomas Avenue to Griffith Street. Ingalls Street would remain an industrial mixed-use street with two auto lanes and parking and

Table VI-9 Comparison of Alternative 5 and Project Build-Out			
<i>Use</i>	<i>Alternative 5</i>	<i>Project</i>	<i>Comparison to Project</i>
Candlestick Point			
Residential (units)	6,500	7,850	-1,350
Retail (gsf):			
Regional Retail	635,000	635,000	0
Neighborhood Retail	125,000	125,000	0
Community Services	50,000	50,000	0
Hotel (gsf)	150,000	150,000	0
Office (gsf)	150,000	150,000	0
10,000-seat Arena (gsf)	75,000	75,000	0
Football stadium (seats)	70,000 (existing)	0	70,000
HPS Phase II			
Residential (units)	4,000	2,650	1,350
Neighborhood Retail (gross square feet - gsf)	125,000	125,000	0
Research & Development (gsf)	2,500,000	2,500,000	0
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Community Services	50,000	50,000	0
Football Stadium (seats)	0	69,000	-69,000
Marina (slips)	300	300	0
Totals			
Residential (units)	10,500	10,500	0
Retail (gsf)	885,000	885,000	0
Community Services	100,000	100,000	0
Research & Development (gsf)	2,500,000	2,500,000	0
Artists' Studios (gsf):			
1:1 Studio Renovation & Replacement	225,000	225,000	0
New Artist Center (net gsf)	30,000	30,000	0
Other Elements			
Yosemite Slough bridge	No	Yes	—
Shoreline Improvements	Yes	Yes	—
State Park Agreement/total acres of State Parkland	No/120.2	Yes/96.7	+23.5

SOURCE: Lennar Urban, PBS&J, 2009.



SOURCE: Lennar Urban, 2009.

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FIGURE VI-4

**Candlestick Point — Hunters Point Shipyard Phase II EIR
ALTERNATIVE 5 LAND USE PLAN**

loading zones on its northern and southern sides. The width of sidewalks on that portion of Ingalls Street from Carroll Avenue to Yosemite Avenue would be decreased from 16 feet to 11 feet to create a uniform street width to accommodate the auto lanes, parking, and loading.

Between the intersection of Carroll Avenue/Arelious Walker Drive and Crisp Road within HPS Phase II, the proposed BRT line would be routed on Carroll Avenue between Arelious Walker Drive and Hawes Street; on Hawes Street between Carroll Avenue and Armstrong Avenue (currently unimproved); and on Armstrong Avenue between Hawes Street and the Navy rail right-of-way; along the Navy rail right-of-way between Armstrong Avenue and Shafter Avenue; along Shafter Avenue between the Navy rail right-of-way and Arelious Walker Drive; and on Arelious Walker Drive between Shafter Avenue and Crisp Road (currently unimproved).

On Carroll Avenue, Hawes Street, and Armstrong Avenue to the Navy rail right-of-way the BRT line would operate within an exclusive BRT lane, one of the two travel lanes in each direction would be transit-only. Hawes Avenue between Carroll Avenue and Armstrong Avenue, and Arelious Walker Drive between Shafter Avenue and Crisp Road are currently unimproved streets and would be built out to accommodate one transit-only travel lane in each direction. The Navy rail right-of-way between Armstrong Avenue and Shafter Avenue would be improved to provide one transit-only travel lane in each direction. Shafter Avenue between the rail right-of-way and Arelious Walker Drive would be reconfigured to provide four travel lanes, with BRT operating in the center lanes.

■ Basis for Impact Analysis

For the Project, the potential impacts are generally based on the parameters of the Project, which include the size, bulk, and type of development, the footprint of development, and the number of residents, employees, and visitors to the Project site. For Alternative 5, the impacts of the Project are compared to the impacts of a similar development program, except for the following:

- No State Parks land agreement
- The Yosemite Slough bridge would not be constructed
- The San Francisco 49ers stadium at HPS Phase II would not be constructed. Instead, the same number of residential and retail units as the Project, as well as the same square footages of these uses as the Project, would be constructed on this site, plus 1,350 residential units would be shifted from Candlestick Point to HPS Phase II

Without a State Parks land agreement, there would be no established funding mechanism for future maintenance of the parks on site. Additionally, 23.5 acres of State Parks land would not be available for development at Candlestick Point compared to the Project. Therefore, as a result of not executing the State Parks land agreement, and keeping the overall development program under Alternative 5 the same as that of the Project, the density of development would increase within the overall Project site due to a decrease in available land for development.

With the shift of residential units, the footprint of development at HPS Phase II would be larger in comparison to the Project, and accordingly, the footprint of development at Candlestick Point would be reduced in comparison to the Project. The build-out of all residential and non-residential uses under Alternative 5 would be the same as the Project.

■ Potential Impacts

Land Use and Plans

Implementation of Alternative 5 would not be expected to divide an established community because it would include infill development, centered on nodes of commercial and retail activity at Candlestick Point and HPS Phase II with no physical division of an established community, the same as for the Project. As with the Project, residential and non-residential infill around these nodes of activity would provide a continuous land use pattern and street grid, provide new services and community amenities in the Bayview Hunters Point neighborhood, allow better access to parks and recreational facilities (which would be improved under Alternative 5), and remove existing barriers to circulation and access over existing conditions. The upland transportation routes for automobile and BRT routes would follow existing streets and railroad right-of-way in the South Basin industrial area surrounding Yosemite Slough. The South Basin industrial area contains a variety of small-scale industrial uses, such as auto repair shops, food distributors, bulk warehouses, and recycling facilities. The area also includes many vacant and underutilized lots. The upland transportation routes would generally run along the southeastern edge of the South Basin industrial area, and not through an established community. Therefore, development under Alternative 5 would not divide an established community and no impact would occur.

Implementation of Alternative 5 would require amendments similar to the Project for the following planning documents: *City of San Francisco General Plan*, *Bayview Hunters Point Redevelopment Plan*, *Hunters Point Shipyard Redevelopment Plan*, *Bay Plan*, and *San Francisco Bay Area Seaport Plan*. An amendment to the *CPSRA General Plan* would not be required because there would no State Parks land agreement. However, with implementation of the requirements and mitigation measures identified for the Project in Section III.C through Section III.S of this EIR, development under Alternative 5 would not conflict with any applicable land use plans, policies, or regulations (of an agency with jurisdiction) adopted for the purpose of avoiding or mitigating an environmental effect. Furthermore, development under this Alternative would not conflict with any of the policies, goals, and strategies analyzed for the Project. Although the Project is consistent with the Bay Plan policies with regards to Bay fill, it should be noted that development under Alternative 5 would reduce the amount of Bay fill compared to the Project, because the Yosemite Slough bridge would not be constructed. There is no Bay fill associated with construction of the stadium; therefore, the lack of a stadium under Alternative 5 would not lessen impacts to Bay fill in comparison to the Project. Similar to the Project, this impact would be less than significant.

Implementation of Alternative 5 would not result in a substantial adverse change in the existing land use character. Development under Alternative 5 would substantially change the character of the site from open space and industrial uses to an urbanized area representative of other areas in San Francisco. This change would improve deteriorated conditions and connectivity, as well as provide numerous areas of open space, extensive landscaped areas, pleasing architecture, and shoreline improvements, all of which would improve the character of the site. Furthermore, without construction of the Yosemite Slough bridge and San Francisco 49ers stadium, changes to the existing land use character would be less than those created by the Project. Therefore, changes resulting from development under Alternative 5 would not be considered adverse changes. Furthermore, the transition in scale between adjacent neighborhoods and development under this Alternative, as well as the varied range of proposed uses, would not result in

a substantial adverse change in the existing land use character of the Project area. Similar to the Project, this impact would be less than significant.

Without a State Parks land agreement, there would be no changes to State Parks land use within the Project site; State Parks land would not be used for development. Therefore, there would be no impacts to the land use character of State Parks, which would be less than the Project.

Population, Housing, and Employment

Construction activities associated with implementation of Alternative 5 would induce direct job growth at the site. The number of construction workers that would be employed during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge and San Francisco 49ers stadium would not occur. It is anticipated that construction employees would commute from elsewhere in the region, rather than relocate to the Bayview Hunters Point neighborhood for a temporary construction assignment. Thus, construction under this Alternative would not generate a substantial, unplanned population increase. Direct and indirect impacts associated with construction employment would be less than significant.

Implementation of Alternative 5 would induce direct and indirect population growth, but this growth would not be considered substantial. Similar to the Project, development under this Alternative would result in a total of 10,500 residential units. Total employment generated under Alternative 5 would be slightly reduced compared to the Project site because the San Francisco 49ers stadium would not be constructed. All other employment-generating uses would be the same as the Project. Employment growth generated by development under this Alternative would result in a similar demand for housing units, which would be less than the total number of new housing units (10,500) that would be provided. The jobs and housing units that would be provided at the site would be closely balanced (approximately 10,730 jobs and 10,500 housing units) so that neither a surplus of housing nor jobs would occur, resulting in indirect residential or employment growth. As a result, similar to the Project, the population and employment increase associated with development under Alternative 5 would not be substantial. This impact is considered less than significant.

This Alternative would demolish and replace 256 units at the Alice Griffith Public Housing site. There are currently no other housing units or residents at the Candlestick Point or HPS Phase II sites. Redevelopment of the Alice Griffith site would occur in phases and would, therefore, not displace substantial numbers of existing residents. The phasing of development under Alternative 5 would be different than the Project because there would be no State Parks land agreement. Under the Project, the phasing of the Alice Griffith district would occur on State Park lands. Under Alternative 5, the initial phases would develop current vacant portions of the Alice Griffith site on Candlestick Point North districts, and existing residents would then occupy public housing replacement units before existing structures are demolished in subsequent phases. Therefore, impacts associated with displacement of housing units and residents with development under Alternative 5 are considered less than significant.

Transportation and Circulation

Alternative 5 would not develop a football stadium; there would be no Yosemite Slough bridge. The remaining Alternative 5 land use program would be the same as with the Project.

The Transportation Study analyzed Alternative 5 and conclusions from the Transportation Study are presented below.

Construction Impacts

Construction activities associated with Alternative 5 would be similar to effects with the Project. Localized construction-related traffic impacts would remain significant and unavoidable.

Intersection Conditions

Alternative 5 would have similar project and cumulative effects at the study intersections. Section III.D discusses traffic effects at those intersections, and the feasibility of mitigation measures. In general, intersection conditions would be significant and unavoidable effects of Alternative 5. Game day traffic conditions with a football stadium would not occur.

Freeway Conditions

Alternative 5 freeway mainline sections effects, freeway ramp junctions conditions, and ramp queuing effects would generally be similar to the Project conditions. Freeway impacts with Alternative 5 would be significant and unavoidable.

Transit Impacts

Alternative 5 transit conditions assume implementation of Project-related transit improvements. Alternative 5 would have a less than significant impact on local and regional transit capacity. However, as with the Project, transit impacts would occur from traffic congestion delay. Overall, those transit delay conditions with Alternative 5 would affect the same lines as with the Project as presented in Section III.D, Impact TR-21 to Impact TR-30. As concluded in Section III.D, the transit delay effects would remain significant and unavoidable. During the AM and PM peak hour, Alternative 5 would require up to 28 additional vehicles, the same as with the Project.

Bicycle Impacts

The Alternative 5 bicycle trips would be accommodated within the proposed street and network, although there would not be a Yosemite Slough bicycle and pedestrian route; impacts on bicycle circulation would be less than significant.

Pedestrian Impacts

The Alternative 5 pedestrian trips would be accommodated within the proposed sidewalk and pedestrian network, although there would not be a Yosemite Slough bicycle and pedestrian route; impacts on pedestrian circulation would be less than significant.

Parking Impacts

Alternative 5 would result in a demand for about 21,310 spaces, compared with a maximum permitted supply of about 16,624 spaces; therefore, the maximum off-street parking supply would be about 4,685 spaces fewer than the estimated peak demand. The Project would have a demand for 21,233 spaces and maximum supply of 16,874 spaces, about 4,360 spaces fewer than estimated peak demand. As noted for

the Project, it is possible that some drivers may seek available parking in adjacent Bayview residential areas to the west. The potential increase in parking demand in adjacent neighborhoods would likely spill over to streets with existing industrial uses in the vicinity, which could, in turn, increase demand for parking in nearby Bayview residential areas. The loss of parking may cause potential secondary effects, which would include cars circling and looking for a parking space in neighboring streets. The secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to some drivers, who are aware of constrained parking conditions in a given area, shifting to other modes. Hence, any secondary environmental impacts that may result from a shortfall in parking would be minor. Therefore, the parking shortfall would not result in significant parking impacts, and Alternative 5 impacts on parking would be less than significant.

This alternative would have less than significant effects on other transportation conditions (loading, air traffic, emergency access).

Aesthetics

Construction activities associated with implementation of Alternative 5 would occur during the same 19-year build-out period and involve the same activities as the Project. Like the Project, those activities would be visible to surrounding land uses and could impact views of scenic vistas and scenic resources in the area. However, any impacts to views would be temporary visual distractions typically associated with construction activities and commonly encountered in developed areas. Because there would be less overall construction with this alternative compared to the Project, impacts to scenic vistas during construction of Alternative 5 would be less than impacts to views of scenic vistas during construction of the Project, although these were identified as less than significant. Construction activities associated with Alternative 5 would have a less-than-significant impact on scenic vistas.

The Yosemite Slough bridge and San Francisco 49ers stadium would not be constructed as part of Alternative 5, and temporary impacts to the slough as a scenic resource would be avoided. There are no adverse impacts, temporary or permanent, on any other identified scenic resource on the Project site as a result of construction activities. The impact would be less than significant, similar to the Project.

As with the Project, construction activities for Alternative 5 would result in exposed trenches, roadway bedding (soil and gravel), spoils/debris piles, and possibly steel plates that would be visible during construction of the utility infrastructure improvements. Although these activities would take place primarily on site, views of the activities could be available from surrounding land uses. As with the Project, implementation of the identified mitigation measure (MM AE-2) would require the Project developer of Alternative 5 to screen construction sites from public view at street level, provide for appropriate staging of construction equipment, and maintain the cleanliness of construction equipment. Furthermore, without the construction of the Yosemite Slough bridge and San Francisco 49ers stadium, the number and duration of construction sites under development of Alternative 5 would be less than the Project. Therefore, construction activities under Alternative 5 would have a less-than-significant impact on the visual character or quality of the site, the same as for the Project.

Construction of Alternative 5 would occur during daylight hours, and, therefore, glare could be created as a result of reflection of sunlight off windows of trucks and other construction materials that have the potential to generate glare (i.e., glass); however, similar to the Project, the glare created by construction

activities at the Project site would not be substantial enough to affect daytime views in the area. Security lighting would be provided after hours on all construction sites, but this lighting would be minimal, restricted to the Project site, and would not exceed the level of existing night lighting levels in other urban areas of San Francisco. Furthermore, without the construction of the Yosemite Slough bridge and San Francisco 49ers stadium, construction activity under development of Alternative 5 would be less than the Project, therefore, creating less potential for glare impacts. In addition, similar to the Project, construction lighting would comply with all City of San Francisco lighting requirements. Therefore, construction activities for development under Alternative 5 would have less-than-significant light and glare impacts, the same as for the Project.

Alternative 5 would include an overall development program similar to the Project, with the exception of the Yosemite Slough bridge, and San Francisco 49ers stadium at the HPS Phase II site, both of which would not be constructed. The State Parks agreement would not be executed, resulting in an increased density of development at Candlestick Point compared to the Project because the development area would be smaller. Alternative 5 would include seven towers at Candlestick Point, compared to 11 towers included under the Project, but the average tower height would be greater under Alternative 5 (341 feet compared to 288 feet under the Project). Compared to the Project, there would be three less towers constructed in the Candlestick Point North district and one less tower constructed in the Candlestick Point South district. Development of Alternative 5 would change views from public viewpoints, but would not substantially obstruct any scenic vistas. Overall, development of Candlestick Point would not block publicly accessible views of the Bay or other scenic vistas. The Yosemite Slough bridge as proposed under the Project would not adversely impact long- or short-range views of the Bay or other scenic vistas. Therefore, this Alternative would not substantially reduce impacts to scenic vistas by not including the bridge.

Views of the East Bay and the Bay from the Project site would be maintained within public access areas, as well as at City and State parks located within Candlestick Point. Similarly, development of HPS Phase II would not substantially block views of scenic vistas, including the Bay. Views of the East Bay and the Bay from HPS Phase II would be maintained on the site and within public access areas, such as from HPS Phase I Hilltop Park. Under Alternative 5, a stadium would not be constructed at HPS Phase II. Instead, residential and retail uses would be developed at the stadium site and building heights would be limited to 65 feet. Therefore, these residential and retail uses would not substantially block views of scenic vistas, including the Bay. The number of residential and retail units, as well as the square footage of area occupied by residential and retail uses, would be the same as the Project. While development of Alternative 5 would include high-rise towers similar to the Project at Candlestick Point and HPS Phase II, those towers would not be clustered and would not substantially obstruct views of the Bay or beyond from any long-range viewpoints. Therefore, similar to the Project, development under Alternative 5 would not substantially obstruct any scenic vistas, and this impact would be less than significant.

Development under Alternative 5 would not substantially damage scenic resources that contribute to a scenic public setting. Alternative 5 would include redevelopment of the Candlestick Park stadium site and associated paved and unpaved parking lots by replacing degraded urban areas and outdated residential development with new, well-designed urban development and integrated public parks. The Yosemite

Slough bridge and roadway approaches would not be constructed and the appearance of the Slough would be unchanged. Scenic resources at HPS Phase II would be retained, including the Re-gunning crane. Additionally under Alternative 5, the stadium would not be constructed at HPS Phase II. The residential and retail uses that would be developed at the proposed stadium site would be limited to a height of 65 feet and would not damage or remove any identified scenic resources. Shoreline improvements at Candlestick Point and HPS Phase II would improve the aesthetic quality of the shoreline, reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 5 would not damage or remove any identified scenic resources that contribute to a scenic public setting and the impact would be less than significant.

Alternative 5 would include an overall development program similar to the Project, with the exception of the State Parks agreement; the Yosemite Slough bridge and San Francisco 49ers stadium at the HPS Phase II site would not be constructed. The State Parks agreement would not occur, resulting in less land available for development at Candlestick Point. Therefore, there would be an increase in density of development at Candlestick Point compared to the Project because the overall development area would be smaller. Alternative 5 would include seven towers at Candlestick Point, compared to 11 towers included under the Project, but the average tower height would be greater under Alternative 5 (341 feet compared to 288 feet under the Project). Compared to the Project, there would be three less towers constructed in the Candlestick Point North district and one less tower constructed in the Candlestick Point South district. In addition, as discussed above, the San Francisco 49ers stadium would not be constructed at the HPS Phase II site. Instead, residential and retail uses would be constructed on the proposed stadium site with building heights limited to 65 feet. Therefore, similar to the Project, development under Alternative 5 would change the visual character of the Project site. However, also similar to the Project, Alternative 5 would not substantially degrade the visual character or quality of the site or its surroundings. In fact, development under Alternative 5 would improve the degraded and deteriorated condition of much of the Project site. Development under Alternative 5 would replace the existing conditions with a more dense urban setting, and this would not represent an adverse change. The proposed shoreline improvements would improve the aesthetic quality of the shoreline by reducing erosion, including marsh plantings where appropriate, and removing debris. Similar to the Project, implementation of Alternative 5 would not substantially degrade the visual character or quality of the Project site or its surroundings. The impact would be less than significant.

Without a State Parks land agreement, there would be no established funding mechanism for future maintenance of the State Parks on site from the Project Applicant. Furthermore, increased use of the CPSRA as a result of population and employment growth associated with Alternative 5 is anticipated. Therefore, increased use of the CPSRA without an established mechanism for future maintenance of the CPSRA could result in deterioration of the CPSRA. This could potentially result in a substantial adverse impact on the visual character and quality of the Project site. Without an established funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. Therefore, development of Alternative 5 could result in a new adverse impact to the land use character of the CPSRA, unless a funding mechanism is established.

Development under Alternative 5 would increase lighting on the Project site relative to existing outdoor lighting and new building surfaces and would increase the level of illumination in the area. Area lighting

would illuminate larger areas that are well traveled so as to promote way finding and provide for a safe environment. In addition to area lighting, building lighting would be angled towards building surfaces for aesthetic purposes and/or to illuminate signs. Like the Project, both types of lighting would be designed to avoid direct visibility of the light source. Resolution 9212 prohibits the use of highly reflective or mirrored glass in new construction. Implementation of the identified mitigation measures (MM AE-7a.1, MM AE-7a.2, MM AE-7a.3, and MM AE-7a.4) and compliance with City Resolution 9212 would reduce impacts from light and glare to a less-than-significant level by shielding lighting fixtures, minimizing spill light, screening vehicle headlights to the maximum extent feasible, and eliminating or minimizing increased glare by the use of non-reflective glass and non-reflective textured surfaces within the proposed development area.

Potential stadium lighting impacts would be avoided because the San Francisco 49ers stadium would not be constructed.

Shadows

Development under Alternative 5 would include the same building heights, layouts, and orientations of buildings as the Project. As discussed above, the State Parks agreement would not occur resulting in less land available for development at Candlestick Point. Therefore, there would be an increase in density of development at Candlestick Point compared to the Project because the overall development area would be smaller. Alternative 5 would include seven towers at Candlestick Point, compared to 11 towers included under the Project, but the average tower height would be greater under Alternative 5 (341 feet compared to 288 feet under the Project). Compared to the Project, there would be three less towers constructed in the Candlestick Point North district and one less tower constructed in the Candlestick Point South district. Under Alternative 5, the existing public open space, Bayview Park and Gilman Park, would not be affected by new shading from development. Gilman Park would experience some shading on winter afternoons. Those shadows would be cast by buildings that do not exceed 40 feet in height, are not subject to *Planning Code* Section 295, and, therefore, would not be considered an adverse impact. No new shadow would be cast on Bayview Park. The CPSRA would be affected by new shade in the afternoon because the towers at Candlestick Point would be taller compared to the Project, but most areas would experience limited new shadow from development under Alternative 5. At HPS Phase II, the existing public open space, in the Project vicinity including India Basin Shoreline Park and India Basin Open Space, would not be affected by new shading from development under Alternative 5. Under Alternative 5, a stadium would not be constructed at HPS Phase II. Residential and retail uses would be constructed on the stadium site and building heights would be limited to 65 feet. Shadows from these uses on adjacent open space areas would be reduced compared to shadows created by the stadium. New shadows cast by development under Alternative 5 on proposed new parks throughout the year would range from little or no shading to large areas of certain parks receiving new shade, particularly in the late afternoon during the vernal and autumnal equinoxes. The extent and duration of shadow on new public sidewalks would increase along street corridors of Alternative 5. Similar to the Project, this new shadow would not be in excess of that which would be expected in a highly urban area. New shade created by implementation of Alternative 5 would occur at limited times of the day and year, and would not substantially affect the use of outdoor recreational facilities or open space. Similar to the Project, this impact would be less than significant.

Wind

Development under Alternative 5 would include structures above 100 feet in height, with maximum heights up to 420 feet, which would extend above surrounding buildings and intercept a large volume of wind. Alternative 5 would include seven towers at Candlestick Point, compared to 11 towers included under the Project, but the average tower height would be greater (341 feet compared to 288 feet under the Project). Because of the exposure of tall structures to wind, the tower structures proposed under Alternative 5 would have the potential to accelerate winds in nearby pedestrian sidewalk areas or public open space areas. The degree of change in pedestrian-level wind conditions would be influenced by building design, such as building height, shape, massing, setbacks, and location of pedestrian areas. Structures nearing or over 100 feet in height could have effects on pedestrian-level conditions such that the wind hazard criteria of 26 miles per hour for a single hour of the year would be exceeded. Similar to the Project, the street grid of Alternative 5 would not align with predominant west and west-northwest wind directions and would, therefore, not result in channeling of winds along street corridors. The street grid would orient building faces such that they would not face into the prevailing wind direction; that orientation would reduce potentially significant pedestrian-level wind acceleration at the Project site.

Implementation of the identified mitigation measure (MM W-1a) would reduce the potential impact from wind for development of Alternative 5 by requiring review of all buildings that could result in adverse wind impacts by a qualified wind consultant. Exceedances of the wind hazard criteria, the design must be revised to reduce the impact below the established threshold. Implementation of required design changes, if any, would reduce potential hazardous wind effects at the pedestrian level by forcing wind downwash to tops of podium areas and/or into the street and away from pedestrian areas. Compliance with the mitigation measures would ensure pedestrian safety in pedestrian-access areas. Similar to the Project, through implementation of the identified mitigation measure, wind impacts would be less than significant. Elimination of the bridge would not change any of the Project's potential wind impacts.

Air Quality

As the footprint of development, the total amount of development, and the land uses provided with a Alternative 2 would be the virtually the same as the Project (with the exception of the stadium at HPS Phase II), air quality impacts of Alternative 5 would also be the same as the Project.

Construction activities for Alternative 5 would generate dust; however, they would need to comply with the San Francisco Health Code and BAAQMD requirements. Implementation of MM HZ-15, which would require the Applicant to ensure that construction contractors comply with the dust control strategies included in an approved dust control plan as part of a site-specific dust control plan, would reduce the impacts caused by construction dust to a less-than-significant level.

Construction activities could also create DPM; however, as the development of Alternative 5 would be substantially the same as the Project, implementation of mitigation measures MM AQ-2.1 and MM AQ-2.2, accelerated emission control implementation on construction equipment, would keep this impact less than significant. Construction activities could also generate toxic air contaminant (TAC) containing PM₁₀; however, as construction activities for Alternative 2 would be substantially the same as for the Project, this impact would be less than significant.

Operational emissions associated with Alternative 5 would be the same as those of the Project, therefore the mass emissions would exceed the BAAQMD CEQA thresholds, and this impact would remain significant and unavoidable, similar to the Project. Alternative 5 has the same R&D square footage, therefore potential TAC emissions from facilities in R&D areas would be the same as the Project. With the implementation of mitigation measures MM AQ-6.1 and MM AQ-6.2, this impact would be less than significant.

Additionally, as the scale of Alternative 5 is virtually the same as the Project, the impacts from Alternative 5 traffic (e.g., carbon monoxide and PM_{2.5}) would be less than the Project and therefore continue to be less than significant.

According to the current BAAQMD CEQA Guidelines, odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that the BAAQMD regards with potential to generate considerable odors include: wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, oil refineries and chemical plants. Alternative 5 would be a large mixed-use development containing residential, office, retail, R&D, recreational, and entertainment uses. Although there may be some potential for small-scale, localized odor issues to emerge around proposed sources such as solid waste collection, food preparation, etc., substantial odor sources and consequent effects on on-site and off-site sensitive receptors would be unlikely and would be resolved by interventions after receipt of any complaints. This would be a less-than-significant impact. No mitigation is required.

The Project is consistent with regional air quality plans; therefore, as Alternative 5 being the same size as Project would remain consistent with these plans. Alternative 5 promotes the use of alternative transportation modes, such as transit, biking and walking. In addition, it puts housing in close proximity with jobs and retail establishments, reducing the length of trips and further reducing reliance on single-occupancy vehicles. Therefore, Alternative 5 conforms to the regional air quality plan and there would be a less-than-significant impact. No mitigation is required.

Noise

Alternative 5 would remove the stadium proposed under the Project and relocate 1,350 residential dwelling units from Candlestick Point to HPS Phase II, and the State Parks agreement would not occur. Other than the stadium site and elimination of State Parks open space, land uses provided with Alternative 5 would be the same as the Project. As land uses would remain the same, the potential noise impacts would be the same as the Project with the exception that the noise impact from operation of the stadium would not occur under Alternative 5.

Construction activities for Alternative 5 would expose sensitive receptors to increased noise levels on the site and in existing residential neighborhoods adjacent to the site. Construction activities would need to comply with the San Francisco Noise Ordinance, which generally prohibits construction between 8:00 P.M. and 7:00 A.M. and limits noise from any individual piece of construction equipment (except impact tools) to 80 dBA at 100 feet. Implementation of mitigation measures MM NO-1a.1 and MM NO-1a.2, which would require implementation of construction Best Management Practices to reduce construction noise and the use of noise-reducing pile driving techniques, would reduce any potentially significant impacts to less-than-significant levels, similar to the Project.

Construction activities for Alternative 5 would result in a temporary or periodic increase in ambient noise that would be noticeable and likely cause for human annoyance. Construction activities would occur within 25 feet of existing and future residential uses. Pile driving activities could result in substantial noise levels of up to 107 dBA at new residential uses on the site or at adjacent existing residences. Construction-related temporary increases in ambient noise levels would be considered significant and unavoidable, the same as for the Project.

Construction activities could also create excessive ground-borne vibration levels in existing residential neighborhoods adjacent to the site and at proposed on-site residential uses, should the latter be occupied before construction activity on adjacent parcels is complete. Implementation of mitigation measures MM NO-1a.1, MM NO-1a.2, and MM NO-2a would require implementation of construction Best Management Practices, noise-reducing pile driving techniques as feasible, and monitoring of buildings within 50 feet of pile driving activities. Implementation of these measures would reduce vibration impacts under Alternative 5, but not to a less-than-significant level, as vibration levels from pile driving activities could be as high as 103 VdB for the residential uses within the HPS North District; therefore, this impact would remain significant and unavoidable, similar to the Project.

Daily operation of Alternative 5, such as mechanical equipment and delivery of goods, would not expose noise-sensitive land uses on- or off- site to noise levels that exceed the standards established by the City of San Francisco. This impact would be less than significant, similar to the Project. Operation activities associated with Alternative 5, such as delivery trucks, would not generate or expose persons on or off site to excessive groundborne vibration. This impact would also be less than significant, similar to the Project.

Operation of Alternative 5 would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes. Noise level increases associated with Alternative 5 would be similar to those shown for the Alternative 5 which also shifts residential uses and does not include the stadium at HPS Phase II, are shown in Table IV-21 (Modeled Noise Levels along Major Project Site Access Roads – Housing Variant) of Chapter IV. According to the noise models, impacts would be significant along Carroll Avenue, Gilman Avenue, and Jamestown Avenue, similar to the Project. However, there would be slightly lower noise levels than the Project along Carroll Avenue, Gilman Avenue, and Jamestown Avenue, but would still be significant.

Because Alternative 5 would not include a football stadium at HPS Phase II and the stadium at Candlestick Point, noise impacts identified for the Project from football games and concerts would not occur with implementation of Alternative 5. Noise generated from the existing stadium is considered an existing condition and would not be considered an impact of the Project.

Cultural Resources

Alternative 5 would not change the significance of any historic structures at Candlestick Point because no historic resources have been identified at Candlestick Point. Similar to the Project, implementation of Alternative 5 would retain Drydocks 2 and 3 and rehabilitate Buildings 140, 204, 205, and 207 at the HPS Phase II site in accordance with the Secretary of the Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. However, development under Alternative 5 would result in the

demolition of Buildings 211, 231, and 253, which are historic resources in the CRHR-eligible Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. This would result in a significant impact because the proposed actions would materially alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR. Implementation of the identified mitigation measures (MM CP-1b.1 and MM CP-1b.2) would reduce those impacts; however, the demolition of historic resources would not reduce impacts to a less-than-significant level. Therefore, similar to the Project, the impacts to these historical resources, created by developing Alternative 5, would be a significant and unavoidable.

Construction activities associated with Alternative 5 could result in a substantial adverse change in the significance of archaeological resources. The Project site overall is likely to contain subsurface archaeological resources from the Native American, Chinese fishing village, prehistoric, and maritime development periods. Similar to the Project, construction activities associated with Alternative 5 could disturb those archaeological resources, and result in potentially significant impacts. Implementation of the identified mitigation measure (MM CP-2a) would reduce the effects on archaeological resources to a less-than-significant level. The Yosemite Slough bridge would be eliminated and potential disturbance of archaeological resources resulting from bridge construction would be avoided.

Construction activities associated with Alternative 5 could result in a substantial adverse change in the significance of paleontological resources. Under Alternative 5, the development footprint at Candlestick Point would be smaller than the Project and the development footprint at HPS Phase II would be greater than the Project. The Bay mud underlying portions of the fill is expected to contain paleontological resources. Similar to the Project, implementation of the identified mitigation measure (MM CP-3a) would reduce the effects of construction-related activities to potential paleontological resources in in-water and off-site areas to a less-than-significant level for development under Alternative 5. The Yosemite Slough bridge would be eliminated and potential disturbance of paleontological resources resulting from bridge construction would be avoided.

Hazards and Hazardous Materials

Under Alternative 5, the development footprint at Candlestick Point would be smaller than the Project because the State Parks land agreement would not occur, thereby making less land available for development. The development footprint at HPS Phase II would be greater than the Project. However, extensive construction would occur in locations similar to the Project and would have potential impacts related to exposure to hazardous materials similar to the Project, as presented below.

Under Alternative 5, the construction impacts associated with Hazards and Hazardous Materials would be reduced as compared to the Project because the overall development footprint would be smaller, as there would be no State Parks land agreement or Yosemite Slough bridge. This reduced development would result in a smaller area subject to disturbance.

Site preparation would include deep excavations for large structures such as for residential towers, with plans to use the cut material elsewhere within the Project site as fill, trenching for utility lines, dewatering, grading and compaction and other earth-disturbing activities. As portions of the site are known to contain elevated levels of chemicals in the soil, construction activities could result in exposure of construction workers, the public or the environment to unacceptable levels of hazardous materials if not

handled appropriately. MM HZ-1a would reduce effects related to exposure of known contaminants at Candlestick Point by requiring compliance with Article 22A or an equivalent process. At HPS Phase II, potential effects related to exposure to hazardous materials from construction activities would be mitigated through requirements to comply with restrictions imposed on the property through the federal site clean-up process (MM HZ-1b, MM HZ-9, and MM HZ-12). Disturbance of contaminated soil, sediments, and groundwater in the shoreline areas at HPS Phase II, although reduced in scope with the elimination of the Yosemite Slough Bridge, would still occur as a result of shoreline improvements. MM HZ-10b would ensure approval of workplans by the Navy and regulatory agencies prior to any work in the shoreline areas. In addition, mitigation measures MM HY-1a.1, MM HY-1a.2, MM BI-4a.1, MM BI-4a.2, and MM BI-5b.4 would reduce water quality and biological resources impacts from disturbance of contaminated soil, groundwater and sediments.

At both Candlestick Point and HPS Phase II, compliance with MM HZ-2a.1 would require the preparation and implementation of contingency plans to address unknown contaminants that might be encountered during construction, and compliance with MM HZ-2a.2 would require preparation and implementation of health and safety plans to protect construction workers from exposure to hazardous materials during construction activities. Construction activities could require off-site transport of contaminated soil or groundwater; compliance with federal, state, and local regulations would ensure that no unacceptable exposure to chemicals occur as a result of these activities. Further, mitigation measures MM HY-1a.1, MM HY-1a.2, and MM HY-1a.3 would ensure that no unacceptable levels of hazardous materials in soil in surface runoff or in groundwater are discharged to the sewer system or discharged from the site to the Bay. Hazardous materials impacts from all of the above construction-related activities would be reduced to less than significant with the implementation of the mitigation measures identified above, the same as for the Project.

Development under Alternative 5, as for the Project, would require the installation of foundation support piles, which could, under certain soil conditions, create a vertical conduit for chemicals occurring in shallow groundwater to migrate to the deeper groundwater aquifer. However, MM HZ-5a, which requires preparation of a plan for pilot boreholes for each pile to prevent disturbance of potentially contaminated fill materials and would reduce this potential impact from pile driving to less than significant, the same as for the Project.

Elimination of construction of the Yosemite Slough Bridge would avoid impacts associated with disturbance of potentially radiologically impacted soils at HPS Phase II in the vicinity of Parcels E and E-2, thus reducing the potential for exposure to hazardous materials in soil or groundwater in this area.

Alternative 5 would place housing on the HPS Phase II site. The Navy's cleanup plan is designed to remediate the HPS site to levels acceptable for the planned uses in the existing HPS Redevelopment Plan. To the extent that Alternative 5 proposes to place housing in areas not designated for residential use in the existing HPS Redevelopment Plan, additional hazardous materials remedial work could be required, which could result in some increased risk to workers, the public and environment from exposure to hazardous materials during the construction process. Any property that has not been remediated for unrestricted use at the time of transfer will have use restrictions placed on the property in compliance with the federal clean-up process. For use restrictions to be removed, the Project Applicant would be required by the transfer documents to obtain approval from the regulatory agencies overseeing

the clean-up process before residential uses could be placed on these portions of the site. Any remedial activities undertaken as part of the construction process would be subject to the requirements in MM HZ-1b, which requires construction activities at HPS Phase II to be done in accordance with all restrictions imposed on the site by the federal regulatory clean-up process and these impacts would be less than significant, the same as for the Project.

Potential impacts associated with disturbance of naturally occurring asbestos would be similar to those associated with the Project and would be mitigated through MM HZ-15, which requires the preparation of dust control plans as required by BAAQMD and DPH. Alternative 5 would involve the demolition of existing structures that may contain asbestos-containing building materials, lead-based paint and other hazardous materials, the same as the Project. The existing regulatory framework and approval process would avoid potential hazards from demolition or building preservation activities and impacts would be less than significant, the same as the Project.

Alternative 5 would involve off-site roadway improvements, which could result in disturbance of hazardous material in soil or groundwater. Unacceptable exposures would be controlled as for the Project by implementation of MM HZ-1a, and hazardous materials impacts from these activities would be less than significant.

Project operations would involve routine use, storage, transport, or disposal of hazardous materials. The use of such materials would be the same as for the Project, as the development program is essentially the same. Compliance with applicable federal, state, and local regulations related to the use, storage and transport of such materials would result in a less-than-significant impact from hazardous materials usage, the same as for the Project.

Geology and Soils

Construction activities, such as removal of paved areas, grading, and excavation, could remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, could be subject to soil loss and erosion by wind and stormwater runoff. However, requirements to control surface soil erosion during and after construction of Alternative 5 would be implemented through the requirements of the identified mitigation measure (MM HY-1a.1), and adverse effects on the soil such as soil loss from wind erosion and stormwater runoff would be reduced to a less-than-significant level. Soil erosion impacts associated with construction of the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 5.

Construction activities would have the potential to affect groundwater levels. Construction may include dewatering procedures during excavation, construction, and operation of foundations and buried utilities. The dewatering could cause settlement of adjacent soils that could damage the overlying foundations of existing buildings. With implementation of the dewatering techniques, groundwater level monitoring, and subsurface controls as specified in the SFBC and required by the identified mitigation measure (MM GE-2a), groundwater levels in the area would not be lowered such that unacceptable settlement at adjacent or nearby properties would occur. Similar to the Project, settlement hazards related to dewatering would be less than significant for development under Alternative 5.

Development of Alternative 5 would require rock removal activities at the Alice Griffith and Jamestown districts that could result in damage to structures from vibration or settlement caused by the fracturing of bedrock for excavation. With implementation of the identified mitigation measure (MM GE-3), vibration from controlled rock fragmentation in the area would not cause unacceptable settlement at adjacent or nearby properties. Similar to the Project, settlement hazards related to controlled rock fragmentation would be less than significant for development under Alternative 5.

The potential for exposure to adverse affects caused by seismic groundshaking and seismically induced ground failure such as liquefaction, lateral spreading, landslides and settlement exists at the Project site. The identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-4a.3, MM GE-5a, and MM GE-6a) would require design-level geotechnical investigations for development under Alternative 5. Design-level geotechnical investigations must include site-specific seismic analyses to evaluate the peak ground accelerations for design of structures, as required by the SFBC through review by DBI. The structural design review would ensure that all necessary mitigation methods and techniques are incorporated in the design for foundations and structures to reduce potential impacts from ground failure or liquefaction to a less-than-significant level for development under Alternative 5. Seismic-related groundshaking hazards associated with the Yosemite Slough bridge would be avoided because the bridge would not be constructed under Alternative 5.

The existing shoreline exhibits active erosion and consists of areas of unprotected slopes and dilapidated naval pier and wharf structures. Similar to the Project, Alternative 5 would include numerous shoreline improvements, including additional concrete revetments, creation of new beach and tidal habitat, and some grading and importation of fill at certain locations. These improvements would improve the stability of the shoreline. Therefore, Alternative 5 would not result in the exposure of structures and facilities at the Project site to substantial adverse effects caused by shoreline instability. Similar to the Project, the impact would be less than significant.

The potential for adverse affects caused by landslides, settlement, expansive and corrosive soils, exists at the Project site. Site-specific, design-level geotechnical investigations would be required to be submitted to DBI in connection with permit applications for individual elements of development for Alternative 5, as specified in the identified mitigation measures (MM GE-4a.1, MM GE-4a.2, MM GE-4a.3, MM GE-5a, MM GE-6a, MM GE-10a, MM GE-11a) for the Project. The site-specific analyses must assess these conditions and prescribe the requirements for foundations on slopes in accordance with the SFBC. All geotechnical investigations and permits must be approved by DBI. With implementation of those mitigation measures, impacts with regards to landslides, settlement, and expansive and corrosive soils would be less than significant. Potential ground failure impacts associated with construction of the Yosemite Slough bridge and the stadium would be avoided because the bridge and stadium would not be constructed under Alternative 5.

Hydrology and Water Quality

The footprint of development for Alternative 5 would be reduced compared to the Project, because no State Parks agreement would occur and the Yosemite Slough Bridge would not be constructed. The extent of development would be reduced compared to the Project, because the stadium would not be constructed, and portion of residential uses proposed at Candlestick Point under the Project would be

shifted to HPS Phase II. As a result, at Candlestick Point the density of development would increase and the extent of development would be reduced compared to the Project. At HPS Phase II, the density and extent of development would remain similar to the Project, as residential development would increase by 1,350 units in place of the stadium. As such, impacts from construction of the Alternative 5 would be less than the Project. With residential uses being shifted from Candlestick Point to HPS Phase II, replacing the stadium and associated parking lots, the total amount of development would be reduced, and the extent of impervious surfaces would be reduced as the footprint of development for Alternative 5 would be reduced compared to the Project and development densities would be greater. Thus, operational impacts to hydrology and water quality would be less than the Project.

With adherence to applicable regulatory requirements, construction activities associated with Alternative 5 would not violate water quality standards, cause an exceedance of water quality standards or contribute to or cause a violation of waste discharge requirements due to sediment-laden runoff, contaminated groundwater from dewatering activities, or the incidental or accidental release of construction materials. With reduced overall development, impacts would be less than the Project, however mitigation measures proposed under the Project would be still be applicable. With implementation of mitigation measures MM HY-1a.1 (preparation of a Storm Water Pollution Prevention Plan—SWPPP—for discharges to the combined sewer system), MM HY-1a.2 (SWPPP preparation for separate storm sewer systems), and MM HY-1a.3 (construction dewatering plan) impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 5 would include excavation for building foundations and underground utilities which could require short-term and/or long-term dewatering of the affected areas. As no extensive underground space is proposed for Alternative 5, the installation of underground building elements and utilities would not substantially alter groundwater levels, similar to the Project. As such, Alternative 5 would not substantially deplete groundwater supplies and would result in a less than significant impact, similar to the Project. As the total amount of open space under Alternative 5 is reduced compared to the Project, the amount of permeable surface within the Project footprint would also be less. Although, the State Parks agreement would not occur, the existing open space accounted for under the Project would remain. Therefore, Alternative 5 would not 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. This impact would be less than significant, similar to the Project.

No streams or rivers are currently located within Alternative 5 site and thus no streams or rivers would be altered by construction activities. Under existing conditions, stormwater typically drains to storm drains (which include both combined and separate systems) or directly to the Bay via surface runoff (generally only along portions of the shoreline). During construction of Alternative 5, the existing drainage patterns within the area would generally be preserved. Construction activities associated with Alternative 4 would not substantially alter the existing drainage pattern of the site or alter the course of a stream or river in ways that would result in substantial erosion, siltation, or flooding on or off site. Impacts would be less than significant, similar to the Project.

Construction activities associated with Alternative 5, including site clearance, grading, and excavation, would not create or contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff. During construction, existing

stormwater drainage facilities would be replaced by a new storm sewer system that would collect and treat on-site stormwater flows and would be sized to accommodate projected flows from upstream contributing areas. With compliance with regulatory requirements, as required by mitigation measures MM HY-1a.1 and MM HY-1a.2 (preparation of an SWPPP) impacts would be less than significant, similar to the Project.

Operation of Alternative 4 would not contribute to violations of water quality standards or waste discharge requirements or otherwise degrade water quality. Compliance with the requirements of the Municipal Stormwater General Permit, the Recycled Water General Permit, and the Industrial General Permit would reduce potential water quality impacts associated with implementation of Alternative 4. In addition, Alternative 5 would be required to comply with the San Francisco SWMP, the Draft San Francisco Stormwater Design Guidelines, and the San Francisco Green Building Ordinance. Compliance with these requirements would be demonstrated in the SDMP or SCP for the project site, as required by mitigation measure MM HY-6a.1. Compliance with the Recycled Water General Permit would be required by implementation of mitigation measure MM HY-6a.2. To reduce the potential for stormwater infiltration to mobilize historic soil contaminants at HPS Phase II, the use of infiltration BMPs would be prohibited by mitigation measure MM HY-6b.1. To reduce stormwater runoff impacts associated with industrial activities at HPS Phase II, compliance with the Industrial General Permit would be required by implementation of mitigation measure MM HY-6b.2. To reduce stormwater impacts associated with maintenance dredging of the marina, compliance with the DMMO regulatory requirements would be required by implementation of mitigation measure MM HY-6b.3. Compliance with the Clean Marinas California Program would be required by implementation of mitigation measure MM HY-6b.4. As the extent of impervious surfaces for Alternative 5 would be reduced than the Project, impacts would be less than the Project.

Development under Alternative 5 would also not utilize groundwater as a source of water supply nor interfere substantially with groundwater recharge. Thus, there would be no net deficit in aquifer volume or a lowering of the local groundwater table level and no impact would occur, similar to the Project.

Operation of Alternative 5 could alter the existing drainage pattern of the site, but would not alter the course of a stream or river, as none exist at or near the site currently, or result in substantial erosion, siltation, or flooding on or off site similar to the project. Implementation of Alternative 5 would not contribute runoff water that would exceed the capacity of existing or planned storm sewer systems or provide substantial additional sources of polluted runoff, as development would include a separate stormwater system that would be sized to accommodate estimated runoff flows and treat runoff prior to discharge to the Bay. Compliance with regulatory requirements, including the submission of a SDMP and SCP to the SFPUC for approval, as required by mitigation measure MM HY-6a.1, would ensure that this impact would be less than significant, similar to the Project.

Implementation of Alternative 5 would not place housing and other structures within a 100-year flood zone or otherwise include development that would impede or redirect flood flows. Implementation of mitigation measures MM HY-12a.1 (Finished Grade Elevations above Base Flood Elevation) and MM HY-12a.2 (Shoreline Improvements for Future Sea-Level Rise) would reduce this impact to a less-than-significant level, similar to the Project.

Implementation of Alternative 5 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. Implementation of mitigation measure MM HY-14 (Shoreline Improvements to Reduce Flood Risk) would reduce impacts to a less-than-significant level. Based on historical records and the location of development, Alternative 5 would not expose people or structures to inundation by seiche, tsunami, or mudflow. These impacts would be less than significant, similar to the Project.

Biological Resources

Similar to the Project, Alternative 5 would involve removal and/or modification of areas that have the potential to contain special-status species, including: seven potentially breeding avian species, one bat species, and four fish species (green sturgeon, Chinook, steelhead, and longfin smelt). Alternative 5 would also have the potential to affect designated critical habitat of the green sturgeon and Central California Coast steelhead and thus, directly impact threatened and/or endangered species through habitat conversion or unauthorized take. In addition, activities would occur within habitats of locally rare or sensitive species such as Pacific herring and Olympia oysters, as well as avian species protected by the MBTA. Elimination of the Yosemite Slough bridge would avoid potential impacts to adverse effects to special-status species in and around Yosemite Slough. Alternative 5 would include implementation of the ecological design features described in the Project's Draft Parks, Open Space, and Habitat Concept Plan that would result in multiple measures to avoid, limit, and mitigate for impacts to special-status and legally protected species. Specifically, the design components would remove invasive species; restore, preserve, and enhance wetland, aquatic, and grassland habitats; revegetate the site with extensive planting of trees and shrubs; increase the vegetative cover for foraging and dispersing animals; and maintain and enhance habitat connectivity along the shoreline. Alternative 5, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-6a.1, MM BI-6a.2, MM BI-6b, MM BI-7b, MM BI-9b, MM BI-18b.1, and MM BI-18b.2) and ecological design features, would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the CDFG or USFWS. Impacts would be less than the Project, and, similar to the Project, impacts would be less than significant after mitigation for development under 5.

Development of Alternative 5 could have a substantial adverse effect on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG or USFWS. The only sensitive habitats other than wetlands and aquatic habitats are eelgrass and areas designated as EFH. Elimination of the Yosemite Slough bridge would avoid potential adverse effects to sensitive natural communities and their habitats in and around Yosemite Slough. Shoreline improvements, shoreline abutments for the proposed marina, and installation of the breakwater at HPS Phase II could have substantial adverse impact to the communities. However, with implementation of the identified mitigation measures (MM BI-4a.2, MM BI-5b.1 through MM BI-5b.4, MM BI-12b.1, MM BI-12b.2, MM BI-12b.3, MM BI-18b.1, MM BI-18b.2, MM BI-19b.1, and MM BI-19b.2), impacts of Alternative 5 on sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG, NMFS, or USFWS would be reduced to a less-than-significant level. Potential impacts to eelgrass beds would be the same as the Project (eelgrass beds are not located near Yosemite Slough), while impacts to EFH would be less than the Project since construction associated with Yosemite Slough

bridge would be avoided and, thus, EFH would not be impacted through the construction of pilings required to support the bridge.

The shoreline improvements included Alternative 5 would be similar to the Project and could have substantial temporary and permanent adverse effect on federally protected wetlands and other waters as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Those impacts would be substantially reduced compared to the Project because the Yosemite Slough bridge would not be constructed. As a result, impacts to approximately 0.70 acre of other waters, 0.01 acre of tidal salt marsh, and 0.96 acre of shadow fill would be avoided. The identified mitigation measures would reduce the effects of construction-related activities to wetlands and other waters by mitigating for the temporary and permanent loss of the wetlands and jurisdictional waters through avoidance of impacts, requiring compensatory mitigation (i.e., creation, preservation, and/or restoration), obtaining permits from the USACE, SFRWQCB, and BCDC that are designed to protect wetlands and jurisdictional waters, and implementing construction BMPs to reduce and/or prevent impacts to waters of the United States, including wetlands and navigable waters. With implementation of the identified mitigation measures (MM BI-4a.1 and MM BI-4a.2), the impacts of development under Alternative 5 to federally protected wetlands and other waters as defined by Section 404 of the CWA would be reduced to a less-than-significant level, similar to the Project. However, impacts would be less than the Project.

Development of Alternative 5 could interfere substantially with the movement of 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 site. The Project site is surrounded by open water and urban development and no major drainages, canyon bottoms, ridgetops, rivers, creeks or areas that provide substantial movement corridors or migratory pathways occur within the Project site. However, similar to the Project, implementation of Alternative 5 would place new residential towers and a stadium with light towers along a portion of the San Francisco Bay shoreline. The increase in strike hazards from the tall buildings and the potential for lighted stadium towers to alter flight paths could substantially interfere with migratory avian flight paths, which would be considered a potentially significant impact to migratory birds. Compared to the Project, the strike hazard related to the stadium light towers would be avoided because no stadium would be constructed. With respect to aquatic species, although migratory fish could continue to move through the open water and Yosemite Slough, the Project site does not contain any substantial migratory fish pathways such as anadromous fish streams. Elimination of the Yosemite Slough bridge would avoid adverse effects to special-status aquatic species and their habitats in and around Yosemite Slough. However, construction of breakwaters and other shoreline treatments in HPS Phase II would occur near eelgrass beds, which could directly or indirectly impact eelgrass beds such that productivity and survival of these habitats would be substantially reduced. Similar to the Project, with implementation of the identified mitigation measures (MM BI-5b.1 through MM BI-5b.4, MM BI-20a.1, and MM BI-20a.2), the potential impacts of Alternative 5 would be reduced to a less-than-significant level 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.

Similar to the Project, Alternative 5 would be required to comply with mitigation measure MM BI-14a to ensure that Project development would not result in conflicts with the City's tree protection ordinances. With implementation of MM BI-14a, Alternative 5 would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant, similar to the Project.

Public Services

Police Protection

During construction of Alternative 5, emergency access to the Project site would be maintained through compliance with the CTMP. The purpose of a CTMP is to ensure that the impacts of construction on the public domain, in particular with respect to temporary interruptions to vehicular and pedestrian traffic, are considered and addressed. Because Alternative 1 would include the same mitigation as the Project, there would be a similar requirement to prepare a CTMP for Alternative 5 that would address temporary impacts on circulation during construction. The CTMP would provide necessary information to various contractors and agencies as to how to maximize the opportunities for complementing construction management measures and to minimize the possibility of conflicting impacts on the roadway system, while safely accommodating the traveling public in the area. Construction activities associated with implementation of Alternative 5 also could increase demand for SFPD services if the site is not adequately secured, providing increased opportunity for criminal activity. To ensure adequate site security, mitigation measure MM PS-1 would require the Project Applicant to provide security during construction. Therefore, this impact would be less than significant, the same as for the Project.

Implementation of Alternative 5 would increase resident and employee population at the Project site resulting in a potential increase in the need for 53 additional police personnel to provide a comparable level of service to existing conditions. The SFPD evaluates the need for additional officers by sector, and not station or district needs. While it is unlikely that 53 new officers would be needed, some redistribution of the police presence in the southeastern portion of the City would be warranted by development of Alternative 5.

If the SFPD determines that the reconfiguration of the Bayview Station would not be sufficient to accommodate additional officers, a new station or facility of approximately 6,000 sf could be constructed within the Project site, on land designated for community-serving uses. As part of this Alternative, up to 100,000 gsf of land divided equally between Candlestick Point and HPS Phase II would be designated for community-serving uses including a police station. Construction of a new SFPD facility (counter, storefront, or other configuration) within these community services uses and/or the reconfiguration or expansion of the existing Bayview Station would be funded by the Project Applicant. Similar to the Project, Alternative 5 includes community service use areas, and as construction would be funded by the Project Applicant, the SFPD would maintain acceptable levels of police service. Therefore, development of this Alternative would not require new or physically altered police facilities beyond the scope of the Project in order to maintain acceptable police services. This impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This

could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Fire and Emergency Medical Services

Alternative 5 would add 10,500 residential units and substantially increase employment-generating uses, resulting in an employment population of 10,730. The increase in the residential and daytime employment population (for a total population of 35,195, including residential population of 24,465 plus 10,730 employees), combined with an increase in the intensity of physical development on the Project site, would result in new demand for fire protection and emergency medical services.

During construction of Alternative 5, emergency access to the Project site would be maintained through compliance with the CTMP, as required by mitigation measure MM TR-1. Construction of a new SFFD facility on land designated for community-serving uses on the Project site (where costs would be borne by the Project Applicant), would allow the SFFD to maintain acceptable response times for fire protection and emergency medical services. Similar to the Project, construction of 100,000 gsf of community facilities, which would include a new SFFD facility, would be included as a component of Alternative 5. As no stadium would be constructed, there would be no demand for additional emergency services on game days. Therefore, development under Alternative 5 would not require new or physically altered fire protection facilities to maintain acceptable response times. Additionally, compliance with all applicable provisions of the *San Francisco Fire Code* would ensure that this impact is considered less than significant.

The bridge over the Yosemite Slough under the Project would offer a direct, separated right-of-way between Candlestick Point and HPS Phase II that would not be available under this alternative. This could result in an increase in response times compared to the Project, and could be a potentially significant impact not occurring with the Project.

Schools

A total of approximately 2,131 school-age children would live within the Project site following full build-out of Alternative 5. While schools in the Project vicinity have approximately 49 percent capacity remaining in the 2008-2009 school year, it is likely that a 12 percent overcapacity of SFUSD as a result of citywide population growth in 2030 would occur. Similar to the Project, the payment of school impact fees pursuant to SB50 would constitute full mitigation for any potential schools impacts. This impact is considered less than significant for development under Alternative 5.

Libraries

Construction of Alternative 5 would not result in impacts to the SFPL. No library branches are located on the Project site. All library services would be available to the community throughout the duration of construction. As such, no impact to library services during construction of Alternative 5 would occur.

Residential and nonresidential development associated with Alternative 5 would increase demand for local library services in the Bayview neighborhood. Although this Alternative would result in a substantial direct and indirect population increase within the Bayview neighborhood, library branches serving the Project site, including the Portola, Visitacion Valley, and the Bayview branches would continue to meet

the demands of the community. In addition to the three library branches serving Alternative 5, the proposed development would include space dedicated to library services to supplement the Bayview branch library. As part of Alternative 5, a 1,500-gsf reading room and automated book-lending machines would be integrated into the community retail and public facilities uses. The SFPL branches, and the dedication of space to accommodate library services on the Project site in order to supplement SFPL branches, would accommodate increased demand from development under this Alternative. No additional library facilities would be required to accommodate development of Alternative 5. Therefore, no new or physically altered library facilities would be required in order to maintain acceptable service ratios and this impact is considered less than significant for development under Alternative 5.

Recreation

Implementation of Alternative 5 would include parks and open space areas similar to the Project, except it would not include a State Parks land agreement, resulting in a different configuration of parks at Candlestick Point. Compared to the Project, the CPSRA would remain 120.2 acres, compared to the 23.5-acre reduction under the Project. Neighborhood parks would be constructed within the Candlestick Point districts, but the total area would be reduced compared to the Project. Construction activities associated with the proposed parks and recreational facilities are considered part of the overall development footprint. Since this Alternative is similar to the Project, construction impacts anticipated to result from implementation of this Alternative are analyzed throughout the technical sections of this EIR. Such impacts would be temporary and would be mitigated by measures identified in Section III.D, Section III.H, Section III.I, and Section III.K, Section III.M, and Section III.N. These measures address construction-related impacts including, but not necessarily limited to, traffic and circulation, air quality, noise, exposure to hazardous material, and soil erosion, which would help reduce potential impacts to recreational resources. In addition, because the State Parks land agreement would not occur, the improvements to the CPSRA as proposed under the Project would not be constructed. Therefore, construction activities at Candlestick Point would be reduced and construction impacts associated with development of new parks and recreational facilities would be less than significant.

At build-out of Alternative 5, the projected population within the Project site would increase from approximately 1,113 residents to approximately 24,465 residents, while employment would increase from 529 jobs to approximately 10,730 jobs. Compared to the Project, the CPSRA would remain 120.2 acres, compared to the 23.5-acre reduction under the Project. Similar to the Project, parks and open space included in Alternative 2 would provide a ratio of about 15.2 acres of parkland per thousand residents, which is substantially higher than the benchmark ratio of 5.5 acres per thousand residents (refer to Section III.P). A total of 5.9 acres of neighborhood parks would be constructed at Candlestick Point compared to 8.1 acres under the Project. The increase in population and employment could result in an increase in the use of existing parks, recreational facilities, and open space. During a given phase, however, park construction could lag behind residential development, leading the parkland-to-population ratio to drop below an acceptable level. Moreover, the development plan is conceptual, and could be modified during the entitlement and development process. Mitigation measure MM RE-2 would ensure that the parks and recreational amenities are constructed as residential and employment-generating uses are developed. Parks and open space at HPS Phase II would include improvements similar to the Project

and would help offset the increase in demand created by new residents and employees. The 1.4-acre Alice Griffith Neighborhood Park would serve residents of the Alice Griffith Public Housing site.

Without a State Parks land agreement, there would be no established funding mechanism for future maintenance of the State Parks on site from the Project Applicant. Furthermore, increased use of the CPSRA as a result of population and employment growth associated with Alternative 5 is anticipated. Therefore, increased use of the CPSRA without an established mechanism for future maintenance of the CPSRA could result in deterioration of the CPSRA. This could potentially result in a substantial adverse impact on recreational facilities at the Project site. Without an established funding mechanism to address the increased use, improvements and maintenance of the CPSRA would be the responsibility of CDPR. Therefore, development of Alternative 5 could result in a new adverse impact on recreational facilities that would not occur under the Project.

A windsurfing launch site is located in the CPSRA. Windsurfing could potentially be impacted by the construction of tall structures in close proximity to the Bay that affect wind patterns and direction. Similar to the Project, development under Alternative 5 would include structures above 100 feet in height, with maximum heights up to 420 feet, which would extend above surrounding buildings and intercept a large volume of wind. Alternative 5 would include seven towers at Candlestick Point, compared to 11 towers included in the Project, but the average tower height would be greater (341 feet compared to 288 feet under the Project). Therefore, due to these taller building heights, impacts to windsurfing could be greater under build-out of Alternative 5.

Utilities

Water Supply

Alternative 5 would include water infrastructure similar to the Project. Impacts of construction activities associated with this infrastructure, including demolition and installation of new utility infrastructure, are discussed in Section III.D, Section III.H, Section III.I, Section III.J, Section III.K, Section III.L, Section III.M, Section III.O, and Section III.S of this EIR. No new construction impacts beyond those identified in those sections would occur with construction of water conveyance or treatment infrastructure associated with the Project. The water required for construction activities is assumed to be supplied by water trucks and/or existing sources. No construction-related impacts associated with the consumption of water would occur with the Alternative 5.

Alternative 5 would have a similar residential and non-residential build-out compared to the Project except the San Francisco 49ers stadium would not be constructed. Because Alternative 5 would not include the stadium it would generate a total demand of approximately 1.65 mgd, 0.02 mgd less than the Project. As current water use from existing land uses at the Project site is approximately 0.3 mgd, the net effect of the Alternative 5 on water demand would be an increase of approximately 1.35 mgd.¹³⁴⁸ As stated in the Water Supply Assessment provided for the Project, the SFPUC projects that adequate supply would be available to satisfy all retail demand, including Project-related demand, under normal conditions (refer to Appendix Q1). Therefore, there would be sufficient water supplies to accommodate

¹³⁴⁸ Water demand for this alternative was estimated by prorating water demand for the Project (presented in Table III.Q-4) based on build-out of Alternative 5.

the water demand of Alternative 5. This is considered to be a less-than-significant impact. Similar to the Project, implementation of Alternative 5 would not require or result in the construction of new or expanded water treatment facilities, and this impact would be less than significant.

Implementation of Alternative 5 would require expansion of the existing off-site AWSS by providing an AWSS loop at Candlestick Point that would connect to the planned extension of the existing off-site AWSS on Gilman Street from Ingalls Street to Candlestick Point. At HPS Phase II, the AWSS would be connected to the existing AWSS system at the intersection of Earl Street and Innes Avenue and at the Palou Avenue and Griffith Avenue intersection with a looped service along Spear Avenue/Crisp Road. Implementation of the identified mitigation measure (MM UT-2) would ensure the provision of adequate water for on-site fire-fighting purposes, and the Project would not require water supplies in excess of existing entitlements or result in the need for new or expanded entitlements for water to fight fires. The impact is less than significant with implementation of this mitigation measure.

Wastewater

Under Alternative 5, development would discharge a total maximum peak flow of maximum peak flow of 2,417 gpm in the Hunters Point tunnel sewer (41 gpm less than the maximum peak flow of Project because the stadium would not be constructed), which has an existing unused capacity of 69,853 gpm in dry weather. This represents 3.5 percent of the available capacity of the Hunters Point tunnel sewer, which could be accommodated by the existing off-site infrastructure.

The wastewater generated under Alternative 5 would be 41 gpm less than the maximum peak flow of Project. As with the Project, it is possible that a temporary increase in CSO volume could occur during wet weather if structures are occupied and contribute wastewater to the Combined Sewer System prior to completion of the separate stormwater and wastewater infrastructure of Alternative 5. Implantation of the identified mitigation measure (MM UT-3a) would ensure that there would be no increase in CSO flows as a result of the Project by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for the Project. The impact on the Combined Sewer System would be reduced to less than significant.

The wastewater generated under Alternative 5 would be less than the Project. The current remaining treatment capacity of the SWPCP would accommodate the increase in wastewater flows from the Project development. Overall flows during wet weather would decrease, indicating that the proposed diversion of wet-weather flows away from the combined system would offset the increase in dry-weather flows, assuming completion of utility infrastructure prior to occupancy of Alternative 5. Based on this analysis, the overall volumes in the Bayside system during wet weather would be less than under existing conditions with implementation of Alternative 5. It is possible that a temporary increase in CSO volume could occur (which could affect the capacity of the SWPCP for treatment) during wet weather, as noted, above. Implantation of the identified mitigation measure (MM UT-3a) would reduce this impact to less than significant by providing temporary detention or retention of wastewater on site during wet weather or completion of the separate stormwater and wastewater systems for Alternative 5. Thus, Alternative 5 would not result in any net increase in CSO volume in the Bayside system during wet weather. A less-than-significant impact to existing off-site treatment facilities would occur.

Development associated with Alternative 5 would incrementally contribute wastewater during dry and wet-weather events to the Combined Sewer System operated by the SFPUC, but overall, wet-weather volumes would decrease in the Bayside system with construction of the alternative's separate stormwater and wastewater systems. Compliance with any applicable permit requirements, as monitored and enforced by the SFPUC, would ensure that the Alternative 5 would not exceed the applicable wastewater treatment requirements of the RWQCB. In addition, Alternative 5 would not cause the City to exceed the requirements of the NPDES permit for the reasons previously stated and because the flows during wet weather would actually decline compared to existing flows from the Project site. This impact would be less than significant.

Solid Waste

Demolition of existing facilities within the Project site under Alternative 5 would generate approximately 971,785 tons of construction debris. Some construction and demolition debris would be reused on site, while other materials would be transported off site for separation. Materials that cannot be reused or recycled would be transported to the landfills in the area. With implementation of the identified mitigation measure (MM UT-5a), the Project Applicant would be required to submit a Waste-Diversion Plan demonstrating strategies to divert at least 75 percent of total construction wastes before receiving building permits. This would reduce construction debris transported to the landfill to 25 percent, or 242,946 tons. At an average density of 1 ton per cubic yard, this equals 242,946 cubic yards, or 0.5 percent of the available capacity at Altamont Landfill as of 2009.

At current disposal rates, the Altamont Landfill would be expected to reach capacity in January 2032; however, it may close three years earlier, in January 2029.¹³⁴⁹ Under Alternative 5, demolition activities, which generate construction debris, are expected to conclude in 2024 at Candlestick Point and in 2021 at HPS Phase II, a minimum of five years before the landfill is expected to close. Further, the City requires the diversion of at least 65 percent of construction waste, as also required by mitigation measure MM UT-5a, which would reduce the amount of waste interred at the landfill. Further, the City continues to actively explore various waste-reduction strategies with the goal of moving towards zero waste. If the City achieves this goal, the impact of construction of the Alternative 5 on solid waste would be further reduced. The impact of the construction waste generated by the Alternative 5 on the capacity of the Altamont Landfill would be less than significant.

Construction activities, including demolition and excavation, could require disposal of hazardous wastes such as asbestos, lead-based paint, and contaminated soils. The amount of these materials would be that could be disturbed would be less than the Project because the Yosemite Slough Bridge would not be constructed. Hazardous waste would require disposal by a licensed transporter to a TSD authorized to treat such hazardous waste. Disposal of these wastes would occur intermittently during the construction period, and would not likely represent a substantial amount of hazardous waste in a given year. Currently, TSDs in California and adjoining states have sufficient capacity to accommodate all hazardous wastes (refer to Setting). Depending on a number of factors, some soil would be transported off site for disposal and some soil may be transported to other areas of the site. Contaminated soils may require transportation off site and treatment at authorized TSDs. Because the TSDs in California and adjoining

¹³⁴⁹ CIWMB, 2009.

states have sufficient capacity to treat hazardous wastes, construction of Alternative 5 would not generate hazardous wastes (construction debris or contaminated soil) that would exceed the capacity of TSDs authorized to treat such waste. This would be a less-than-significant impact.

At full build-out, the Alternative would generate approximately 19,487.8 tons annually when all uses are fully operational and assuming no waste-reduction measures. The amount of solid waste generated under Alternative 5 would be 2,339.2 tons less than the Project because the stadium would not be constructed. Solid waste generated under Alternative 5 would represent approximately 3.3 percent (compared to 3.7 percent under the Project) of the total waste generated in San Francisco as of 2008 (approximately 594,732 tons). All residents and businesses of Alternative 5 would be required to comply with the City's mandatory recycling and composting ordinance. In addition, consistent with the City's goal of achieving zero waste by the year 2020, the Project Applicant would prepare a Site Waste Management Plan as required by the identified mitigation measure (MM UT-7a.1) that would specify the methods by which the Alternative 5 would divert operational solid waste to assist the City in achieving its diversion goals. The impact of operational solid waste generated by Alternative 5 on the capacity of the Altamont Landfill (and/or the landfill with which the City contracts at the close of the current selection process) would be less than significant.

Nearly all uses under Alternative 5 would involve the routine use of hazardous materials at varying levels that would require disposal. The amount of hazardous materials would be reduced because the stadium would not be constructed. Quantification of precise amounts of additional hazardous materials use associated with new proposed uses is not practical at this time. Therefore, it is assumed that a variety of hazardous materials could be used in small quantities, ranging from R&D in which a wide variety of hazardous materials would be used, to facilities such as the proposed stadium, where fuels and maintenance products would comprise the majority of hazardous materials, to smaller-scale users, such as artists' studios, and the marina, where small quantities of fuel could be utilized. The amounts of hazardous waste that would be generated by such uses would not be substantial. In addition, new residents and businesses would be expected to comply with all hazardous waste regulations, including the disposal of household hazardous waste. Because the minimal amount of hazardous waste that would be generated by the Alternative 5 could be accommodated by existing TSD facilities, this impact would be less than significant.

Electricity, Natural Gas, and Telecommunications

The proposed utility infrastructure improvements for Alternative 5 would include the construction of a joint trench for electrical, natural gas, cable TV, and telecommunications, the same as for the Project. This alternative would not include the new stadium, CPSRA improvements, or the Yosemite Slough bridge. As the development would be smaller than the Project, less electricity, natural gas, and telecommunications serves would be required. Infrastructure expansion would not be as extensive as required for the Project. However, these differences between Alternative 5 and the Project would not substantially affect the infrastructure plan as presented for the Project and, therefore, impacts would be the same as for the Project, and less than significant.

Energy

Construction activities associated with implementation of Alternative 5 would require energy sources including electricity, diesel, and gasoline. Similar to the Project, the construction activities for Alternative 5 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not generate a prolonged demand for energy and would be subject to requirements to minimize wasteful fuel consumption. Energy use during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge and stadium would not occur. Furthermore, given the type of development proposed under this Alternative, the energy demand created during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related energy use associated with development under Alternative 5 would be considered less than significant.

Implementation of Alternative 5 would result in baseline electricity consumption similar to the Project and would include the energy savings associated with the Project Applicant's commitment to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project, those efficiency measures would result in consumption of at least 5.4 percent less electricity than a project that would not implement such measures. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential electricity use impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses by at least 15 percent, mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, and MM GC-4, which would require installation of energy efficient lighting, would reduce electricity consumption impacts of Alternative 5 to less than significant. In addition, the San Francisco 49ers stadium would not be constructed at HPS Phase II resulting in reduced electricity demand compared to the Project.

Implementation of Alternative 5 would result in baseline natural gas consumption similar to the Project and would include efficiency measures similar to the Project resulting in the use of approximately 13 percent less natural gas than a development project without such measures. Those efficiency measures would result in consumption of at least 13 percent less natural gas than a development project without such measures. In addition, the Project Applicant will also implement renewable energy strategies, such as the use of photovoltaic cells to provide electricity, the use of solar thermal energy to provide space cooling with the use of absorption systems, and/or water for space heating and domestic water systems. However, because the Project Applicant's commitment to implement energy reductions and voluntary green building practices (beyond the measures required in the City's Green Building Ordinance) is preliminary and not based on actual building designs, mitigation is necessary to reduce potential natural gas consumption impacts to a less-than-significant level. Mitigation measure MM GC-2, which requires the Project Applicant to exceed the 2008 Title 24 energy efficiency standards for homes and businesses

by at least 15 percent, and mitigation measure MM GC-3, which would require installation of ENERGY STAR appliances for builder-supplied appliances, would reduce natural gas consumption impacts of Alternative 5 to less than significant. In addition, the San Francisco 49ers stadium would not be constructed at HPS Phase II resulting in reduced natural gas demand compared to the Project.

Alternative 5 would increase trips to and from the Project site, increasing the use of petroleum fuels. Based on average fuel efficiencies for the City of San Francisco and a VMT similar to that of the Project, this Alternative would result in a demand for 14.01 million gallons of gasoline and 0.93 million gallons of diesel annually. Similar to the Project, fuel consumption resulting from travel to and from the Project site would be five times as high as under existing conditions, indicating a large increase in consumption. However, this consumption would not be wasteful because (1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel. Without the San Francisco 49ers stadium at HPS Phase II, game day and event-related fuel consumption would be avoided. Therefore, similar to the Project, Alternative 5 would not be wasteful with respect to petroleum fuel consumption, and impacts are considered less than significant.

Greenhouse Gas Emissions

Similar to the Project, construction activities associated with implementation of Alternative 5 would emit GHGs associated with diesel and gasoline consumption. Similar to the Project, the construction activities for Alternative 5 would not include unusual or atypical activities that would result in a higher-than-average demand for fuels. Construction would consist of temporary activities that would not be a prolonged source of GHG emissions. GHG emissions during the construction period would be similar to the Project but slightly reduced because construction of the Yosemite Slough bridge and stadium would not occur. Furthermore, given the type of development proposed under this Alternative, the GHG emissions during the construction period would not be large in comparison to a project of a similar size and with similar land uses. Therefore, construction-related GHG emissions and climate change impacts associated with development under Alternative 5 would be considered less than significant.

Implementation of Alternative 5 would result in baseline GHG emissions similar to the Variant 2 and would include the GHG emissions savings associated with mitigation measures including MM GC-1 through MM GC-4 which requires the implementation of the Project Applicant's conceptual commitments to (1) reduce energy use to 15 percent below Title 24 2008 standards for all development components, and (2) use ENERGY STAR appliances for all appliances installed by builders in residential units. This Alternative would also be required to comply with the City's Green Building Ordinance, per Chapter 13C of the *Environment Code*. Similar to the Project and Variant 2, Alternative 5 would increase trips to and from the Project site, increasing the use of petroleum fuels. However, this Alternative would also include the Project Applicant's commitment to reduce transportation related GHG emissions:

(1) this Alternative would include measures to minimize transportation-related fuel use by implementing a number of transit, bicycle, and pedestrian improvements; (2) this Alternative would include a TDM program designed to reduce the remaining vehicle trips; and (3) this Alternative would result in dense development within an urbanized area with a mixture of neighborhood-serving uses, which would reduce the total number of trips to and from the site, as well as overall trip lengths. The programs included in this Alternative for minimization of trips, as well as the density, mix of uses, and overall physical layout, would result in efficiency in the total amount of fuel consumed by shortening trip lengths and shifting trips from vehicular modes of travel. Without the San Francisco 49ers stadium at HPS Phase II, game day and event-related GHG emissions would be avoided. Thus, GHG emissions at the Project site under development of Alternative 5 would not inhibit the achievement of the goals of AB 32 or the SFCAP. Similar to the Project and Variant 2, GHG emissions and climate change impacts would be less than significant.

BAAQMD is considering the future adoption of quantitative CEQA thresholds of significance for operational-related GHG emission impacts. At present, two options relevant to the Project are under consideration for operational GHG emission thresholds; the lead agency can choose either option. Option 1 is based on a project's total operational GHG emissions of 1,100 metric tonnes CO₂e per year. The Project's total operational emissions would exceed this level, which means that if this was used, the Project would be significant. Option 2 is based on the amount of a project's operational GHG emissions per service population, set at 4.6 metric tonnes CO₂e per year. In anticipation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the Project's operational GHG emissions under the proposed thresholds of significance identified above. The BAAQMD thresholds stated above are still in draft form and may undergo additional changes before being finalized; a revised version is expected Monday, November 2nd. The methodologies presented in this EIR for quantification of GHG operational emissions is based on using more refined data sources than indicated in the BAAQMD guidance and are the most appropriate to use for Alternative 5 and the Project.

With mitigation, the Project-related operational emissions of 154,639 result in 4.5 tonnes CO₂e per service population per year based on a service population of 34,242 (this accounts for 23,869 net new residents and all jobs except for the stadium jobs, which already exist, 10,373). Therefore, the Project-related operational emissions would be less than 4.6 tonnes CO₂e per service population per year and would result in a less-than-significant impact on climate change. Alternative 5 would reduce total development compared to the Project. Alternative 5 would decrease the housing density and alter the service population which would impact the amount of GHG emissions per service population. Without a quantitative analysis, the comparison to the BAAQMD threshold cannot be judged, and Alternative 5 may not be below the proposed threshold.

■ Attainment of Project Objectives

Alternative 5 would meet most of the Project objectives, although it would meet transportation-related objectives to a lesser extent than the Project because this Alternative does not include the Yosemite Slough bridge. Refer to Table VI-10 (Attainment of Project Objectives Alternative 5) below for a discussion of each objective.

Table VI-10 Attainment of Project Objectives Alternative 5

<i>Objective</i>	<i>Meets Project Objective?</i>	<i>Analysis</i>
1. The integrated development should produce tangible community benefits for the Bayview and the City.	Y-	Alternative 5 would include the same development program and uses as the Project, resulting in the same range of job and economic development opportunities. This alternative would renovate and replace the artist studios at HPS Phase II and create a permanent space for artists. However, it would include substantially less parks and open space amenities compared to the Project because no State Parks agreement would occur and no improvements would be made to the CPSRA. Alternative 4 would not meet this objective to the same extent as the Project.
2. The integrated development should re-connect Candlestick Point and the Hunters Point Shipyard site with the larger Bayview neighborhood and should maintain the character of the Bayview for its existing residents.	Y-	Alternative 5 would include the same development program and uses as the Project. The proposed mix of uses and urban design concepts would provide a direct physical, visual, and architectural connection to the Bayview neighborhood and City. This alternative also includes extension of the transportation network into the Project site. Those connections would allow residents of the Bayview neighborhood and City to access the commercial, cultural, and institutional opportunities at the Project site. However, this alternative would not include the Yosemite Slough bridge. Therefore, while Alternative 5 would meet this Project objective, it would not meet it to as great an extent as the Project.
3. The integrated development should include substantial new housing in a mix of rental and for-sale units, both affordable and market-rate, and encourages the rebuilding of Alice Griffith Housing.	Y	Alternative 5 would include a variety of unit types, sizes, and structures, and a wide range of affordability levels. This alternative would also include the redevelopment of the Alice Griffith Public Housing site. Therefore, Alternative 2 would meet this Project objective.
4. The integrated development should incorporate environmental sustainability concepts and practices.	Y	Alternative 5 would include the same sustainability principles and concepts as the Project. Therefore, Alternative 5 would meet this Project objective.
5. The integrated development should encourage the 49ers—an important source of civic pride—to remain in San Francisco by providing a world-class site for a new waterfront stadium and necessary infrastructure.	N	Alternative 5 would not include construction of a new stadium and would not meet this Project objective.
6. The integrated development should be fiscally prudent, with or without a new stadium.	Y	Development of Alternative 5 would increase sales tax revenue to the City to a similar extent compared to the Project and include a development program that would encourage substantial private capital investment. Alternative 2 would meet this Project objective.

Y = Alternative does meet Project objective.

Y- = Alternative meets Project objective, but to a lesser extent than the Project.

Y- = Alternative meets Project objective, but to a significantly lesser extent than the Project.

N = Alternative does not meet Project objective.

VI.D ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The City's primary objective for the Project is to revitalize the BVHP community by providing the following: increased business and employment opportunities; housing options at a range of affordability levels; improved public recreation and open space amenities; an integrated transportation, transit, and infrastructure plan; and other economic and public benefits, all of which would collectively have no net negative impact on the City's General Fund.

Alternative 1 (No Project) would reduce Project impacts because development would only occur at HPS Phase II, resulting in reduced construction-related impacts and fewer or less substantial operational impacts due to the reduced population and employment growth. Alternative 2 (CP-HPS Phase II Development Project, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge) would avoid Project impacts related to biological resources, water quality, and hazardous materials because the Yosemite Slough would not be constructed. However, because the Yosemite Slough bridge would not be constructed, Alternative 2 would result in increased traffic-related impacts, particularly on game days. Alternative 3 (Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians) would reduce Project impacts because development would primarily occur at HPS Phase II, resulting in reduced construction-related impacts and fewer or less substantial operational impacts due to the reduced population and employment growth. Stadium-related impacts including light and glare, traffic, air quality, and noise would be avoided because the stadium would not be constructed. Alternative 4 (Reduced CP-HPS Phase II Development, Historic Preservation, No HPS Phase II Stadium, Marina, or Yosemite Slough Bridge) would reduce the most significant Project impacts to a less-than-significant level (reduced traffic-related air quality and noise impacts, avoidance of historic resource impacts, and avoidance of construction-related impacts to water quality and biological resources because the bridge and marina would not be constructed). Alternative 5 (Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge) would avoid Project impacts related to biological resources, water quality, and hazardous materials because the Yosemite Slough would not be constructed. However, because the Yosemite Slough bridge would not be constructed, Alternative 5 would result in increased traffic-related impacts resulting from population and employment growth at HPS Phase II. Alternative 4 would be the environmentally superior alternative. However, this Alternative would not meet the objectives to the same extent as the Project.

VI.D.1 Alternatives Considered But Eliminated from Further Analysis in the EIR

A number of alternatives were proposed during the planning and public scoping process for the project. Several of these alternatives were identified by Arc Ecology, a local community organization. In January 2009, Arc Ecology published a report titled *Alternatives for Study, Draft Outline of Issues, Positions, and Alternatives for Public Comment and Further Study* (Arc Ecology Report).¹³⁵⁰

¹³⁵⁰ Arc Ecology, Draft Alternatives for Study, Draft Outline of Issues, Positions, and Alternatives for Public Comment and Further Study, January 2009.

Alternatives considered, but eliminated from further analysis in the EIR, were evaluated in concept, but were eliminated for one or more factors, including (1) they did not reduce significant environmental effects; (2) they did not achieve most of the basic Project objectives; and/or (3) they were not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. As stated above, according to CEQA Guidelines Section 15126.6(f)(1), factors that may be considered when a Lead Agency is assessing the feasibility of an alternative include:

[S]ite 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) (CEQA Guidelines, Section 15126.6(f)(1)).

The alternatives considered but eliminated from further analysis in this EIR include:

- Alternative San Francisco 49ers stadium locations (City of Brisbane or Port of San Francisco sites)
- Alternative land use plans and locations for the 49ers Stadium on HPS Phase II
- Alternative land use plan for Candlestick Point
- Develop Candlestick Point for parks and open space only
- Alternative locations for the Project within the City of San Francisco
- Alternative locations for the Project outside the City of San Francisco

■ Alternative San Francisco 49ers Stadium Locations

Alternative sites for the 49ers Stadium identified through the process explained above include:

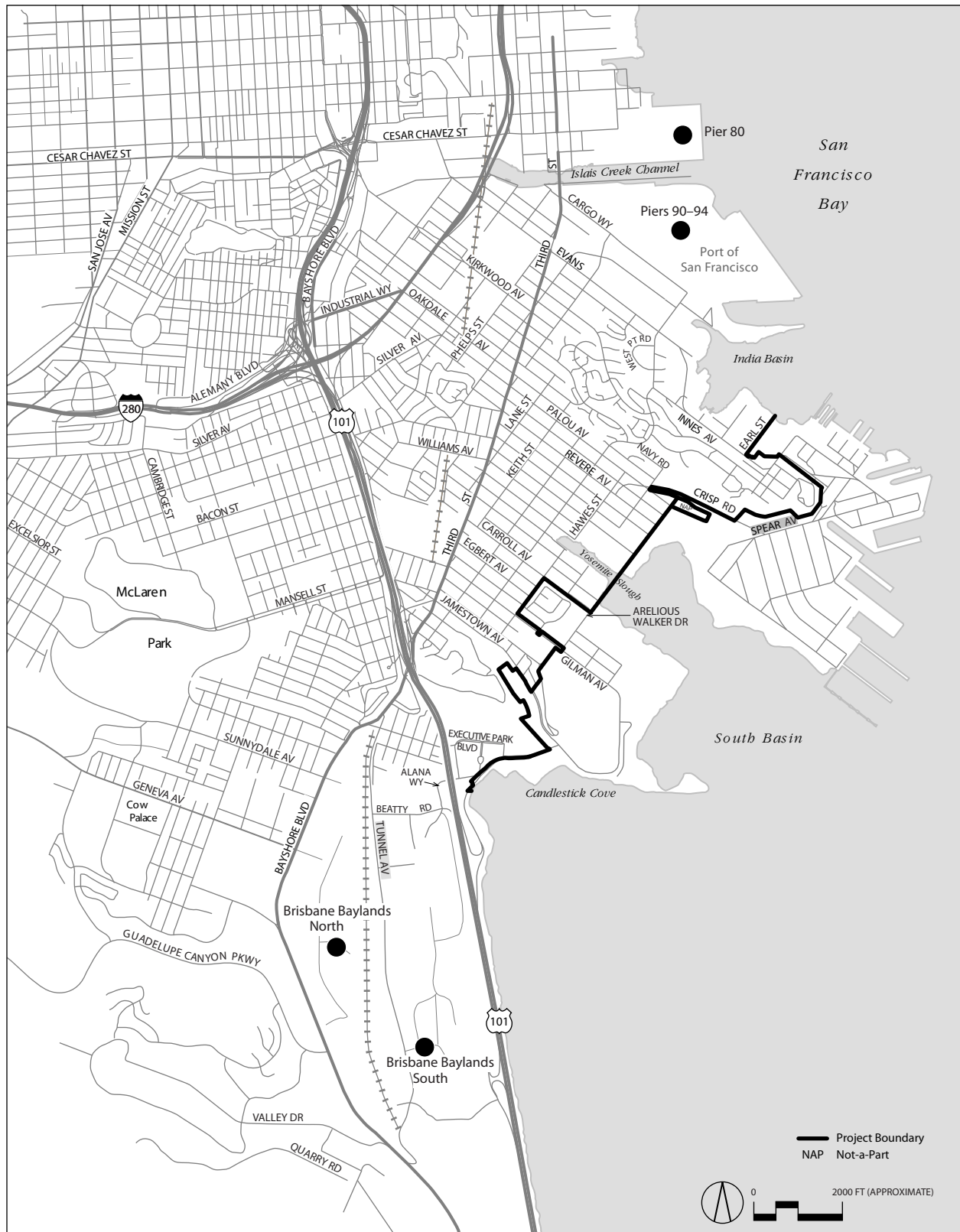
- City of Brisbane
 - > Brisbane Baylands South
 - > Brisbane Baylands North
- Port of San Francisco
 - > Pier 80
 - > Piers 90 to 94 Backlands

All of these sites were evaluated but determined to be infeasible locations for the reasons explained below.

Figure VI-5 (Alternative Off-Site Stadium Locations) illustrates the off-site stadium locations.

City of Brisbane Sites

The City of Brisbane in San Mateo County is completing a planning process for the area known as the Brisbane Baylands, an approximately 659-acre area generally west of US-101, east of the Union Pacific/Caltrain railroad right-of-way, and south of the San Francisco/San Mateo County line.



SOURCE: PBS&J, 2009.

PBS&J 10.31.09 08068 | JCS | 09

FIGURE VI-5

Candlestick Point — Hunters Point Shipyard Phase II EIR

ALTERNATIVE OFF-SITE STADIUM LOCATIONS

The Brisbane General Plan currently designates the Brisbane Baylands area as Planned Development–Trade Commercial and in the Commercial Mixed-Use zoning district (C-1 Baylands). The Brisbane Baylands Specific Plan framework, which is the planning document addressing concepts for the Brisbane Baylands, provides the basis for the Phase I Specific Plan that addresses the 446-acre eastern portion of the 659-acre Baylands area.¹³⁵¹ The Baylands site, now owned by Universal Paragon Corporation (UPC) is located on the former Southern Pacific Railroad Yard and former landfill sites. The Phase I Specific Plan proposes approximately 107 acres of commercial, 68 acres of office/institutional, 118 acres of aquatic open space, 99 acres of upland open space/open area, and 54 acres of right-of-way streets and infrastructure for this area. The plan also addresses basic parameters for circulation, land use, open space, infrastructure, and utilities for potential future development of the larger 659-acre area, including the Phase I Specific Plan area and adjacent properties generally situated to the west, between the Caltrain rail line and Bayshore Boulevard. UPC also owns the Schlage Lock site north of the Brisbane Baylands Specific Plan area in San Francisco.¹³⁵² The 2006 Specific Plan is continuing to go through public review, and the City of Brisbane is preparing a Draft Environmental Impact Report for the plan.

The Arc Ecology Report identified two sites within the Brisbane Baylands area for alternative stadium locations because the sites are large and undeveloped, with freeway and transit access. One is within the Brisbane Baylands Phase I Specific Plan area (Brisbane Baylands South). The second site is within the Brisbane Baylands Future Phase area (Brisbane Baylands North). As noted, both of those sites are generally designated for Planned Development–Trade Commercial in the Brisbane General Plan and are located in the Commercial Mixed-Use zoning district (C-1 Baylands). The Brisbane Baylands Phase I Specific Plan designates the Brisbane Baylands South site for office and institutional uses. The Brisbane Baylands Framework Plan designates the Brisbane Baylands North site for commercial, office, and service industrial uses.

The Brisbane Baylands locations are not considered feasible sites for the 49ers stadium for the following reasons:

- The Baylands Specific Plan, although not yet formally adopted, does not include a stadium as an allowed use in either the northern or southern portions of the site. Both sites are designated for commercial, office, institutional, and industrial uses. While planning considerations in a particular jurisdiction can evolve over time, it is expected that the range of uses identified in the Phase I Specific Plan reflect Brisbane's long-term planning goals for the Brisbane Baylands, which plans do not include developing a professional football stadium.
- The Brisbane sites are outside of the City and County of San Francisco. Planning review, and approval of a stadium in Brisbane Baylands would be subject to City of Brisbane jurisdiction. Neither the San Francisco Redevelopment Agency (Agency), the City and County of San Francisco, nor Lennar Urban would reasonably be able to acquire, control, or otherwise have access to a Brisbane site for the purpose of pursuing such alternative locations. Thus, the Brisbane Baylands sites were determined to be infeasible for development of the stadium, and were rejected from further consideration in the EIR.

¹³⁵¹ City of Brisbane, Initial Study for the Brisbane Baylands Phase I Specific Plan, February 26, 2006.

¹³⁵² The Schlage Lock site is not part of the Brisbane Baylands Specific Plan area. This site is within the Visitacion Valley Redevelopment Project Area and is programmed for mixed-use development, including approximately 1,250 residential units.

Port of San Francisco Sites

The Port of San Francisco (Port) controls approximately 7.5 miles of San Francisco's waterfront, generally extending from Fisherman's Wharf to India Basin. The Port's property consists of former public tidelands, which are held in "Public Trust." The Port oversees a broad range of commercial, maritime, and public activities on the public trust property. The "public trust" is a legal doctrine that governs the use of tide and submerged lands, including former tide and submerged lands that have been filled. Public trust lands are required to be used for public trust purposes, which include navigation, fisheries, waterborne commerce, natural resource protection, and water-related uses that attract the public to use and enjoy the waterfront.¹³⁵³ The Waterfront Land Use Plan was initially adopted by the Port in 1997 and defines acceptable uses, policies, and land use information applicable to properties under the Port's jurisdiction.¹³⁵⁴

The Arc Ecology report identified two sites for alternative stadium locations, including Pier 80 and the backlands of Piers 90 to 94. Arc Ecology recommended the alternative stadium sites on Port property because the sites are large, with freeway and transit access. Development of a stadium at either site would also generate minimal traffic through residential neighborhoods (refer to Figure VI-5). Both sites are part of the Port's Piers 80–96 Maritime Cargo area and are reserved for port and industrial uses.

The Maritime Cargo area is the Port's last remaining Maritime Cargo handling facility and is a critical component to the Port's State-mandated mission of providing and supporting maritime commerce, navigation and fishery uses. The Maritime complex area was identified in the Waterfront Land Use Plan for cargo uses because of the significant investment the State, the Port, and the City have spent on the cargo facilities, supporting infrastructure, and related transportation infrastructure. Included in this investment is the recently completed \$27 million multi-modal Illinois Street freight rail bridge, designed to support on-dock freight rail access and to improve the connection between the active cargo piers. Each of the remaining cargo facilities services a unique but inter-related cargo role. Pier 80 is the last remaining Bay Area breakbulk cargo terminal, facilitating the movement of goods such as steel, lumber, machine parts, and other cargos not suitable to be shipped in a container.¹³⁵⁵ Piers 90 to 94 are used to import bulk cargos such as sand and aggregate. Combined, the complex supports nearly all of the construction-related activities in San Francisco, the San Francisco Peninsula, and beyond that rely on steel, concrete, and aggregate supplies for construction of buildings and infrastructure. In addition to the important role the Port facilities play in supporting infrastructure and new development projects, they employ a high number of high-paying production, distribution, and repair (PDR) workers.¹³⁵⁶

The San Francisco Bay Area Seaport Plan, co-authored by the San Francisco Bay Conservation Development Commission (BCDC) and the Metropolitan Transportation Commission (MTC), designates these facilities for Port Priority Use, and calls for these facilities to be retained to support

¹³⁵³ California State Lands Commission, Public Trust Policy.

http://www.slc.ca.gov/Policy_Statements/Public_Trust/Public_Trust_Policy.pdf (accessed online July 23, 2009).

¹³⁵⁴ Port of San Francisco, Waterfront Land Use Plan, adopted June 1997 and as amended.

¹³⁵⁵ Break-bulk cargo is a shipping term for any loose material that must be loaded individually, not in shipping containers or in bulk as with oil or grain.

¹³⁵⁶ David Beaupre, Planning and Development, Port of San Francisco, Email correspondence with Wells Lawson, Mayor's Office of Economic and Workforce Development, May 1, 2009.

cargo operations. The Port's Piers 80-96 facilities are some of the last remaining lands available in the City for heavy industrial uses and are largely port-related industrial uses that are water-dependent or relate to or support the adjacent water-dependent uses.

Sports facilities, such as the San Francisco 49ers stadium, are not considered allowable uses at either site under the Waterfront Land Use Plan. Both sites considered are State Tidelands subject to the Public Trust, which restricts the types of allowable uses. Public recreation and assembly uses are consistent with the Public Trust. However, Proposition H, a ballot measure adopted by voters in 1990, imposed criteria for consideration of "non-maritime" uses. Under Proposition H, sports facilities with seating capacity greater than 22,000 seats, such as a new 49ers football stadium, would be subject to approval by voters at a public election.¹³⁵⁷

The Port locations are not considered feasible sites for the 49ers stadium for the following reasons:

- A stadium would displace maritime-dependent cargo handling and industrial uses not available or feasible elsewhere in San Francisco.
- Sports facilities are not allowable uses at either site under the Waterfront Land Use Plan.
- A stadium use at either site would be subject to approval by voters at a public election.

Thus, the Port sites were determined to be infeasible for development of the stadium and were rejected from further consideration in the EIR.

■ **Alternative Land Use Plans and Locations for the 49ers Stadium at HPS Phase II**

Five alternative land use plans were proposed by Arc Ecology and studied in concept for this document. They include proposals to locate the stadium on Parcels B, C, and G of HPS Phase II; one proposal with no stadium at HPS Phase II; and one alternative land use plan for Candlestick Point. All of the Arc Ecology alternative land use plans for HPS Phase II and Candlestick Point are within the same Project site boundaries and assume a development program similar to the Project with the intent of improving economic, social, and environmental benefits compared to the Project. Figure VI-6 (Arc Ecology Alternative Land Use Plans) illustrates the alternative land use plans. The alternatives are based on the following concepts:

- Connect the waterfront to existing neighborhoods and open space areas.
- Transfer State and City parkland to improve overall distribution and quality of open space areas.
- Identify geologic constraints to determine suitable building sites.
- Develop an urban waterfront park with contiguous ecological habitats in conjunction with programmed open space areas.
- Connect existing habitats in the Project site and vicinity.
- Develop neighborhood-serving parks with programmed uses and low-impact design techniques to provide on-site stormwater treatment.
- Create a bicycle and pedestrian network connecting new and existing neighborhoods to park and open space facilities.

¹³⁵⁷ Port of San Francisco, Waterfront Land Use Plan, adopted June 1997 and as amended.



SOURCE: Arc Ecology Alternatives for Study, January 2009.

PBS&J 10.23.09 08068 | JCS | 09

To the extent that the Arc Ecology alternatives present a mix of uses and at an intensity similar to the Project, including residential, commercial, research and development (R&D), cultural and entertainment, hotel, sports fields, and open space areas, these alternatives can be expected to have impacts similar to the Project. The alternatives for HPS Phase II also present new uses, including an industrial maritime facility, museum, festival and performance venue, driving range, cultural plaza/sculpture park, and solar arrays on Piers 1 and 2. Generally, these new uses would result in impacts similar to or greater than the Project. All of the Arc Ecology alternatives include an upland roadway connection between Candlestick Point and HPS Phase II and no Yosemite Slough bridge. In this regard, the Arc Ecology alternatives are similar to Alternatives 2, 4, and 5 analyzed above, all of which do not include the Yosemite Slough bridge. All HPS Phase II alternatives would include open space uses along the shoreline of Parcels E and E-2 and the north end of Parcel B, the same as the Project. All of the alternatives would also include a 20,000-seat arena and marinas along the shorelines of Parcels B, C, and D, compared to the 10,000-seat arena on Candlestick proposed as part of the Project, a component of these alternatives that would potential increase, not decrease impacts compared to the Project.

Overall, the Arc Ecology land use alternatives are rejected because they do not reduce or avoid environmental effects of the Project in ways different from the Alternatives examined above. A more detailed explanation is included below for why each of these proposals was rejected from further consideration in this document.

Stadium on Parcel B

This alternative would generally be within the same HPS Phase II site boundaries and follow a development program similar to the Project. Compared to the Project, this Alternative would relocate residential uses from Parcel B to Parcels E and G, and the stadium would be located on Parcel B. R&D uses would be north of Crisp Road and would be reduced at HPS Phase II compared to the Project. Additional R&D uses could be accommodated at Candlestick Point. Stadium parking would be on dual-use fields west of the stadium on Parcel B and to the south on Parcel C. A 20,000-seat arena would be on Parcel D as opposed to the 10,000-seat arena proposed at Candlestick Point under the Project.

The proposal would not reduce any impacts from the project except those associated with constructing and operating the Yosemite Slough bridge, a component of Alternatives 2, 4, and 5. With an assumed development of the same magnitude as the Project, most construction impacts would not be reduced, including, but not necessarily limited to, impacts on archaeological resources, air quality, noise, geology and soils, hydrology and water quality, and biological resources. Construction of this alternative would require the same shoreline improvements as the Project to ensure public safety, resulting in impacts similar to the Project. Impacts to biological resources related to construction of the Yosemite Slough bridge would be avoided because no bridge would be constructed. Construction of a marina along the shoreline of Parcels B, C, and D could result in impacts to aquatic resources and water quality, similar to the Project, but with an additional marina at Parcel B. Buildings 211, 231, and 253 at HPS Phase II, have been determined eligible for the California Register of Historic Resources (CRHR) and are contributors to the Hunters Point Commercial Dry Dock and Naval Shipyard Historic District. Development of the dual-use fields on Parcel C would require demolition of those buildings, similar to the Project.

The proposal to locate residential uses on Parcel Parcels E and G, could result in additional impacts from hazardous materials remediation, since the Navy's remedial program is designed to remediate the property to a level that would allow for uses as set out in the 1997 HPS Redevelopment Plan, which generally calls for non-residential uses on Parcels E and G. Construction of housing on Parcels E and G would require the property owner to go through the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) process to obtain approval from the Regulatory Agencies to use that area for a residential use. Depending on the outcome of the CERCLA process, further remediation and/or property controls could be required, potentially resulting in additional impacts that could result from exposure to hazardous materials during the remediation process as compared to the Project.

Because the development program of this alternative would be the same or similar to the Project, operational impacts would not be reduced, including impacts to land use, population, housing and employment, aesthetics, shadow, wind, air quality, noise, public services, utilities, energy, and secondary land use, with the exception of those operational impacts avoided with the elimination of the Yosemite Slough bridge. Significant traffic, noise, and air quality impacts would not be reduced, including impacts from daily operations and game days. The stadium on HPS Phase II Parcel B with this alternative would result in game day traffic patterns different from those that would occur with the Project. Section III.D identified routes subject to additional congestion during post-game conditions with the Project. (Refer to Table III.D-23 [Locations of Congestion Following San Francisco 49ers Football Game].) With this alternative, the primary transportation route to the stadium would be from Third Street, via Cargo Way, Evans Avenue, and Innes Avenue, with lesser volumes on the Harney Way, Gilman Avenue, or Paul Avenue corridors compared to the Project. This alternative could therefore result in additional game-day traffic impacts on those corridors, exacerbating vehicle congestion during post-game conditions compared to the Project. In addition, with no Yosemite Slough bridge, this alternative would result in greater transportation-related impacts on game days because vehicular traffic to and from the stadium would be delayed, and traffic levels would be further increased on local streets, including Innes Avenue, Evans Avenue, and Ingalls Street.

Operation of a 20,000-seat arena on HPS Phase II Parcel D could increase traffic-related impacts from arena events because the arena capacity would be doubled compared to the Project. Also, the arena on the HPS Phase II site instead of at Candlestick Point could increase arena-related traffic impacts at intersections along the Innes Avenue, Evans Avenue, and Cargo Way corridors to Third Street, compared to the Project.

The Stadium on Parcel B Alternative would reduce biological impacts of the Project that are associated with the Yosemite Slough bridge but in other respects this proposal has the same or greater impacts as compared to the Project. Alternatives that do not include the Yosemite Slough bridge are included above. This alternative is rejected as either similar to alternatives examined or similar to the project and, therefore, offering no environmental benefits not considered in the Alternatives analysis.

Stadium on Parcel C

This alternative is generally the same as the Stadium on Parcel B, except the stadium would be located on Parcel C and parking for the stadium would be located on Parcel B. This proposal would have the same

impacts as the Stadium on Parcel B proposal and is rejected for the same reasons as explained above for Stadium on Parcel B.

Stadium on Parcel G

This alternative would generally be within the same HPS Phase II site boundaries and follow a development program similar to the Project. This alternative is also similar to Alternative 2 (CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge). Compared to the Project and Alternative 2, the Arc Ecology stadium on Parcel G Alternative the stadium would be moved west to Parcels E and G and a 20,000-seat arena would be east of the stadium on Parcel D. Stadium parking would be on dual-use fields surrounding the stadium. Residential uses would be on Parcel B and R&D uses on Parcel C. This proposal does not reduce or avoid environmental impacts in a substantially different way than Alternative 2 and for this reason is rejected from further consideration. CEQA does not require analysis of every alternative, just a reasonable range of alternatives and an alternative similar to this proposal is examined in detail above.

No Stadium at HPS Phase II

This alternative would generally be within the same HPS Phase II site boundaries and follow a development program similar to the Housing Variant. The Arc Ecology No Stadium Alternative would include a mix of residential, commercial, R&D, cultural, and open space uses. Residential uses would be on Parcels D, E, and G, with commercial uses distributed throughout the site. R&D uses would be on Parcels B and C and an educational campus would be located on Parcel C, which is different from the Project and Housing Variant. A 20,000-seat arena would be east of the stadium on Parcel D.

This proposal is similar to Alternatives 1, 3, and 5 that consider no stadium at HPS Phase II. The Housing Variant and R&D Variant also address the no stadium scenario.

With an assumed development of the same magnitude as the Housing Variant, this proposal would have similar construction and operational impacts. Impacts to biological resources related to construction of the Yosemite Slough bridge would be avoided because no bridge would be constructed, but Alternative 2, 4 and 5 also proposed alternatives without the Yosemite Slough bridge.

Operation of the 20,000-seat arena on Parcel D could increase traffic-related impacts from arena events as described above, which would not result in reduced or avoided impact, the goal in selecting CEQA alternatives.

This alternative was rejected because it is essentially duplicative of several development programs analyzed in this EIR and would not result in reduced or avoided impacts not already identified in alternatives considered above.

Alternative Land Use Plan for Candlestick Point

This alternative would generally be within the same Candlestick Point site boundaries and follow a development program similar to the Project. The Arc Ecology Candlestick Point Alternative land use plan would include a mix of residential, commercial, R&D, cultural, and open space uses.

A main concept of this Arc Ecology alternative is to connect existing open space areas at Candlestick Point to the CPSRA. Wildlife and vegetation corridors would connect the shoreline to inland open space areas. Section III.N identifies that there is localized movement between Bayview Hill and the CPSRA. However, it is concluded that the Project would not interfere substantially with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors.

With an assumed development of the same magnitude as the Project, construction and operational impacts are generally similar. As this alternative is not substantially different from a Project Variant, it was rejected from further consideration in this EIR.

Individual Alternative Land Uses at Candlestick Point and HPS Phase II

The Arc Ecology report identified additional alternative land uses and concepts for development at Candlestick Point, HPS Phase II, and improvements to areas outside of the Project site. Table VI-11 (Summary of Arc Ecology Land Uses and Concepts for Candlestick Point and HPS Phase II) outlines those concepts and includes a comparison to Project features and impacts. To the extent that these are duplicative of Project or Alternative components, impacts associated with these concepts are analyzed in Chapter III or this Chapter VI. Reasons for rejecting other concepts are explained below.

Table VI-11 Summary of Arc Ecology Land Uses and Concepts for Candlestick Point and HPS Phase II	
<i>Arc Ecology Alternative Proposal (Page #)^a</i>	<i>Relationship to Project Impacts</i>
Locate PDR businesses at Candlestick Point (117)	Arc Ecology proposes PDR uses at Candlestick Point near existing and new residential uses as a potential relocation area for PDR uses displaced by the Arc Ecology proposal to day light Yosemite Creek. The Project does not propose PDR uses, nor does it propose displacement of existing PDR uses. PDR uses at Candlestick Point could result in different and/or additional traffic-related impacts. Operational noise and air quality impacts could also occur, including impacts to sensitive receptors due to the proximity of existing and proposed residential uses. Therefore, locating PDR uses at Candlestick Point would not reduce impacts compared to the Project.
Locate outlets and regional retail at Candlestick Point (117)	Regional retail is proposed at Candlestick Point under the Project. Addition of outlet retail at Candlestick Point would not reduce impacts compared to the Project. The Arc Ecology proposed location of retail would make the uses more visible from northbound US-101. However, this alternative location would not reduce construction or operational impacts of such uses compared to the Project.
Move arena to HPS from Candlestick Point (80, 82, 84, and 86)	Operation of the 20,000-seat arena on Parcel D could increase traffic-related impacts from arena events because the capacity would be doubled compared to that proposed under the Project and the location would result in generation of additional trips to HPS Phase II. This could increase traffic-related impacts at intersections along the Third Street corridor, compared to the Project.
Expand arena from 10,000 to 20,000 seats (38)	
Shared parking on HPS (throughout plans)	Shared parking at HPS Phase II is proposed under the Project, including dual-use sports fields. Implementation of shared parking at HPS Phase II would not reduce construction or operational impacts compared to the Project.
Maritime industrial uses at HPS (106–107, 114)	Maritime industrial uses are not proposed under the Project. Construction and operation of such uses at HPS Phase II could result in new impacts including, but not necessarily limited to, impacts on air quality, noise, hydrology and water quality, and biological resources.
Indoor sports facility at HPS (80, 103, 111–116)	An indoor sports facility is not specifically proposed under the Project. Construction and operation of an indoor sports facility at HPS Phase II would not reduce impacts compared to the Project. However, such uses are not precluded by the Project.

Table VI-11 Summary of Arc Ecology Land Uses and Concepts for Candlestick Point and HPS Phase II

<i>Arc Ecology Alternative Proposal (Page #)</i> ^a	<i>Relationship to Project Impacts</i>
Move multi-plex cinema to HPS from Candlestick Point (105)	The Project would include a theater at Candlestick Point. Relocating the theater to HPS Phase II would not reduce impacts compared to the Project.
Move sports fields closer to neighborhood residences (120)	The Project proposes sports fields at HPS Phase II, primarily surrounding the stadium on dual-use fields. Locating the sports fields closer to residential uses at Candlestick Point or HPS Phase II would not reduce impacts compared to the Project. In addition, locating sports fields in close proximity to residential uses could result in land use conflicts related to noise and nighttime lighting.
Open space link from Third Street to the Bay along Yosemite Slough (122–129)	Providing an open space connection from Third Street to the Bay along Yosemite Slough and day lighting of Yosemite Slough west of its current terminus is outside of the Project site. Implementation of such improvements would not reduce impacts of the Project. Instead it would expand the scope of the Project and could result in additional environmental impacts.
Daylight Yosemite Slough (124–129)	
Widen waterfront habitat corridors (41)	Wildlife and vegetation corridors would connect the shoreline to inland open space areas. Section III.N (Biological Resources) identifies that there is localized movement between Bayview Hill and the CPSRA. However, the Project would not interfere substantially with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors. Therefore, widening and reorientation of vertical development would not reduce impacts to wildlife movement compared to the Project.
Create habitat corridors to inland open space (41,48,59,64)	
Reorient Alice Griffith Park to connect with slough (96-99)	
Provide concession stands in park (throughout plans)	This concept locates park concession stands and other attractions throughout the parks and open space facilities. Construction and operation of such uses would not reduce impacts compared to the Project. However, such uses are not precluded by the Project.
Transfer City land to State Parks (59)	Transfer of City land to State Parks is a policy decision and would not reduce any environmental impacts compared to the Project. An alternative analysis is provided below that evaluates development of only parks and open space at Candlestick Point.
CPSRA nature interpretive center (40)	This use is not precluded by the Project but also does not appear to address any specific environmental impact of the Project. State Parks is undertaking a separate planning process for its park, which will be the vehicle for determining the details of park design.
Alternative Routes to bridge over slough (130)	Alternatives 2, 3, and 4 in this EIR analyze upland transportation routes with no bridge crossing Yosemite Slough.
Alternative urban forms and development layout (60)	The Project does include some of these urban design concepts, such as extending the existing street grid into Candlestick Point. The proposed urban design concepts would not reduce impacts compared to the Project.
Extend existing street grid (60)	
Radial geometry from existing topographic features, land marks and constructed shoreline (60)	
Water management: constructed treatment wetlands, storm water retention and irrigation storage ponds (47, 50, 124)	The Project incorporates various forms of stormwater management, including vegetated swales, flow-through planter boxes, permeable pavement, green rooftops, and rainwater cisterns. Bioretention basins would also be constructed within parks and open space. The Project would provide a network of reclaimed water mains for dual plumbing in commercial buildings and for irrigation of landscaped areas. Much of these design elements would be incorporated into open space areas. Incorporating additional conservation measure beyond what is already proposed would not further reduce impacts compared to the Project.
Integrated resource conservation with open space systems (50)	
Solar arrays on Piers 1 and 2 (38, 80)	Installation of solar arrays on piers is not proposed under the Project. The feasibility of such installations is unknown. New impacts to biological resource impacts could occur, including impacts to waterbirds that roost in large numbers on piers on HPS Phase II. However, installation of solar arrays could reduce energy impacts by providing more local electricity generation.

Table VI-11 Summary of Arc Ecology Land Uses and Concepts for Candlestick Point and HPS Phase II

<i>Arc Ecology Alternative Proposal (Page #)^a</i>	<i>Relationship to Project Impacts</i>
Remove the capped landfill on parcel E2 and replace it with a constructed treatment wetland (32)	Cleanup of Parcel E-2 is not a part of the Project. Cleanup of Parcel E-2 is the Navy's responsibility, as governed by the HPS status as a Superfund site under CERCLA. Moreover, the Project does not propose the transfer of Parcel E-2 until the CERCLA regulatory oversight agencies determine that this parcel is safe for the planned uses. Removing the landfill would not reduce any environmental impacts of the Project.

SOURCE: PBS&J and Arc Ecology, *Draft Alternatives for Study, Draft Outline of Issues, Positions, and Alternatives for Public Comment and Further Study*, January 2009.

a. Page number of Arc Ecology *Draft Alternatives for Study*, January 2009.

■ Develop Candlestick Point for Parks and Open Space Only

Under this alternative, the majority of Candlestick Point would be developed as a park and open space, assuming the San Francisco 49ers stadium is constructed at HPS Phase II or elsewhere. The entire CPSRA would remain under the jurisdiction of the California Department of Parks and Recreation (CDPR). Candlestick Park and the surrounding area would remain in the Public (P) zoning district, which permits public uses and facilities. This alternative would reduce construction-related impacts of the Project, as less development would occur on the Candlestick Point site. It would reduce or avoid many of the operational Project impacts. However, this alternative would meet few, if any, of the Project objectives, including creation of a range of job and economic development opportunities. In addition, this alternative would most likely have to be funded and developed by the City. Finally, the feasibility of phasing land development at Alice Griffith to allow residents to move directly into new homes would be compromised under this scenario.

■ Alternative Locations for the Project outside the City of San Francisco

This alternative would involve development of the Project on a site outside of the City. If feasible, development of the Project at another location could reduce site-specific impacts to biological resources (e.g., no bridge-related construction impacts) and cultural resources (e.g., demolition of historic resources at HPS Phase II); however, it would not reduce or avoid Project impacts associated with construction (e.g., air quality and noise) or operation (e.g., traffic, air quality, and noise). In fact, this alternative, while it would remove significant impacts from vehicular traffic on City streets in the Project area, it would shift these impacts to other jurisdictions. Although this alternative would reduce potentially adverse site-specific impacts that could conceivably be avoided at other sites, if site of this size could be found available, development at a location outside the City would fail to meet any of the Project objectives. Developing the Project outside the City would not provide benefit to the citizens of the Bayview neighborhood or San Francisco.

■ Alternative Locations for the Project within the City of San Francisco

This alternative would involve development of the Project on a site outside of the Bayview Neighborhood, but still within the City; however, there are no vacant parcels or designated redevelopment areas large enough (at least 702 acres) to accommodate the Project. Development of the

Project at another location would not reduce or avoid the significant impacts associated with construction of the Project (e.g., air and noise), or the operational impacts of the Project (e.g., traffic, air quality, and noise).

VI.E COMPARISON OF ALTERNATIVES

Table VI-12 (Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives) identifies the significant and unavoidable impacts of the Project and identifies whether any of the alternatives lessens or avoids those impacts. The table identifies whether the alternatives result in the same (=), lesser (<), or greater (>) impacts as compared to the Project. The table also provides the level of significance for the Project and the Alternatives after the implementation of all feasible mitigation measures.

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives					
	Alternative 1 No Project ^a	Alternative 2 No Bridge Alt ^b	Alternative 3 49ers at Candlestick ^c	Alternative 4 Lesser Build ^d	Alternative 5 No Park Agreement ^e
TRANSPORTATION					
Impact TR-1 The Project would result in construction-related transportation impacts in the Project vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Project vicinity. Mitigation measure MM TR-1 would reduce but not avoid construction-related transportation impacts during construction activities. Therefore, construction transportation impacts would remain significant.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-2 Implementation of the Project would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts. Although implementation of a Travel Demand Management Plan was assumed in developing Project travel demand estimates, and would be essential to ensure that impacts at additional locations do not occur, traffic congestion caused by the Project and the Project's contribution to cumulative impacts would still be significant.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-3 The Project would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Project vicinity where no feasible traffic mitigation measures have been identified.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-4 At the intersection of Tunnel/Blanken, the Project would result in significant Project AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.					
Significance of Alternative Compared to Project	<	=	<	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
Impact TR-5 Project contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions were determined to be significant, and no feasible mitigation measures have been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-6 Project contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-8 Project contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-10 The Project would result in significant Project traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-11 The Project would contribute to significant cumulative traffic impacts at four freeway segments. No feasible mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-12 The Project would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-13 The Project would contribute to significant cumulative traffic impacts at 12 freeway ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives					
	Alternative 1 No Project^a	Alternative 2 No Bridge Alt^b	Alternative 3 49ers at Candlestick^c	Alternative 4 Lesser Build^d	Alternative 5 No Park Agreement^e

Impact TR-14 The Project would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-15 The Project would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-21 The Project would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Project impacts and Project contributions to cumulative impacts on the 9-San Bruno would remain significant.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-22 The Project would increase congestion and contribute to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Implementation of mitigation measure MM TR-22.1 and MM TR-22.2 would reduce impacts to transit operations. However, since feasibility of MM TR-22.1 is uncertain, and since MM TR-22.2, without MM TR-22A, would reduce, but not completely avoid, impacts on the 23-Monterey, 24-Divisadero, and 44-O'Shaughnessy, Project impacts and Project contributions to cumulative impacts on the these lines would remain significant.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-23 The Project would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Project impacts and Project contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
Impact TR-24 The Project would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24 th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24 th Street, Project impacts and Project contributions to cumulative impacts on the 48-Quintara-24 th Street would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-25 The Project would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-26 The Project would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Project impacts and Project contributions to cumulative impacts on the T-Third would remain significant.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-27 The Project would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19 th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19 th Avenue/Geneva Limited, Project impacts and Project contributions to cumulative impacts on the 28L-19 th Avenue/Geneva Limited would remain significant.					
Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
Impact TR-28 The Project would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101. No feasible mitigation has been identified.					
Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives					
	Alternative 1 No Project^a	Alternative 2 No Bridge Alt^b	Alternative 3 49ers at Candlestick^c	Alternative 4 Lesser Build^d	Alternative 5 No Park Agreement^e

Impact TR-30 The Project would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.

Significance of Alternative Compared to Project	=	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-32 The Project's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.

Significance of Alternative Compared to Project	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

Impact TR-38 For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Impact TR-39 The existing game day service and Project transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Impact TR-46 Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Impact TR-47 The existing transit service and Project improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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Impact TR-51 Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Project conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.

Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

Impact TR-52 Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations. Implementation of mitigation measure MM TR-23.1 would reduce impacts to less than significant. Due to the uncertainty of this mitigation the impact would remain significant.

Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

AIR QUALITY

Impact AQ-4 Operation of the Project would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.

Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

NOISE

Impact NO-2 Construction activities associated with the Project would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the Project's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the *Municipal Code*, vibration levels would still be significant.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Impact NO-3 Construction activities associated with the Project would result in a substantial temporary or periodic increase in ambient noise levels.

Significance of Alternative Compared to Project	<	=	<	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Impact NO-6 Operation of the Project would generate increased local traffic volumes that could cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-12 Comparison of the Significant and Unavoidable Impacts of the Project to Each of the Alternatives					
	Alternative 1 No Project ^a	Alternative 2 No Bridge Alt ^b	Alternative 3 49ers at Candlestick ^c	Alternative 4 Lesser Build ^d	Alternative 5 No Park Agreement ^e

Impact NO-7 Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that could adversely affect surrounding residents for the duration of a game or concert.

Significance of Alternative Compared to Project	<	=	<	<	<
Level of Significance after Mitigation (Project/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

CULTURAL RESOURCES

Impact CP-1 Construction activities associated with the Project could result in a substantial adverse change in the significance of a historical resource.

Significance of Alternative Compared to Project	=	=	=	<	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/LTS	SU/SU

< Alternative does lessen the severity of the impact

> Alternative increases the severity of the impact

= Alternative impact is similar to the Project impact

NI = No Impact

LTS = Less-Than-Significant impact

SU = Significant and Unavoidable Impact

a. No Project

b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge

c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge

e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge

Because this EIR includes variants to the Project, any one of which could be approved instead of or in combination with the Project, Table VI-13 (Comparison of the Significant and Unavoidable Impacts of Variant 1: No Stadium, Additional R&D to Each of the Alternatives) through Table VI-17 (Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Shared Stadium Variant) identify the significant and unavoidable impacts of the variants and identify whether any of the alternatives lessens or avoids those impacts. The tables identify whether the alternatives result in the same (=), lesser (<), or greater (>) impacts as compared to the variants. The table also provides the level of significance for the Project and the variants after the implementation of all feasible mitigation measures.

**Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1:
No Stadium, Additional R&D to Each of the Alternatives**

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
TRANSPORTATION					
The R&D Variant would result in construction-related transportation impacts in the R&D Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the R&D Variant vicinity.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Implementation of the R&D Variant would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would result in significant impacts and would contribute to significant cumulative impacts at intersections in the R&D Variant vicinity where no feasible traffic mitigation measures have been identified.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
At the intersection of Tunnel/Blanken, the R&D Variant would result in significant Project AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
R&D Variant contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions were determined to be significant, and no feasible mitigation measures have been identified.					
Significance of Alternative Compared to Variant	=	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant's contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

**Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1:
No Stadium, Additional R&D to Each of the Alternatives**

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
R&D Variant contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would result in significant traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would contribute to significant traffic impacts on freeway conditions.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would contribute to significant cumulative traffic impacts at freeway ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

**Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1:
No Stadium, Additional R&D to Each of the Alternatives**

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The R&D Variant would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Project impacts and Project contributions to cumulative impacts on the 9-San Bruno would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The R&D Variant would increase congestion and contribute to cumulative conditions at intersections, which would increase travel times and impact transit operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Feasibility of mitigation measures is unclear or would not completely avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The R&D Variant would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Project impacts and Project contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The R&D Variant would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, R&D Variant impacts and R&D Variant contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The R&D Variant would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

**Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1:
No Stadium, Additional R&D to Each of the Alternatives**

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The R&D Variant would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Project impacts and Project contributions to cumulative impacts on the T-Third would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19 th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19 th Avenue/Geneva Limited, Project impacts and Project contributions to cumulative impacts on the 28L-19 th Avenue/Geneva Limited would remain significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The R&D Variant's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1: No Stadium, Additional R&D to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The existing game day service and transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI
Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI
The existing transit service and R&D Variant improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI
Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under R&D Variant conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under R&D Variant conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
AIR QUALITY					
Operation of the R&D Variant would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

**Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1:
No Stadium, Additional R&D to Each of the Alternatives**

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
NOISE					
Construction activities associated with the R&D Variant would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before Project construction activity on adjacent parcels is complete. Although the R&D Variant's construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the <i>Municipal Code</i> , vibration levels would still be significant.					
Significance of Alternative Compared to Variant	<	=	<	=	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Construction activities associated with the R&D Variant would result in a substantial temporary or periodic increase in ambient noise levels.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Operation of the R&D Variant would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that could adversely affect surrounding residents for the duration of a game or concert.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

CULTURAL RESOURCES

The R&D Variant would result in a substantial adverse change in the significance of a historical resource. Implementation of mitigation measure MM CP-3b would reduce the impact, but not to a less-than-significant level. The impact would be significant and unavoidable.

Significance of Alternative Compared to Variant	<	=	=	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/LTS	SU/SU

Table VI-13 Comparison of the Significant and Unavoidable Impacts of Variant 1: No Stadium, Additional R&D to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
--	---	--	---	---	--

< Alternative does lessen the severity of the impact

> Alternative increases the severity of the impact

= Alternative impact is similar to the Project impact

NI = No Impact

LTS = Less-Than-Significant impact

SU = Significant and Unavoidable Impact

a. No Project

b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge

c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge

e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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TRANSPORTATION

The Housing Variant would result in construction-related transportation impacts in the Housing Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Housing Variant vicinity.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Implementation of the Housing Variant would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Housing Variant vicinity where no feasible traffic mitigation measures have been identified.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

At the intersection of Tunnel/Blanken, the Housing Variant would result in significant Project AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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Housing Variant contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions were determined to be significant, and no feasible mitigation measures have been identified.

Significance of Alternative Compared to Variant	=	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant's contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Housing Variant contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Project conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would result in significant traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would contribute to significant traffic impacts on freeway conditions.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would contribute to significant cumulative traffic impacts at freeway ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Housing Variant would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Project impacts and Project contributions to cumulative impacts on the 9-San Bruno would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion and contribute to cumulative conditions at intersections, which would increase travel times and impact transit operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Feasibility of mitigation measures is unclear or would not completely avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Project impacts and Project contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Housing Variant would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, Housing Variant impacts and Housing Variant contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Project impacts and Project contributions to cumulative impacts on the T-Third would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19th Avenue/Geneva Limited, Project impacts and Project contributions to cumulative impacts on the 28L-19th Avenue/Geneva Limited would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Housing Variant would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.

Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

The existing game day service and transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.

Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Project conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.

Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

The existing transit service and Housing Variant improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.

Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Housing Variant conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Housing Variant conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

The Housing Variant would result in construction-related transportation impacts in the Housing Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Housing Variant vicinity.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Implementation of the Housing Variant would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Housing Variant vicinity where no feasible traffic mitigation measures have been identified.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

At the intersection of Tunnel/Blanken, the Housing Variant would result in significant Project AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Project/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Housing Variant contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Project conditions were determined to be significant, and no feasible mitigation measures have been identified.

Significance of Alternative Compared to Variant	=	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Housing Variant would contribute to significant traffic impacts on freeway conditions.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion and contribute to cumulative conditions at intersections, which would increase travel times and impact transit operations of the 23-Monterey, 24-Divisadero and the 44-O'Shaughnessy. Feasibility of mitigation measures is unclear or would not completely avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Project would also contribute to cumulative impacts on these transit routes on US-101.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Housing Variant's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Housing Variant conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Housing Variant conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
AIR QUALITY					
Operation of the Housing Variant would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
NOISE					
Construction of the Housing Variant would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before construction activity on adjacent parcels is complete. Although the construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the <i>Municipal Code</i> , vibration levels would still be significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Construction activities associated with the Housing Variant would result in a substantial temporary or periodic increase in ambient noise levels.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Operation of the Housing Variant would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that could adversely affect surrounding residents for the duration of a game or concert.					
Significance of Alternative Compared to Variant	=	>	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	NI/NI	NI/SU	NI/NI	NI/NI	NI/NI

Table VI-14 Comparison of the Significant and Unavoidable Impacts of Variant 2: No Stadium, Relocation of Housing to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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CULTURAL RESOURCES

The Housing Variant would result in a substantial adverse change in the significance of a historical resource. Implementation of mitigation measure MM CP-3b would reduce the impact, but not to a less-than-significant level. The impact would be significant and unavoidable.

Significance of Alternative Compared to Variant	<	=	=	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/LTS	SU/SU

< Alternative does lessen the severity of the impact

> Alternative increases the severity of the impact

= Alternative impact is similar to the Project impact

NI = No Impact

LTS = Less-Than-Significant impact

SU = Significant and Unavoidable Impact

a. No Project

b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge

c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge

e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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TRANSPORTATION

The Tower Variants would result in construction-related transportation impacts in the Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Variant vicinity. Mitigation measure MM TR-1 would reduce but not avoid construction-related transportation impacts during construction activities. Therefore, construction transportation impacts would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Implementation of the Tower Variants would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts. Although implementation of a Travel Demand Management Plan was assumed in developing Variant travel demand estimates, and would be essential to ensure that impacts at additional locations do not occur, traffic congestion caused by the Variant and the Variant's contribution to cumulative impacts would still be significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Tower Variants would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Variant vicinity where no feasible traffic mitigation measures have been identified.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

At the intersection of Tunnel/Blanken, the Tower Variants would result in significant AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.

Significance of Alternative Compared to Variant	<	=	<	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Tower Variants contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Variant conditions were determined to be significant, and no feasible mitigation measures have been identified.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Tower Variants contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Tower Variants contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would result in significant Tower Variants traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would contribute to significant cumulative traffic impacts at four freeway segments. No feasible mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The Tower Variants would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would contribute to significant cumulative traffic impacts at 12 freeway ramp locations. No feasible traffic mitigation is available.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Variant impacts and Variant contributions to cumulative impacts on the 9-San Bruno would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would increase congestion and contribute to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Implementation of mitigation measure MM TR-22.1 and MM TR-22.2 would reduce impacts to transit operations. However, since feasibility of MM TR-22.1 is uncertain, and since MM TR-22.2, without MM TR-22A, would reduce, but not completely avoid, impacts on the 23-Monterey, 24-Divisadero, and 44-O'Shaughnessy, Variant impacts and Variant contributions to cumulative impacts on the these lines would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Tower Variants would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Variant impacts and Variant contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, Variant impacts and Variant contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Variant impacts and Variant contributions to cumulative impacts on the T-Third would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Tower Variants would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19th Avenue/Geneva Limited, Variant impacts and Variant contributions to cumulative impacts on the 28L-19th Avenue/Geneva Limited would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The Tower Variants would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Variant would also contribute to cumulative impacts on these transit routes on US-101. No feasible mitigation has been identified.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The Tower Variants' proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
The existing game day service and Tower Variants transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Tower Variants conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The existing transit service and Tower Variants improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Tower Variants conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Tower Variants conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations. Implementation of mitigation measure MM TR-23.1 would reduce impacts to less than significant. Due to the uncertainty of this mitigation the impact would remain significant.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
SHADOW					
The Tower Variant would add shadows to Gilman Park during the hours between one hour after sunrise and one hour before sunset, with a new shadow load greater than 1.0 percent. This new shadow could have an adverse effect on the use of park. While Tower Variant A would not add shade after late morning or midday periods at any time of year, and the park would not be affected in afternoon periods of use, the shadow effect is conservatively considered to be a significant and unavoidable impact of Tower Variant C.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/NI	SU/NI	SU/NI	SU/NI
AIR QUALITY					
Operation of the Tower Variants would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
NOISE					
Construction of the Tower Variants would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before construction activity on adjacent parcels is complete. Although the construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the <i>Municipal Code</i> , vibration levels would still be significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Construction activities associated with the Tower Variants would result in a substantial temporary or periodic increase in ambient noise levels.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Operation of the Tower Variants would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that would adversely affect surrounding residents for the duration of a game or concert.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

CULTURAL RESOURCES

The Tower Variants would result in a substantial adverse change in the significance of a historical resource. Implementation of mitigation measure MM CP-3b would reduce the impact, but not to a less-than-significant level. The impact would be significant and unavoidable.

Significance of Alternative Compared to Variant	<	=	=	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/LTS	SU/SU

Table VI-15 Comparison of the Significant and Unavoidable Impacts of Variant 3: Candlestick Point Tower to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
<p>< Alternative does lessen the severity of the impact > Alternative increases the severity of the impact = Alternative impact is similar to the Project impact NI = No Impact LTS = Less-Than-Significant impact SU = Significant and Unavoidable Impact</p> <p>a. No Project b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge</p>					

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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TRANSPORTATION

The Utilities Variant would result in construction-related transportation impacts in the Utilities Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the Utilities Variant vicinity. Mitigation measure MM TR-1 would reduce but not avoid construction-related transportation impacts during construction activities. Therefore, construction transportation impacts would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Implementation of the Utilities Variant would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts. Although implementation of a Travel Demand Management Plan was assumed in developing Utilities Variant travel demand estimates, and would be essential to ensure that impacts at additional locations do not occur, traffic congestion caused by the Utilities Variant and the Utilities Variant's contribution to cumulative impacts would still be significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Variant vicinity where no feasible traffic mitigation measures have been identified.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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At the intersection of Tunnel/Blanken, the Utilities Variant would result in significant AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.

Significance of Alternative Compared to Variant	<	=	<	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Utilities Variant contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Variant conditions were determined to be significant, and no feasible mitigation measures have been identified.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Utilities Variant contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Utilities Variant contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would result in significant Variant traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would contribute to significant cumulative traffic impacts at four freeway segments. No feasible mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Utilities Variant would contribute to significant cumulative traffic impacts at 12 freeway ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Variant impacts and Variant contributions to cumulative impacts on the 9-San Bruno would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion and contribute to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Implementation of mitigation measure MM TR-22.1 and MM TR-22.2 would reduce impacts to transit operations. However, since feasibility of MM TR-22.1 is uncertain, and since MM TR-22.2, without MM TR-22A, would reduce, but not completely avoid, impacts on the 23-Monterey, 24-Divisadero, and 44-O'Shaughnessy, Variant impacts and Variant contributions to cumulative impacts on these lines would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Utilities Variant would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Variant impacts and Variant contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, Variant impacts and Variant contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, Utilities Variant impacts and Utilities Variant contributions to cumulative impacts on the T-Third would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19th Avenue/Geneva Limited, Variant impacts and Variant contributions to cumulative impacts on the 28L-19th Avenue/Geneva Limited would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The Utilities Variant would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Variant would also contribute to cumulative impacts on these transit routes on US-101. No feasible mitigation has been identified.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The Utilities Variant's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

For as many as 12 times a year 49ers games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

The existing game day service and Utilities Variant transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Utilities Variant conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The existing transit service and Utilities Variant improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Variant conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Variant conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations. Implementation of mitigation measure MM TR-23.1 would reduce impacts to less than significant. Due to the uncertainty of this mitigation the impact would remain significant.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

AIR QUALITY

Operation of the Utilities Variant would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SUSU	SU/SU	SU/SU

NOISE

Construction of the Utilities Variant would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before construction activity on adjacent parcels is complete. Although the construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the *Municipal Code*, vibration levels would still be significant.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Construction activities associated with the Utilities Variant would result in a substantial temporary or periodic increase in ambient noise levels.

Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-16 Comparison of the Significant and Unavoidable Impacts of Variant 4: Utilities to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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Operation of the Utilities Variant would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that would adversely affect surrounding residents for the duration of a game or concert.

Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

CULTURAL RESOURCES

The Utilities Variant would result in a substantial adverse change in the significance of a historical resource. Implementation of mitigation measure MM CP-3b would reduce the impact, but not to a less-than-significant level. The impact would be significant and unavoidable.

Significance of Alternative Compared to Variant	<	=	=	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/LTS	SU/SU

< Alternative does lessen the severity of the impact

> Alternative increases the severity of the impact

= Alternative impact is similar to the Project impact

NI = No Impact

LTS = Less-Than-Significant impact

SU = Significant and Unavoidable Impact

a. No Project

b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge

c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge

e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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TRANSPORTATION

The 49ers/Shared Stadium Variant would result in construction-related transportation impacts in the 49ers/Shared Stadium Variant vicinity due to construction vehicle traffic and roadway construction and would contribute to cumulative construction impacts in the 49ers/Shared Stadium Variant vicinity. Mitigation measure MM TR-1 would reduce but not avoid construction-related transportation impacts during construction activities. Therefore, construction transportation impacts would remain significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Implementation of the 49ers/Shared Stadium Variant would cause an increase in traffic that would be substantial relative to the existing and proposed capacity of the street system, and result in significant and unavoidable impacts. Although implementation of a Travel Demand Management Plan was assumed in developing 49ers/Shared Stadium Variant travel demand estimates, and would be essential to ensure that impacts at additional locations do not occur, traffic congestion caused by the 49ers/Shared Stadium Variant and the 49ers/Shared Stadium Variant's contribution to cumulative impacts would still be significant.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would result in significant impacts and would contribute to significant cumulative impacts at intersections in the Variant vicinity where no feasible traffic mitigation measures have been identified.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

At the intersection of Tunnel/Blanken, the 49ers/Shared Stadium Variant would result in significant AM peak hour traffic impacts, and contribute to cumulative PM peak hour traffic impacts, for which a feasible mitigation measure has been identified. The identified mitigation measure would improve traffic operations, but not to acceptable levels of service.

Significance of Alternative Compared to Variant	<	=	<	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU

49ers/Shared Stadium Variant contributions at some study area intersections that would operate at LOS E or LOS F under 2030 No Variant conditions were determined to be significant, and no feasible mitigation measures have been identified.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

49ers/Shared Stadium Variant contributions at the intersections of Geneva/US-101 Southbound Ramps and Harney/US-101 Northbound Ramps, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-6 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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49ers/Shared Stadium Variant contributions at the intersections of Bayshore/Geneva, which would operate at LOS F under 2030 No Variant conditions, were determined to be significant, and a mitigation measure has been identified to avoid this impact. However, implementation of mitigation measure MM TR-8 is uncertain, and this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would result in significant Variant traffic spillover impacts and contribute to cumulative traffic spillover impacts. The identified mitigation measures would reduce, but not avoid, traffic spillover impacts.

Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would contribute to significant cumulative traffic impacts at four freeway segments. No feasible mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would result in significant impacts at four freeway on-ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would contribute to significant cumulative traffic impacts at 12 freeway ramp locations. No feasible traffic mitigation is available.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would result in significant impacts related to freeway diverge queue storage at the Harney/US-101 Northbound Off-ramp. Mitigation measure MM TR-6 has been identified to avoid this impact, but its implementation is uncertain. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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The 49ers/Shared Stadium Variant would contribute to significant cumulative traffic impacts related to freeway diverge queue storage at some off-ramp locations. Mitigation measure MM TR-6 has been identified to avoid this impact at the US-101 Northbound off-ramp to Harney Way, and US-101 Southbound Off-ramp to Harney Way/Geneva Avenue. However, implementation is uncertain. For the other ramps, no feasible mitigations have been identified. Therefore, this impact would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would increase congestion and contribute to cumulative conditions at intersections along San Bruno Avenue, which would increase travel times and impact operations of the 9-San Bruno. Implementation of mitigation measures MM TR-21.1 and MM TR-21.2 could reduce impacts to transit operations. However, since feasibility of MM TR-21.1 is uncertain, and since MM TR-21.2, without MM TR-21.1, would reduce, but not completely avoid, impacts on the 9-San Bruno, Variant impacts and Variant contributions to cumulative impacts on the 9-San Bruno would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would increase congestion and contribute to cumulative conditions at intersections along Palou Avenue, which would increase travel times and impact operations of the 23-Monterey, 24-Divisadero, and the 44-O'Shaughnessy. Implementation of mitigation measure MM TR-22.1 and MM TR-22.2 would reduce impacts to transit operations. However, since feasibility of MM TR-22.1 is uncertain, and since MM TR-22.2, without MM TR-22A, would reduce, but not completely avoid, impacts on the 23-Monterey, 24-Divisadero, and 44-O'Shaughnessy, Variant impacts and Variant contributions to cumulative impacts on these lines would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would increase congestion at intersections along Gilman Avenue and Paul Avenue, which would increase travel times and would impact operations of the 29-Sunset. Implementation of mitigation measures MM TR-23.1 and MM TR-23.2 would reduce impacts to transit operations. However, since feasibility of MM TR-23.1 is uncertain, and since MM TR-23.2, without MM TR-23.1, would reduce, but not completely avoid, impacts on the 29-Sunset, Variant impacts and Variant contributions to cumulative impacts on the 29-Sunset would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

The 49ers/Shared Stadium Variant would increase congestion at intersections along Evans Avenue, which would increase travel times and impact operations of the 48-Quintara-24th Street. Implementation of mitigation measures MM TR-24.1 and MM TR-24.2 would reduce impacts to transit operations. However, since feasibility of MM TR-24.1 is uncertain, and since MM TR-24.2, without MM TR-24.1, would reduce, but not completely avoid, impacts on the 48-Quintara-24th Street, Variant impacts and Variant contributions to cumulative impacts on the 48-Quintara-24th Street would remain significant.

Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
The 49ers/Shared Stadium Variant would increase congestion at intersections in the study area, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the 54-Felton. Implementation of mitigation measure MM TR-25 would reduce, but not avoid impacts.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The 49ers/Shared Stadium Variant would increase congestion at intersections along Third Street, and make a considerable contribution to cumulative impacts that would increase travel times and impact operations of the T-Third. Implementation of mitigation measures MM TR-26.1 and MM TR-26.2 would reduce impacts to transit operations. However, since feasibility of MM TR-26.1 is uncertain, and since MM TR-26.2, without MM TR-26.1, would reduce, but not completely avoid, impacts on the T-Third, 49ers/Shared Stadium Variant impacts and 49ers/Shared Stadium Variant contributions to cumulative impacts on the T-Third would remain significant.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The 49ers/Shared Stadium Variant would increase congestion at the intersection of Geneva Avenue and Bayshore Boulevard. This would increase travel times and impact operations of the 28L-19 th Avenue/Geneva Limited. Implementation of mitigation measures MM TR-27.1 and MM TR-27.2 would reduce impacts to transit operations. However, since feasibility of MM TR-27.1 is uncertain, and since MM TR-27.2, without MM TR-27.1, would reduce, but not completely avoid, impacts on the 28L-19 th Avenue/Geneva Limited, Variant impacts and Variant contributions to cumulative impacts on the 28L-19 th Avenue/Geneva Limited would remain significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU
The 49ers/Shared Stadium Variant would increase congestion on US-101 mainline and ramps, which would increase travel times and impact operations of the 9X, 9AX, 9BX-Bayshore Expresses, and 14X-Mission Express. The Variant would also contribute to cumulative impacts on these transit routes on US-101. No feasible mitigation has been identified.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The 49ers/Shared Stadium Variant would increase congestion and contribute to cumulative congestion on US-101 and on Bayshore Boulevard, which would increase travel times and adversely affect operations of SamTrans bus lines on these facilities. No feasible mitigation has been identified.					
Significance of Alternative Compared to Variant	=	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
The 49ers/Shared Stadium Variant's proposed transit preferential treatments and significant increases in traffic volumes on Palou Avenue would result in impacts on bicycle travel on Bicycle Routes #70 and #170 between Griffith Street and Third Street. The effectiveness of mitigation is uncertain. Therefore, the impact would remain significant.					
Significance of Alternative Compared to Variant	<	=	=	=	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/SU	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
For as many as 24 times a year 49ers/Raiders games at the proposed stadium would result in significant impacts on study area roadways and intersections. Implementation of mitigation measure MM TR-38 would lessen game-day impacts; however, traffic impacts would remain significant.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
The existing game day service and 49ers/Shared Stadium Variant transit improvements would not be adequate to accommodate projected transit demand. Implementation of mitigation measure MM TR-39 would reduce game-day impacts on transit capacity; however, traffic impacts on transit operations would remain significant.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Weekday evening secondary events at the stadium would result in increased congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under 49ers/Shared Stadium Variant conditions without a secondary event, and result in significant impacts at nine additional intersections and one additional freeway off-ramp. Implementation of mitigation measure MM TR-46 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
The existing transit service and 49ers/Shared Stadium Variant improvements would not be adequate to accommodate projected transit demand during secondary events with attendance of 37,500 spectators. In addition, transit lines serving the area would experience additional delays due to traffic generated by the secondary event.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI
Weekday evening events at the arena would exacerbate congestion at intersections, freeway mainline, and freeway ramps already operating at unacceptable LOS under Variant conditions without an arena event, and result in significant traffic impacts at Harney Way and Jamestown Avenue, which was operating acceptably under Variant conditions without an arena event. Mitigation measure MM TR-51 would reduce but not avoid impacts.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU
Sell-out weekday evening events at the arena would be accommodated within the existing and proposed transit service. However, traffic congestion would impact transit operations. Implementation of mitigation measure MM TR-23.1 would reduce impacts to less than significant. Due to the uncertainty of this mitigation the impact would remain significant.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
AIR QUALITY					
Operation of the 49ers/Shared Stadium Variant would violate BAAQMD CEQA significance thresholds for mass criteria pollutant emissions from mobile and area sources and contribute substantially to an existing or projected air quality violation at full build-out in the year 2029.					
Significance of Alternative Compared to Variant	<	<	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
NOISE					
Construction of the 49ers/Shared Stadium Variant would create excessive groundborne vibration levels in existing residential neighborhoods adjacent to the Project site and at proposed on-site residential uses should the latter be occupied before construction activity on adjacent parcels is complete. Although the construction vibration impacts would be temporary, would not occur during recognized sleep hours, and would be consistent with the requirements for construction activities that exist in Sections 2907 and 2908 of the <i>Municipal Code</i> , vibration levels would still be significant.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/SU	SU/SU	SU/SU	SU/SU	SU/SU
Construction activities associated with the 49ers/Shared Stadium Variant would result in a substantial temporary or periodic increase in ambient noise levels.					
Significance of Alternative Compared to Variant	<	=	<	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Operation of the 49ers/Raiders Shared Stadium Variant would generate increased local traffic volumes that would cause a substantial permanent increase in ambient noise levels in existing residential areas along the major Project site access routes.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/LTS	SU/SU	SU/SU	SU/SU	SU/SU
Noise during football games and concerts at the proposed stadium would result in temporary increases in ambient noise levels that would adversely affect surrounding residents for the duration of a game or concert.					
Significance of Alternative Compared to Variant	<	=	<	<	<
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/NI	SU/NI	SU/NI

CULTURAL RESOURCES

The 49ers/Raiders Shared Stadium Variant would result in a substantial adverse change in the significance of a historical resource. Implementation of mitigation measure MM CP-3b would reduce the impact, but not to a less-than-significant level. The impact would be significant and unavoidable.

Significance of Alternative Compared to Variant	<	=	=	<	=
Level of Significance after Mitigation (Variant/Alternative)	SU/NI	SU/SU	SU/SU	SU/LTS	SU/SU

Table VI-17 Comparison of the Significant and Unavoidable Impacts of Variant 5: 49ers/Raiders Shared Stadium to Each of the Alternatives

	<i>Alternative 1 No Project^a</i>	<i>Alternative 2 No Bridge Alt^b</i>	<i>Alternative 3 49ers at Candlestick^c</i>	<i>Alternative 4 Lesser Build^d</i>	<i>Alternative 5 No Park Agreement^e</i>
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< Alternative does lessen the severity of the impact

> Alternative increases the severity of the impact

= Alternative impact is similar to the Project impact

NI = No Impact

LTS = Less-Than-Significant impact

SU = Significant and Unavoidable Impact

a. No Project

b. CP-HPS Phase II Development Plan, HPS Phase II Stadium, State Parks Agreement, and without the Yosemite Slough Bridge

c. Reduced CP-HPS Phase II Development, San Francisco 49ers Stay at Existing Candlestick Park Stadium, with Limited State Parks Agreement, and Yosemite Slough Bridge Serving Only Transit, Bicycles, and Pedestrians

d. Reduced CP-HPS Phase II Development, HPS Phase II Stadium, no State Parks Agreement, and without the Yosemite Slough Bridge

e. Reduced CP-HPS Phase II Development, No HPS Phase II Stadium, No State Parks Agreement, and without the Yosemite Slough Bridge