Responses to Comments on the
Draft Subsequent Environmental Impact Report

EVENT CENTER AND MIXED-USE DEVELOPMENT AT MISSION BAY BLOCKS 29-32

Office of Community Investment and Infrastructure Case No. ER 2014-919-97
San Francisco Planning Department Case No. 2014.1441E
State Clearinghouse No. 2014112045

Draft SEIR Publication Date: June 5, 2015
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CHAPTER 13 (continued)

Responses to Comments

13.12 Noise and Vibration

13.12.1 Overview of Comments on Noise and Vibration

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.3, Noise and Vibration. These include topics related to:

- NOI-1: Sensitive Receptors
- NOI-2: Noise Significance Thresholds
  - NOI-2a: Construction Noise Thresholds
  - NOI-2b: Operational Noise Thresholds
- NOI-3: Methodology / Approach to Analysis
  - NOI-3a: Noise Impact Methodology
  - NOI-3b: Vibration Impact Methodology
- NOI-4: Construction Noise Impacts
- NOI-5: Vibration Impacts
- NOI-6: Crowd Noise

13.12.2 Sensitive Receptors (NOI-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-19

"Tables 5.3-2 and 5.3-4, the distance from the "project site" to the UCSF Medical Center at Mission Bay is listed as 560 feet, without any explanation of measuring points. Elsewhere in the DEIR it is listed as 300 feet. This distance needs to be confirmed because at page 5.3-14, summarizing Article 1, Section 47.2 of the San Francisco Police Code, the DEIR states that "except as permitted by the Entertainment Commission, [amplified] sound shall not be issued within 450 feet of hospitals." As GSW proposes noise sources and noise generating events in the outdoor plaza areas as well as within the Event Center, the Final EIR should be specific and consistent about the locations from which distances were measured and what those distances are." (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-19]*)

Response NOI-1: Sensitive Receptors

The correct distance between the project site and the nearest hospital is 560 feet, as set forth in Table 5.3-4 on page 5.3-9 of the Draft SEIR. This distance was measured using the Google Earth ruler tool and is the diagonal distance from the southwesternmost corner of the project site at the setback of the proposed 16th Street tower to the northeast corner of the building housing the

Betty Irene Moore Women's Hospital and Bakar Cancer Hospital. The distance between the Betty Irene Moore Women's Hospital and Bakar Cancer Hospital and the proposed Third Street Plaza where outdoor amplified sound is proposed is approximately 750 feet.

The 300-foot distance presented in Table 5.4-5 on page 5.4-17 of the Draft SEIR, incorrectly identified the distance between the project site and the energy center adjacent to the hospital. Consequently, Table 5.4-5 (p. 5.4-17) is revised as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

TABLE 5.4-5
SENSITIVE RECEPTORS IN THE PROJECT SITE VICINITY

Receptor Type	Distance and Direction from the Project Site
Residential: UCSF Mission Bay Housing (Hearst Tower), Block 22	200 feet northwest
Residential: Madrone Mission Bay Residential Towers	800 feet to the north, on Mission Bay Boulevard North
Hospital: UCSF Benioff Children's Hospital facility at Mission Bay, plus the UCSF Betty Irene Moore Women's Hospital and the UCSF Bakar Cancer Hospital	~~300~~560 feet southwest

SOURCE: Environmental Science Associates, 2015

This revision does not change the analysis or conclusions presented in the Draft SEIR.

13.12.3 Noise Significance Thresholds (NOI-2)

Issues Raised by Commenters: Construction Noise Thresholds (NOI-2a)

This response addresses all or part of the following comments, which are quoted below:

O-MBA9L3-2 O-MBA9L3-7

"I. The DSEIR Is Not Sufficient as an Informational Document with Respect to Noise Impacts.

"A fundamental defect in the DSEIR's analysis of noise impacts is its use of thresholds of significance that do not actually measure the impacts that matter. This is readily demonstrated by comparing the two impacts that relate to the consistency of the Project with governing noise standards or plans (i.e., Impacts NO-2 (construction) and NO-4 (operations)) with the two impacts that relate to how noise affects people (i.e., Impacts NO-1 (construction) and NO-5 (operations)). Even in its discussion of the impacts that affect people, the DSEIR uses thresholds of significance that conflate compliance with non-CEQA regulatory programs with less-than-significant impacts under CEQA. This is error.

"The DSEIR uses several general thresholds of significance for noise impacts:

- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

(DSEIR, p. 5.3-16.)

"Impact NO-1 is described as "Construction of the proposed project would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)." (DSEIR 5.3-20.) For construction impacts, the DSEIR uses several more specific thresholds of significance, including:

- Non-impact equipment. The impact is considered less than significant as long as construction noise from non-impact equipment is less than 80dba at 100 feet from the noise generating equipment.1
- Impact equipment. The impact is considered less than significant as long as the 1-hour Leq is less than 90 dBA for daytime and 80 dBA for nighttime construction noise exposure at residential uses, and 100 dBA for commercial and industrial uses.2

"The DSEIR then rigidly adheres to the regulatory scheme of the San Francisco Noise Ordinance in assessing the significance of noise from non-impact equipment, erroneously assuming the noise ordinance's regulatory scheme provides an appropriate threshold for determining whether impacts are significant under CEQA. Subdivision (d) of section 2909 of the San Francisco Noise Ordinance establishes thresholds for determining significance of noise impacts on nearby residents of 45 dBA nightime/55 dBA daytime noise, stating:

> Fixed Residential Interior Noise Limits. In order to prevent sleep disturbance, protect public health and prevent the acoustical environment from progressive deterioration due to the increasing use and influence of mechanical equipment, no fixed noise source may cause the noise level measured inside any sleeping or living room in any dwelling unit located on residential property to exceed 45 dBA between the hours of 10:00 p.m. to 7:00 a.m. or 55 dBA between the hours of 7:00 a.m. to 10:00p.m. with windows open except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

"These standards (i.e., 45 dBA nightime/55 dBA daytime noise) are based on the actual health and welfare of people. But the DSEIR does not use them for construction noise or operational traffic or crowd noise because this provision of the City's noise ordinance only applies to fixed noise sources. The DSEIR thus conflates compliance with the noise ordinance for less-than-significant impacts under CEQA.

"The EIR's assumption in this regard violates CEQA, because compliance with regulatory standards cannot be used as a substitute for a fact-based analysis of whether an impact is significant. While San Francisco is free to adopt a noise ordinance that exempts specific noise sources from its regulatory effect, it is not free, under CEQA, to fail to disclose the significance of noise that exceeds these interior noise limits.[3]

"Because the DSEIR did not use the thresholds stated in section 2909(d), the noise impact assessment does not present relevant information that is necessary for determining whether the impact is significant. Instead, we have an impact assessment that is constrained by a series of arbitrary distinctions (i.e., the source fixed or not, the equipment impact or non-impact, the receptors are located in residences or hospitals) that have nothing to do with whether the affected community will suffer significant noise impacts.

"The DSEIR refers to the World Health Organization (WHO) as "perhaps the best source of current knowledge regarding the health effects of noise impacts because European nations have continued to study noise and its health effects, while the United States Environmental Protection Agency all but

eliminated its noise investigation and control program in the 1970s." (DSEIR, p. 5.3- 4.) The DSEIR also cites WHO's Guidelines for Community Noise and its thresholds for adverse effects of noise on people.

> In contrast to many other environmental problems, noise pollution continues to grow and it is accompanied by an increasing number of complaints from people exposed to the noise. The growth in noise pollution is unsustainable because it involves direct, as well as cumulative, adverse health effects.

(WHO, Guidelines for Community Noise, p. vii.)

> Specific effects to be considered when setting community noise guidelines include: interference with communication; noise-induced hearing loss; sleep disturbance effects; cardiovascular and psycho-physiological effects; performance reduction effects; annoyance responses; and effects on social behaviour.

(WHO, Guidelines for Community Noise, p. v.

> The scope of WHO's effort to derive guidelines for community noise is to consolidate actual scientific knowledge on the health impacts of community noise and to provide guidance to environmental health authorities and professionals trying to protect people from the harmful effects of noise in non-industrial environments.

(WHO, Guidelines for Community Noise, p. iii.)

> As discussed by Mr. Hubach:
>
> WHO's night-time standard for sleep disturbance inside bedrooms is 30 dBA, and outside bedrooms with "window open (outdoor values)" is 45 dBA. WHO's night-time and daytime standard for "speech intelligibility and moderate annoyance" for inside dwellings is 35 dBA. For outdoor living areas, WHO's daytime and evening standard for moderate annoyance is 50 dBA and for serious annoyance is 55 dBA.

"(Exhibit 1, p. 3.) Yet, despite citing the WHO Guidelines, the DSEIR fails to use these standards as its thresholds of significance, and finds that "ambient plus project" noise levels much higher than the WHO's standards for harmful noise are less than significant.

> Another human health and welfare based standard is provided by the State of California:
>
> State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in Title 24 of the California Code of Regulations
>
> The State of California updated its Building Code requirements with respect to sound transmission, effective January 2014. Section 1207 of the California Building Code (Title 24 of the California Code of Regulations) establishes material requirements in terms of sound transmission class (STC) 13 rating of 50 for all common interior walls and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public area. The previous code requirements (before 2014) set an interior performance standard of 45 dBA from exterior noise sources. This requirement will be re-instated in July of 2015.

Footnotes:

[1] DSEIR, p. 5.3-16 - 5.3-17 ["Proposed construction activities would be required to comply with the San Francisco Noise Ordinance and the Mission Bay Good Neighbor Construction Noise Policy. The San Francisco Noise Ordinance prohibits construction activities between 8:00 p.m. and 7:00 a.m. and limits noise from any individual piece of construction equipment, except impact tools approved by the Department of Public Works, to 80 dBA at 100 feet. The Mission Bay Good Neighbor Construction Noise Policy limits pile driving or other extreme noise generating activity (80 dBA at a distance of 100 feet) to 8:00 a.m. to 5:00 p.m., Monday through Friday. As long as project construction activities comply with the noise ordinance, construction noise impacts from non-impact equipment would be considered less than significant. If construction activities using non-impact equipment would exceed these standards and the restrictions of the Mission Bay Good Neighbor Policy, then the noise effects would be potentially significant and mitigation measures would be required."]

[2] DSEIR, p. 5.3-17 ["The San Francisco Noise Ordinance does not identify any quantitative noise limit standard for impact equipment. To assess the potential impacts related to rapid impact compaction, this analysis employs the general construction noise assessment methodology and criteria suggested by the Federal Transit Administration (FTA). This guidance identifies a 1-hour Leq of 90 dBA for daytime and 80 dBA for nighttime construction noise exposure at residential uses. Commercial and industrial land use exposure to construction noise of 100 dBA is suggested as an assessment criterion."]

[3] See, e.g., *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 16 (lead agencies must review the site-specific impacts of pesticide applications under their jurisdiction, because "DPR's [Department of Pesticide Regulation] registration does not and cannot account for specific uses of pesticides..., such as the specific chemicals used, their amounts and frequency of use, specific sensitive areas targeted for application, and the like"); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109 ["the fact that a particular environmental effect meets a particular threshold cannot be used as an automatic determinant that the effect is or is not significant ... a threshold of significance cannot be applied in a way that would foreclose the consideration of other substantial evidence tending to show the environmental effect to which the threshold relates might be significant"]; *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture* (1986) 187 Cal.App.3d 1575, 1587- 1588 (state agency applying pesticides cannot rely on pesticide registration status to avoid further environmental review under CEQA); *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882 (rejects contention that project noise level would be insignificant simply by being consistent with general plan standards for the zone in question). See also *City of Antioch v. City Council of the City of Pittsburg* (1986) 187 Cal.App.3d 1325, 1331-1332 (EIR required for construction of road and sewer lines even though these were shown on city general plan); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712-718 (agency erred by "wrongly assum[ing] that, simply because the smokestack emissions would comply with applicable regulations from other agencies regulating air quality, the overall project would not cause significant effects to air quality.").

(*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-2]*)

"The DSEIR omits important information about the environmental setting.

"For example, to judge the noise impact on residents of the Hearst Tower, it is important to know whether these residents typically open their window to get fresh air or, conversely, whether the building is subject to any requirements to keep windows closed. This is because closed windows provide significant sound transmission loss.

"It also important to know what kind of windows nearby buildings have, because standard windows provide much less sound transmission loss than acoustically-rated windows.

California State Building Code Section 1207 requires an interior performance standard of 45 dBA DNL. Given that windows in the Hearst Tower, and adjacent residences, are operable and ostensibly used for ventilation, achieving 45 dBA interior may be in jeopardy. It is unknown if the Hearst Tower has mechanical ventilation to allow the windows to be closed for noise control. Even if they do already have mechanical ventilation, their windows may not have sufficient sound transmission loss for the predicted increased noise levels.

"The Title 24 compliance for Hearst Towers may have permitted windows to be open and not have required mechanical ventilation systems. If that is the case, they would need to keep windows open for fresh air and then suffer the increased noise.

"I tried to find out if there is a ventilation system mandated by code for Hearst Tower. This is Section 1207.11 of the California State Building Code, which says in noisy settings, windows must be closed to achieve the state's 45 dB interior standard, in which case a mechanical ventilation system must be installed. I searched for an acoustical report typically filed with Planning and/or Department of Building Inspection (DBI) to see what original design requirement were in place. I visited DBI and spoke with Dwayne Farrell who said they had no record of Hearst Tower at 1560 3rd St, and only a crane permit for the parking garage on the opposite corner. He suggested I visit the inspectors and planners in the building to see if they could find a permit number or block and lot information. I did, to no avail. However, it was suggested that perhaps since it is a State building, the State Architect might have all records. So I contacted Luke Molinar, DSA, who did a records search but came up empty on this topic (See Attachment 1 [email exchange with Luke Molinar].)

"Nevertheless, I visited the Project site on 8 July 2015, to make visual and aural observations. I walked along 3rd St from South St to 16th St, and South St to Terry Francois Blvd. The predominant noise is due to traffic – largely Muni, trucks and the occasional motorcycle. It was noticeably quieter away from 3rd St approaching the waterfront to the east. I spent some time in the pedestrian mall along Gene Friend Way.

"I observed many of the windows in Hearst Tower and adjacent Mission Bay Housing were open.(See Attachment 2 [a photograph I took on 8 July 2015, showing part of the Mission Bay Housing building on the left and part of the Hearst Tower on the right], and Attachment 3 [a photograph I took on 8 July 2015, showing part of the Hearst Tower on the right].)

"Therefore, regardless of whether the buildings are required to keep windows closed. The residents are opening them, presumably for fresh air." (*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-7]*)

Response NOI-2a: Construction Noise Thresholds

These comments suggest that the analysis of construction noise in the SEIR inappropriately applies the significance thresholds for construction noise as codified in the San Francisco Noise Ordinance (Article 29 of the Police Code) and the Mission Bay Good Neighbor Construction Noise Policy. Instead, the comments suggest using a fixed residential interior noise standard set forth in Section 2909(d) the Noise Ordinance (45 dBA nighttime and 55 dBA daytime) as the significance threshold for assessing construction noise. The comments further state that the Draft SEIR should have used the World Health Organization standards as the significance thresholds for noise. Finally, the comments request information regarding the mechanical ventilation systems and windows at Hearst Tower.

The assessment of construction noise in the SEIR applies two different significance criteria as suggested in Appendix G of the CEQA Guidelines, Section XII. The first criterion that is applicable to construction activity addresses whether the proposed project would result in "exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies standard." This criterion specifies an assessment relative to an adopted noise ordinance or other standards. The CEQA guidance recognizes that no one noise level fits all settings and communities. Thus a community standard of an acceptable noise level is built into local noise controls. The City's Noise Ordinance (Article 29 of the Police Code) identifies specific compliance standards for construction activity and equipment, and therefore, the analysis of construction noise impacts properly addresses the project's noise impacts as compared to the local Noise Ordinance standards (see Impact NO-2 on page 5.3-24 of the SEIR). Consequently, consistent with CEQA Guidelines, Appendix G, it is these construction-specific standards of the local noise ordinance that are applied in the construction noise analysis and not the standards applicable to fixed noise sources. Thresholds for fixed noise sources are designed to establish not-to–exceed standards for noise sources such as building mechanical equipment and industrial or commercial processing machinery; fixed noise thresholds are not appropriate for measuring and analyzing construction noise. Similarly, the interior noise levels suggested by the World Health Organization, which have been developed as guidance for interior standards for new residential development, would be inappropriate for analyzing construction noise. Substantial evidence supports the thresholds identified in the SEIR. The Police Code standards relied upon in the analysis are described in the SEIR at page 5.3-13. The standards both

restrict the hours during which noise-generating construction activities can occur, and establish limits on the amount of noise that can be generated at a distance of 100 feet from the equipment. (See San Francisco Police Code, §§ 2907, 2908.)

OCII has determined that, as long as project construction activities comply with the Noise Ordinance, construction noise impacts from non-impact equipment would be considered less than significant. This reflects the recognition that construction-related noise is temporary in character, is generally acceptable when limited to daylight hours, and is part of what residents of urban areas expect as part of a typical urban noise environment (along with sirens, vehicles, etc.). Contrary to suggestions made by the commenter, both the temporary nature of these construction noise impacts and the fact that they will occur during times when urban residents expect ambient noise levels to be at their highest are legitimate reasons to conclude impacts are less than significant.

The second criterion suggested in Appendix G of the CEQA Guidelines that is applicable to construction activity addresses whether the proposed project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. This potential impact is addressed in Impact NO-1 (SEIR pp. 5.3-20 to 5.3-23). Here CEQA indicates that the appropriate threshold to be applied could be an increase over existing ambient noise levels without the project but leaves the determination of the quantitative threshold to be applied at the discretion of the lead agency. For this project, as discussed on pages 5.3-17 and 5.3-18, the SEIR applies a threshold of a 10 dBA increase over the existing noise levels, which represents a perceived doubling of loudness as the threshold representing a substantial temporary increase in noise levels warranting implementation of construction noise control measures. A more liberal threshold was developed to be applied to construction impacts given that construction is an inherently noisy activity and application of a lesser threshold, such as the 5 dBA increase applied to operational impacts which denotes a readily perceptible increase, would be exceeded by the most routine construction activity and is therefore not considered to be a realistically applicable criterion for construction. Additionally, a 10 dBA increase threshold is codified in Section 2909 (c) of the Police Code as a noise limit for noise affecting public property. This increase is an appropriate threshold for construction activity as it reflects OCII's understanding that allowable increases in noise levels can be dependent on a number of factors, including source and the duration of the noise and the receiver of the noise.

As stated on page 5.3-20 of the SEIR, piles would be cast in place into augured holes and would not require use of an impact or vibratory pile driver. Consequently, there would be no noise impacts from pile driving associated with the proposed project. And as described in Chapter 12, Project Refinements and New Variant, rapid impact compaction is no longer a proposed method of construction. Thus, the construction noise caused by the project would be limited to noise from equipment such as bulldozers, cranes, concrete saws, and other mobile and stationary construction equipment as listed in SEIR Table 5.3-5 (p. 5.3-17). The temporary noise increase from construction would be less than 10 dBA over existing conditions, and would be less than significant. Construction noise would be temporary, and extreme noise-generating activities would only occur during daytime hours, 8:00 a.m. to 5:00 p.m., Monday to Friday, consistent

with the Mission Bay Good Neighbor Construction Noise Policy. The Police Code establishes limits on the hours during which noise-generating construction activities can occur, and establishes limits on the amount of noise that can be generated, as measured at a distance of 100 feet from the equipment. (See San Francisco Police Code, §§ 2907, 2908.) These standards apply to all construction sites, and do not vary depending on neighboring uses. These standards also focus on exterior noise levels. For these reasons, whether neighboring buildings have windows that are open or closed does not affect the analysis.

OCII acted within its discretion in relying on these standards to determine the significance of construction-related noise. "A threshold of significance is an identifiable, quantitative, qualitative, or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant." (CEQA Guidelines, § 15064.7 subd. (a).) The lead agency has substantial discretion in determining the appropriate threshold of significance to evaluate the severity of a particular impact. (See CEQA Guidelines, § 15064, subd. (b); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068 [explaining agency discretion to fashion significance thresholds of significance].) As explained in the CEQA Guidelines, "[t]he determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area." (CEQA Guidelines, § 15064, subd. (b).). This discretion extends to the lead agency's determination regarding what threshold to use to determine whether construction noise is significant. (*Sierra Club v. Tahoe Regional Planning Agency* (E. D. Cal. 2013) 916 F.Supp.2d 1098, 1146-1151 [significance threshold limited hours during which construction could occur, but did not otherwise impose limit on construction noise; county's approach was consistent with noise ordinance and therefore upheld]; see *Mount Shasta Bioregional Ecology Center v. County of Siskiyou* (2012) 210 Cal.App.4th 184, 204-207 [upholding analysis of increased noise generated by project based on significance thresholds adapted from other agencies]; *National Parks & Conserv. Assn. v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1353 [upholding EIR's use of county noise standards for assessing significance of project's noise impacts].)

Ordinances, plans, policies, and regulations adopted by a lead agency, or adapted from those of another agency with expertise over the resource at issue, can serve as the basis for setting thresholds of significance. (See *North Coast Rivers Alliance v. Marin Mun. Water Dist.* (2013) 216 Cal.App.4th 614, 651 [upholding analysis of greenhouse gas emission based on consistency with county's emissions reduction goals]; *National Parks & Conserv. Assn. v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1353 [upholding EIR's use of county noise standards for assessing significance of project's noise impacts]; *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 492-493 [upholding thresholds of significance for aesthetic impacts derived from city's local coastal program policies].) CEQA case law also endorses the use of existing environmental standards or regulations as thresholds of significance. (See *Tracy First v. City of Tracy* (2009) Cal.App.4th 912 [upholding determination that energy impact of project was less

than significant because the project achieved energy efficiencies greater than those required by California Energy Efficiency Standards]; *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 47 [upholding finding that incremental impacts of criteria pollutants on sensitive crops would be less than significant based on National Ambient Air Quality Standards promulgated to protect public health and welfare from adverse effects of a pollutant]; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1107 ["thresholds can be drawn from existing environmental standards, such as other statutes or regulations"]; *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899 [upholding use of thresholds of significance recommended by SCAQMD to assess air quality impacts]; *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 896 [agency has discretion to rely on adopted standards to serve as significance thresholds for a particular project].)

Where an agency's significance thresholds are challenged by a project opponent, the standard of review for a court reviewing the selected threshold is the "substantial evidence" standard, meaning the court must give deference to the lead agency's decision to select particular significance thresholds, including the threshold for construction noise. (See *National Parks and Conservation Association v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1358 [court applies the substantial evidence test to review of an agency's decision to select particular thresholds for an EIR]; *Mount Shasta Bioregional Ecology Center v. County of Siskiyou* (2012) 210 Cal.App.4th 184, 204-207 [upholding operational noise analysis]; *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357, 371-374 [deferring to city's determination that noise analysis was performed in a manner consistent with general plan policy]; *Sierra Club v. Tahoe Regional Planning Agency* (E. D. Cal. 2013) 916 F.Supp.2d 1098, 1146-1151 [upholding agencies' application of significance threshold for construction noise].)

The SEIR does not rely solely on compliance with regulatory standards in the Police Code to determine whether noise impacts are considered significant., the analysis for construction-related noise impacts also discusses the Mission Bay Good Neighbor Policy. This policy is described at page 5.3-15 of the SEIR. This policy has the effect of imposing additional limits on the days and hours when noise-generating construction activities can occur. This policy applies to the project and would limit extreme noise-generating activity to 8:00 a.m. to 5:00 p.m., Monday through Friday and prohibit such activity on Saturdays, Sundays, and holidays. The SEIR also relies on the general construction noise assessment methodology and criteria recommended by the Federal Transit Administration (FTA). (See SEIR, p. 5.3-17.) This methodology is a quantitative construction noise assessment and is performed by comparing the predicted noise levels with impact criteria appropriate for the construction stage. The approach requires an appropriate descriptor, a standardized prediction method and a set of recognized criteria for assessing the impact. The *descriptor* used for construction noise is the Leq, which is appropriate because it can be used to describe the noise level from operation of each piece of equipment separately, it can be used to describe the noise level during an entire phase, and it can be used to describe the average noise over all phases of the construction.

In addition to OCII's criteria described above and the criteria recommended by FTA, the SEIR considers whether the project would result in a substantial temporary increase in noise levels in

the project vicinity above levels existing without the project. Persistent construction equipment noise related to an increase of 10 dBA over the existing noise levels would represent a perceived doubling of loudness and is considered a substantial temporary increase in noise levels warranting implementation of construction noise control measures and is also codified in Section 2909 (c) of the Police Code which applies to noise limits for public property. (See SEIR, pp. 5.3-17 to 5.3-18; 5.3-20 to 5.3-24.) In any event, as explained above, it is appropriate for the SEIR to rely on ordinances, policies, and other established standards to establish thresholds of significance for noise impacts.

The comment cites a number of cases to support its view that compliance with regulatory standards cannot be relied upon to determine whether an impact is significant under CEQA. Specifically:

- In *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 16-17, the project involved a state-wide plan to apply pesticides to control the spread of crop disease. The EIR stated the application of pesticides would not result in impacts because pesticides had to undergo a registration process in order to be licensed for use. The court held the EIR's approach was improper because the registration process was not designed to account for the environmental effects of state-wide use of the pesticides. Here, the EIR has not dismissed the project's construction noise impacts by virtue of some other regulatory program. Instead, the EIR discloses these impacts, and evaluates their significance using thresholds embodied in the City's Police Code and derived from FTA guidance.

- In *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture* (1986) 187 Cal.App.3d 1575, 1587-1588, the agency performed no CEQA review at all, but simply cited the previous registration of the pesticides proposed for use. That did not occur here; OCII has not cited the Police Code or the FTA guidance as a basis for foregoing analysis; rather, OCII used this guidance to determine whether the project's construction noise impacts would be significant.

- In *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109, the court stated that an agency cannot cite compliance with a regulatory standard as a conclusive determination that the impact at issue will not be significant; if the record contains evidence that an impact may be significant, despite compliance with that threshold. Here, however, the regulatory standard addresses directly the impact at issue, and OCII applied a quantitative threshold in addition to the regulatory threshold to determine significance.

- *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882 stands for the proposition that an agency has discretion to prepare an EIR, rather than a negative declaration, even if the project complies with applicable noise standards. Here, OCII has prepared an EIR.

- *City of Antioch v. City Council of the City of Pittsburg* (1986) 187 Cal.App.3d 1325, 1331-1332 held the agency had to prepare an EIR, even though the road and infrastructure was already shown on the city's general plan. Here, OCII has not taken the position that, because the project is consistent with the Mission Bay Plan, no analysis is required.

- In *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712-718, the agency erred by applying air district permitting rules as significance thresholds to the entire project, including those sources of pollutants that were not subject to these rules; the error, therefore, was in considering only part of the agency's emissions, and measuring them against an inapplicable standard. These factors are not present here.

OCII therefore concludes that it has acted within its discretion in relying on Appendix G of the CEQA Guidelines, as well as the Police Code, the Mission Bay Good Neighbor Policy, and FTA Guidance, to determine standards of significance for purposes of construction noise.

The comment suggests different thresholds of significance that, in the commenter's view, should have been used to assess the severity of construction noise impacts (e.g., World Health Organization standards). The commenter's disagreement over the methodology used in the SEIR is noted. However a lead agency is vested with discretion to choose the proper significance threshold and does not violate CEQA when it chooses to reject different thresholds proposed by a project opponent. (See *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal.App.4th 327, 335-336 ("*CREED*") [rejecting petitioners' argument that the City erred by not applying a different significance threshold]; C*alifornia Oak Foundation v. Regents of University of California* (2010) 188 Cal. App. 4th 227, 282 [rejecting petitioner's argument that a lead agency used the incorrect significance threshold in evaluating the biological significance of tree impacts]; *National Parks & Conservation Assn. v. County of Riverside* (1999) 71 Cal. App. 4th 1341, 1356-1357 [upholding a biological significance threshold used by Riverside County as supported by substantial evidence].)

With regard to the windows and building design of the Hearst tower residential units, as stated in UCSF's Long Range Development Plan EIR published in 2014, UCSF is not subject to local plans, policies, or ordinances whenever using land under its control in furtherance of its educational mission. However, it is UCSF policy to be consistent with such plans, policies or ordinances to the extent feasible. Consequently, it was entirely UCSF's discretion as to what building standards to apply to its residential hall. If windows are operable, it allows occupants the individual choice to control interior noise levels as they could be affected by existing roadway traffic on Third Street or nearby construction noise, whether it is from UCSF projects, other construction projects in Mission Bay, or the proposed project.

Issues Raised by Commenters: Operational Noise Thresholds (NOI-2b)

This response addresses all or part of the following comments, which are quoted below:

O-MBA9L3-4 O-MBA9L3-8

"For operational traffic noise, the DSEIR states:

> Traffic noise level significance is determined by comparing the increase in noise levels (traffic contribution only) to increments recognized by Caltrans as representing a perceptible increase in noise levels. Additionally, it is widely accepted methodology by both FTA18 and the Federal Interagency Committee on Noise (FICON)19 that thresholds should be more stringent for

> environments that are already noise impacted. Consequently, for noise environments where the ambient noise level is 65 dBA DNL or less, the significance threshold applied is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. In noise environments where the ambient noise level exceeds 65 dBA DNL, the significance threshold applied is an increase of 3 dBA or more, which Caltrans recognizes as a barely perceptible increase.

(DSEIR, p. 5.3-19.)

> Operational noise from non-transportation sources such as egress of patrons from events or sound amplification equipment in common areas are assessed based on noise increases of 8 dBA (for noise generated by commercial uses) over existing ambient (L90) levels and any applicable restrictions of the City's noise ordinance and Police Code. Although these operational noise increases would be of limited duration, they would be expected to occur throughout the life of the project and are therefore considered permanent changes in noise conditions.

(DSEIR, p. 5.3-19.)

> As described by Mr. Hubach, for operational noise impacts (Impact NO-5), the DSEIR uses a series of "ambient plus increment" thresholds. As discussed by Mr. Hubach, using "ambient plus increment" thresholds where existing noise levels are already high:
>
> > disregards the fact the Project will make severe conditions worse. In addition, using these "ambient plus increment" thresholds for operational noise results in an unsustainable gradual increase in ambient noise. It is a formula for ever-increasing noise levels because each new project establishes a new, higher, baseline; then when the next project is approved, the incremental change will be added to the new baseline.

(Exhibit 1, p. 5.)

"By ignoring the severity of existing noise levels and only looking to the "de minimis" nature of the Project's incremental effect, the DSEIR's noise impact determinations violate CEQA. (See *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120 ("*CBE*") ["[T]he relevant question"... is not how the effect of the project at issue compares to the preexisting cumulative effect, but whether "any additional amount" of effect should be considered significant in the context of the existing cumulative effect. [footnote omitted] In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant. [footnote omitted]"].)[4] *Communities* and *Kings County* teach that the significance of a cumulative impact depends on the environmental setting in which it occurs, especially the severity of existing environmental harm.

Footnote:

[4] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720-21 ["They contend in assessing significance the EIR focuses upon the ratio between the project's impacts and the overall problem, contrary to the intent of CEQA.... We find the analysis used in the EIR and urged by GWF avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under GWF's 'ratio' theory, the greater the overall problem, the less significance a project has in a cumulative impacts analysis. We conclude the standard for a cumulative impacts analysis is defined by the use of the term 'collectively significant' in Guidelines section 15355 and the analysis must assess the collective or combined effect of energy development"].)

(*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-4]*)

"For Impact NO-1 and Impact NO-5, the DSEIR uses a threshold of significance of the "ambient plus increment" type. For Impact No-1, the "ambient plus increment" threshold of significance is whether the "the increase in noise levels over existing conditions would be less than 10 dBA." (DSEIR, p. 5.3-23.)

"This type of threshold discounts the significance or severity of pre-existing noise levels and treats them as if they are irrelevant to whether the incremental change caused by the Project is "significant." The DSEIR finds that "Peak cumulative construction activities would occur during a 3-month period in 2015–

2016 and during this time, the increase in noise levels over existing conditions would be less than 10 dBA (without mitigation). All other periods of construction would similarly be under 10 dBA. Therefore, this impact would be less than significant." (DSEIR, p. 5.3-23.)

"This conclusion is based on Table 5.3-8, which shows that all three receptors chosen for analysis have pre-existing ambient noise levels that are very loud already (i.e., Madrone Residential Tower is at 70.1 dBA (hourly Leq), Hearst Residential Tower is at 71.2 dBA (hourly Leq), and UCSF Hospital is at 67 dBA (hourly Leq).

"As a point of reference for these noise levels, the World Health Organization's (WHO) standards for harmful noise are much lower than these pre-existing noise levels. WHO's night-time standard for sleep disturbance inside bedrooms is 30 dBA, and outside bedrooms with "window open (outdoor values)" is 45 dBA. WHO's night-time and daytime standard for "speech intelligibility and moderate annoyance" for inside dwellings is 35 dBA. For outdoor living areas, WHO's daytime and evening standard for moderate annoyance is 50 dBA and for serious annoyance is 55 dBA.

"Another point of reference for the pre-exiting noise levels at the three "sensitive receptor locations" selected by the DSEIR is the San Francisco Noise Ordinance. As the DSEIR describes it, section 2909(d) provides "maximum noise levels at any sleeping or living room in any dwelling unit located on residential property must not exceed 45 dBA between 10:00 p.m. and 7:00 a.m., and 50 dBA between 7:00 a.m. and 10:00 p.m" where source of the noise is "fixed sources of noise, such as building mechanical equipment and industrial or commercial processing machinery." (DSEIR, pp. 5.3-13, 14.)

"The DSEIR does not use the WHO standards at all. With respect to the San Francisco Noise Ordinance, the DSEIR does not use the 45 dBA between 10:00 p.m. and 7:00 a.m., and 50 dBA between 7:00 a.m. and 10:00 p.m standard for any aspect of the Project's noise except the fixed machinery (e.g. generators) because the noise ordinance does not use this standard to regulate the Project's noise from construction equipment or operational noise from increased traffic, crowds, concerts, etc.[1]

"This approach may be useful to the City for Impacts NO-2 and NO-4, which assess the Project's consistency with other applicable plans and laws, but it does not makes sense for assessing the construction or operational impacts of the Project on actual people.

"Table 5.3-8 shows that all three receptors chosen for analysis will add construction noise to pre-existing ambient noise levels that already exceed the health and welfare based standards discussed above. As a result of construction operations (assuming all noise producing construction operations occur at the same time, noise levels at the Madrone Residential Tower will rise from 70.1 to 70.9 dBA (hourly Leq), at the Hearst Residential Tower from 71.2 to 80.8 dBA (hourly Leq), and at UCSF Hospital from 67 to 72.8 dBA (hourly Leq).

"The DSEIR's use of compliance with the San Francisco Noise Ordinance as a threshold for judging the significance of the Project's construction noise impacts (see DSEIR p. 5.3-17) appears to reflect a policy decision, because it is not based on science.

"The same is true of the DSEIR's use, for operational noise impacts, of a threshold of 8 dBA or 8 dBC above ambient noise, based on the San Francisco Noise Ordinance. (DSEIR, p. 5.3-13). The same is true of the DSEIR's use, for mobile sources of operational noise impacts, of "ambient plus increment" thresholds of significance:

> "Traffic noise level significance is determined by comparing the increase in noise levels (traffic contribution only) to increments recognized by Caltrans as representing a perceptible increase in noise levels. Additionally, it is widely accepted methodology by both FTA18 and the Federal Interagency Committee on Noise (FICON)19 that thresholds should be more stringent for environments that are already noise impacted. Consequently, for noise environments where the ambient noise level is 65 dBA DNL or less, the significance threshold applied is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. In noise environments where the ambient noise level exceeds 65 dBA DNL, the significance threshold applied is an increase of 3 dBA or more, which Caltrans recognizes as a barely perceptible increase."

(DSEIR, p. 5.3-17).

> "Consequently, for noise environments where the ambient noise level is 65 dBA DNL or less, the significance threshold applied is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. In noise environments where the ambient noise level exceeds 65 dBA DNL, the significance threshold applied is an increase of 3 dBA or more, which Caltrans recognizes as a barely perceptible increase."

(DSEIR, p 5.3-19)

"Using these "ambient plus increment" thresholds where existing noise levels are already too high, as shown in Tables 5.3-9 and 5.3-10 (DSEIR, pp. 5.3-34, 36), disregards the fact that the Project will make already severe conditions worse. In addition, using these "ambient plus increment" thresholds for operational noise results in an unsustainable gradual increase in ambient noise. It is a formula for ever-increasing noise levels because each new project establishes a new, higher, baseline; then when the next project is approved, the incremental change will be added to the new baseline.

"Therefore, the operational impact assessment needs to be redone using valid, science-based thresholds that relate to actual human health and welfare effects of noise.

"In my opinion, is the Project will cause a significant increase in Impact NO-1 and Impact NO-5 above levels existing without the project.

Footnote:

[1] The DSEIR states that: "The HUD regulations also include a goal (not a standard) that interior noise levels not exceed 45 dB DNL" (DSEIR, p. 5.3-9.) But HUD's goal of 45 DNL interior, is 10 dB greater than the 35 dB Leq level the DSEIR cites as a threshold for sleep disturbance (see DSEIR, 5.3-2), and 15 dB greater than the 30 dB Leq guideline given by WHO. noise, when added to background or ambient noise, exceeds these health and welfare based standards, the impact is significant even if the impact does not violate the San Francisco Police Code standard.

(*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-8]*)

Response NOI-2b: Operational Noise Thresholds

These comments suggest that use of an ambient-plus-project increment significance threshold for operational traffic noise and operational noise from non-transportation sources is not appropriate because it will result in an unsustainable gradual increase in ambient noise. Commenter also suggests the World Health Organization (WHO) standards should be used as significance thresholds for project related noise, and states that the Noise Ordinance is an improper threshold for assessing construction noise impacts.

The commenter disagrees with the thresholds used to assess the construction noise impacts (Impact NO-1) and operational noise impacts from mobile sources (Impact NO-5). According to the commenter, these thresholds disregard the fact that the project will make already severe cumulative noise conditions worse. The commenter cites case law addressing CEQA's requirements for conducting cumulative analyses. Notably, however, Impacts NO-1 and NO-5 relate to project-level impacts, not cumulative impacts. Cumulative construction noise is analyzed in Impact C-NO-1 on page 5.3-39 to 5.3-41 of the SEIR, which concludes that "even though construction noise generated by the proposed project alone would not result in a significant noise impact, the proposed project's contribution to the cumulative noise impact from overlapping construction activities in the immediate project vicinity could be cumulatively considerable," however implementation of mitigation would reduce the project's contribution to cumulative construction noise impacts to a less than significant level. Cumulative operational noise from mobile sources is analyzed in

Impact C-NO-2, which concludes that operational noise impacts (primarily from increased traffic) would be less than significant along Third Street but would be significant and unavoidable along Illinois Street and along Mariposa Street during Saturday basketball events. In cases where a project's significant effects cannot be mitigated or avoided, an agency, after adopting proper findings, may nevertheless approve the project if it first adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the "benefits of the project outweigh the significant effects on the environment." (Public Resources Code, Section 21081, sub. (b); *see also,* CEQA Guidelines, Sections 15093, 15043, sub.(b).) The determination regarding whether to adopt a statement of overriding considerations will be made by the decision-makers.

The above notwithstanding, existing-plus-project increment thresholds are appropriate to assess operational noise under CEQA in the Mission Bay Plan area for two reasons. The first reason is that CEQA Guidelines Appendix G identifies a noise impact criterion to address whether the proposed project would result in "exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies standard." As stated on page 5.3-13 of the SEIR, the noise ordinance limits for commercial and industrial properties (Section 2909(b)) provide that "no person shall produce or allow to be produced, a noise level more than 8 dBA above the local ambient level at the property plane." Consequently, the SEIR must consider operational noise impacts of commercial properties in terms of increased noise levels over existing ambient noise levels.

The second reason existing-plus-project increment thresholds are appropriate to assess operational noise under CEQA is because Appendix G of the CEQA Guidelines inquires whether the proposed project would result in a "substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project." Here CEQA suggests that an appropriate threshold to apply is an increase over existing ambient noise levels without the project but leaves the determination of the quantitative threshold to be applied at the discretion of the lead agency.

With regard to the potential for cumulative projects to successively increase ambient noise levels, this potential impact is assessed on pages 5.3-42 and 5.3-43 of the SEIR. Noise levels in the project area are predominantly the result of transportation sources. The assessment of cumulative traffic noise presented in Table 5.3-11 compares traffic noise generated by the project in addition to future traffic volumes generated by foreseeable development in the project vicinity to the existing ambient noise levels. If a significant cumulative noise level increase is predicted, an assessment is made to determine whether the project contribution is cumulatively considerable. As identified in Table 5.3-11, receptors along two roadways would experience cumulative roadway noise impacts resulting in a significant and unavoidable cumulative noise impact.

The comment states that for operational noise impacts (Impact NO-5), the SEIR improperly ignores the severity of existing noise levels by looking only at the project's incremental effect. This comment is incorrect. The SEIR assesses both project-level and cumulative noise impact analyses.

For the project level analysis, the SEIR describes existing noise levels in the area and explains the increase in noise levels that would be attributable to project-related activities. The SEIR then analyzes whether the increase in noise would be considered significant based on the described thresholds of significance. For example, regarding vehicular traffic noise, the SEIR explains that for noise environments where the ambient noise level is 65 dBA DNL or less, the applicable significance threshold is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. In noise environments where the ambient noise level exceeds 65 dBA DNL, the applicable significance threshold is an increase of 3 dBA or more, which Caltrans recognizes as a barely perceptible increase (SEIR, p. 5.3-32.). The SEIR then describes the potential for vehicular traffic noise to exceed these thresholds (SEIR, pp. 5.3-32 to 5.3-36). This analysis fulfills the requirements of CEQA. (*Mount Shasta Bioregional Ecology Center v. County of Siskiyou*, *supra*, 210 Cal.App.4th at pp. 210-216 [upholding analysis of cumulative noise impacts].) Furthermore, the SEIR discussion of Impact NO-5 does not mask potential significant noise impacts, as the comment suggests. Rather, the SEIR describes potential impacts in detail and acknowledges that noise levels generated by crowds and increases in roadway traffic noise would be significant and unavoidable even with implementation of the identified mitigation measures (SEIR, pp. 5.3-32 to 5.3-39).

The cumulative noise impact is addressed in Impact C-NO-2 on page 5.3-42 of the SEIR. Here, vehicular traffic noise is assessed from traffic data that include not only existing traffic volumes and those of the proposed project but also cumulative traffic increases as calculated by the transportation analysis. The cumulative transportation analysis was based on cumulative development and growth identified by the San Francisco County Transportation Authority SF-CHAMP travel demand model (see SEIR pp. 5.2-108 to 5.2-111), which includes, among other assumptions, the following developments described in Section 5.1.5 of the SEIR.

- University of California at San Francisco (UCSF), 2014 Long Range Development Plan (LRDP), Mission Bay Campus
- Eastern Neighborhoods Area Plans
- Seawall Lot 337 and Pier 48 Mixed-Use Project (Mission Rock Project)
- Pier 70 Mixed-Use Development

Roadway noise increases under the cumulative-with-project scenario were compared to existing roadway noise levels, and in this way, the noise impact analysis of the SEIR contained a conservative estimate of both project-level and cumulative noise impacts.

Please see Response NOI-2a above regarding the lead agency's ability to (1) select its own significance thresholds rather than the WHO standards suggested by commenter and (2) rely upon the Noise Ordinance as a significance threshold.

13.12.4 Methodology / Approach to Analysis (NOI-3)

Issues Raised by Commenters: Noise Impact Methodology (NOI-3a)

This response addresses all or part of the following comments, which are quoted below:

O-MBA9L3-6

"1. Does the DSEIR use a reliable methodology to determine the significance of Impact NO-1 and Impact NO-5.

"Impact NO-1 is "Construction of the proposed project would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)." (DSEIR, pp. 5.3-20 to 5.3-23.)

"Impact NO-5 is "Operation of the proposed project would cause a substantial permanent increase in ambient noise levels in the project vicinity. (Significant and Unavoidable with Mitigation)." (DSEIR, pp. 5.3-32 to 5.3-39.)

"In my opinion the DSEIR does not use a reliable methodology to determine whether Impact NO-1 or NO-5 is significant." (*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-6]*)

Response NOI-3a: Noise Impact Methodology

The methodologies for assessment of Impact NO-1 is discussed on pages 5.3-16 through 5.3-19 of the SEIR and are based on both (1) assessing consistency with the City's noise ordinance, and (2) adhering to limits on the absolute increase in construction noise over ambient levels, consistent with CEQA Guidelines Appendix G. OCII disagrees with the commenter's assertion that these are not reliable methodologies. .

Overall increases in construction noise were assessed using modeling techniques of the FHWA Road Construction Noise Model. Separate modeling runs were performed for each construction phase for multiple pieces of equipment associated with each phase, as provided by the project sponsor's contractor. Cumulative construction noise levels were then calculated for periods where one or more phases would overlap and are presented on Table 5.2-8 on page 5.3-23 of the SEIR.

The methodologies for assessment of Impact NO-5 are discussed on pages 5.3-16 through 5.3-19 of the SEIR. Traffic noise modeling was completed using the Federal Highway Administration Traffic Noise Model. Traffic noise level impact significance was determined by comparing the increase in noise levels (traffic contribution only) to increments recognized by Caltrans[1] as representing a perceptible increase in noise levels. Additionally, the analysis applied a widely

[1] Caltrans, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, p. 2-44.

accepted methodology used by both FTA[2] and the Federal Interagency Committee on Noise (FICON)[3] that thresholds should be more stringent for environments that are already noise impacted. Consequently, a more stringent significance threshold of 3 dBA, which Caltrans recognizes as a barely perceptible increase, was applied for noise environments where the ambient noise level exceeds 65 dBA DNL, while in areas where the ambient noise level is 65 dBA DNL or less, the significance threshold applied is an increase of 5 dBA or more, which Caltrans recognizes as a readily perceptible increase. Substantial evidence supports the methodology applied in the SEIR. Potential impact from operational noise from non-transportation sources such as egress of patrons from events or sound amplification equipment in common areas are assessed based on noise increases of 8 dBA (for noise generated by commercial uses) over existing ambient (L_{90}) levels and applicable restrictions of the City's noise ordinance such as Article 1, Section 47.2 of the Police Code, which regulates the time of use of any sound amplifying equipment. Although these operational noise increases would be of limited duration, they would be expected to occur throughout the life of the project and are therefore considered permanent changes in noise conditions. This methodology of comparing resultant noise of a proposed source with the ambient (L_{90}) levels is recommended by the City of San Francisco in its recently published City-wide noise guidance for enforcement of its noise ordinance,[4] and OCII determined that this methodology is appropriate for the SEIR. Please see Response NOI-2a above regarding the agency's ability to rely upon the Noise Ordinance as a significance threshold.

Issues Raised by Commenters: Vibration Impact Methodology (NOI-3b)

This response addresses all or part of the following comments, which are quoted below:

O-MBA9L3-9

"2. Does the DSEIR use a reliable methodology to determine the significance of Impact NO-3?

"Impact NO-3 is "Construction of the proposed project would not expose people and structures to or generate excessive groundborne vibration levels. (Less than Significant)." (DSEIR, pp. 5.3-24 to 5.3-26.)

"In my opinion the DSEIR does not use a reliable methodology to determine whether Impact NO-3 is significant.

"The DSEIR omits important information about the environmental setting. In particular, the DSEIR acknowledges that "Sensitive receptors to vibration include ... vibration-sensitive equipment." (DSEIR, p. 5.3-8.) But the DSEIR does not provide any evidence relating to the use of such equipment in the vicinity. Such information should include the type of equipment, the purpose of its use, its degree of sensitivity, and its distance from Project related sources of vibration.

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2 U.S. Department of Transportation, Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.

3 Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Analysis Issues, August 1992.

4 City of San Francisco, *San Francisco Police Code Article 29: Regulation of Noise Guidelines for Noise Control Ordinance Monitoring and Enforcement*, December 2014.

"In its impact assessment, the DSEIR inexplicably excludes also the users of vibration sensitive equipment from the category of sensitive receptors, and based on this policy decision, concludes that construction vibration effects are not significant, stating:

> "As discussed in the 1998 FSEIR, construction vibration effects on sensitive equipment would be a concern for users of research buildings and could be an inconvenience. However, these users are not considered sensitive receptors, and therefore, construction vibration effects are not considered a significant environmental effect under CEQA."

(DSEIR, p. 5.3-25.)

"Since UCSF is a "research hospital" is it safe to assume that scanning electron-beam microscopes are used by researchers and pathologists. These devices are extremely sensitive to low level vibration. It is common for them to have environmental criteria specifically for vibration. If the specified vibration levels are exceeded the image will blur rendering the instrument useless. Therefore, in my opinion, the DSEIR should include users of vibration-sensitive equipment in the category of sensitive receptors, and then assess the Project's impact on the users.

"For "Human annoyance" from groundborne vibration, the DSEIR uses a threshold of significance of : "For adverse human reaction, this analysis applies the "strongly perceptible" threshold of 0.1 inches per second PPV." (DSEIR, p. 5.3-25.) In my opinion, this threshold should be "perceptible, not "strongly perceptible."

"In applying its "strongly perceptible" threshold, the DSEIR says:

> "The closest residence would be the UCSF Mission Bay Housing (Hearst Tower), approximately 200 feet from the project site while the nearest hospital would be approximately 560 feet away. A recent study of vibration induced by rapid impact compaction indicated that at a distance of 30 meters (100 feet), cumulative vibration energy results in maximum vibration level of 2.3 millimeters per second (0.09 inches per second). Because sensitive land uses would be more than 100 feet away, worst-case cumulative vibration levels generated by rapid impact compaction would be below the strongly perceptible threshold."

(DSEIR, p. 5.3- 25.)

"In my opinion, this conclusion is incorrect because the DSEIR's calculation of vibration does take into account the increased vibration on upper floors of this building. Soil attenuation varies with the type of soil and moisture content, and distance attenuation from 100 to 200 feet may only be a factor of 0.5, or less. Accordingly, actual PPV at the Hearst Tower is likely to be 0.045 ips, or considerably greater depending on site-specific parameters. In addition, the DSEIR's calculation does not take into account building resonance effects for above-grade floors which amplify vibration at certain frequencies. Recalculating to take this factor into account indicates vibration on upper floors would certainly be "perceptible" and likely "strongly perceptible."

> Alternate Calculation:
>
> rapid impact compaction - 0.09 ips PPV @100 feet
> distance attenuation factor - x 0.5 from 100 to 200 feet
> rapid impact compaction - 0.045 ips PPV @200 feet
> soil attenuation variation - x 2 (6 dB) ground floor
> result at Hearst Tower - 0.09 ips PPV @100 feet
> resonant amplification - x 3 (10 dB)
> result at Hearst Tower - 0.27 ips PPV upper floors
> criterion for humans - 0.1 ips PPV "strongly perceptible"

"In my opinion, the Project likely to cause a significant increase in Impact NO-3 above levels existing without the project, particularly when compaction is occurring during construction." (*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-9]*)

Response NOI-3b: Vibration Impact Methodology

The commenter's opinion that the vibration threshold for adverse human reaction should be "perceptible" and not "strongly perceptible" is acknowledged. However, given that the previously proposed rapid impact compaction would have been a temporary activity conducted during daytime hours and not during sleep-sensitive hours, the less stringent threshold was applied to this activity for the determination of a "significant" effect. As explained above, moreover, rapid impact compaction is no longer a proposed method of construction so the main source of construction-related vibration has been eliminated from the project, and the vibration impact would be less than significant regardless of which threshold is applied. (See Chapter 12, Project Refinements and New Variant.)

The methodology used in the assessment of vibration-related construction impacts in the SEIR was appropriate and used the published General Assessment[5] methodology of the FTA in its document *Transit Noise and Vibration Impact Assessment* for calculation of the magnitude of construction-related vibration impacts. This document states that the purpose of the General Assessment is to provide a relatively simple method of developing estimates of the overall levels of ground-borne vibration that can be compared to acceptability criteria. The methodology thus serves as an appropriate screening-level analysis that provides a sufficient level of detail for the environmental impact assessment. If the General Assessment method identifies potential exceedance of applicable criteria then a more detailed analysis may be undertaken.

As described in SEIR Chapter 12, Project Refinements and New Variant, the project sponsor no longer proposes to use rapid impact compaction as a method of construction which, as described on page 5.3-25 of the SEIR, would have resulted in vibration levels of 0.09 inches per second at 100 feet. Consequently, with the proposed project refinements, there would be no substantial vibration-inducing construction activity at the project site. Other standard construction equipment proposed, such as bulldozers and drill rigs, generate much more modest vibration levels on the order of 0.089 inches per second at 25 feet, which would be further reduced to 0.01 inches per second at the nearest structure, approximately 100 feet away, and would not be perceptible, based on Caltrans criteria.[6] Vibration levels from this equipment at the UCSF hospital, approximately 560 feet away, would be reduced to below 50 VdB (0.0015 inches per second) and would not be expected to interfere with vibration-sensitive equipment, were it considered to be an environmental impact.

Please see Response NOI-2a above regarding the lead agency's ability to select project-specific significance thresholds.

[5] The general level of assessment, as described in the FTA Guidance, is an extension of the screening procedure. It uses generalized data to develop a curve of vibration level as a function of distance.

[6] Caltrans, Transportation and Construction vibration Guidance Manual, September 2013, Page 21.

13.12.5 Construction Noise Impacts (NOI-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-18 O-MBA9L3-3

"Page 5.3-41, the DEIR provides that construction-related vehicles and equipment will be required to use designated truck routes to travel to and from the project site, as determined in consultation with the SFMT A. UCSF requests that truck routes be designated in consultation and coordination with UCSF and other nearby developers." (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-18]*)

"(DSEIR, p. 5.3-10.) DSEIR does not tell us what buildings in area comply with this code. (See DSEIR § 5.3.3.4 [Sensitive Receptors], and Table 5.3-4.) However, as Mr. Hubach observes:

> Table 5.3-8 shows that all three receptors chosen for analysis will add construction noise to pre-existing ambient noise levels that already exceed the health and welfare based standards discussed above. As a result of construction operations (assuming all noise producing construction operations occur at the same time, noise levels at the Madrone Residential Tower will rise from 70.1 to 70.9 dBA (hourly Leq), at the Hearst Residential Tower from 71.2 to 80.8 dBA (hourly Leq), and at UCSF Hospital from 67 to 72.8 dBA (hourly Leq).

"(Exhibit 1, p. 4.) Since the Project's noise, when added to background or ambient noise, exceeds the above health and welfare based standards, the impact is significant even if the impact does not violate the San Francisco Police Code." (*Mission Bay Alliance, Thomas Lippe, letter, July 25, 2015 [O-MBA9L3-3]*)

Response NOI-4: Construction Noise/Truck Route Impacts

Construction Truck Routes

Construction truck routes are discussed on page 5.2-114 of the SEIR. Access from I-280 northbound would be via the I-280 off-ramp at the intersection of Mariposa/ Owens, continuing on Mariposa Street to Third Street or Terry A. Francois Boulevard, then to 16th Street or South Street, or from the off-ramp continuing on the new Owens Street segment to 16th Street. Alternately, trucks would exit I-280 northbound at the Cesar Chavez Street, and continue north on Third Street to 16th Street, Terry A. Francois Boulevard, and South Street.

Access to I-280 southbound would be via South Street, Third Street, 16th Street, to the new Owens Street segment and onto the on-ramp, or Third Street to Mariposa Street to the I-280 on-ramp at Owens Street. Alternately, trucks could access the I-280 southbound via South Street, Third Street, 25th Street, to the on-ramp at Pennsylvania Street. Access from I-80 westbound would be via the Eighth Street off-ramp at Harrison Street, continuing on Eighth Street, Bryant Street, and Seventh Street to 16th Street. Access to I-80 eastbound would be via South Street, Third Street, 16th Street, Seventh Street, Bryant Street to the on-ramp at Fifth Street. Truck access routes have been established by SFMTA and are not within the purview of the project sponsor. If the project sponsor

proposes a street closure in order to perform construction, the SFMTA Construction Regulations (https://www.sfmta.com/services/streets-sidewalks/construction-regulations) must be adhered to. In addition, SFMTA operates its Interdepartmental Staff Committee on Traffic and Transportation (ISCOTT) that meets approximately twice a month to discuss proposed temporary street closures for special events including street fairs, athletic events and neighborhood block parties. These meetings are open to the public.

As stated on page 5.3-22 of the SEIR, while truck trips would increase hourly noise levels on Third Street, Mariposa Street, and Caesar Chavez Street, the addition of 40 heavy duty truck trips to the existing peak hour traffic would increase traffic noise contributions by 2.3 dBA along Third Street during peak excavation activities. This would be a *less than significant* contribution to roadway noise levels.

Construction Noise

As indicated in Table 5.3-8 of the SEIR (p. 5.3-23), concurrent construction activities could result in increased noise levels at the nearest sensitive receptors. The maximum estimated increase at any receptor is approximately 9.6 dBA. As described in Chapter 12, Project Refinements and New Variant, rapid impact compaction is no longer a proposed method of construction, which would reduce this worst-case predicted increase to about 9.2 dBA. Such an increase would be noticeable—not an uncommon occurrence in an urban area when construction activity is ongoing. However, construction activity would be limited to daytime hours and would not exceed OCII's criteria for a significant impact. Therefore, on the basis of the established methodology for construction noise impacts as discussed in Response NOI-2a, above, Impact NO-1 was determined to be less than significant. Nevertheless, the SEIR does identify a significant cumulative noise impact from construction of the project in combination with other construction activities in the vicinity during the same period, and identifies Mitigation Measure M-C-NO-1: Construction Noise Control Measures to address construction noise, the implementation of which would reduce the severity of construction noise impacts.

13.12.6 Vibration Impacts (NOI-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-16	O-Fibrogen-1	O-MBA7S2-17	O-MBA7S2-65
O-MBA9L3-5	O-MBA9L3-9	I-Schreiner-1	

"When UCSF planned and developed a large student housing complex along Third Street in 2002, it relied on the zoning districts in the South Plan, which called for commercial/industrial uses on adjacent blocks such as Blocks 29-32. Those uses would be primarily daytime uses, not uses that would disgorge up to 18,000 people after 10:00 p.m. on more than 100 days per year.

"Page 5.3-26, Improvement Measure I-N0-3. UCSF requests that this measure be modified to expand the distance for notification of owners and occupants to include all occupants of the UCSF Medical Center at

Mission Bay and the student housing on Third Street." (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-16]*)

"Vibrations from pile driving can also create additional risks, which have not been analyzed for this Project." (Karp Geotech, p. 6.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-17]*)

"Vibrations During Construction

"Driving displacement piles causes noise and vibrations from impact that are transferred though dense sub grade materials to nearby structures. As the configuration of the proposed arena will likely be circular or elliptical and vibrations, particularly driving those at the western side of the project, would likely affect the UCSF Medical Center building at 1650 3rd Street. Prior to project approval, an indicator pile test program must be implemented to monitor vibrations and verify the suitability of the intended foundation system for the area.

"Drilling and casting-in-place reinforced concrete shafts, if feasible to required depths, may be an appropriate suitable alternative to driven piles. As noted below for shoring, shafts are augered and spoils removed through casing contained in the rig that is withdrawn as concrete is placed. Using tremie methods, concrete displaces water in the hole so it rises and is pumped out with low groundwater loss. Before the project is approved, a test program should be implemented to ascertain the feasibility of using cast-in-place piles or where appropriate, a combination of drilled and driven piles." (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-65]*)

"With respect to vibration impacts, as Mr. Hubach states:

> The DSEIR omits important information about the environmental setting. In particular, the DSEIR acknowledges that "Sensitive receptors to vibration include ... vibration-sensitive equipment." (DSEIR, p. 5.3-8.) But the DSEIR does not provide any evidence relating to the use of such equipment in the vicinity. Such information should include the type of equipment, the purpose of its use, its degree of sensitivity, and its distance from Project related sources of vibration.
>
> In its impact assessment, the DSEIR inexplicably excludes also the users of vibration sensitive equipment from the category of sensitive receptors, and based on this policy decision, concludes that construction vibration effects are not significant, stating:
>
> "As discussed in the 1998 FSEIR, construction vibration effects on sensitive equipment would be a concern for users of research buildings and could be an inconvenience. However, these users are not considered sensitive receptors, and therefore, construction vibration effects are not considered a significant environmental effect under CEQA." (DSEIR, p. 5.3-25.)

"The DSEIR cannot omit an analysis of potentially significant effects by the simple expedient of arbitrarily defining the receptors of such effects as non-sensitive." (*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-5]*)

"2. Does the DSEIR use a reliable methodology to determine the significance of Impact NO-3?

"Impact NO-3 is "Construction of the proposed project would not expose people and structures to or generate excessive groundborne vibration levels. (Less than Significant)." (DSEIR, pp. 5.3-24 to 5.3-26.)

"In my opinion the DSEIR does not use a reliable methodology to determine whether Impact NO-3 is significant.

"The DSEIR omits important information about the environmental setting. In particular, the DSEIR acknowledges that "Sensitive receptors to vibration include ... vibration-sensitive equipment." (DSEIR, p. 5.3-8.) But the DSEIR does not provide any evidence relating to the use of such equipment in the vicinity. Such information should include the type of equipment, the purpose of its use, its degree of sensitivity, and its distance from Project related sources of vibration.

"In its impact assessment, the DSEIR inexplicably excludes also the users of vibration sensitive equipment from the category of sensitive receptors, and based on this policy decision, concludes that construction vibration effects are not significant, stating:

> "As discussed in the 1998 FSEIR, construction vibration effects on sensitive equipment would be a concern for users of research buildings and could be an inconvenience. However, these users are not considered sensitive receptors, and therefore, construction vibration effects are not considered a significant environmental effect under CEQA."

(DSEIR, p. 5.3-25.)

"Since UCSF is a "research hospital" is it safe to assume that scanning electron-beam microscopes are used by researchers and pathologists. These devices are extremely sensitive to low level vibration. It is common for them to have environmental criteria specifically for vibration. If the specified vibration levels are exceeded the image will blur rendering the instrument useless. Therefore, in my opinion, the DSEIR should include users of vibration-sensitive equipment in the category of sensitive receptors, and then assess the Project's impact on the users.

"For "Human annoyance" from groundborne vibration, the DSEIR uses a threshold of significance of : "For adverse human reaction, this analysis applies the "strongly perceptible" threshold of 0.1 inches per second PPV." (DSEIR, p. 5.3-25.) In my opinion, this threshold should be "perceptible, not "strongly perceptible."

"In applying its "strongly perceptible" threshold, the DSEIR says:

> "The closest residence would be the UCSF Mission Bay Housing (Hearst Tower), approximately 200 feet from the project site while the nearest hospital would be approximately 560 feet away. A recent study of vibration induced by rapid impact compaction indicated that at a distance of 30 meters (100 feet), cumulative vibration energy results in maximum vibration level of 2.3 millimeters per second (0.09 inches per second). Because sensitive land uses would be more than 100 feet away, worst-case cumulative vibration levels generated by rapid impact compaction would be below the strongly perceptible threshold."

(DSEIR, p. 5.3- 25.)

"In my opinion, this conclusion is incorrect because the DSEIR's calculation of vibration does take into account the increased vibration on upper floors of this building. Soil attenuation varies with the type of soil and moisture content, and distance attenuation from 100 to 200 feet may only be a factor of 0.5, or less. Accordingly, actual PPV at the Hearst Tower is likely to be 0.045 ips, or considerably greater depending on site-specific parameters. In addition, the DSEIR's calculation does not take into account building resonance effects for above-grade floors which amplify vibration at certain frequencies. Recalculating to take this factor into account indicates vibration on upper floors would certainly be "perceptible" and likely "strongly perceptible."

> Alternate Calculation:
>
> rapid impact compaction - 0.09 ips PPV @100 feet
> distance attenuation factor - x 0.5 from 100 to 200 feet
> rapid impact compaction - 0.045 ips PPV @200 feet
> soil attenuation variation - x 2 (6 dB) ground floor
> result at Hearst Tower - 0.09 ips PPV @100 feet
> resonant amplification - x 3 (10 dB)
> result at Hearst Tower - 0.27 ips PPV upper floors
> criterion for humans - 0.1 ips PPV "strongly perceptible"

"In my opinion, the Project likely to cause a significant increase in Impact NO-3 above levels existing without the project, particularly when compaction is occurring during construction." (*Mission Bay Alliance, Lippe, letter, July 25, 2015 [O-MBA9L3-9]*)

"We are reading through the Warrior's DEIR and encountering major heartburn with the noise and vibration analysis and mitigation. First, we see continuing reference to the MB Good Neighbor Policy and the SFEIR for MB completed in 1998. None of us in the MB life science community have seen those documents much less participated in the development of same. Life science and specifically sophistication of instrumentation and evolution of preclinical work has changed dramatically since 1998.

"Could you please forward a copies of at least the Good Neighbor Policy as soon as is possible." (*FibroGen, Catherine Sharpe, email, July 6, 2016 [O-Fibrogen-1]*)

"The following statement is provided in addition and as complementary information to the comments provided to you by Tom Lippe (Law Offices of Thomas N. Lippe APC, 201 Mission St., 12th Floor, San Francisco, CA 94105) on behalf of the Mission Bay Alliance regarding the Warriors Arena Project.

"Surveying the vibration-sensitive equipments that are mostly used at the UCSF Mission Bay (MB) by members of the Neuroscience research community, there appear to be two groups of equipment that fall under different criteria when considering vibration design/tolerance features for buildings (according to the ASHRAE Handbook).

"The main category (VC-B) relevant for MB includes: Microsurgery, eye surgery, neurosurgery; bench microscopes greater than 400x magnification; optical equipment on isolation tables such as two-photon microscopes. Tolerance vibration velocities (in microns/sec) are indicated as the yellow line in the two attached figures from a study in another building (not at MB but relevant as general reference for vibration-sensitive equipment used here). Acceptable values for vibration velocities above 8Hz vibration frequencies are 25 microns/sec (max) and up to 50 microns/sec for lower frequencies, especially those in the range of walking-induced vibrations (~2Hz). Actual values of measurements should fall below those lines (as in the example measurement in the second slide; again not made at MB) for equipment to work error free.

"The next category (VC-C) deals with ultrahigh vibration requirements (< 6 microns/sec Max.) for electron microscopes (TEMs, SEMs). However, I did not hear from any of the Neuroscience faculty whether those currently are in use.

"The EIR considers vibration-sensitive equipment not to be 'sensitive receptors' but we would disagree with that since those pieces of equipment are indispensable for performing our research, largely supported by the National Institute of Healths. The EIR indicates that, during construction, research buildings may experience vibration velocities that exceed 0.008 in/s (or 203.2 microns/s), 5 to10-fold the values considered acceptable for operating the equipment (although the affected vibration frequency range is not indicated). Additionally, the EIR does not indicate by how much those velocities may be exceeded. Without a more thorough assessment of the potential vibration levels and spectra to be expected during construction and usage of the facility the impact on vibration-sensitive equipment is not possible. Even from the few points mentioned in the EIR it appears that vibration levels would be significantly above the VC-B criteria and, thus, may constitute intolerable interference with ongoing research or medical practice." (*Christopher Schreiner, email, July 27, 2015 [I-Schreiner-1]*)

Response NOI-5: Vibration Impacts

As described in Chapter 12, Project Refinements and New Variant, rapid impact compaction is no longer a proposed method of construction. Piles would be installed using drilling and cast-in-place techniques. Impact or vibratory pile driving are not proposed construction techniques. Other standard construction equipment proposed, such as bulldozers and drill rigs, generate much more modest vibration levels on the order of 0.089 inches per second at 25 feet, which would be further reduced to 0.01 inches per second at the nearest structure, approximately 100 feet away, and would not be perceptible, based on Caltrans criteria.[7] Consequently, there would be no substantial vibration-inducing construction activity at the project site.

In response to Comment A-UCSF-16 regarding Improvement Measure I-NO-3, Neighbor Notification of Vibration-Inducing Construction Activities, this measure is no longer required as the activity of concern, rapid impact compaction, is no longer proposed.

Comment O-MBA7S2-17 asserts that the SEIR does not analyze additional risks from vibrations from pile driving. As stated on page 5.3-20 of the SEIR, piles would be cast in place into augured holes and would not require use of an impact or vibratory pile driver. Consequently, there would be no noise or vibration impacts from pile driving associated with the proposed project, and the indicator pile test program suggested by the commenter is not warranted.

Vibration effects to sensitive equipment were discussed on page V.G-32 of the 1998 FSEIR, which concludes that "because construction vibration effects on sensitive equipment would be a concern for future users of research buildings, rather than a physical impact on people or the environment, it could be an inconvenience but would not be a significant environmental effect."

The commenter's opinion that the vibration threshold for adverse human reaction should be "perceptible" and not "strongly perceptible" is acknowledged. However, given that the previously proposed rapid impact compaction would have been a temporary activity conducted during daytime hours and not during sleep-sensitive hours, the less stringent threshold was applied to this activity for the determination of a "significant" effect.

Please see Response NOI-3b above regarding vibration impact assessment methodologies.

The Mission Bay Good Neighbor Policy is described on SEIR page 5.3-23 and was forwarded to the requesting commenter, as described in Section 13.3, Response ERP-3.

[7] Caltrans, Transportation and Construction vibration Guidance Manual, September 2013, Page 21.

13.12.7 Crowd Noise (NOI-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-17 I-Cehand-1 I-Jones-2

"Pages 5.3-37 through 5.3-38, the DEIR indicates that the excessive noise would occur at the northbound Muni line platform adjacent to the UCSF student housing building on up to 105 evenings following basketball games, concerts and other major events. To address this impact, the DEIR indicates that the project sponsor will urge patrons to respect the quiet of the neighborhood as they leave the area and provide to all interested neighbors a contact agency and phone number that would be prepared to respond to complaints. We respectfully request that GSW and the City devise more effective mitigation measures to address this significant impact.

"The land uses most affected are the UCSF Mission Bay Housing units on Block 20 that front onto Third Street and onto Gene Friend Way. These buildings have no air conditioning and rely on a passive ducting system for ventilation when windows are closed for noise control. At the time these structures were built, it was anticipated that adjacent development would consist of biotechnology or office uses. It was not anticipated that an arena and event center with over 200 events per year would be proposed directly across the street, of which up to 150 large events would generate crowd noise that, according to the DEIR, would be significant and unavoidable due to "the increase in noise levels from crowds gathering at the Muni T-line platform during quieter nighttime periods". The significant and unavoidable impact of crowd noise on the UCSF Mission Bay Housing complex would most acutely affect those units in Hearst Tower which contain bedrooms that face Third Street or Gene Friend Way (83 units), those units in the South Building which contain bedrooms that face Gene Friend Way (63 units), and those units in the North Building which contain bedrooms that face Third Street (18 units). For these reasons, UCSF requests that the following mitigation measure be included in the Final EIR:

> To minimize the effect of crowd noise on nearby sensitive receptors at the UCSF Mission Bay Housing complex, the project sponsor will evaluate and implement feasible noise control measures to limit the significant increase in noise affecting the existing UCSF Mission Bay Housing complex on Block 20. The noise control measures will be submitted to the City for review and approval, and following City approval, will be implemented to reduce the significant and unavoidable noise impacts affecting UCSF Mission Bay Housing on Block 20." (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-17]*)

"• Noise- Intoxicated people being loud outside after games- after 10 pm and weeknights." (*Jadine Cehand, email, June 30, 2015 [I-Cehand-1]*)

"Sports games tend to attract a loud and rowdy crowd, which can be aggressive and sometimes violent." (*Jackie Jones, email, July 1, 2015 [I-Jones-2]*)

Response NOI-6: Crowd Noise

These comments express concerns associated with crowd noise, and one comment requests additional mitigation measures to address crowd noise at the MUNI platform.

As discussed on page 5.3-38 of the SEIR, the project sponsor, as part of its site management practices, would implement the San Francisco Entertainment Commission's Good Neighbor Policy for nighttime entertainment activities, urging patrons to respect the quiet of the neighborhood as they leave the area and providing a phone number to all interested neighbors to respond to complaints.

The project sponsor must apply to the Entertainment Commission for an entertainment permit through a formal process as discussed on page 5.3-15 of the SEIR. Police Code Sections 1060.5(g) and 1060.31 require that all Places of Entertainment have a Security Plan approved by the Entertainment Commission Director or the Commission and that a condition of approval of a Place of Entertainment permit include a Security Plan. A Security Plan is defined in Police Code Section 1060(n) as including, among other things "providing for the orderly dispersal of individuals and traffic from the premises of the Business and within 100 feet of any door that patrons use to enter or exit the premises", as well as mandating certain ratios of Security Guards to the number of patrons. In addition to the Security Plan, the Entertainment Commission permit could include such conditions as:

1. Notices shall be well-lit and prominently displayed at all entrances to and exits from the establishment urging patrons to leave the establishment and neighborhood in a quiet, peaceful and orderly fashion and to please not litter or block driveways in the neighborhood.

2. Employees of the establishment shall be posted at all entrances and exits to the establishment during the period from 10:00 p.m. to such time past closing that all patrons have left the premises. These employees shall insure that patrons waiting to enter the establishment and those exiting the premises are urged to respect the quiet and cleanliness of the neighborhood as they walk to their parked vehicle or otherwise leave the area.

Further, Police Code Section 1060.20.1(a) provides a procedure for suspension of Entertainment Permits by the Entertainment Commission where the Permittee has operated the Business "[i]n a manner that has harmed the public health, safety or welfare by significantly increasing pedestrian congestion, the incidence of disorderly conduct, or the level of noise in the area in which the premises are located…" and where the Permittee has refused or failed, upon request of the Police Department, Entertainment Commission or the Director to take reasonable steps to alleviate the conditions.

Further, the Entertainment Commission encourages public outreach before issuing a permit, and the hearing requirement for issuing a permit would afford UCSF and other neighbors the opportunity to provide input into the development of permit conditions to address noise impacts that may occur during pre- and post-event crowd ingress and egress either in writing during the 30-day notice period or in person at the hearing. UCSF and neighbors would also have the opportunity to participate in the procedures pertaining to complaints, enforcement and

suspension of permits if the Event Center were to operate in violation of the standards set forth in the conditions established in its place of entertainment permit. Therefore, given this already established process for UCSF to participate in the development of feasible noise control measures as part of the Entertainment Commission's permit process, the addition of the mitigation measure requested by the commenter is not warranted.

It should be noted that, as part of the new Muni UCSF/Mission Bay Station Variant, the existing northbound and southbound passenger platforms at the UCSF/Mission Bay light rail stops would be removed and replaced with a single center platform to accommodate both northbound and southbound light rail service passengers. The station would be located in the general location of the existing UCSF/Mission Bay Station southbound platform in front of UCSF hospital. Please see Section 12.4 of the RTC. As described in Section 12.4, the new station would be located approximately 300 feet further south of the UCSF Hearst Tower housing complex. Further, UCSF hospital does not contain operable windows and is, therefore, less sensitive to noise.

However, the noise impact remains significant and unavoidable with mitigation.

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13.13 Air Quality

13.13.1 Overview of Comments on Air Quality

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.4, Air Quality. These include topics related to:

- AQ-1: Significance Thresholds
  - AQ-1a: Lead Agency's Use of BAAQMD Thresholds
  - AQ-1b: Use of BAAQMD Guidelines and Significance Thresholds for Construction and Operation
  - AQ-1c: Health Risk Significance Thresholds
  - AQ-1d: PM2.5 Significance Thresholds
- AQ-2: Dust Control Plan
- AQ-3: Construction Impacts, Methodology, and Assumptions
- AQ-4: Operational Impacts, Methodology, and Assumptions
  - AQ-4a: Consideration of Vehicle Trips from Golden State Warrior Basketball Events
  - AQ-4b: Significant and Unavoidable Impacts from Gridlock and Parking Problems
  - AQ-4c: Quantification and Analysis of Air Quality Impacts
- AQ-5: Health Risk Methodology and Assumptions
- AQ-6: Mitigation Measures, Feasibility, and Enforcement
  - AQ-6a: Mitigation of Construction-related Impacts
  - AQ-6b: Construction Mitigation — Truck Idling
  - AQ-6c: Construction Mitigation — Compliance Certification
  - AQ-6d: Use of Renewable Diesel as Construction Mitigation Measure
  - AQ-6e: Implementation and Enforceability of Mitigation Measure M-AQ-1
  - AQ-6f: Feasibility of Mitigation Measure M-AQ-2a
- AQ-7: Emissions Offsets Mitigation Measure

13.13.2 Significance Thresholds (AQ-1)

Issues Raised by Commenters: Lead Agency's Use of BAAQMD Thresholds (AQ-1a)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-3 O-MBA8L2-6 O-MBA8L2-23

———————————

"B. Criteria air pollutants: the DSEIR's impact assessment for construction and operational criteria air pollutants is based on legal errors and not supported by substantial evidence.

1. The City cannot use the DSEIR's thresholds of significance for criteria air pollutants until it formally adopts them in a rule--making procedure.

The DSEIR's thresholds of significance are:

For the impacts analyzed in this section, the project would have a significant impact related to air quality if it were to:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in a cumulative air quality impact in combination with past, present and reasonably foreseeable future projects in the vicinity.

(DSEIR 5.4-23.)

For criteria pollutants, the DSEIR uses numerical thresholds of significance borrowed from the Bay Area Air Quality Management District ("BAAQMD") for ROG (54 lbs/day); NOx (54 lbs/day); Exhaust PM10 (82 lbs/day); Exhaust PM2.5 (54 lbs/day).

> The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants that may contribute to an existing or projected air quality violation is based on the State and federal Clean Air Acts emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NOx, the offset emissions level is an annual average of 10 tons per year (or 54 pounds (lbs.) per day). These levels represent emissions below which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants that could result in increased health effects.

(DSEIR p. 5.4-25; see also p. 5.4-31.)

The City uses these numerical thresholds of significance for virtually all land use development projects in the city that require CEQA review. This is shown by the following sample of excerpts from recent Environmental Impacts Reports and Negative Declarations attached hereto as Exhibits 4 through 16. All of them use the BAAQMD numbers as the thresholds of significance for these pollutants.

Therefore, the City is required to undertake its own rule-making proceeding to adopt these thresholds as its own and determine in a public process that they are supported by substantial evidence.

> (b) Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence.
>
> (c) When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

(CEQA Guideline, § 15064.7.) Since the City has not formally adopted the air quality significance thresholds in a public process supported by substantial evidence, it cannot use these thresholds on an ad hoc basis as it has done in this EIR." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-3]*)

"The DSEIR's use of the BAAQMD thresholds of significance is erroneous as a matter of law for several other reasons.[4] The DSEIR cannot merely reference a project's compliance with another agency's regulations. Lead agencies must conduct their own fact-based analysis of project impacts, regardless of whether the project complies with other regulatory standards. The DSEIR uses BAAQMD's thresholds of significance uncritically, without any factual analysis of its own, in violation of CEQA.[5] This uncritical application of the BAAQMD's thresholds of significance represents a failure of the City to exercise its independent judgment in preparing the DSEIR.[6] Just as disagreement from another agency does not deprive a lead agency of discretion under CEQA to judge whether substantial evidence supports its conclusions,[7] agreement from another agency does not relieve a lead agency of separately discharging its obligations under CEQA. The BAAQMD CEQA Guidelines do not provide any factual explanation as to why the 54 lbs. per day standard represents an appropriate threshold for judging the significance of project-level ozone pollution impacts. More importantly, the DSEIR also fails to include any such explanation, and is therefore inadequate as a matter of law.[8] It is well-settled that compliance with other regulatory standards cannot be used under CEQA as a basis for finding that a project's effects are insignificant, nor can it substitute for a fact-based analysis of those effects.[9]

"Also, the DSEIR's reliance on information not contained in the DSEIR for purposes of showing these thresholds are supported by substantial evidence violates CEQA's informational requirements. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405 ["whatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report"]; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442 ["[I]nformation 'scattered here and there in EIR appendices' or a report 'buried in an appendix,' is not a substitute for 'a good faith reasoned analysis'"], 443 ["The audience to whom an EIR must communicate is not the reviewing court but the public and the government officials deciding on the project. That a party's briefs to the court may explain or supplement matters that are obscure or incomplete in the EIR, for example, is irrelevant ... The question is therefore not whether the project's significant environmental effects can be clearly explained, but whether they were"] (emphasis in original).)

"Finally, the attached report by Greg Gilbert and Paul Rosenfeld and Jessie Jaeger detail additional reasons why the DSEIR has not adequately supported its use of these thresholds.

"**3. The DSEIR's impact assessments for construction related criteria pollutants (ozone precursors, PM10, PM2.5) and TAC emissions are invalid.**

"DSEIR Table 5.4-8 shows construction-related daily emissions of the ozone precursor ROG at 47 lbs/day (mitigated by Tier 2 and NOx VDECS engines) or 49 lbs/day (mitigated by Tier 4 engines) and of the ozone precursor NOx at 144 lbs/day (mitigated by Tier 2 and NOx VDECS engines) or 73 lbs/day (mitigated by Tier 4 engines).

"The DSEIR's impact assessments for construction-related ozone precursor emissions are invalid because the DSEIR uses the invalid thresholds of significance discussed above.

"Because NOx construction-related emissions are reported as higher than the applicable (but invalid) threshold of significance for ROG (i.e., 54 lbs/day), the DSEIR concludes the Project's impact on ozone pollution is significant. While this conclusion is correct, it is also misleading because it understates the severity of the impact deemed "significant." The DSEIR implies that the only fraction of the Project's NOx emissions that are "significant" is the fraction above 54 lbs/day. But as discussed above, this threshold of significance is invalid. Using this invalid threshold implies that most of the quantity of emissions below the threshold are not "significant." (*Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831 ["The conclusion that one of the unavoidable adverse impacts of the project will be the 'increased demand upon water available from the Santiago County Water District' is only stating the obvious. What is needed is some information about how adverse the adverse impact will be"].)

"**Footnotes:**

[4] *Endangered Habitats League v County of Orange* (2005) 131 Cal.App.4th 777, 793 ("The use of an erroneous legal standard [for the threshold of significance in an EIR] is a failure to proceed in the manner required by law that requires reversal.").

[5] *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109 [underscore emphasis added], citing *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 114 ("*CBE*");

accord *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 342 ["A threshold of significance is not conclusive...and does not relieve a public agency of the duty to consider the evidence under the fair argument standard."].)

6 *Friends of La Vina v. County of Los Angeles* (1991) 232 Cal.App.3d 1446.

7 *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 626.

8 *Santiago County Water Dist. v. County of Orange*, *supra*, 118 Cal.App.3d 818.

9 *See*, e.g., *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 16 (lead agencies must review the site-specific impacts of pesticide applications under their jurisdiction, because "DPR's [Department of Pesticide Regulation] registration does not and cannot account for specific uses of pesticides..., such as the specific chemicals used, their amounts and frequency of use, specific sensitive areas targeted for application, and the like"); *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture (*1986) 187 Cal.App.3d 1575, 1587-1588 (state agency applying pesticides cannot rely on pesticide registration status to avoid further environmental review under CEQA); *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882 (rejects contention that project noise level would be insignificant simply by being consistent with general plan standards for the zone in question). *See also City of Antioch v. City Council of the City of Pittsburg* (1986) 187 Cal.App.3d 1325, 1331-1332 (EIR required for construction of road and sewer lines even though these were shown on city general plan); *Kings County Farm Bureau v. City of Hanford*, *supra*, 221 Cal.App.3d at pp. 712-718 (agency erred by "wrongly assum[ing] that, simply because the smokestack emissions would comply with applicable regulations from other agencies regulating air quality, the overall project would not cause significant effects to air quality.").

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-6]*)

"**IX. CEQA Air Quality Thresholds of Significance Have Not Been Adopted By the Lead Agency**

"At Page 5.4-25 the DSEIR establishes criteria pollutant thresholds adopted by the Bay Area Air Quality Management District (BAAQMD). Following their adoption by the BAAQMD, the City of San Francisco has used these numerical thresholds for virtually all land use development projects undertaken in the City and requiring CEQA review.

"However, CEQA Guidelines, § 15064.7(b) requires that "[t]hresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence." Without exception, this Guidelines section requires that, prior to application of thresholds in actual CEQA environmental reviews, the City undertake its own rule-making proceeding to adopt these thresholds as their own after determining in a public process that they are supported by substantial evidence. Since the City has not formally adopted the air quality significance thresholds in a public process, supported by substantial evidence, their ad hoc application to the DSEIR is inappropriate." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-23]*)

Response AQ-1a: Lead Agency's Use of BAAQMD Thresholds

The comment states the use of BAAQMD's recommended thresholds for the project is not supported by substantial evidence.

OCII disagrees with the comment. OCII has discretion to rely on BAAQMD's recommended thresholds of significance and the use of those thresholds is supported by substantial evidence. In consideration of state and federal air quality standards, and based on its own independent review of thresholds of significance for air quality impacts recommended by the BAAQMD, OCII and its environmental consultants have determined that BAAQMD's recommended significance thresholds are appropriate to use to evaluate potentially significant air quality impacts associated with the proposed project. While others may disagree, such disagreement does not alter the fact that OCII staff's, its consultant's, and BAAQMD's expert conclusions developed in its 2009 document *Revised Draft Options and Justification Report, California Environmental Quality Act*

Thresholds of Significance referenced in the SEIR (pp. 5.4-24 to 5.4-27) constitute substantial evidence upon which OCII may rely. (See *Center for Biological Diversity v. Department of Forestry & Fire Protection* (2014) 232 Cal.App.4th 931, 948 ["disagreement is insufficient… [a challenger must] *affirmatively show* there was no substantial evidence in the record…" (original emphasis)].) BAAQMD's 2009 Justification Report develops and considers a variety of air quality thresholds and recommends thresholds of significance that BAAQMD staff believed to provide a fair share of emission reductions from land use development.

Under CEQA, lead agencies have discretion in determining the appropriate threshold of significance to determine the severity of a particular impact. "A threshold of significance is an identifiable, quantitative, qualitative, or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant." (CEQA Guidelines, § 15064.7 subd. (a).)

CEQA Guidelines section 15064.7 states that public agencies are "*encouraged* to develop and publish thresholds." (Subd. (a), italics added.) CEQA does not, however, require the adoption of formal thresholds for individual projects. (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 896 [section 15064.7 "does not *require* a public agency to adopt [] significance thresholds . . . and it does not forbid an agency to rely on standards developed for a particular project."]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068 [formal adoption of project-specific thresholds is not required].) As the court in *Save Cuyama Valley* explained, "CEQA only requires that a threshold be formally adopted if it is for 'general use'—that is, for use in evaluating significance in all future projects." (213 Cal.App.4th at p. 1068; see also 2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont. Ed. Bar 2015) § 13.12, p. 13-13 ["An agency needs to follow the requirements for threshold adoption set forth in CEQA Guidelines § 15064.7 only when it is formally adopting thresholds to be used as a matter of general application."].)

Here, neither the City nor OCII has formally adopted thresholds of significance to be used as a matter of general application. No project in the City is *required* to use the thresholds of significance developed by the Bay Area Air Quality Management District (BAAQMD). As permitted under CEQA, agencies have discretion to determine the thresholds of significance that are appropriate for a particular project or impact. Using the same threshold for multiple projects in the same area, such as multiple projects in the City or multiple projects within an air district's boundaries, is often appropriate and even desirable because it promotes consistency. (*Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 111 [recognizing the use of existing environmental standards in determining the significance of a project's environmental impacts is desirable "because it is an effective means of promoting consistency in significance determinations."].) The use of such thresholds is particularly appropriate where, as here, they have been developed by an agency with particular expertise with respect to the resource area addressed by that threshold. Therefore, using the thresholds of significance for air quality impacts developed by the BAAQMD is within the discretion of the

OCII. Moreover OCII may, but is not required to, undergo a formal rulemaking process in order to cite and rely upon these thresholds.

The significance thresholds used in the SEIR for criteria air pollutants are based on state and federal air quality emissions limits for new stationary sources, which are set at levels designed to assure that new sources will not impede achievement of health-based ambient air quality standards. As explained on SEIR pp. 5.4-25-to 5.4-27, the criteria air pollutant thresholds are set at levels below which a project, when considering not just stationary sources but all sources of criteria air pollutants, is not anticipated to substantially contribute to a violation of either the state or federal air quality standards. The SEIR identifies the known adverse health effects of the contaminants in the air quality setting (pp. 5.4-4 to 5.4-16).

The SEIR need not specifically cite the exact same literature or studies as the comment to satisfy the CEQA mandate of disclosing the impacts. Policy 4.1 of the Environmental Protection Element of the City's General Plan directs the City to support and comply with objectives, policies, and air quality standards of the Bay Area Air Quality Management District, and OCII is in agreement with this policy as it relates to the selection of significance thresholds for use in the SEIR.

Significance standards recommended in regulatory agency guidance documents are "routinely used because their use ordinarily cannot be challenged as inappropriate or unsupported." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont. Ed. Bar 2015) § 13.14, p. 13-15.) There is abundant CEQA case law endorsing the use of existing environmental standards or regulations as thresholds of significance. (See *Tracy First v. City of Tracy* (2009) Cal.App.4th 912 [upholding determination that energy impact of project was less than significant because the project achieved energy efficiencies greater than those required by California Energy Efficiency Standards]; *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 47 [upholding finding that incremental impacts of criteria pollutants on sensitive crops would be less than significant based on National Ambient Air Quality Standards promulgated to protect public health and welfare from adverse effects of a pollutant]; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1107 ["thresholds can be drawn from existing environmental standards, such as other statutes or regulations"].)

Rialto Citizens for Responsible Growth v. City of Rialto (2012) 208 Cal.App.4th 899, is instructive. In that case, the EIR used the methodology and thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) to analyze a project's cumulative air quality impacts. The EIR concluded the project would have a significant cumulative impact on air quality because the project would generate emissions exceeding the thresholds of significance adopted by the SCAQMD. The court held that the EIR included a reasonable analysis of cumulative air quality impacts because it complied with the SCAQMD's recommendation that those thresholds be used to assess a project's contribution to cumulative air quality impacts. (*Id*. at p. 933.)

Similarly, here, the SEIR uses the significance thresholds and methodology developed by BAAQMD to analyze the project's criteria pollutant air quality impacts. The SEIR's use of those thresholds is appropriate and is supported by substantial evidence developed by BAAQMD in its

2009 document *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*. The cases cited in the comment are either distinguishable inapposite. In *Endangered Habitats League v County of Orange* (2005) 131 Cal.App.4th 777, 793, the county erred by relying on a significance threshold that was more lenient than a threshold expressly required by the CEQA Guidelines. The threshold derives from a CEQA Guideline establishing, as a matter of State law, "mandatory findings of significance," and focuses on impacts to rare, threatened or endangered species. (CEQA Guidelines, § 15065, subd. (a).) No mandatory significance threshold applies here. OCII therefore has discretion to determine a threshold, and acts within its discretion in electing to follow BAAQMD guidance.

In *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109, the court observed that compliance with a threshold cannot be used as a conclusive determination that the impact at issue will not be significant; if the record contains evidence that an impact may be significant, despite compliance with that threshold, then the agency must perform further analysis. In this case, however, OCII is relying on a threshold expressly developed by BAAQMD as a means of determining whether a project's criteria air pollutant emissions are significant. The comment is an unsupported statement that the threshold is inappropriate. While commenters do not posit alternative significance thresholds for OCII to consider, OCII acknowledges that different experts may reach different conclusions. However, as noted above, OCII and its expert consultants have carefully considered the appropriateness of using significance thresholds developed by the BAAQMD to analyze potentially significant air quality impacts of the proposed project. Based on this evaluation and the expertise of the BAAQMD, OCII has determined the thresholds are appropriate.

In *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 342, where the court observed that "[a] threshold of significance is not conclusive . . . and does not relieve a public agency of the duty to consider the evidence under the fair argument standard" the issue was whether an EIR instead of a negative declaration should have been prepared. *Mejia* stands for the proposition that, where a "fair argument" exists, notwithstanding compliance with a recommended significance threshold, an EIR must be prepared. (See also *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882 [agency had discretion to prepare EIR, rather than relying on negative declaration, notwithstanding evidence that project would comply with applicable noise standards].) In this case, OCII has not prepared a negative declaration. For this reason, the "substantial evidence" test applies.

In *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 16-17, the project involved a state-wide plan to apply pesticides to control the spread of crop disease. The EIR stated the application of pesticides would not result in impacts because pesticides had to undergo a registration process in order to be licensed for use. The court held the EIR's approach was improper because the registration process was not designed to account for the environmental effects of state-wide use of the pesticides. Here, the SEIR has not dismissed the project's air quality impacts by virtue of some other regulatory program. Instead, the SEIR discloses the project's air quality emissions, and evaluates their significance using thresholds recommended by an expert agency for that purpose.

In *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture (*1986) 187 Cal.App.3d 1575, 1587-1588, the agency performed no CEQA review at all, but simply cited the previous registration of the pesticides proposed for use. That did not occur here; OCII has not cited the BAAQMD guidance as a basis for forgoing analysis; rather, OCII has followed BAAQMD's recommendations regarding how to determine whether the project's criteria air pollutant emissions are significant.

In *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712-718, the court held the county erred by relying on the local air district's permitting rules to establish significance thresholds under CEQA where those rules addressed only a portion of the air pollutants that the project would emit, and by analyzing separately the project's direct and indirect emissions. Here, OCII is not relying on BAAQMD's permitting rules, which apply only to "stationary sources," and which therefore do not encompass indirect emissions. Rather, OCII is using BAAQMD guidance that is directly applicable to the CEQA process. Moreover, OCII is not segregating direct and indirect emissions as a means of understating impacts.

The comment states OCII may not rely on information not included in the Draft SEIR itself to support the use of the thresholds of significance. That statement is incorrect. In reviewing the adequacy of an EIR and particularly whether substantial evidence supports an agency's decision, courts look to the whole administrative record, not just the EIR itself. (See, e.g., *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392-393 [the Court must uphold an EIR if there is any substantial evidence *in the record* to support the agency's determination that the EIR is adequate and complies with CEQA]; *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1108 [reviewing court considers whether there is any substantial evidence *in light of the whole record* to support the decision].) In any event, the Draft SEIR explains why the thresholds are used and expressly refers to the BAAQMD guidance documents from which the thresholds were derived. (See Draft SEIR, pp. 5.4-24 to 5.4-58.) Where an EIR incorporates reports, studies, or other documents by reference, the incorporated material is considered as part of the EIR. (CEQA Guidelines, § 15150, subd. (a).)

The comment states the SEIR "understates the severity" of project-related emissions. This statement is incorrect. The SEIR describes the existing environmental setting and discloses the amount of emissions the project would generate from various sources. The SEIR then evaluates the severity of the impact against the thresholds of significance. This analysis fulfills the requirements of CEQA. The case cited in the comment – *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818 – is distinguishable. There, the court found that an EIR failed to adequately address potential water supply impacts for a proposed gravel mine. Specifically, the EIR was "silent" about the effect of the water delivery necessary to serve the project on water service elsewhere in the Water District's jurisdiction. (*Id*. at p. 831.) The EIR simply stated that the project would result in "an increased demand upon water available from the Santiago Water District." (*Ibid*.) According to the court, there needed to be "some information about how adverse the adverse impact will be."

Here, in contrast, the SEIR describes the potential impacts in detail and analyzes the severity of the impacts using the stated thresholds of significance. The analysis complies with CEQA. (See

CEQA Guidelines, § 15151 ["An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive"].)

Please see Response AQ-1c regarding significance thresholds for cumulative air quality impacts.

Issues Raised by Commenters: Use of BAAQMD Guidelines and Significance Thresholds for Construction and Operation (AQ-1b)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-4 O-MBA8L2-5 O-MBA8L2-10 O-MBA8L2-16

"**2. The DSEIR's numerical thresholds of significance for criteria pollutants (ozone precursors, PM10, PM2.5) borrowed from the BAAQMD are invalid.**

"As noted above, for its impact assessment and mitigation strategy for criteria pollutants, the DSEIR uses numerical thresholds of significance borrowed from the BAAQMD. But the DSEIR cannot merely reference a project's compliance with another agency's regulations. Lead agencies must conduct their own fact-based analysis of project impacts, regardless of whether the project complies with other regulatory standards.

"The result of using these thresholds is a deeply misleading impact assessment and mitigation strategy because using these invalid thresholds allows the DSEIR to avoid finding impacts are significant, and it allows the DSEIR to understate the severity of impacts deemed "significant" because it implies that most of the quantity of emissions below the thresholds are not "significant." Also, using these invalid thresholds underestimates the degree of mitigation required to reduce significant impacts to less than significant, and therefore, the DSEIR curtails its consideration of the feasibility of additional mitigation measures that could further substantially reduce emissions.

"The numerical thresholds borrowed from the BAAQMD are logically and legally invalid, and they are not supported by substantial evidence. The thresholds are contained in the BAAQMD's "CEQA Air Quality Guidelines."[1] But neither the DSEIR or the BAAQMD CEQA Air Quality Guidelines describe any evidence that might support the use of these thresholds. The same is true of BAAQMD's other publications relating to these thresholds, i.e., Appendix D of the BAAQMD CEQA Air Quality Guidelines, BAAQMD's Revised Draft Options and Justification Report,(October 2009), and the Bay Area AQMD Proposed Air Quality CEQA Thresholds of Significance, published May 3, 2010.

"While these BAAQMD publications purport to include substantial evidence supporting the use of these thresholds for all criteria air pollutants for which the Bay Area is in non-attainment, they do not. Instead, the BAAQMD CEQA Air Quality Guidelines merely provide policy rationales for why it is a good idea to have thresholds of significance. Nowhere does the document actually provide evidence for why any number of pounds per day below, for example, 54 for NOx or ROG, is not "cumulatively considerable."

"The BAAQMD's Revised Draft Options and Justification Report (October 2009) states the thresholds "are based on the trigger levels for the federal New Source Review (NSR) Program and BAAQMD's Regulation 2, Rule 2 for new or modified sources." (See page 2.) These New Source Review Program rules provides that any new source that will emit pollutants above the levels stated in the left hand column of Table 4 (e.g., 10 lbs/day of NOx and ROG) must impose "Best Available Control Technology ("BACT")." (Id. pp. 16-17.) These rules also provide that any new source emitting pollutants above the levels stated in the right hand column of Table 4 (e.g., 54 lbs/day of NOx and ROG) must offset all emissions. (Id. pp. 16-17.)

"In addition to the inherent flaws in the NSR rules described above, it is inappropriate to base the EIR's significance determination for purposes of CEQA on the Air District's "triggers" for an entirely different regulatory program, i.e., New Source Review under the Clean Air Act ("CAA").[2] One of CEQA key purposes is to require "disclosure" of significant impact, and it allows agencies to approve projects where emissions exceed its thresholds of significance after feasible mitigations are first adopted and as long as the project's benefits outweigh the environmental harm. The CAA, in contrast, is not primarily concerned with public disclosure, and it provides absolute limits on emissions (i.e., the offset triggers in Table 4) that cannot be exceeded under any circumstances. A standard that shuts down economic activity (i.e., the CAA offset standard) is necessarily and appropriately different than a standard (i.e. a CEQA threshold of significance) that requires disclosure of the impact to the public and the adoption of feasible mitigation measures.

"Indeed, if it is possible to borrow any CAA NSR standard for use as a CEQA threshold of significance, it would be the BACT triggers in Table 4 (i.e., when ROG or NOx emissions exceed only 10 lbs/day), because those standards force the adoption of feasible mitigation measures, similar to CEQA's thresholds of significance.

"NSR Regulation 2, Rule 2 for new or modified sources requires that if ozone precursor emissions exceed 54 lbs per day (i.e., 10 tpy), the polluter must offset all emissions. In contrast, the DSEIR Mitigation Measure M-AQ-2b only requires offsetting emissions above 54 lbs per day (i.e., 10 tpy). This BACT standard is much lower than the NSR offset standard and the DSEIR's threshold of significance of 54 lbs/day. But, there is no parallel requirement in the DSEIR for imposing anything like BACT to this Project's construction or operational emissions that exceed 10 lbs/day.

"**Footnotes:**

[1] The BAAQMD CEQA Air Quality Guidelines were published May 2010, and updated May 3, 2011.

[2] The CAA establishes health-based ambient air quality standards and ranks air districts nationwide based on their level of attainment of those standards. The CAA also establishes a timetable for air districts to reach attainment, and authorizes specific penalties where a deadline is not met. CEQA, on the other hand, requires lead agencies to analyze and discuss significant impacts on air quality, and to continue to mitigate those impacts so long as they remain significant or no additional mitigation is feasible."

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-4]*)

"Regarding NSR Regulation 2, Rule 2's offset standards (i.e., 54 lbs/day for ROG or NOx), the BAAQMD's Revised Draft Options and Justification Report (October 2009) observes: "These levels represent a cumulatively considerable contribution."[3] But there is no evidence that emissions below these thresholds are not also "cumulatively considerable."

"Moreover, regardless of any evidence included in these other BAAQMD documents, no such evidence can overcome a fundamental logical and legal flaw in the EIR's assumption that these thresholds are appropriate for the purpose for which the DSEIR uses them. Using the DSEIR's logic, if the City finds that one project will add 53 lbs/day of ozone precursors, it is considered a less-than-significant impact, but if that project will add 55 lbs/day of ozone precursors, it is considered significant. Yet, if the City approved two new large projects in the area in the same 2- or 3-year period, or where operational impacts cause increased emissions, each emitting 53 lbs/day of ozone precursors, it is considered a less-than-significant impact even though the total of the two added together equals 106 lbs/day of ozone precursors!

"This scenario is not hypothetical; it is unfolding in San Francisco, and in the Mission Bay area now. (See Table 3, July 21, 2015, letter report by traffic engineer Larry Wymer, attached as Exhibit 2 to the July 27, 2015, letter from this office regarding impacts on Transportation for a list of project undergoing or about to undergo construction in this area of San Francisco.) As a result, the thresholds violate a fundamental CEQA principal that regardless of whether projects' incremental impacts are deemed insignificant in isolation, they may be cumulatively significant.

"The significance of a cumulative impact depends on the environmental setting in which it occurs, especially the severity of existing environmental harm. (Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98, 120 ("CBE") ["[T]he relevant question"... is not how the effect of the project at issue compares to the preexisting cumulative effect, but whether "any

additional amount" of effect should be considered significant in the context of the existing cumulative effect. [footnote omitted] In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant. [footnote omitted]"]; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720-721.)

"This area is in "non-attainment" status under federal and state clean air laws for these criteria pollutants; and this project, along with many others, will substantially contribute to that existing significant adverse impact. There is no evidence to the contrary. The City's untenable position is that public agencies in the Air Basin can approve project after project, each emitting (in the case of ozone precursors) up to 54 lbs/day of new and additional ozone precursors, without ever causing a cumulatively considerable increase in air pollution. This approach runs counter to the reason for conducting cumulative impact analysis. If the City (and other agencies in the Air Basin) continues to find that projects that make air quality worse - when it is already significantly degraded - do not have a significant adverse cumulative impact on air quality, then the City will have no legal obligation to adopt feasible mitigation measures to reduce the significant cumulative impact.

"Here, the BAAQMD CEQA Guidelines present ample evidence that the Bay Area's air quality is degraded and has been for a very long time. Therefore, the idea that agencies can forever approve multiple projects that each add 53 lbs of ROG and NOx to the air every day and never be deemed cumulatively considerable is absurd. Rather than explain why this is not true, the BAAQMD documents simply ignore the issue.

"**Footnote:**

[3] Exhibit 4, p. 2."

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-5]*)

"**4. The DSEIR's impact assessments for operational criteria pollutants (ozone precursors, PM10, PM2.5) and TAC emissions are invalid.**

"The operational impact assessment for ozone precursor, PM10, PM2.5 and TAC emissions is invalid for many reasons.

"DSEIR Table 5.4-9 shows operational daily emissions of criteria pollutants as follows:

ROG: 79 lbs/day [14 tpy]
NOx: 124 lbs/day [23 tpy]
PM10: 80 lbs/day [14.6 tpy]
PM2.5: 25 lbs/day [4.5 tpy]

(DSEIR, p. 5.4-39.)

"The DSEIR's impact assessments for these criteria pollutants emissions are invalid because they are based on the invalid thresholds of significance discussed above.

"Because construction-related emissions of ROG and NOx are higher than the applicable (but invalid) threshold of significance for these pollutants, the DSEIR concludes the Project's impact on ozone pollution is significant. As discussed above, while correct, this conclusion is misleading because it understates the severity of the impact deemed "significant" by implying that the only fraction of the Project's NOx emissions is are "significant" is the fraction above 54 lbs/day.

"The DSEIR's impact assessment for operational ozone precursor emissions is also misleading because it omits from its quantitative tally of criteria pollutants the emissions the Project will generate in San Francisco and the Mission Bay neighborhood from basketball game-associated "vehicle miles traveled" (DSEIR, p. 5-37.) The DSEIR's rationale for this startling omission is that moving the Warriors games from Oakland to San Francisco will reduce the same number of "vehicle miles traveled" in Oakland that the Project will generate in San Francisco and the Mission Bay neighborhood.

"This rationale is based on the unstated, but incorrect, assumption that the environmental setting at Oracle Arena and the Mission Bay site are identical. These settings are very different, in many crucial respects. First and foremost, the Mission Bay neighborhood and the surrounding areas of San Francisco are populated by San Franciscans, not Oaklanders. The residents, citizens, and registered voters of San Francisco are entitled to know what the Project's air quality impacts will be on them, regardless of whether the residents, citizens, and registered voters of Oakland will experience an air quality benefit as a result of the move.

"Second, Oracle Arena sits in the middle of a vast parking lot. To the west is I-880, various commercial properties, wetlands, and the Bay. To the east is the Coliseum, railroad tracks, ABC Supply (provider of industrial equipment), East Bay Truck and Auto Repair, BART tracks and the Coliseum BART Station, and then, over 2,000 feet away to the northeast there is a group of apartment buildings. To the north and south stretch commercial properties for well over a mile without any residences. This stands in stark contrast to the dense residential population surrounding the Mission Bay site.

"The DSEIR's suggestion that respiratory disease, heart disease, and cancer-causing air pollution is fungible and transferable, without regard to the location or environmental setting in which it occurs, is unsupported." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-10]*)

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"**III. Air Quality Thresholds of Significance Used in the DSEIR Are Based On Outdated, Non-Scientific NSR Values**

"BAAQMD (District) is regionally responsible for attaining or maintaining healthy air quality in the 9-county Bay Area that includes the proposed Event Center and Mission Bay Blocks 29 -32; the District implements a number of programs for attainment of regional air quality, including issuance of CEQA guidance used by Lead Agencies in the review and mitigation of air quality impacts and specified emissions of new development. The District has historically acted under CEQA as a commenting agency for new developments subject to CEQA review not otherwise subject to District regulations. CEQA thresholds, used by the City as Lead Agency and applied to the DSEIR (see Table 5.4-6 Criteria Air Pollutant Thresholds), were developed by the BAAQMD many years ago, well prior to the last Ozone Attainment Plan issued by the District in 2001.

"How the District's air quality CEQA thresholds were developed is relevant to whether they are appropriate and effective for use in evaluating the potential significance of air impacts of the proposed event center and other land use types anticipated within the DSEIR. While CEQA encourages the use of thresholds (Guidelines section 15064.7) to promote consistency and integration of environmental review activities across regulatory and planning disciplines and programs, the Lead Agency's air quality thresholds must reflect the true significance of the environmental impact for which they act as an impact or mitigation measuring device. Moreover, the courts have found that use of regulatory thresholds must not be applied "in a way that forecloses the consideration of any other substantial evidence showing there may be a significant effect" (CBE v. CA Resources Agency; 126 Cal. Rptr. 2d. 441, Cal.App.3 Dist., 2002).

"In this case, the Lead Agency's use of District thresholds ignores air pollution nonattainment and ambient air quality monitoring evidence that they have not been adequately effective in reducing land-use related mobile source emissions in the air basin. Importantly, the BAAQMD's CEQA threshold increments (expressed in lbs/day or tons/yr of specified pollutants) were based decades ago on NSR (New Source Review) quantitative increments intended solely for ensuring that the region's stationary source emissions, regulated under permits issued by the BAAQMD, would not cause the region to fall out of "attainment" status for complying with federal air quality ozone standards. NSR increments were established decades ago within federal Clean Air Act programs, aimed exclusively at regulating stationary (not mobile) sources of air pollution, and were keyed quantitatively to an area's air quality designations; worse air quality invokes use of more restrictive NSR daily or annual emission limits.

"Surprisingly, there is no scientific basis for how NSR values were established, nor is there any substantive information regarding their formulation or formation left in the historical record; we have researched this issue extensively and have been unable to find written material or anyone in regulatory air agencies

(CARB, EPA) who is intimately familiar with or is still alive who can recall how NSR increments were established nearly fifty years ago.

"In the DSEIR, BAAQMD's CEQA thresholds of significance were used; those thresholds were established by borrowing NSR values intended to ensure that the BAAQMD's stationary sources would not lead to regional air pollution "nonattainment" episodes. As a practical matter, the region's failure to attain the federal ozone standard is evidence of the lack of scientific credibility in how the BAAQMD's CEQA thresholds were established, as well as their lack of efficacy-had they been scientifically tied to land use growth and the mobile source emissions they create, it would be easily argued that the Bay Area would not now be designated "marginal nonattainment" for ozone air pollution after years of nonattainment.

"Use of NSR values that were never scientifically designed, to establish current BAAQMD CEQA thresholds, makes even less sense when comparing the emissions inventory of stationary sources in the Bay Area to emissions resulting from mobile sources (vehicles) that routinely emit regulated pollutants traveling to or from new land use developments. Quite simply, there is no rational nexus between the two categories since stationary source emissions equate to typically less than one-sixth those emitted by the basin's mobile sources.

"A more effective method for use by BAAQMD in designing CEQA threshold levels would have been to base them on growth in vehicle emissions expected to occur from projected land use growth in the basin---this method was developed and used in 2002 by the Sacramento Metropolitan Air Quality Management District (SMAQMD) to establish CEQA thresholds logically and arithmetically based on estimated increments of mobile source emissions of new development. The increment of new development-related emissions was derived from careful review of five years of immediately-prior building permit records obtained in the nonattainment area, and then adjusted to account for processes (such as ongoing development of rapid transit in the basin) expected to reduce vehicle-miles-travelled from new developments. CEQA threshold emission quantities (expressed as lbs/day or tons/yr) were then set at levels that would account for---and mitigate---only that new land use portion of the basin's total emissions determined by modeling and inventory analyses as necessary to achieve attainment of air quality standards under federal Clean Air Act requirements.

"Under this 'nexus analysis' approach, CEQA thresholds are scientifically established by correlating increased mobile source emissions from projected land use growth in the nonattainment area to the number of tons of related reductions needed for attainment by CAA-specified date(s). Such an approach greatly reduces the risk of under- or over-mitigating, and provides far more certainty that the estimated tons of emission reductions to result from their use, and critical to ensuring attainment of ambient air quality standards, will be realized. BAAQMD CEQA thresholds were not established scientifically, and the region has continued to violate ambient air quality standards for ozone for many years now-both act as potent evidence to call into serious question the effectiveness of BAAQMD's NSR-based CEQA thresholds in the DSEIR for Event Center/Mission Bay Blocks 29 - 32. Further, they suggest that air quality impacts are likely underestimated, and mitigation values are overestimated in the DSEIR." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-16]*)

Response AQ-1b: Use of BAAQMD Guidelines and Significance Thresholds for Construction and Operation

The comment suggests that the Draft SEIR conclusions regarding the significance of air quality impacts is erroneous because the analysis applied guidelines developed by the BAAQMD in determining whether impacts were significant. The comment also questions the use of BAAQMD's recommended thresholds of significance for cumulative impacts related to ROG and NOx emissions. The comment suggests there is no evidence that emissions below these thresholds would not be cumulatively considerable.

Use of BAAQMD Guidelines

For a general discussion of OCII's discretion to rely on the BAAQMD 2010 CEQA Guidelines to provide significance thresholds for use in CEQA analysis, please see Response AQ-1a. The BAAQMD 2010 CEQA Guidelines and significance thresholds are the subject of current ongoing litigation on an issue unrelated to the one raised by the comment.[1] In the most recent judicial decision in August 2013, the Court of Appeal reversed a previous trial court's decision and held that BAAQMD's adoption of the thresholds was not a "project" subject to CEQA review. The court also agreed with BAAQMD that there were scenarios in which the thresholds could be used to properly assess whether and in what amount a project would add pollution to the environment. As a result, the court concluded, the thresholds were not invalid.

The California Supreme Court granted a petition for review filed in that case. (*California Building Industry Association v. Bay Area Air Quality Management Dist.* (No. S213478).) Oral argument occurred on October 7, 2015. The Supreme Court is therefore expected to issue a decision in the case in the near future. The outcome of this case will not affect whether the significance thresholds at issue here are appropriate for the project. The question for review in that case, as framed by the Supreme Court, is: "Under what circumstances, if any, does the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) require an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project?" The resolution of this issue will not affect the significance thresholds relied upon by OCII.

Although BAAQMD has withdrawn its thresholds as a result of this litigation, the Planning Department has determined that substantial evidence supports the use of many of BAAQMD's thresholds, and thus relies on this evidence to support the SEIR's significance thresholds. OCII is relying on the information published by BAAQMD and EPA for developing- thresholds used to assess criteria pollutant and health risk assessment impacts. For example, the thresholds listed in SEIR Table 5.4-6 are the criteria air pollutant thresholds developed by the BAAQMD. The SEIR (pp. 5.4-25 to 5.4-26) provides substantial evidence in support of these thresholds. The efficacy of these thresholds will not be addressed in the California Supreme Court's decision.

In light of BAAQMD's decision to withdraw its guidance, BAAQMD recommends that lead agencies consider relying on BAAQMD's previous guidance with respect to thresholds, which was issued in 1999. The 1999 Guidance established the thresholds shown in **Table 13.13-1** with respect to criteria air pollutants of concern:

[1] In a ruling dated February 14, 2012 Alameda County Superior Court Judge Frank Roesch found that in adopting new air quality CEQA significance thresholds (new thresholds), the BAAQMD violated CEQA by not first studying the potential environmental impacts of its new thresholds on future growth and transportation patterns. Judge Roesch required that the new thresholds be rescinded pending formal CEQA approval. Judge Roesch did not rule on the merits of the new thresholds. This case is pending before the State Supreme Court.

TABLE 13.13-1
BAAQMD'S 1999 AIR QUALITY THRESHOLDS OF SIGNIFICANCE

Pollutant	Annual Threshold in tons per year	Daily Threshold in pounds per day
ROG	15	80
NOx	15	80
PM10	15	80
PM2.5	None	None

SOURCE: (BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans (December 1999), p. 16.)The 1999 Guidance does not include a significance threshold for fine particulate matter ($PM_{2.5}$).

These thresholds are less stringent than those set forth in the guidance that have been withdrawn by BAAQMD as a result of litigation. Although OCII could use the thresholds established in the 1999 guidance, OCII has exercised its discretion to continue to use the 2010 thresholds, in that the 2010 thresholds are more stringent. If the 1999 thresholds were used, OCII's conclusions with respect to the significance of air quality impacts would be the same, since the project's estimated operational emissions of NOx would still exceed the 1999 threshold.

The construction and operation emission thresholds for criteria pollutants applied in the SEIR were developed by BAAQMD based upon offset thresholds used to implement its Regulation 2 Rule 2 for permitting of stationary sources of air pollution (New Source Review). It is the existing practice by most air Districts[2] within California that develop significance thresholds under CEQA for criteria pollutants to use New Source Review (NSR) emission limits for deriving thresholds of significance for project-level emissions of criteria pollutants.

As stated on page 5.4-28 of the SEIR, the project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, if a project's emissions are below the project-level thresholds, the project would not be considered to result in a considerable contribution to cumulative regional air quality impacts.

Some comments suggest that the NSR thresholds which underlie the BAAQMD significance thresholds are not appropriate given the non-attainment status of the air district with respect to ozone. While the air basin is still designated as a non-attainment region, which is partially reflective of recent increases in the stringency of state and federal air quality standards for ozone, California Air Resources data show that monitored ozone concentrations in the San Francisco Bay Area Basin have declined 17 percent over the past 20 years despite a region-wide increase in vehicle miles travelled of over 100 percent.[3] Consequently, it is clear that measures taken locally

[2] Inclusive of The South Coast Air Quality Management District (see page 6-1 of the District's *CEQA Air Quality Handbook*), the San Joaquin Air Pollution Control District (see page 81 of the Districts *Guidance for Assessing and Mitigating Air Quality Impacts*, 2015 and the Monterey Bay Unified Air Pollution Control District (see page 2-2 of the District's CEQA Air Quality Guidelines from 2008).

[3] CARB, California Almanac of Emissions and Air Quality -2013 Edition, Chapter 4 Regional Trends and Forecasts.

by BAAQMD are effective and a large portion of these reductions has been achieved by curtailing emissions from stationary sources. The NSR thresholds are therefore enabling the BAAQMD to capture a sufficient percentage of projects to effectively reduce ozone precursors within the basin. Basing the CEQA significance thresholds on these same rates also ensures a similar capture of projects on which to impose mitigation through the CEQA process.

One comment suggests that use of a brightline threshold such as 54 pounds per day of NOx, is inappropriate because two projects assessed independently could combine to exceed this threshold and not be captured in a project-level analysis. However, Appendix G of the CEQA Guidelines specifies that air quality analysis should include assessment of a project's emissions relative to "quantitative thresholds for ozone precursors" because ozone is a regional pollutant that for the most part is not emitted directly to the atmosphere and, therefore, like greenhouse gases emissions, represents a cumulative impact. Accordingly, in its 2011 CEQA Guidelines BAAQMD state that "no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts."

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

The California Natural Resources Agency acknowledges that there is no "one molecule" rule under CEQA for the purposes of identifying cumulative impacts.[4] Consequently, it is not necessary to mitigate significant air pollutant emissions to a net zero level but only to below the identified threshold, emissions below which would represent a *de minimis* contribution to existing air quality.

Threshold of Significance for Cumulative Impacts

The BAAQMD guidance provides specific recommendations for determining whether a project's emissions of criteria pollutants would be cumulatively considerable. The BAAQMD guidance lists recommended thresholds of significance for criteria pollutants and explains that these thresholds represent the emission levels above which a project's individual emissions would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. The Guidance provides that the thresholds would be an evaluation of the incremental contribution of a project to a significant cumulative impact. These threshold levels are well-established in terms of existing regulations as promoting review of emissions sources to prevent cumulative deterioration of air quality.[5] It was therefore appropriate to use the recommended thresholds in evaluating the project's cumulative air quality impacts.

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4 California Natural Resources Agency, Initial Statement of Reasons for Regulatory Action, Proposed Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97, July 2009, p.23.

5 Bay Area Air Quality Management District, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance,* October 2009.

Rialto Citizens for Responsible Growth v. City of Rialto (2012) 208 Cal.App.4th 899, is on point. In that case, the challenged EIR used the methodology and thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) in determining whether the project's emissions of criteria pollutants (ROG, NOx, etc.) would be significant. The EIR also used the methodology and thresholds of significance recommended by the SCAQMD in determining whether the project's emissions of criteria pollutants was cumulatively considerable. The EIR concluded that the project would have a significant cumulative impact on air quality because the project would "generate emissions that exceed the thresholds of significance recommended by the SCAQMD for ROG, NOx, and CO." (*Id*. at p. 932; see also *id*. at p. 932.) The court determined that the EIR's reliance on the SCAQMD methodology and thresholds of significance was appropriate and provided substantial evidence supporting the EIR's cumulative impacts analysis. (*Id*. at pp. 931-934.)

Notably, in *Rialto Citizens*, the SCAQMD recommended using the thresholds of significance for project-specific emissions to determine whether a project's incremental contribution to a cumulative significant impact was cumulatively considerable. The EIR explained: "The SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. *Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed using the same significance criteria as those for project specific impacts.* Therefore, individual development projects that generate construction-related or operational emissions that exceed the SCAQMD recommended daily thresholds for project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the Basin is nonattainment." (*Id*. at p. 933, emphasis added.) The court concluded that "[i]n view of the SCAQMD's recommendations, the EIR reasonably analyzed the project's cumulative impact on air quality based on the project's emissions alone." (*Ibid*.)

Similarly, here, the BAAQMD recommends assessing whether a project's incremental contribution to emissions of criteria pollutants are cumulatively considerable by considering the emissions specific to the project and provides specific thresholds of significance for making that determination. It was therefore appropriate for the Draft SEIR to rely on the thresholds and methodology recommended by BAAQMD in determining whether the project's emissions of criteria pollutants are cumulatively considerable. Like the EIR upheld in *Rialto Citizens*, the Draft SEIR "addressed whether the project's additional impact on air quality should be considered cumulatively significant in light of the existing air quality problem, and concluded that it was." (208 Cal.App.4th 899, 932.)

Furthermore, the Draft SEIR concludes that the project would result in a cumulatively considerable contribution to regional air quality impacts even with implementation of the proposed mitigation measures, and therefore, the cumulative impact is considered significant and unavoidable with mitigation. Therefore, the comment's suggestion that using the BAAQMD's recommended thresholds provided a means for avoiding the disclosure of a potential significant impact is not accurate. The Draft SEIR describes project-related emissions in detail and concludes the project's contribution to the impact would be cumulatively considerable and the impact is considered significant and unavoidable.

Further, the comment misstates the standards for an adequate cumulative impacts analysis under CEQA. Although the significance of a cumulative impact depends on the environmental setting in which it occurs, any contribution to a significant cumulative impact is not necessarily cumulatively considerable. Even if a project contributes to a cumulatively significant impact, "[t]his does not mean [] that any additional effect in a nonattainment area for that effect necessarily creates a significant cumulative impact; the "one [additional] molecule rule" is not the law." (*Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 128.) Instead, the lead agency has discretion to determine whether the project's incremental contribution to a significant cumulative impact is cumulatively considerable. (*Ibid*. ["the basic approach set forth in Guidelines section 15064, subdivision (i)(1) seems sound - that is, in assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the proposed project's incremental effects are cumulatively considerable."].) Here, OCII properly exercised its discretion and relied on the thresholds of significance recommended by the BAAQMD to determine whether the project's incremental contribution to ROG and NOx emissions impacts was cumulatively considerable.

Issues Raised by Commenters: Health Risk Significance Thresholds (AQ-1c)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-12 O-MBA8L2-28 O-MBA8L2-33 O-MBA8L2-34

"**5. The DSEIR's impact assessment for Project-caused increases in Toxic Air Contaminants (TACs) is invalid.**

"The DSEIR's impact assessment for operational Toxic Air Contaminants (TACs) - Impact AQ-3 - is invalid for a number of reasons, in particular because the DSEIR's use of thresholds of significance for Project-caused increases in cancer risk and PM2.5 is inconsistent, confusing, and legally erroneous.

"**a. The DSEIR's health impact assessment for the Project-caused increases in cancer risk from TACs is invalid.**

"The DSEIR uses a threshold of significance for the Project's impact of increasing cancer risk in the area of "100 in one million." As discussed above, for criteria pollutants the DSEIR borrows thresholds of significance from the BAAQMD to determine the significance of both the direct, incremental increase in emissions caused by the Project, and the Project's contribution to cumulative increase in emissions in the area.

"In contrast, in its assessment of the Project's impact of increasing cancer risk in the area, the Project ignores BAAQMD's stated "Individual Project" threshold of significance "for Risk and Hazards for new sources and receptors" which is stated as "Increased cancer risk of >10.0 in a million." (Exhibit 1, p. 2-2.) Instead, the DSEIR uses BAAQMD's stated "Cumulative Project" threshold of significance "for Risk and Hazards for new sources and receptors" which is stated as "Increased cancer risk of >100.0 in a million." (DSEIR, p. 5.4-13; see, May 2011, BAAQMD Updated CEQA Guidelines, p. 2-2.).[13]

Table 1

Hearst Tower Child		No Tier 2/VDECS	Tier 2/VDECS
Background	26	26	26
No Tier 2/VDECS	54	54	
Tier 2/VDECS	9.2		9.2
Operations - Generators	30	30	30
Operations - Mobile	7.2	7.2	7.2
Total	126.4	117.2	72.4
less background		26	26
Project incremental impact		91.2	46.4

"The DSEIR estimates the Project's impact of increasing cancer risk for adults living at UCSF's Hearst Tower as either 40 or 38 additional cancer cases per one million persons, depending on whether the Project is able to successfully use off-road construction equipment meeting Tier 2 and NOx VDECS standards. (See Figure 2, DSEIR, p. 5.4-49, Table 5.4-11.)

Table 2

Hearst Tower – Adult		No Tier 2/VDECS	Tier 2/VDECS
Background	26	26	26
No Tier 2/VDECS	2.8	2.8	
Tier 2/VDECS	0.48		0.48
Operations - Generators	30	30	30
Operations - Mobile	7.2	7.2	7.2
Total	66.48	66	63.68
less background		26	26
Project incremental impact		40	37.68

"The DSEIR estimates the Project's impact of increasing cancer risk for adults living at UCSF's Hearst Tower as either 45 or 42 additional cancer cases per one million persons, depending on whether the Project is able to successfully use off-road construction equipment meeting Tier 2 and NOx VDECS standards. (See Figure 3, DSEIR, p. 5.4-49, Table 5.4-11.)

Table 2

UCSF Hospital Child		No Tier 2/VDECS	Tier 2/VDECS
Background	44	44	44
No Tier 2/VDECS	28	28	
Tier 2/VDECS	4.8		4.8
Operations - Generators	30	30	30
Operations - Mobile	7.2	7.2	7.2
Total	114	109.2	86
less background		44	44
Project incremental impact		65.2	42

"As discussed above, the DSEIR's premise that the Project Sponsor can obtain a substantial quantity of off-road construction equipment meeting Tier 2 and NOx VDECS standards is illusory. Therefore, the only relevant numbers are the three higher numbers, i.e., 91, 40 and 45. But even using the lower numbers, i.e., 46, 38, and 42, all of them exceed the BAAQMD's "Individual Project" threshold of significance for increased cancer risk of 10 per one million." (Exhibit 1, p. 2-2.) Instead of explaining why, after using BAAQMD's thresholds of significance for all criteria pollutants, the DSEIR does not use the BAAQMD's "Individual Project" increased cancer risk threshold of significance of 10 per one million, the DSEIR simply ignores this threshold.

"Thus, the DSEIR uses at least two strategies to avoid disclosing a significant increase in cancer risk: using BAAQMD's cumulative standard instead of its individual project standard, and assuming the Project Sponsor can obtain a substantial quantity of off-road construction equipment meeting Tier 2 and NOx VDECS standards. Dropping either of these unwarranted predicates reveals the Project's impact of increasing cancer risk is significant.[14]

"The DSEIR explains its choice of a threshold of significance for cancer risk from TAC's of 100 per one million persons as follows:

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

(DSEIR, p. 5.4-13.)[15]

"The City's reliance on the EPA's judgment of "acceptable" cancer risk is legally flawed for several reasons. First, the City relies on a simplistic misrepresentation of actual EPA policy. Second, even if EPA policy is what the City implies it is, the DSEIR errs as a matter of CEQA law by using the EPA's judgment of "acceptable" cancer risk to determine the significance of the Project's impacts.

"The EPA's actual policy is to assess increased cancer risk based on a host of site-specific factors within a range of values from 1 in one million to 100 in one million. This policy reflects the agency's attempt to balance the costs and benefits of protecting public health in its implementation of a host of federal environmental laws, including the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, CERCLA (Superfund), etc. (See e.g., Starfield, L.E., "The 1990 National Contingency Plan: More Detail and More Structure, But Still a Balancing Act"; Environmental Law Reporter, June 1990, pp. 10222-10251, attached hereto as Exhibit 3.)[16]

"Instead of following this analytic approach, the DSEIR selects one value at the least environmentally protective end of the EPA's "acceptable risk" range and uses it to determine the significance of the Project's impacts, but without regard to the Project's site-specific considerations. Again, the DSEIR has cherry-picked a threshold of significance to avoid finding the Project's cancer risk impact significant.

"Also, CEQA neither requires nor allows the City to use the EPA's judgment of "acceptable" cancer risk to determine the significance of the Project's impacts. The City's discretion to decide that significant environmental harm is "acceptable" in light of the project's benefits arises at the end of the CEQA analysis, in the context of a statement of overriding considerations, not at the beginning of the process, in determining whether impacts are significant.

> A statement of overriding considerations is required, and offers a proper basis for approving a project despite the existence of unmitigated environmental effects, only when the measures necessary to mitigate or avoid those effects have properly been found to be infeasible. (Pub. Resources Code, § 21081, subd. (b).) Given our conclusion the Trustees have abused their discretion in determining that CSUMB's remaining effects cannot feasibly be mitigated, that the Trustees' statement of overriding circumstances is invalid necessarily follows. CEQA does not authorize an agency to proceed with a project that will have significant, unmitigated effects on the environment, based simply on a weighing of those effects against the project's benefits, unless the measures necessary to mitigate those effects are truly infeasible. Such a rule, even were it not wholly inconsistent with the relevant statute (id., § 21081, subd. (b)), would tend to displace the fundamental obligation of "each public agency [to] mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so" (id., § 21002.1, subd.(b)).

"City of Marina v. Board of Trustees of the California State University (2006) 39 Cal.4th 341, 368-69.

"This is a critical distinction, because where the Project does not exceed thresholds of significance that are erroneously inflated by the concept of "acceptable risk," the City is absolved of further legal obligation to mitigate the impact. As a result, the public cannot know whether the City will allow an unknown

number of cancer cases to occur that it could have feasibly avoided had it scrupulously followed CEQA. Nor does the public know, had the EIR determined that 46 additional child cancer cases per one million persons is significant, whether or not the City would have found the Project's benefits outweigh its environmental and adverse human health effects.

"The DSEIR also attempts to support its "100 in a million excess cancer cases" by stating: "The 100 in a million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on the District's recent regional modeling analysis." (DSEIR p. 5.4-13, citing the 2009 BAAQMD Justifications report, p. 67). Neither document, however, explains what this means. For example, how are "excess" cancer cases "consistent" with "ambient" cancer risk? What does "most pristine" mean? On a scale of 1 to 10, are Mission Bay and the "most pristine areas" separated by 1 unit, or 10 units, or somewhere in between? In short, this justification for the threshold is mere verbiage.

"**Footnotes:**

[13] This is also a City criterion for defining "Air Pollutant Exposure Zones" (APEZ). (DSEIR, p. 5.4-12.) An APEZ is "an area in which modeled air pollution exceeds "either: (1) a cancer risk of greater than 100 per one million exposed, and/or (2) PM2.5 concentrations in excess of 10 microgram per cubic meter (ug/m3) (including ambient).... Since the Project is not in an APEZ, the subsequent criterion of significance is whether or not the Project will create an APEZ." (DSEIR, Appendix-TR, Air Quality Appendix, p. 9.)

[14] See e.g., DSEIR, p. 5.4-49 ["With the minimum level of compliance with this mitigation measure (Tier 2 plus NOX VDECS), increased cancer risk as a result of project construction activities at the maximally impacted receptor would be approximately 9.2 in one million and cumulative excess cancer risk at all receptor locations would be reduced to below the significance threshold of 100 per one million. While unmitigated increased cancer risk at the maximally impacted receptors would exceed the threshold of 100 in one million, with implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), increased cancer risk at the maximally impacted receptors would be below the threshold of 100 in one million"].)

[15] Footnote 21 cites to "54 Federal Register 38044, September 14, 1989." As of July 6, 2015, this document was not included on the City's AB900 mandated web page dedicated to preparing the administrative record concurrently with its CEQA review of the Project. (See Pub. Res. Code § 21186 (a), (b), and (c).)

[16] "In the proposed NCP [Superfund National Contingency Plan], the Agency [EPA] had defined the acceptable risk range as being from 10^{-4} to 10^{-7}, meaning that when the excess risk to an individual of contracting cancer due to a lifetime exposure to a certain concentration of a carcinogen falls between approximately 1 in 10,000 [100 in one million] and 1 in 10 million, it is judged to be an acceptable exposure. As a measure of additional protection, the proposal provided that there should be a "point of departure" of 10^{-6}, toward the more protective end of the scale, that should be used in setting preliminary remediation goals; if conditions warranted, the final remedy could achieve a level elsewhere within the range. ¶ The final rule maintained the point of departure of 10^{-6}, but narrowed the risk range to 10^{-4} through 10^{-6}. This action was taken in response to public comment and concerns that the Superfund range went below the accepted de minimis level used by other EPA programs and those of other federal agencies. ... the Agency has retained the discretion to select a cleanup level outside the range in appropriate circumstances (e.g., where concerns about sensitive populations, synergistic effects among chemical mixtures, etc., suggest that the remedy should attain a level below 10^{-6}. The use of a range of acceptable risk is general practice for most government programs. As discussed below in the section on role of cost, it affords the Agency the flexibility to take into account different situations, different kinds of threats, and different kinds of technical remedies. If a single risk level had been adopted, (e.g., at the more stringent end of the risk range), fewer alternatives would be expected to pass the protectiveness threshold and qualify for consideration in the balancing phase of the remedy selection process." (Id., 20 ELR 10237 [footnotes omitted].)

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-12]*)

"3. The DSEIR does not assess the Project's individual excess cancer risk to the Bay Area Air Quality Management District's (BAAQMD) 10 in one million significance threshold.[2] Rather, it determines the Project's significance by comparing the cumulative cancer risk (background risk plus Project risk) to BAAQMD's cumulative risk threshold of 100 in one million.

"**Footnote:**

[2] "California Environmental Quality Act Air Quality Guidelines." Bay Area Air Quality Management District, May 2011. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_ May%202011_5_3_11.ashx, p. 2-2

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-28]*)

"**Failure to Assess Individual Health Risk from Proposed Project**

"The DSEIR fails to assess the individual health risk that construction of the Project may have on nearby sensitive receptors. According to the DSEIR, because "both the PM2.5 and cancer risk assessments account for background (existing) concentrations and risk levels," the Project's contribution to PM2.5 concentrations and excess cancer risks are instead combined with background concentrations, and are then compared to cumulative significance thresholds (Volume 2, p. 5.4-45). Instead, the DSEIR uses the individual project cancer risk threshold of 10 in one million to determine the significance of emissions from the proposed emergency generators, exclusively (Volume p. 5.4-46). This application of the 10 in one million threshold is inconsistent with CEQA thresholds set forth by BAAQMD. As a result, the significance of the Project's toxic air contaminant (TAC) emissions during construction is not adequately determined. An updated DSEIR should be prepared to accurately assess the Project's individual health risk according to CEQA guidance set forth by BAAQMD.

"The DSEIR does not apply the project risk threshold of 10 in one million to the Project as a whole (stationary, area, and mobile sources of TACs); rather, the DSEIR applies this threshold to stationary sources, exclusively, to the proposed emergency generators that will be used during Project operation (Volume 2, p. 5.4-46). The DSEIR explains this application by stating the following:

"The permitting process under BAAQMD Regulation 2, Rule 5 requires a Health Risk Screening Analysis, the results of which are posted on the District's website. Per its Policy and Procedure Manual, the BAAQMD requires implementation of Best Available Control Technology for Toxics and would deny an Authority to Construct or a Permit to Operate for any new or modified source of TACs that exceeds a cancer risk of 10 in one million" (Volume 2, p. 5.4-46).

"The requirements and thresholds set forth in BAAQMD's Regulation 2, Rule 5, as referred to in the DSEIR, however, apply only to stationary sources. As a result, the TAC emissions from on- and off-road mobile sources, such as construction equipment and heavy duty diesel trucks, are not held to any sort of significance threshold. This application of the 10 in one million threshold is inconsistent with CEQA thresholds set forth by BAAQMD. According to the BAAQMD's May 2011 Recommended Methods for Screening and Modeling Local Risks and Hazards, "the thresholds for local risks and hazards from TAC and PM2.5 are intended to apply to all sources of emissions, including both permitted stationary sources and on- and off-road mobile sources, such as sources related to construction, busy roadways, or freight movements."[18] Therefore, an individual project would be considered significant if the total project's TAC emissions, including exhaust from construction equipment, heavy duty diesel trucks, and diesel-powered generators, would result in an increased cancer risk greater than 10 in one million, or would result in an increased ambient air PM2.5 concentration greater than 0.3 $\mu g/m^3$.

"The BAAQMD's October 2009 Revised Draft Options and Justification Report[19] outlines four ways of siting a new source and determining a significance threshold. Any project with the potential to expose people (receptors) to substantial levels of TAC is currently deemed to have a significant impact. The BAAQMD uses the following approach (Option 1) to determine significance:

> "Proposed development projects that have the potential to expose receptors to TAC <u>in excess of the following thresholds from any source, mobile or stationary</u> would be considered to have a significant air quality impact if the:
>
> - Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million.
> - Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index greater than 1 for the MEI" (p. 59).

"The second option consists "of applying the current stationary source permitting thresholds to project-generated stationary, area-, and mobile-source TAC emissions" (p. 60). As previously stated, stationary sources of emissions are subject to BAAQMD's permit process per Regulation 2, Rule 5. The permitting process requires that all new or modified stationary sources that emit TACs perform modeling to determine what the concentration of TACs will be at the boundary of their property. This current permitting approach does not include area or mobile sources of emissions in the modeling or permitting assessment. If a proposed stationary source will have operational TAC concentrations from permitted equipment that result

in an estimated 1 excess cancer risk in a million, the project is required to install Toxic Best Available Control Technology (TBACT) to minimize emissions of TACs. The TAC modeling must also demonstrate to BAAQMD that implementation of the proposed project would not result in additional incremental exposure of surrounding receptors to levels that exceed 10 in one million for excess cancer risk or a hazard index above one. The BAAQMD will not issue an authority to construct or permit to operate for any stationary source of TACs that would result in concentrations exceeding a 10 in one million threshold.

"Option 2 expands on Option 1 by requiring the application of the one in a million threshold for stationary sources to install TBACT to projects that have TAC emissions from sources (primarily mobile) not currently required to obtain permits to operate. These non-stationary source type projects, such as the Warriors Arena Project, would be required to implement Toxic Best Practices (TBPs), such as site and circulation design, setbacks from roadways, air conditioning, and vegetation buffers, if their modeled cancer risks are above the one in a million threshold. The BAAQMD would identify a list of TBPs for non-stationary sources to implement if they are above the one in a million threshold. The threshold of significant impact, thereby requiring implementation of all feasible on-site mitigation measures would be the 10 in a million excess cancer risk and a HI of 1.0.

"The more stringent Option 3 involves application of a tiered CEQA threshold. New sources of TACs locating in impacted communities, as identified by the BAAQMD's Community Air Risk Evaluation (CARE) Program, would have to install TBACT and/or TBPs and would be subject to a significance threshold of 5 in one million (after consideration of TBACT and/or TBPs). New sources of TACs locating in a community other than an impacted community would be subject to a significance threshold of 10 in one million. Finally, Option 4 proposes a no net increase inhalation cancer risk. Option 4 does not define a "substantial change" because any increase would be considered significant.

"The first two options suggest that projects with the potential to expose receptors to TACs greater than 10 in one million excess cancers, from any source, mobile or stationary, should be considered significant. The third option suggests a more stringent significance threshold of 5 in one million, and the fourth option suggests an even more stringent threshold, which deems any increase in TACs as significant. Regardless, all four options specify that emissions from both stationary and mobile sources be included when determining project significance. As a result, the maximum threshold that could reasonably apply to the Project's stationary and mobile source TAC emissions is the BAAQMD's individual project threshold of 10 in one million.

"**Footnotes:**

[18] "Recommended Methods for Screening and Modeling Local Risks and Hazards." Bay Area Air Quality Management District, May 2011. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx

[19] "Revised Draft Options and Justification Report." Bay Area Air Quality Management District, October 2009. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/revised-draft-ceqa-thresholds-justification-report-oct-2009.pdf?la=en

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-33]*)

"**Failure to Use District's PM2.5 Cumulative Threshold**

"To evaluate the cumulative impacts of the Project, the DSEIR implements criteria used to define an Air Pollutant Exposure Zone (APEZ). The DSEIR states:

> "an APEZ [is] defined as an area in which modeled air pollution exceeds 'either: (1) a cancer risk of greater than 100 per one million exposed, and/or (2) PM2.5 concentrations in excess of 10 microgram per cubic meter ($\mu g/m^3$) (including ambient)'" (Volume 3, Appendix AQ, p. 9).

"The cancer risk cumulative threshold of 100 in one million, used in the DSEIR, is consistent with the cumulative cancer risk threshold set forth by the BAAQMD, but not, as explained above, with the individual project cancer risk threshold. However, the PM2.5 threshold of 10 $\mu g/m^3$ is inconsistent with the BAAQMD's cumulative threshold, and represents a value that is far greater than the BAAQMD's

recommended value. According to the BAAQMD's May 2011 CEQA Guidelines, "a project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius (or beyond where appropriate) from the fence line of a source, or from the location of a receptor, plus the contribution from the project, exceeds the following:

- Non- compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk levels of more than 100 in one million or a chronic hazard index greater than 10 for TACs; or
- 0.8 μg/m^3 annual average PM2.5."[20]

"BAAQMD suggests that a project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius would result in an annual average PM2.5 concentration greater than 0.8 μg/m^3. This threshold is much more stringent when compared to the 10 μg/m^3 threshold used in the DSEIR. As a result, the DSEIR should implement the recommended cumulative threshold set forth by BAAQMD, rather than the 10 μg/m^3 threshold.

"Furthermore, the DSEIR uses BAAQMD thresholds to determine the significance of other air quality impacts, but then uses APEZ criteria to determine health risk significance, even though BAAQMD suggests significance thresholds for cumulative health risks. For example, the DSEIR uses BAAQMD's average daily emissions construction thresholds to determine significance of construction emissions on air quality (Volume 2, p. 5.4-25). As is apparent, there is a huge discrepancy between the 10 μg/m^3 threshold used in the DSEIR and the 0.8 μg/m^3 cumulative threshold recommended by BAAQMD. Using an alternative threshold, rather than the one set forth by BAAQMD, demonstrates that the Applicant is picking and choosing the thresholds that apply to the Project to determine significance.

"**Footnote:**

[20] "California Environmental Quality Act Air Quality Guidelines." Bay Area Air Quality Management District, May 2011. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_ May%202011_5_3_11.ashx, p. 5-15

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-34]*)

Response AQ-1c: Health Risk Significance Thresholds

The comment disputes the validity of using the 100 in one million incremental cancer risk as a threshold of significance for determining cumulative impacts from toxic air contaminants. The comment also states that the BAAQMD recommended threshold for individual projects (10 per one million) was ignored.

The threshold used in the Draft SEIR of 100 in a million incremental cancer risk threshold for assessing cumulative impacts from toxic air contaminants is appropriate and supported by substantial evidence. As explained in Response AQ-1, a lead agency has discretion to determine the appropriate threshold of significance to evaluate the severity of a particular impact. A lead agency's determination of whether to characterize impacts as significant necessarily requires the lead agency to make policy judgments. As the CEQA Guidelines explain, "[t]he determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data." (CEQA Guidelines, § 15064, subd. (b).) An agency may, but is not required to, rely on thresholds of significance recommended or adopted by other agencies. (See *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899 [agency may rely on thresholds recommended

by other agencies]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068 [agency discretion to fashion significance thresholds of significance].) In any event, agencies are permitted to use their expertise and must make policy judgments to determine the threshold of significance that is appropriate for a particular impact.

Here, the Draft SEIR explains in detail the rationale for using 100 in one million as the threshold of significance for increased cumulative cancer risk from TACs. (See SEIR, p. 5.4-13; 5.4-27.) The health risk thresholds identified in the SEIR on pp. 5.4-27 to 5.4-28 are based on a combination of the BAAQMD 2010 CEQA Guidelines and assessments by the City of localized sources of toxic air contaminants and proximity to sensitive receptors. The thresholds developed by the City and relied on by OCII do not ignore a threshold of 10 per one million for individual project emissions as the comment suggests. Instead, the project site conditions were such that the threshold did not apply in this instance as further explained below.

The City in partnership with the BAAQMD has identified the Air Pollutant Exposure Zone in the City – areas with poor air quality under existing and cumulative conditions[6]. The project site is not located within an Air Pollutant Exposure Zone. The SEIR states that in such a case, if the project could result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria that otherwise would not occur without the project, a significant impact would occur if the proposed project results in an excess cancer risk greater than 10.0 per million (page 5.4-27). The analysis demonstrated that the project would not result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria. Therefore, the 10.0 per million excess cancer risk criterion does not apply. Using this tiered threshold approach, the City can minimize the creation of new Air Pollutant Exposure Zones and the impact on existing Air Pollutant Exposure Zones through the CEQA process.

The localized health risk thresholds explained above were developed based on City specific information and consultation with BAAQMD staff[7] as part of the development of both the City's Clean Construction Ordinance and Article 38 of the San Francisco Health Code, which addresses toxic air contaminants and sensitive land use developments within the Air Pollutant Exposure Zone. As part of the development of these codes and ordinances, the Planning Department and the San Francisco Public Health Department (DPH) partnered with the BAAQMD to inventory and assess air pollution and exposures from vehicles, stationary, and area sources within San Francisco.

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6 San Francisco DPH, the Planning Department, and the Bay Area Air Quality Management District have worked together to utilize third-party-verified modeling to identify locations in the City that exceed two health-based criteria: 1) an excess cancer risk from all modeled sources; and 2) PM2.5 concentrations from all modeled sources (including ambient) that exceed defined health-protective limits. These locations are referred to as the Air Pollutant Exposure Zone. In addition, the City has identified parcels within 500 feet of elevated freeways as part of the Air Pollutant Exposure Zone, consistent with guidance from the California Air Resources Board. A "health vulnerability layer" was then added based on the Air District's evaluation of health vulnerability in the Bay Area. For those zip codes in the worst quintile of Bay Area Health Vulnerability scores (94102, 94103, 94105, 94124, and 94130), the City lowered the standard for identifying city lots in the Air Pollutant Exposure Zone to: (1) excess cancer risk greater than 90 per one million persons exposed, and/or (2) PM25 concentrations in excess of 9 μg/m3.

7 BAAQMD staff was also present and spoke in support at an October 6, 2014 public hearing during which the Ordinance was considered and recommended for approval by the San Francisco Board of Supervisors Land Use and Economic Development Committee.

Citywide dispersion modeling was conducted using AERMOD[8] to assess the emissions from the following primary sources: roadways, permitted stationary sources, port and maritime sources, and Caltrain. Emissions of PM_{10} (DPM is assumed equivalent to PM_{10}), $PM_{2.5}$, and total organic gases (TOG) were modeled on a 20-meter-by-20-meter receptor grid covering the entire City. The results represent a comprehensive assessment of existing cumulative exposures to air pollution throughout the City. The methodology and technical documentation for modeling citywide air pollution is available in the document entitled *The San Francisco Community Risk Reduction Plan: Technical Support Documentation*.[9]

With further consultation among the Planning Department, DPH, and BAAQMD staff and the public, the City identified areas with poor air quality, termed "Air Pollutant Exposure Zone." Projects within an Air Pollutant Exposure Zone require special consideration when siting uses that emit toxic air contaminants (such as construction equipment exhaust) or siting sensitive land uses.

Modeling and mapping of all known existing sources of air pollution as well as identifying the criteria for an Air Pollutant Exposure Zone involved considerable stakeholder outreach and public participation. The designation and establishment of Air Pollutant Exposure Zone was subsequently adopted by the San Francisco Board of Supervisors and is codified in both the Article 38 of the San Francisco Health Code and as part of the Clean Construction Ordinance (Ordinance No. 28-15). Sites outside an Air Pollutant Exposure Zone have generally good air quality, even for sensitive populations. Within and outside the Air Pollutant Exposure Zone, projects that could emit substantial pollutant concentrations require more detailed analysis to determine if the impacts are significant.

The project site is not within an Air Pollutant Exposure Zone and, based on citywide modeling, the highest mitigated risk at a receptor near the project site (UCSF Hospital) from the contribution of emissions from all modeled sources is an excess cancer risk of 86 per one million persons exposed with an increased risk of 44 per one million due to background ambient sources and the remainder from modeled vehicles (construction and operation) and stationary source contributions from the project. These levels are below the SEIR threshold levels for identifying when sensitive populations may be exposed to substantial pollutant concentrations. The SEIR clearly discloses the threshold levels for this location as a cancer risk of 100 per one million (SEIR p. 5.4-27).

Evidence collected by the Planning Department and the BAAQMD guides establishment of the significance thresholds used by OCII, and the thresholds are specifically designed to ensure that the

[8] AERMOD is the USEPA's preferred/recommended steady state air dispersion plume model. For more information on AERMOD and to download the AERMOD Implementation Guide see www.epa.gov/ttn/scram/dispersion_prefrec.htm#aermod (accessed May 20, 2014).

[9] Bay Area Air Quality Management District, San Francisco Department of Public Health, and San Francisco Planning Department, *The San Francisco Community Risk Reduction Plan: Technical Support Documentation*, December 2012. Available online at ftp.baaqmd.gov/pub/CARE/SFCRRP/SF_CRRP_Methods_and_Findings_v9.pdf. Accessed February 25, 2015.

ambient air quality standards are not exceeded. U.S. EPA's Residual Risk Report to Congress[10] set an upper limit of acceptability of 1 in 10,000 (i.e., 100 in 1 million) lifetime cancer risk for the most exposed individual. In the Benzene NESHAP rule, EPA explained, "The EPA will generally presume that if the risk to that individual [the Maximum Individual Risk] is no higher than approximately 1 in 10 thousand, that risk level is considered acceptable and EPA then considers the other health and risk factors to complete an overall judgment on acceptability." More restrictive thresholds are identified in Residual Risk Report to Congress and are for the purposes of identifying a de minimis threshold for screening level assessments below which a refined analysis is not required.

Further, the contributions considered in the report consider specific sources of a permitted facility. Because the 100 in one million threshold used in the analysis of the SEIR is used as a cumulative threshold that considers multiple sources not typically considered by EPA in a facility analysis, such as contributions from roadways and railways, as well as from multiple stationary sources from multiple operators as well as from construction activity, the 100-in-one-million threshold serves as an appropriately conservative threshold for such an analysis. As the lead agency, OCII may consider thresholds recommended by other agencies provided that those thresholds are supported by substantial evidence, such as that discussed above.

It should be noted that when BAAQMD developed its 100 in one million cumulative criterion characterized in its CEQA Air Quality Guidelines as reflective of air quality in a "pristine" portion of the Bay area, it was originally designated as its "Point Reyes" approach,[11] reflecting the air quality in this National Seashore that the U.S. Park Service identifies as a Class I Park and wilderness area. Consequently, even such pristine areas as Point Reyes National Seashore can have a sizeable background cancer risk, largely due to cumulative global atmospheric transport.

The Draft SEIR identified a significant impact under Impact AQ-3 with regard to localized increases in cancer risk and identified Mitigation Measure M-AQ-1 Construction Emissions Minimization to reduce this impact to a less than significant level. As part of the Responses to Comments document, a refined health risk analysis was performed for the relocation of the emergency standby generators (see Chapter 12), and the results indicated that Impact AQ-3 would be less than significant. However, Mitigation Measure M-AQ-1 is still required to address the significant air quality impact identified for Impact AQ-1. Consequently, no statement of overriding considerations is necessary with respect to localized increases in cancer risk.

Because the SEIR, with the refined analysis, concludes that the impact is less than significant, the comment's discussion regarding a "statement of overriding considerations" is not applicable with respect to Impact AQ-3. CEQA provides that a project may be approved despite its significant and unavoidable impacts if the agency adopts a statement of overriding considerations stating the specific reasons to support its action. (Pub. Resources Code, § 21081,

[10] U.S. Environmental Protection Agency (U.S. EPA), Office of Air Quality Planning and Standards, Residual Risk Report to Congress, March, 1999.
[11] BAAQMD, Bay Area Air Quality Management District CEQA Guidelines Public Workshop Presentation, "Developing Thresholds of Significance", Slide 10, February 26, 2009.

subd. (b); CEQA Guidelines, § 15093.) As noted in the comment, however, an agency may not adopt a statement of overriding considerations in lieu of proposing feasible mitigation measures for significant impacts. (See *City of Marina v. Board of Trustees of the California State University* (2006) 39 Cal.4th 341.) That has not occurred here. Rather, here, OCII properly exercised its discretion in determining the appropriate thresholds of significance to analyze toxic air contaminants and the Draft SEIR proposes feasible mitigation that would reduce the impact to a less than significant level. Therefore, it is not necessary to adopt a statement of overriding considerations and the commenter's reliance on *City of Marina v. Board of Trustees of the California State University* (2006) 39 Cal.4th 341, is misplaced.

The response to comments O-MBA8L2-7 and O-MBA8L2-9 in Section 13.13.7: Mitigation Measure, Feasibility and Enforcement later in this section provides substantial evidence for the availability of construction equipment capable of achieving the risk reductions presented in Table 5.4-11 of the SEIR.

Issues Raised by Commenters: $PM_{2.5}$ Significance Thresholds (AQ-1d)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-13 O-MBA8L2-29 O-MBA8L2-34

"**b. The DSEIR's health impact assessment for Project-caused increases in $PM_{2.5}$ invalid.**

"The DSEIR uses a threshold of significance for the Project's health impact of increasing PM2.5 concentrations of "10 µg/cubic meter." As discussed above, for criteria pollutants, the DSEIR borrows thresholds of significance from the BAAQMD to determine the significance of both the direct, incremental increase in emissions caused by the Project, and the Project's contribution to cumulative increase in emissions in the area.

"In contrast, in its assessment of the Project's health impact of increasing PM2.5 concentrations, the Project ignores BAAQMD's stated cumulative threshold of 0.8 µg/cubic meter.(See Exhibit 1, p. 2-2.) According to BAAQMD, "Cumulative emissions within the 1,000 foot evaluation zone would be considered significant where the increased average annual ground-level concentrations of PM2.5 would be greater than 0.8 µg/m3." (Exhibit 4, p. 5.)

"Obviously, there is a huge discrepancy between the 10 µg/cubic meter threshold used in the DSEIR compared to the 0.8 ug/cubic meter threshold recommended by BAAQMD. This discrepancy is particularly troubling given that the DSEIR reports Project-caused cumulative increases in PM2.5 concentrations just below the 10 µg/cubic meter threshold, but well above the 0.8 µg/cubic meter threshold.

"It would appear, once again, that the DSEIR has cherry-picked a threshold of significance to avoid finding the Project's health risk impact from increases in PM2.5 significant." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-13]*)

"4. The DSEIR also fails to utilize BAAQMD's cumulative PM2.5 threshold of 0.8 µg/m^3." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-29]*)

"**Failure to Use District's PM2.5 Cumulative Threshold**

"To evaluate the cumulative impacts of the Project, the DSEIR implements criteria used to define an Air Pollutant Exposure Zone (APEZ). The DSEIR states:

> "an APEZ [is] defined as an area in which modeled air pollution exceeds 'either: (1) a cancer risk of greater than 100 per one million exposed, and/or (2) PM2.5 concentrations in excess of 10 microgram per cubic meter (µg/m^3) (including ambient)'" (Volume 3, Appendix AQ, p. 9).

"The cancer risk cumulative threshold of 100 in one million, used in the DSEIR, is consistent with the cumulative cancer risk threshold set forth by the BAAQMD, but not, as explained above, with the individual project cancer risk threshold. However, the PM2.5 threshold of 10 µg/m^3 is inconsistent with the BAAQMD's cumulative threshold, and represents a value that is far greater than the BAAQMD's recommended value. According to the BAAQMD's May 2011 CEQA Guidelines, "a project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius (or beyond where appropriate) from the fence line of a source, or from the location of a receptor, plus the contribution from the project, exceeds the following:

- Non- compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk levels of more than 100 in one million or a chronic hazard index greater than 10 for TACs; or
- 0.8 µg/m^3 annual average PM2.5."[20]

"BAAQMD suggests that a project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius would result in an annual average PM2.5 concentration greater than 0.8 µg/m^3. This threshold is much more stringent when compared to the 10 µg/m^3 threshold used in the DSEIR. As a result, the DSEIR should implement the recommended cumulative threshold set forth by BAAQMD, rather than the 10 µg/m^3 threshold.

"Furthermore, the DSEIR uses BAAQMD thresholds to determine the significance of other air quality impacts, but then uses APEZ criteria to determine health risk significance, even though BAAQMD suggests significance thresholds for cumulative health risks. For example, the DSEIR uses BAAQMD's average daily emissions construction thresholds to determine significance of construction emissions on air quality (Volume 2, p. 5.4-25). As is apparent, there is a huge discrepancy between the 10 µg/m^3 threshold used in the DSEIR and the 0.8 µg/m^3 cumulative threshold recommended by BAAQMD. Using an alternative threshold, rather than the one set forth by BAAQMD, demonstrates that the Applicant is picking and choosing the thresholds that apply to the Project to determine significance.

"**Footnote:**

[20] "California Environmental Quality Act Air Quality Guidelines." Bay Area Air Quality Management District, May 2011. Available at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_ May%202011_5_3_11.ashx, p. 5-15

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-34]*)

Response AQ-1d: PM2.5 Significance Thresholds

The comment disputes the validity of using cumulative PM2.5 concentrations of 10 micrograms per cubic meter (µg/m^3) as the threshold of significance for determining the project's health impacts from PM2.5 emissions. Instead, the comment suggests the Draft SEIR should have found

that the project would have a significant cumulative impact if the total of all past, present, and foreseeable future sources within a 1,000 foot radius, plus the project, would result in an annual average $PM_{2.5}$ concentration greater than 0.8 $\mu g/m^3$. The threshold used by OCII for assessing the significance of cumulative levels of $PM_{2.5}$, which follows the City's approach, is supported by substantial evidence and satisfies the requirements of CEQA. As stated in Response AQ-1c, a lead agency's determination of whether to characterize impacts as significant necessarily requires the lead agency to make policy judgments. Agencies are permitted to use their expertise and make policy judgments to determine the threshold of significance that is appropriate for a particular impact.

The overall $PM_{2.5}$ maximum cumulative concentration reported in the Draft SEIR that is expected to result at the project site with the project and existing ambient levels is 9.0 $\mu g/m^3$ with 8.6 $\mu g/m^3$ $PM_{2.5}$ due to background ambient sources. The project contribution is 0.4 $\mu g/m^3$ from modeled vehicles (construction and operation) and stationary source contributions from the project. The cumulative level of 9.0 $\mu g/m^3$ is below the SEIR threshold level of 10 $\mu g/m^3$ for identifying when sensitive populations may be exposed to substantial pollutant concentrations. The SEIR clearly discloses the threshold level for this location as a $PM_{2.5}$ concentration above 10 $\mu g/m^3$ (SEIR p. 5.4-27).

With respect to the selected threshold for $PM_{2.5}$ exposure, OCII relied on San Francisco specific thresholds developed by the City in consultation with BAAQMD and in reference to USEPA policy guidance. The project site is not within an identified Air Pollutant Exposure Zone (where the City would apply a more stringent incremental limit); therefore the exposure criteria limit that the City applies to this location is based on cumulative $PM_{2.5}$ concentrations greater than 10 $\mu g/m^3$. This threshold is inclusive of existing background concentrations and is more stringent than either federal or state ambient air quality standards.

To more specifically explain the genesis of the standard the City is using, as further stated on SEIR page 5.4-12, in April 2011, the USEPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*. In this document, USEPA staff concludes that the then-current federal annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ should be revised to a level within the range of 13 to 11 $\mu g/m^3$, with evidence strongly supporting a standard within the range of 12 to 11 $\mu g/m^3$. The Air Pollutant Exposure Zones established in San Francisco as explained in Response AQ-1a are based on the health protective $PM_{2.5}$ standard of 11 $\mu g/m^3$, as supported by the USEPA's Particulate Matter Policy Assessment, although lowered by City of San Francisco staff in consultation with BAAQMD staff to 10 $\mu g/m^3$ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs and hence are even more conservative as a significance threshold. The project site is not in an Air Pollutant Exposure Zone and the cumulative levels of $PM_{2.5}$ with the project will not exceed 10 $\mu g/m^3$, a health-protective level as documented above. Therefore, the SEIR properly concluded that the project impact to $PM_{2.5}$ would not be significant.

13.13.3 Dust Control Plan (AQ-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-2 I-Hong 4

"**I. The DSEIR Is Not Sufficient as an Informational Document with Respect to Air Quality Impacts.**

A. Dust: the DSEIR's impact assessment for construction-related dust pollution is based on legal errors and not supported by substantial evidence.

Regarding dust pollution, the DSEIR states:

The site-specific Dust Control Plan would require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 mph; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with these dust control requirements.

(DSEIR, p. 5.4-30.)

"The Dust Control Plan is either part of the project description, or a mitigation measure, or both. Either way, what the Project Sponsor is actually going to do to control dust - on the ground -must be described. Otherwise, the DSEIR violates CEQA.

"If the Dust Control Plan is part of the project description, the DSEIR fails to present a complete project description, making it impossible for the public or other agencies to comment on the potential environmental impacts of this part of the project.

"If the Dust Control Plan is a mitigation measure, the DSEIR defers the development of this mitigation measure until after Project approval, without meeting CEQA requirements for doing so, because (1) Article 22 B specifies a suite of measures but does not require the adoption of any in particular, (2) the DSEIR does not specify a performance standard by which the success of the Dust Control Plan can be judged, and (3) there is no evidence it is impracticable to develop and include the Dust Control Plan in the DSEIR, before project approval. (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 95 (CBE); *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359; 1394 (*Gentry*).

"Also, by failing to identify the Dust Control Plan as a CEQA mitigation measure, the DSEIR throws the enforceability of the Plan under CEQA into doubt. (See *Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1260-1262; *Lincoln Place Tenants Association v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1508 ["mitigating conditions are not mere expressions of hope..."]. (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-2]*)

"4. I realize that the control of Fugitive Dust and construction work is hard to handle. All to[o] often the "best practices" does not work. But with all this work going on how will it affect/impact the ongoing adjacent projects, UCSF's adjacent facilities and their daily operations? The current project at Union Square, Central Subway Station is doing a better than usual job in controlling the dust from entering these high-end retail shops. This includes the California Pacific Medical Center along the Van Ness Corridor. (Use of semi- closed barriers with mesh screens). This may be an better option than some of the best practices." (*Dennis Hong, email, July 27, 2015 [I-Hong-4]*)

Response AQ-2: Dust Control Plan

The comment states that the SEIR improperly relies on compliance with the San Francisco Construction Dust Control Ordinance in finding the project's construction-related dust impacts will be less than significant.

As explained in the SEIR, the project sponsor is required to comply with the San Francisco Construction Dust Control Ordinance (San Francisco Health Code Article 22B and San Francisco Building Code Section 106A.3.2.6). The City adopted the ordinance to reduce the quantity of dust generated during site preparation, demolition, and overall construction work in order to protect the health of the general public and onsite workers, to minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI). The ordinance represents a regulation of general applicability, adopted for the purpose of environmental protection, that is not peculiar to the parcel or to the project. (CEQA Guidelines, § 15183.)

Additionally, the Risk Management Plan (RMP) requires a dust plan and dust monitoring for all construction work in Mission Bay. The RMP is enforceable by the Regional Water Quality Control Board through the recorded Covenant and Environmental Restrictions. With respect to dust control, RMP section 4.3.1 specifies measures that must be implemented, contains a Dust Plan and, specifies circumstances under which dust monitoring is required. Performance standard and specified mandatory measures are included, such as watering of active construction areas to prevent visible dust plumes from migrating outside of the parcel under development, hydroseeding any areas that are not actively under construction for ten days or more, etc. For the daily average, the airborne dust action level for PM_{10} is 50 micrograms per cubic meter ($\mu g/m^3$) or baseline dust (i.e., the difference between upwind and downwind dust levels), whichever is higher. For the 10-minute time weighted average (TWA), the airborne dust action level is 250 $\mu g/m^3$. The mechanisms ensuring that these plans are developed and implemented are described in detail on SEIR pages 5.4-22 and 5.4-23 as well as in the impact discussion on page 5.4-30.

The Construction Dust Control Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection (DBI). For projects over one-half acre, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Department of Public Health (DPH) prior to issuance of a building permit by the DBI which has already been submitted by the sponsor. The goal of the Dust Management Plan is no visible dust and includes a mechanism to temporarily

stop work and apply more aggressive dust control measures, until there are no visible dust clouds migrating off-site.

Building permits will not be issued without written notification from the Director of Public Health that the applicant has an approved site-specific Dust Control Plan in place. The Construction Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the Director of Public Health.

As explained in the SEIR, due to the project's size, the project sponsor is required to prepare a Dust Control Plan, which has already been submitted to the San Francisco DPH and received conditional approval.[12] That plan must include a number of equivalent measures to minimize dust. Specifically, the site-specific Dust Control Plan requires the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 mph; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions. The project sponsor will be required to designate an individual to monitor compliance with these dust control requirements. These requirements are laid out in the SEIR. (SEIR, pp. 5.4-29 to 5.4-31; 5.4-22 to 5.4-23.) Please also see Section 13.22, Response HAZ-3 for further description of the Dust Control Plan.

The requirements described above, which are also described in the SEIR, are mandatory for all construction projects in the City. For example, the San Francisco Building Code Section 106A.3.2.6 states that: "Dust control required. All applicants for a building, demolition, excavation, grading, foundation, or other permit required by this Code to construct a new building, to demolish a building, to substantially alter or to add to an existing building shall comply with the requirements for dust control and, in addition, for projects over a half acre the applicant will be required to submit a Dust Control Plan for approval by the San Francisco Health Department as set forth in Article 22B of the San Francisco Health Code."

The BAAQMD has acknowledged that implementation of best management practices represent sufficient insurance of avoiding significant impacts related to fugitive dust generated by

[12] City and County of San Francisco, Department of Public Health, Environmental Health. Dust Monitoring Plan Conditional Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158, September 15, 2015.

construction activities.[13] Studies[14] have demonstrated that the application of best management practices at construction sites have significantly controlled fugitive dust emissions. Individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to more than 90 percent. These studies support BAAQMD staff's recommendation that projects implementing these construction best management practices will reduce fugitive dust emissions to a less than significant level.[15] In the aggregate, best management practices will substantially reduce fugitive dust emissions from construction sites. These studies support the SEIR's finding that projects implementing construction best management practices will reduce fugitive dust emissions to a less than significant level.

In light of these requirements, it is reasonable to assume the project will comply with the ordinance. (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884 [holding it was reasonable for agency to expect that environmental regulations would be followed].) There is also substantial regulatory oversight built into the City's ordinance. For example, the Dust Control Plan must be approved by the San Francisco Department of Public Health (DPH) prior to issuance of a building permit by the DBI. The project sponsor must hire an independent, third-party to conduct inspections and keep a record of those inspections and must designate an individual to monitor compliance with the dust control requirements. The project sponsor has submitted an updated Dust Control Plan to the City in October of 2015. The plan provides additional information regarding how the project sponsor will carry out these obligations. The plan has already been developed and received conditional approval by the DPH. Although they are not project-specific mitigation measures, these existing regulatory requirements will be included in the Mitigation Monitoring and Reporting Program (MMRP) for the project, to further help the public understand compliance documentation for this particular regulation. (Pub. Resources Code, § 21081.6, subd. (a); *Lincoln Place Tenants Assn. v. City of Los Angeles* (2007) 155 Cal.App.4th 425, 446.) Therefore, the comment's skepticism regarding the enforceability of the Dust Control Plan is unwarranted.

The comment also states the SEIR cannot rely on compliance with existing regulations in finding an impact will be less than significant. This statement is incorrect. California courts recognize that an agency may rely on compliance with existing regulations or requirements in finding a project's impacts would be less than significant. (See, e.g., *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 1933 [holding agency could rely on project's compliance with Building Code's energy efficiency standards for conclusion that project would not have significant energy impacts, and therefore did not require mitigation]; *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884 [project's compliance with existing laws and regulations provided substantial evidence that seismic impacts would be less than significant].) In fact, reliance on compliance with the applicable regulatory framework is common and widely accepted CEQA practice. (See *ibid*.; see also *City of*

[13] BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance,* October 2009, pages 2 and 25.
[14] Western Regional Air Partnership. 2006. *WRAP Fugitive Dust Handbook.* September 7, 2006. Available: http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf. Accessed September 2015.
[15] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011, page D-47.

Maywood v. Los Angeles Unified School Dist. (2012) 208 Cal.App.4th 362, 411-412 [citing compliance with regulatory standards as adequately addressing hazardous materials at school site].)

Because compliance with the City's Construction Dust Control Ordinance is not mitigation, the comment's claim that reliance on the ordinance is improper deferral of mitigation is misplaced. In any event, even if compliance with the ordinance could be considered mitigation, it would not constitute improper deferral of mitigation. Courts may find that mitigation is improperly deferred when an agency concludes that a project's significant impacts will be reduced to a less than significant level or avoided with the implementation of a mitigation measure that has not yet been formulated and for which success is uncertain. (See *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214, 240 ["Impermissible deferral of mitigation measures occurs when an EIR puts off analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the manner described in the EIR. [Citation.]"].) For example in *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, cited in the comment, the court found that a mitigation measure adopted to reduce impacts to the Stephens' kangaroo rat was improperly deferred. The measure provided that the project sponsor would obtain biological report regarding the Stephens' kangaroo rat only "if deemed necessary by the Planning Director," and in that event, the project sponsor would comply with any recommendations in the future report. (*Id*. at p, 1396.) The court found the measure constituted improper deferral of mitigation because it deferred analysis of the impact itself until after project approval and merely required the project sponsor to comply with unspecified recommendations in a future report that may never be prepared and there was no evidence that the measure would mitigate impacts to the Stephens' kangaroo rat. (*Ibid*.) Because it was not certain whether a report would ever be prepared, whether any additional mitigation would be imposed, or whether the measure would result in any reduction in impacts, the court held it was improper for the agency to rely on the measure in adopting a negative declaration. (*Ibid*.)

That has not occurred here. The SEIR discusses fugitive dust in detail and acknowledges that project-related demolition, excavation, grading, and other construction activities may cause windblown dust that could contribute particulate matter into the local atmosphere. The SEIR explains that health risks associated with particulate matter (i.e., fugitive dust) require that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. The San Francisco Construction Dust Control Ordinance was adopted for this purpose. It describes actions that must be taken to limit fugitive dust for construction projects to minimize health effects. Compliance with these requirements is feasible and mandatory and will ensure that potential dust-related construction air quality impacts of the project will be less than significant. The project sponsor has submitted a Dust Control Plan applying these requirements to this project. Therefore, the SEIR properly relied on compliance with the ordinance in finding potential dust-related construction air quality impacts of the project will be less than significant.

The City's Construction Dust Control Ordinance establishes "best management practices," or "BMPs," to reduce dust emissions during construction. An agency's decision to rely on BMPs to address a project's impacts has been upheld on numerous occasions under both federal and state law. (See *Hapner v. Tidwell*, 621 F.3d 1239, 1246 (9th Cir. 2010) [citing use of BMPs to reduce soil

disturbance during logging operations]; *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451 F.3d 1005, 1015-16 [references to detailed BMPs incorporated into proposed timber sale supported the conclusion agency had taken "hard look" at project's impacts as required by National Environmental Policy Act]; *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1089 (9th Cir. 2013); [agency properly relied on BMPs imposed under the Clean Water Act as mitigation for wetlands impacts]; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 795-796 [upholding agency's reliance on mitigation measure requiring installation and maintenance of BMPs to address run-off].)

13.13.4 Construction Impacts, Methodology, and Assumptions (AQ-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-8 O-MBA8L2-15 O-MBA8L2-26 O-MBA8L2-31

"Also, the DSEIR incorrectly utilizes a default hauling trip length of 20-miles, provided by the California Emissions Estimator Model ("CalEEMod"), to determine the on-road hauling emissions that would occur during construction. Using this default value, rather than a site-specific trip length to the actual haul destination, results in an underestimation of the Project's construction emissions. Therefore, the impact assessment must be recalculated to realistically account for the actual haul destination of the excavation spoils. (See Exhibit 2.)" (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-8]*)

"**II. Construction Emissions From Wastewater Improvements Have Not Been Adequately Reviewed in the DSEIR**

"At DSEIR pg. 1-9, significant environmental impact areas in the Event Center environmental review process are identified. One of those includes sewer processing plant and related utility improvements made necessary for the Events Center and associated development of the 11 acre project area:

> "As indicated on Table 1-2, the SEIR determined that the proposed project would result in significant and unavoidable impacts in the areas of....utilities (construction of new or upgraded wastewater facilities, and determination by the San Francisco Public Utilities Commission that it currently has inadequate capacity to serve the project's wastewater demand)."

"Based on the language noted above, it appears the DSEIR's project at Mission Bay Blocks 29 - 32 cannot proceed without sewer and associated utility improvements. However, at DSEIR pg. 1-43 it appears that the project is considered by the Lead Agency to not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Then, at DSEIR pg. 1-44 information from measure M-C-UT-4 shows that the project sponsor must pay for "fair share" improvements to the Mariposa Pump Station:

> The project sponsor shall pay its fair share for improvements to the Mariposa Pump Station and associated wastewater facilities required to provide adequate sewer capacity within the project area and serve the project as determined by the SFPUC. The contribution shall be in proportion to the wastewater flows from the proposed project relative to the total design capacity of the upgraded pump station(s). The project sponsor shall not be responsible for any share of costs to address pre-existing pump station deficiencies.

"However, at DSEIR, pg. 5.7-13, it appears the wastewater improvements are made necessary by the project and that it cannot proceed without them:

> "Therefore, permanent improvements to the pump station and a long term increase in capacity would be needed to accommodate the proposed project in combination with other proposed and planned development in the Mission Bay South Plan area. In addition, as discussed in Section 5.9, Hydrology and Water Quality, the increased wastewater flows from **the proposed project** (emphasis added) in combination with other foreseeable future projects could increase the volume of combined sewer discharges (CSDs) from the Mariposa Pump Station which could necessitate improvements to the Mariposa wet weather pump station."

"If the DSEIR project necessitates the improvements to local wastewater treatment facilities and related utility improvements, the associated construction emissions should be analyzed and mitigated as appropriate within the DSEIR and not piecemealed to some other review process or ignored altogether. No information is found in the DSEIR's Air Quality element that shows that construction-related emissions from the necessary wastewater utility improvements were recognized and evaluated within the DSEIR." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-15]*)

"1. The FEIR incorrectly utilizes a default hauling trip length of 20-miles, provided by the California Emissions Estimator Model ("CalEEMod"),[1] to determine the on-road hauling emissions that would occur during construction; however, utilizing this default value, rather than a site specific trip length, results in an underestimation of the Project's construction emissions.

Footnote:

[1] CalEEMod website, available at: http://www.caleemod.com/

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-26]*)

"**Inadequate Use of CalEEMod Default Values**

"The DSEIR calculates the emissions from on-road haul trucks during Project construction by assuming a trip length of 20-miles, which represents the default hauling trip length provided by CalEEMod (Volume 3, Appendix AQ, p. 6). This default trip length, however, does not represent the actual haul trip length that would occur. Therefore, in an effort to accurately estimate the actual haul trip length, we conducted an independent analysis using the best resources available.

"The DSEIR "estimates that the maximum depth of excavation on-site would be approximately 30 feet below San Francisco City Datum; this would require approximately 350,000 cubic yards of soils on-site to be excavated and removed from the site" (Volume 3, Appendix AQ, p. 17). In order to transport this soil off-site, the DSEIR anticipates that approximately 39,952 haul trips will be required over the course of approximately four months (Volume 3, Appendix AQ, Table 6.1-13, pp. 1243).

"The DSEIR fails to disclose where this excavated soil will be transported to. According to the DSEIR, in 2006, the City of San Francisco adopted the Construction and Demolition Waste Ordinance[3], which mandates that 75 percent of construction and demolition debris be recycled (Volume 3, Appendix AQ, p. 70). Therefore, it can be assumed that 75 percent of the approximately 350,000 cubic yards of construction debris will be transported to a registered construction and demolition (C&D) debris recovery facility, and the remaining 25 percent will be transported to a registered landfill. The Construction and Demolition Waste Ordinance requires that C&D materials be transported to a registered recovery facility, and provides a list of the facilities currently approved by the City.[4] The permitted daily capacity of each facility is not disclosed in the DSEIR; however, due to the large amount of debris that will have to be transported off-site over a very short period of time (four months), it can be assumed that this material will most likely be transported to multiple recovery facilities. Again, because the DSEIR does not disclose where this material will be transported to, we measured the distance of each recovery facility to the Project site, and then used the average distance of these facilities to represent the one-way hauling trip length (see table below).

Recovery Facility Name	Distance From Project Site (miles)
Big for Hauling and Demolition	2.1
Marin Resource Recovery Center	25.6
Smart Demolition	3.1
Blue Line Transfer, Inc.	12.1
Premier Recycle	55.3
West Contra Costa Sanitary Landfill	21.1
Certified Blue Recycling, Inc	19.6
Recology San Francisco	5.0
Windsor Materials Recovery Facility	70.6
Davis Street Transfer & Recycling Center	19.5
SF Recovery Inc	5.5
Zanker Materials Processing Facility	58.5
Average Distance From Project Site	**25**

"Using this method, we can assume that approximately 29,964 haul trips will transport 262,500 cubic yards of material approximately 25 miles one-way.

"The remaining 25 percent, or approximately 87,500 cubic yards, of C&D material will most likely be transported to a landfill. San Francisco currently has a contract with Waste Management, Inc., to transport waste to the Altamont Landfill, which is approximately 53 miles away from the Project site.[5] Once the Altamont Landfill contract expires in 2016, the City of San Francisco is proposing to enter a new agreement with Recology's Hay Road Landfill, which is located approximately 70 miles away from the Project site.[6] According to the DSEIR, construction activities are anticipated to occur starting in 2015, with full Project build out in 2018 (Volume 3, Appendix AQ, p. 5). For that reason, depending on when construction activities actually start, there is the possibility that C&D materials will be transported to the Hay Road Landfill. Therefore, we estimated total haul emissions assuming that 25 percent of C&D material would be transported to the Altamont Landfill (Scenario 1), and then we estimated emissions from an alternative scenario, where we assumed that 25 percent of C&D material would be transported to the Hay Road Landfill (Scenario 2).

"The tables below summarize the results of our analysis for each scenario.

Scenario 1: Current Contract with Altamont				
Location		One-Way Distance (miles)	Total One-Way Haul Trips	Total Vehicle Miles Traveled
75%	Recovery Facilities	25	29,964	744,106
25%	Altamont Landfill	53	9,988	527,366
100%	-	-	**39,952**	**1,271,472**

Scenario 2: Proposed Contract with Hay Road Landfill Approved				
Location		One-Way Distance (miles)	Total One-Way Haul Trips	Total Vehicle Miles Traveled
75%	Recovery Facilities	25	29,964	744,106
25%	Hay Road Landfill	70	9,988	695,165
100%	-	-	**39,952**	**1,439,271**

"When we compared the total vehicle miles traveled (VMT) from each of the above scenarios to the VMT from the CalEEMod default trip length of 20 miles, we found that Scenario 1 would result in a 37 percent increase in VMT, and found that Scenario 2 would result in a 44 percent increase in VMT (see table below).

Scenario	Vehicle Miles Traveled (VMT)
1 – Altamont Landfill	1,271,472
CalEEMod Default	799,040
Net Increase in VMT	**472,432**
Percent Increase in VMT	***37%***
2 – Hay Road Landfill	1,439,271
CalEEMod Default	799,040
Net Increase in VMT	**640,231**
Percent Increase in VMT	***44%***

"We derived emission factors from the California Air Resources Board's (CARB) EMFAC2011 model to estimate the increase in emissions when site specific hauling trip lengths are used.[7] We specified a 2015 calendar year for Scenario 1, which assumes that the Altamont Landfill contract is still active, and we specified a 2016 calendar year for Scenario 2, which assumes that the Altamont Landfill contract has expired, and has been replaced by a new contract with Hay Road Landfill. Additional parameters used to derive these emission factors are specified in the table below.

EMFAC2011 Parameter	Input
Region Type	Air Basin
Region	San Francisco Bay Area
Season	Annual
Vehicle Class	T7 Tractor
Model Year	Aggregated
Speed	Aggregated

"EMFAC2011 does not provide emission factors for CH_4 and N_2O, which are mobile-source greenhouse gases that contribute to the effects of climate change. Therefore, we used heavy duty diesel truck emission factors from the Environmental Protection Agency's (EPA) *Emission Factors for Greenhouse Gas Inventories,* which specifies a CH_4 emission factor of 0.0051 grams per mile (g/mile), and a N_2O emission factor of 0.0048 g/mile.[8] We applied Global Warming Potentials (GWPs) to each of these pollutants in order to convert these emissions to carbon dioxide equivalents (CO_2e).[9]

"According to the DSEIR, the CalEEMod default vehicle type for hauling is a mix of all heavy-heavy duty trucks (HHDT), labeled as a T7 vehicle type (Volume 3, Appendix AQ, pp. 1244). Furthermore, the CalEEMod emissions estimates take into account idling emissions, starting exhaust, evaporative emissions, and running losses, as well as emissions from road dust (Volume 3, Appendix AQ, pp. 1245 – 1248). Because our analysis is a bit more simplistic than the emissions calculated in CalEEMod, we estimated the emissions, using the methods and input parameters described above, from a 20-mile default hauling trip length. In an effort to demonstrate consistency, we used 2015 emissions factors to estimate the net increase in emissions for Scenario 1, and used 2016 emission factors to estimate the net increase in emissions for Scenario 2. The results of our analyses are summarized in the table below (see attachment for calculation details).

Scenario 1 vs. CalEEMod Default Hauling Emissions						
	ROG	**CO**	**NOx**	**CO2e**	**PM10**	**PM2.5**
Pounds per Day:						
Scenario 1	9.530	42.934	287.657	54,337	7.346	5.023
CalEEMod Default (2015)	5.989	26.982	180.774	34,147	4.616	3.157
Net Increase	**3.541**	**15.953**	**106.883**	**20,190**	**2.729**	**1.866**
	ROG	**CO**	**NOx**	**CO2e**	**PM10**	**PM2.5**
Tons per Year (CO2e in Metric Tons per Year):						
Scenario 1	0.419	1.889	12.657	2,173	0.323	0.221
CalEEMod Default (2015)	0.264	1.187	7.954	1,366	0.203	0.139

Scenario 1 vs. CalEEMod Default Hauling Emissions						
	ROG	**CO**	**NOx**	**CO2e**	**PM10**	**PM2.5**
Net Increase	**0.156**	**0.702**	**4.703**	**808**	**0.120**	**0.082**

Scenario 2 vs. CalEEMod Default Hauling Emissions						
	ROG	**CO**	**NOx**	**CO2e**	**PM10**	**PM2.5**
Pounds per Day:						
Scenario 2	8.800	39.466	273.077	60,759	6.947	4.427
CalEEMod Default (2016)	4.886	21.910	151.604	33,732	3.857	2.458
Net Increase	**3.915**	**17.556**	**121.473**	**27,027**	**3.090**	**1.969**
	ROG	**CO**	**NOx**	**CO2e**	**PM10**	**PM2.5**
Tons per Year (CO2e in Metric Tons per Year):						
Scenario 2	0.387	1.737	12.015	2,430	0.306	0.195
CalEEMod Default (2016)	0.215	0.964	6.671	1,349	0.170	0.108
Net Increase	**0.172**	**0.772**	**5.345**	**1,081**	**0.136**	**0.087**

"Our simple analysis indicates that the use of a CalEEMod default hauling trip length results in an approximate 37 – 44 percent underestimation in mobile-source, hauling emissions. CalEEMod default values should only be relied upon when site specific information is not available. As indicated by our analysis above, hauling destinations can be derived very easily. If site specific information is used to determine hauling trip lengths, the emissions increase significantly. As a result, an updated DSEIR should be prepared to adjust the hauling trip length to reflect site specific distances. Furthermore, worker and vendor trip lengths, which we were not able to determine due to a lack of information disclosed in the DSEIR, should also be adjusted to reflect site specific distances.

"**Footnotes:**

[3] San Francisco Ordinance No. 27-06, available at: http://sfenvironment.org/sites/default/files/fliers/files/cd_ordinance.pdf

[4] San Francisco Ordinance No. 27-06, List of Registered Transporters and Registered Facilities, available at: http://sfenvironment.org/sites/default/files/fliers/files/sfe_zw_cd_registered_facilities_list.pdf

[5] "Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County." Notice of Availability of and Intent to Adopt a Negative Declaration, March 4, 2015. Available at: http://sfmea.sfplanning.org/2014.0653E_NOA.pdf

[6] "Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County." Notice of Availability of and Intent to Adopt a Negative Declaration, March 4, 2015. *Available at:* http://sfmea.sfplanning.org/2014.0653E_NOA.pdf

[7] EMFAC2011 Web Database, *available at*: http://www.arb.ca.gov/emfac/2011/

[8] "Emission Factors for Greenhouse Gas Inventories." Climate Leadership United States Environmental Protection Agency, April 4, 2014. *Available at:* http://www.epa.gov/climateleadership/documents/emission-factors.pdf

[9] "Emission Factors for Greenhouse Gas Inventories." Climate Leadership United States Environmental Protection Agency, April 4, 2014. *Available at:* http://www.epa.gov/climateleadership/documents/emission-factors.pdf, CH_4 GWP is equal to 25, and the N_2O GWP is equal to 298.

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-31]*)

Response AQ-3: Construction Impacts, Methodology, and Assumptions

Comments suggest that the analysis of construction-related criteria pollutant emissions incorrectly utilize the default 20-mile trip length assumption of CalEEMod for material hauling trips rather than a project specific value accounting for a variety of potential disposal sites. The comment also says that construction emissions from improvements to the Mariposa Pump Station were not analyzed and mitigated.

The analysis used in the SEIR assumes the 20-mile default haul truck trip length for a variety of reasons. First, it is unknown what quantities of materials would be required to be disposed of at Class I (if any) or Class II disposal sites. The purpose of the air quality analysis is to inform decision makers and disclose known impacts based on substantial evidence. CEQA section 15384 cites that speculation does not constitute substantial evidence. Rather than engage in speculative estimates of receiving land fill locations and associated haul trips, the 20-mile CalEEMod default was used as a conservative estimate of average trip length. This assumption is conservative because, although it is unknown what quantities would be required to be disposed at Class I or Class II disposal sites, construction and demolition debris can be accepted at the Recology recycling and recovery facility in San Francisco, approximately five miles from the project site and clean soils can be accepted at the Brisbane soils facility, also about five miles from the project site. Both facilities have the capacity to serve the project's disposal needs[16]. Also, as discussed in Chapter 12, Project Refinements and New Variant, the project sponsor is now proposing on-site soil treatment. The total estimated volume of on-site soil to be treated is approximately 98,000 cubic yards, which would substantially reduce the volume of Class I and Class II designated wastes and associated truck trips for disposal. The CalEEMod recommended default value of 20 miles has been vetted by the BAAQMD and the California Air Pollution Control Officers Association as a reasonable assumption for CEQA-related air quality analyses. Construction-related emissions were identified as significant and unmitigatable in the SEIR and, consequently, variations in haul truck trip length would not result in a change to the significance determination. Furthermore, Mitigation Measure M-AQ-2b requires the project sponsor to fund offsets based upon actual emissions, not estimated emissions and thus fees would be determined based on the actual distances of haul truck trip length.

Construction Impacts of the Mariposa Pump Station (O-MBA8L2-15)

While improvements to the Mariposa Pump Station are not a part of the proposed project, or required for the proposed project, Impact C-UT-2 (SEIR pp. 5.7-13 to 5.7-15) acknowledges that permanent improvements to the Mariposa Pump Station would be required under future cumulative conditions, and that the potential impacts of the construction of required pump station improvements would result in potential impacts to air quality, among other potential environmental effects. This utility impact is identified as significant and unavoidable because specific plans and design for permanent pump station improvements have not been finalized, CEQA environmental review has not been completed for these improvements, and construction of such pump station improvements is under the jurisdiction of the San Francisco Public Utilities Commission (SFPUC) and beyond the control of the project sponsor. Because the design and construction of permanent improvements to the pump station are within the discretion of the SFPUC, the date is uncertain as to when these improvements will be necessary. These improvements would be subject to its own future CEQA review, and air quality impacts associated with construction of the Mariposa Pump Station improvements will be identified in

[16] Per Daniella Mattucci Assistant Manager at Baylands Soils Processing their facility has capacity to accept 300,000 cubic yards of clean soil from this project.

the CEQA document for that project. The permanent improvements to the Mariposa Pump Station are not required for the project to proceed.

13.13.5 Operational Impacts, Methodology, and Assumptions (AQ-4)

Issues Raised by Commenters: Consideration of Vehicle Trips from Golden State Warriors Basketball Events (AQ-4a)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-10 O-MBA8L2-21

"**4. The DSEIR's impact assessments for operational criteria pollutants (ozone precursors, PM10, PM2.5) and TAC emissions are invalid.**

"The operational impact assessment for ozone precursor, PM10, PM2.5 and TAC emissions is invalid for many reasons.

"DSEIR Table 5.4-9 shows operational daily emissions of criteria pollutants as follows:

ROG: 79 lbs/day [14 tpy]
NOx: 124 lbs/day [23 tpy]
PM10: 80 lbs/day [14.6 tpy]
PM2.5: 25 lbs/day [4.5 tpy]

(DSEIR, p. 5.4-39.)

"The DSEIR's impact assessments for these criteria pollutants emissions are invalid because they are based on the invalid thresholds of significance discussed above.

"Because construction-related emissions of ROG and NOx are higher than the applicable (but invalid) threshold of significance for these pollutants, the DSEIR concludes the Project's impact on ozone pollution is significant. As discussed above, while correct, this conclusion is misleading because it understates the severity of the impact deemed "significant" by implying that the only fraction of the Project's NOx emissions is are "significant" is the fraction above 54 lbs/day.

"The DSEIR's impact assessment for operational ozone precursor emissions is also misleading because it omits from its quantitative tally of criteria pollutants the emissions the Project will generate in San Francisco and the Mission Bay neighborhood from basketball game-associated "vehicle miles traveled" (DSEIR, p. 5-37.) The DSEIR's rationale for this startling omission is that moving the Warriors games from Oakland to San Francisco will reduce the same number of "vehicle miles traveled" in Oakland that the Project will generate in San Francisco and the Mission Bay neighborhood.

"This rationale is based on the unstated, but incorrect, assumption that the environmental setting at Oracle Arena and the Mission Bay site are identical. These settings are very different, in many crucial respects. First and foremost, the Mission Bay neighborhood and the surrounding areas of San Francisco are populated by San Franciscans, not Oaklanders. The residents, citizens, and registered voters of San Francisco are entitled to know what the Project's air quality impacts will be on them, regardless of whether the residents, citizens, and registered voters of Oakland will experience an air quality benefit as a result of the move.

"Second, Oracle Arena sits in the middle of a vast parking lot. To the west is I-880, various commercial properties, wetlands, and the Bay. To the east is the Coliseum, railroad tracks, ABC Supply (provider of industrial equipment), East Bay Truck and Auto Repair, BART tracks and the Coliseum BART Station, and then, over 2,000 feet away to the northeast there is a group of apartment buildings. To the north and south stretch commercial properties for well over a mile without any residences. This stands in stark contrast to the dense residential population surrounding the Mission Bay site.

"The DSEIR's suggestion that respiratory disease, heart disease, and cancer-causing air pollution is fungible and transferable, without regard to the location or environmental setting in which it occurs, is unsupported." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-10]*)

"**VII. Offsets for Operational Emissions from Warriors Games Appear to be Double-Counted**

"At DSEIR pg. 5.4-37, new operational emissions from vehicle trips generated by Warrior games are, for the purposes of mitigation, discounted based on the assumption that those emissions have already been counted in the CEQA-review process conducted for Warriors' games at the Oracle Arena (Oakland). This approach is used in the DSEIR to justify the purchase of fewer emission offsets from BAAQMD necessary to reduce the project's onroad emission impacts to less-than-significant levels, and it is predicated on the assumption that no new large sports events will occur at the Oakland Coliseum/Oracle Arena once large-venue sports games move across the Bay to the proposed Arena in San Francisco. From pg. 5.4-37:

> "Some of the motor vehicle trips that would be generated by Golden State Warriors basketball games at the proposed event center would be regional trips similar to those currently generated by basketball games occurring at the Oracle Arena in Oakland, and as a result, the emissions associated with these regional trips would not represent new emissions to the air basin."

"At the bottom of the same page, additional material reinforces the crediting strategy:

> "It is unlikely that there would be another NBA franchise in the Bay Area, so all of the professional basketball games occurring in the region would likely be played at the new event center. This assumption is consistent with that of the City of Oakland in its CEQA related analyses."

"For the purposes of estimating vehicle trip emissions from large Warriors game-style sporting events that will be held at the proposed San Francisco Events Center, the Lead Agency has assumed that existing (Oracle Arena-based) Warriors game-related vehicle trip emissions will shift from Oakland to the new San Francisco Events Center. Under this DSEIR perspective, there would be no net increase in vehicle trips (and related emissions) since game attendees are expected to drive the same distance (25 miles on average) to the new facility in San Francisco that they are assumed to currently drive to attend a Warriors game (or similar large-venue sports event) at the Oracle Arena in Oakland. Crucial to this perspective is the notion that there would be no new, large-venue sporting events at the Oracle arena which would then act to backfill the loss of Warriors games---otherwise there must be a net gain in total, large-venue sporting event emissions created between the two arenas. In fact, the "no net gain" perspective taken by the Lead Agency in the DSEIR is used to justify deducting those Warriors game "existing trip" emissions from the project's emissions modeling so that fewer emission offsets would be required for the project. Based on our review of information contained in a recent Oakland EIR, this appears to be inappropriate.

"For the above-referenced approach to be viable for use in the DSEIR, the vehicle-trip emissions resulting currently from the large-sports venue games held at Oracle must transfer to the proposed San Francisco Event Center *and must then not be backfilled with new, large-sports venue games at Oracle*—otherwise there will be a net gain in emissions not accounted for in either the new Events Center DSEIR or the EIR conducted for the expanding Oracle Arena.

"In contradiction to the DSEIR's claim is this statement from Oakland's Coliseum Area Specific Plan DEIR1, Vol. I, pg. 1-1:

> "The Project seeks to retain Oakland's three major professional sports franchises with three new venues and an accompanying mixed-use residential....."

"On the next page, this information further clarifies that Oakland will backfill with large sports venues that will continue the emissions currently associated with the Warriors operation at the Oracle Arena:

> "The development of Sub-Area A and a portion of Sub-Area B (the "Coliseum District") is based on the Coliseum City Master Plan, which calls for three new sports venues (a new football stadium and a new baseball park in Sub-Area A plus a new basketball arena and multi-purpose events center in Sub-Area B)..."

"At Coliseum Area Spa DEIR, pg. 4.2-59, mobile source emission impacts were modeled based on three scenarios:

- Existing criteria pollutant emissions from the Coliseum District area ("Existing No Project", or "2013 Baseline"),
- Future 2035 criteria pollutant emissions from the Coliseum District if the Project were not developed (i.e., future no Project, or 2035 Baseline), and
- Future 2035 criteria pollutant emissions from the Coliseum District (i.e., future plus Project, or 2035 plus Project).

"By logical inference from the first- and second-bulleted points noted above, large sports venue- related emissions currently attributed to Warriors games appear to remain "on the books" for Oracle. Correspondingly, at pg. 4.2-60, existing emissions quantities associated with the Warriors games are retained:

> "Table 4.2-7 shows estimated average daily and annual maximum criteria emissions under current conditions (2013 Baseline), as well as the emissions projected from current land uses at the Coliseum District as they would occur in 2035 (2035 Baseline). These projected 2035 baseline emissions are based on a continuation of existing land uses, vehicle trips, and VMTs."

"Based on the information cited above, it is clear that the City of Oakland anticipates retention of mobile source emissions generated by the equivalent of Warriors games at their Coliseum/Oracle Arena. Further, it appears that the Coliseum/Oracle EIR was certified prior to issuance of the Warriors NOP---thus the claim in the Warriors EIR that large sports venue- related emissions can be transferred from Oakland to San Francisco, and with credit applied to compliance with Mitigation Measure M-AQ-2b (Emission Credits) shown at pg. 5.4-41, is likely neither applicable nor appropriate under CEQA." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-21]*)

Response AQ-4a: Consideration of Vehicle Trips from Golden State Warrior Basketball Events

Comments suggest that the assessment of air quality impacts from project operations should have considered vehicle trips generated by basketball events in the analysis of regional emissions.

The air quality analysis of the SEIR contains analysis of both regional operational air quality impacts (Impact AQ-2 on SEIR pages 5.4-37 to 5.4-43) and localized air quality impacts (Impact AQ-3 on pages 5.4-44 to 5.4-51). The analysis of localized impacts considered emission from all vehicle trips generated by the event center and mixed-use development at Mission Bay, inclusive of basketball events as well as localized air quality conditions as modeled by BAAQMD for development of both the City's Clean Construction Ordinance and Article 38 of the San Francisco Health Code, which address toxic air contaminants and sensitive land use developments within Air Pollutant Exposure Zone.

The regional air quality analysis, on the other hand, considered new regional emissions generated by the proposed project. Vehicle trip emissions associated with existing basketball games at Oracle Arena represent the existing regional condition and, therefore, are not new regional emissions. These trips occur now so they are part of the existing baseline condition. It is reasonable to assume that the Oracle Arena will not be host to another NBA franchise in the Bay Area, so no new vehicle emissions associated with NBA basketball games would be expected in the region. This assumption is supported by substantial evidence and vetted by OCII. The assumption was also accepted by the California Air Resources Board when it approved the project sponsor's analysis of greenhouse gas emissions pursuant to its AB 900 application. Further, as a conservative analysis for CEQA purposes, the operational emissions quantified in Impact AQ-2 of the Draft SEIR assume that Oracle Arena maintains its current levels of non-Golden State Warriors events and that all of such non-Golden State Warriors events (i.e., concerts, family shows etc.) at the proposed event center in San Francisco would represent new vehicle trips and associated emissions to the air basin.

One comment makes reference to proposed new facilities considered in the Final EIR for the Oakland Coliseum Area Specific Plan, which was certified in March 31, 2015, over four months after the Notice of Preparation of the proposed event center at Mission Bay. The Specific Plan is based on Oakland's assumption that all three current City of Oakland sports franchises (the Raiders, the A's and the Warriors) will make independent business decisions to remain in Oakland,[17] and at the Coliseum District, and that each of the sports franchises will have new, separate venues for their games. Consequently, the assumptions within the Coliseum Area Plan Final EIR are entirely different from those of the proposed project. But, as evidenced by even Oakland's specific plan, Golden State Warriors basketball games will not occur at both locations. To count vehicle emissions associated with Golden State Warrior's basketball games at both the existing arena and proposed event center would overestimate air quality impacts.

Issues Raised by Commenters: Significant and Unavoidable Air Quality Impacts from Gridlock and Parking Problems (AQ-4b)

This response addresses all or part of the following comments, which are quoted below:

I-Heath-4	I-Heath-6	I-Lighty-4	I-Lighty-6
I-Lighty-7	I-Stryker-5	I-Tan-4	I-Tan-6
PH-Scott-4	PH-Scott-6		

"… the practical effect will be yet … unhealthy air emissions." (*Alison Heath, email, June 30, 2015 [I-Heath-4]*)

"The project's traffic new massive gridlock and parking problems will also cause significant and unavoidable impacts on air quality. Increased car and truck emissions in the area will be unhealthy for residents, workers and hospital patients. This will have a disastrous impact on the health and welfare of

[17] City of Oakland, Draft SEIR for Oakland Coliseum Area Specific Plan, 2014, page 3-16.

Mission Bay residents and patients and families who rely on UCSF and other lifesaving services in Mission Bay. The Draft EIR fails to address and mitigate these health impacts, relying on vague plans and purchases of emissions offsets rather than effective mitigation measures as required by CEQA." (*Alison Heath, email, June 30, 2015 [I-Heath-6]*)

"… the practical effect will be yet … unhealthy air emissions." (*Michael Lighty, email, July 27, 2015 [I-Lighty-4]*)

The project's traffic new massive gridlock and parking problems will also cause significant and unavoidable impacts on air quality. Increased car and truck emissions in the area will be unhealthy for residents, workers and hospital patients. This will have a severe impact on the health and welfare of Mission Bay residents and patients and families who rely on UCSF and other lifesaving services in Mission Bay. The Draft EIR fails to address and mitigate these health impacts, relying on vague plans and purchases of emissions offsets rather than effective mitigation measures as required by CEQA." (*Michael Lighty, email, July 27, 2015 [I-Lighty-6]*)

"This concern includes the construction phase, which though temporary, occurs next to a health care facility that has large numbers of sensitive receptors." (*Michael Lighty, email, July 27, 2015 [I-Lighty-7]*)

The proposed parking restriction, with 200 spaces for 18,000 fans at the proposed Warriors Arena, is also ludicrous, and will result in … air pollution …" (*Michael Stryker, email, July 26, 2015 [I-Stryker-5]*)

"… the practical effect will be yet … unhealthy air emissions." (*Judy Tan, email, July 27, 2015 [I-Tan-4]*)

"The project's traffic new massive gridlock and parking problems will also cause significant and unavoidable impacts on air quality. Increased car and truck emissions in the area will be unhealthy for residents, workers and hospital patients. This will have a disastrous impact on the health and welfare of Mission Bay residents and patients and families who rely on UCSF and other lifesaving services in Mission Bay. The Draft EIR fails to address and mitigate these health impacts, relying on vague plans and purchases of emissions offsets rather than effective mitigation measures as required by CEQA." (*Judy Tan, email, July 27, 2015 [I-Tan-6]*)

"While restricting the number of parking spaces may be considered a means of traffic management under the City's regulation, the practical effects will be yet more … unhealthy air emissions …" (*Damion Scott, public hearing transcript, June 30, 2015 [PH-Scott-4*)

"Increased car and truck emissions in the area will be unhealthy for residents, workers, and hospital patients. This will have a disastrous impact on the health and welfare of Mission Bay residents." (*Damion Scott, public hearing transcript, June 30, 2015 [PH-Scott-6]*)

Response AQ-4b: Significant and Unavoidable Air Quality Impacts from Gridlock and Parking Problems

Several individual comments voice concern that traffic congestion and lack of available parking will result in significant and unavoidable impacts in the immediate project area related to air quality.

While the SEIR identified significant and unavoidable air quality impacts from operational air emissions, these impacts are regional impacts related to emissions of ozone precursors (ROG and NOx) in an area designated as non-attainment for ozone. Consequently, impacts associated with these emissions will be experienced in the regional air basin and not disproportionately in the localized area around the proposed project.

As discussed on page 5.4-40, although the most stringent applicable ozone standards were not exceeded at the Potrero Hill monitoring station over the past five years, the San Francisco Bay Area Air Basin (SFBAAB) experienced an average of 8.4 days of exceedance per year between 2010 and 2014.[18] The proposed project's ROG and NOx increases could contribute to new or exacerbated air quality violations in the SFBAAB region by contributing to more days of ozone exceedance or result in Air Quality Index values that are unhealthy for sensitive groups and other populations. As shown in Table 5.4-3, the SFBAAB has averaged between 8 and 19 days per year that are considered unhealthy for sensitive groups and had 2 unhealthy (red) days in the last five years. Consequently, while ozone precursor emissions are significant and unavoidable, the likely area of impact would be downwind (primarily to the east of the project site) due to ozone formation after transport of these precursor emissions.

Regarding fine particulate matter emissions that might affect conditions in the immediate project vicinity, a localized health risk assessment was conducted as part of the analysis and is presented on pages 5.4-43 through 5.4-50 of the SEIR. Table 5.4-10 presents localized fine particulate ($PM_{2.5}$) concentrations at the maximally impacted sensitive receptor locations in the project area from mobile sources (vehicles). The values in this table include all existing vehicles in addition to vehicle traffic generated by the proposed office and retail uses and all the vehicle trips in the area associated with a basketball event as well as contributions from local existing and proposed permitted stationary sources. Additionally, for the health risk analysis, it was conservatively assumed that all vehicle trips generated by the project would travel on all local roadways to account for localized congestion and vehicles seeking available parking. Table 5.4-11 presents increased cancer risk contributions at the maximally impacted sensitive receptor locations in the project area from these same sources. Both tables indicate that localized pollutant exposure would not exceed the significance thresholds for $PM_{2.5}$ or increased cancer risks. Consequently, localized air quality impacts associated with the proposed project would be less than significant.

[18] Bay Area Air Quality Management District, *Annual Bay Area Air Quality Summaries*, 2014. Available online at www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx (accessed October 3, 2014).

Page 5.4-26 of the SEIR included an assessment of localized carbon monoxide concentrations. This analysis determined that localized roadway volumes were insufficient to result in a violation of the carbon monoxide standard, which has not been violated anywhere in the Bay Area for over 11 years due primarily to reformulation of gasoline within the state.

Issues Raised by Commenters: Quantification and Analysis of Air Quality Impacts (AQ-4c)

This response addresses all or part of the following comments, which are quoted below:

O-MM-13

"5. There Is No Accurate or Legally Adequate Analysis and Mitigation of the Project's Air Quality Impacts or GHG Impacts.

"The DSEIR fails to quantify or coherently analyze air quality impacts, complaining, for example, that "it is difficult to predict the magnitude of health effects from the project's exceedance of significance criteria for regional ROG and NOx emissions. (DSEIR 5.4-40.) The DSEIR also admits that its proposed "mitigation" of reducing vehicle trips by not providing adequate parking or transportation capacity "would be difficult to quantify." The DSEIR may not hide behind its failure to gather the necessary data to analyze these and other air quality impacts, because that failure also violates CEQA's requirement to inform the public and decisionmakers of the Project's impacts and to mitigate them." (*Mary Miles, Attorney at Law, email, July 27, 2015 [O-MM-13]*)

Response AQ-4c: Quantification and Analysis of Air Quality Impacts

The commenter states that the SEIR fails to quantify or coherently analyze air quality impacts. OCII disagrees. Quantified construction-related air quality impacts are presented in Table 5.4-7 (SEIR page 5.4-31), while mitigated emissions are presented in Table 5.4-8 (SEIR page 5.4-33). These tables present quantified emission totals for all project construction sources and compare them to significance thresholds which are also presented in the tables. An explanation of the methodology for calculating these emissions is provided on page 5.4-31 and explanation of the significance criteria applied is presented on pages 5.4-24 through 5.4-26 of the SEIR.

Quantified operational air quality impacts are presented in Table 5.4-9 (SEIR page 5.4-39). This table presents quantified emission totals for all project operational sources and compares them to significance thresholds which are also presented in the table. An explanation of the methodology for calculating these emissions is provided on pages 5.4-37 and 5.4-38 and explanation of the significance criteria applied is presented on pages 5.4-24 through 5.4-26 of the SEIR. Localized health risk impacts are also quantified and presented in Table 5.4-10 and 5.4-11 (SEIR pages 5.4-48 and 5.4-49).

Potential impacts of quantified operational exceedance of air quality thresholds are discussed on page 5.4-40 which begins with the accurate statement that prediction of the health effects

associated with significant emissions in ozone precursors is difficult to quantify. The analysis following this statement, however, provides a quantified perspective to the potential health impacts based on existing air quality within the air basin.

With respect to mitigation, quantified estimates of the potential benefits of implementing transportation demand management (TDM) measures would be speculative at this time, and consequently, the SEIR conservatively assumed no quantified emissions benefits associated with implementing additional TDM mitigation measures. The assumptions and calculations included in the SEIR were developed by OCII and City staff in consultation with its environmental consultants. The assumptions and calculations are both reasonable and conservative and are supported by substantial evidence.

13.13.6 Health Risk Methodology and Assumptions (AQ-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-22

"**VIII. Project Health Risks May Be Underestimated Using Older Guidance**

"The DSEIR provides analysis and discussion of the project's potential to cause significant health risks from project-related toxics, with specific details on health risks and PM2.5 calculations and methodology found in Appendix AQ. Exposure parameters presented in Section 3 of Appendix AQ do not appear to reflect current methods for calculating excess cancer risks, and as a result it is likely that the HRA underestimates Warriors Arena's potential excess cancer risks.

"Table 3 lists daily breathing rates referencing BAAQMD's Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines released in January 2010.[2] These breathing rates are consistent with rates recommended by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Risk Assessment Guidelines released in 2000.[3] After publicly working on revisions during 2014, OEHHA released updated Risk Assessment Guidelines in early 2015 that outline risk calculations for specific age groupings. The new methods incorporate higher daily breathing rates than those listed in the BAAQMD's 2010 Guidelines and used in the HRA. To comply with the latest OEHHA Guidelines, the inhalation intake factors should be re-calculated for the EIR using the updated 95% daily breathing rate for children of 1,090 L/kg-day.[4]

"Additionally, the screening approach taken in the HRA to evaluate operational cancer risks should be revised to include a refined, site-specific analysis of impacts using the USEPA AERMOD model. With respect to the number of years of data to model, the USEPA Guideline on Air Quality Models states:

> "Five years of representative meteorological data should be used when estimating concentrations with an air quality model. Consecutive years from the most recent, readily available 5-year period are preferred.[5]"

"The DSEIR used meteorological data from 2008; updated AERMOD results, employing five years of the most recent meteorological data, should be used with exposure parameters and methodology in compliance with the 2015 OEHHA Risk Assessment Guidelines to calculate excess cancer risk.

Footnotes:

[2] BAAQMD, January 2010. Air Toxics NSR Program Health Risk Screening Analysis (HRSA) Guidelines. Available at: http://www.baaqmd.gov/-/media/Files/Engineering/Air%20Toxics%20Programs/hrsa_guidelines.ashx?la=en.

[3] OEHHA, September 2000. Air Toxics Hot Spots Program Risk Assessment Guidelines. Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis. Available at: http://www.oehha.ca.gov/air/hot_spots/pdf/stoch4f.pdf.

[4] OEHHA, February 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessment. Section 5.4.1.1: Residential Inhalation Dose for Cancer Risk Assessment. Available at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

[5] USEPA, November 9, 2005, Guideline on Air Quality Models. 40 CFR 51, Appendix W, Section 8.3.1.2.a.

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-22]*)

Response AQ-5: Health Risk Methodology and Assumptions

One comment expresses concern that the health risk impacts estimated in the SEIR may be underestimated because the analysis did not employ increased breathing rate assumptions recently published by the state of California's Office of Health Hazard Assessment (OEHHA) and used meteorological data from 2008.

In March of 2015 (after the Notice of Preparation was issued), OEHHA adopted revised guidance on recommended breathing rates for use in health risk screening analyses. BAAQMD has indicated[19] that, as an implementing agency for the guidance issued by OEHHA, it is striving to implement the recommended changes to health risk assessment analysis by the beginning of 2016. It is noteworthy that air districts do not always adopt OEHHA methodologies verbatim or immediately. For example, the San Joaquin Air Pollution Control District recently adopted some of the methodology recently adopted by OEHHA but also adopted a revised increased cancer risk threshold that is less stringent than that recommended in the OEHHA guidance.

The Planning Department and the San Francisco Public Health Department (DPH) have worked extensively with the BAAQMD to inventory and assess air pollution exposure from vehicles, stationary, and area sources within San Francisco, which forms the basis of the development of Air Pollution Exposure Zones and specific air quality protection measures codified in the Clean Construction Ordinance and Article 38. (See Response AQ-1a.) Consequently, the City believes BAAQMD's existing health risk assessment methodology protocols are appropriate for evaluating potential incremental health risk form the project, and OCII agrees. While BAAQMD's methodology may be updated in the future to implement revised OEHHA guidance methodologies as well as other potential future recommendations that may be released by OEHHA and other organizations, the analysis of the SEIR uses methodology currently embraced by the BAAQMD, which is consistent with the existing methods used to compile inventories of existing risks throughout the City, and therefore represents a valid conservative estimate of incremental health risk resulting from the project.

[19] BAAQMD, Chong, Daphne, Toxicologist, e-mail correspondence to Wade Wietgrefe, Senior Planner, City of San Francisco Environmental Planning

With regard to the use of a single year of meteorological data in the health risk analysis, Appendix W 8.3.1.2(b) of U.S. EPA's Guideline on Air Quality Models[1] clarifies that "[t]he use of 5 years of NWS meteorological data or at least one year of site specific data is required." The AERMOD modeling used in the health risk analysis, in accordance with SF Planning and BAAQMD protocol for the citywide modeling, used one year of meteorological data collected in Mission Bay. The meteorological data used for the health risk assessment is site specific, as it was collected at the Mission Bay station. SF Planning and the BAAQMD determined that this meteorological data set is sufficient for the citywide HRA that forms the basis of SF Planning's CEQA significance policy, and OCII concurs.

13.13.7 Mitigation Measure, Feasibility and Enforcement (AQ-6)

Issues Raised by Commenters: Mitigation of Construction–related Impacts (AQ-6a)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-7 O-MBA8L2-9 O-MBA8L2-27 O-MBA8L2-32

"The DSEIR assumes that adoption of Mitigation Measure M-AQ-1, requiring use of off-road equipment with engines meeting Tier 2 or Tier 4 standards, will reduce construction-related ROG emissions to 47 or 49 pounds per day, respectively, which are both below the applicable (but invalid) threshold of significance for ROG (i.e., 54 lbs/day). (DSEIR, p. 5.4-33, Table 5.4-8.) But equipment meeting Tier 2 or Tier 4 standards are not sufficiently available to meet either requirement. (See Exhibit 2.) Therefore, the impact assessment must be recalculated to more realistically estimate the percentage of construction equipment that will meet Tier 2 or 4 standards." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-7]*)

"**a. Mitigation Measure M-AQ-1 does not comply with CEQA's legal requirements.**

"Mitigation Measure M-AQ-1 (at DSEIR, p. 5.4-35) does not comply with CEQA's legal requirements. As discussed above, the requirement that off-road equipment meet Tier 2 standards is illusory, and therefore ineffective, because the Project Sponsor will not be able to obtain enough equipment meeting this standard.

"M-AQ-1 includes a limit on idling time of two minutes, and provides exceptions to this limit as provided in state law (DSEIR, p. 5.4-36), but utterly fails to describe what these exceptions are. The DSEIR must fully describe this measure in order for the public and City decision makers to assess its effectiveness.

"M-AQ-1 requires the Project Sponsor prepare a Construction Emissions Minimization Plan, and the Project Sponsor must certify compliance with the Plan. (DSEIR, p. 5.4-36.) This is asking the fox to guard the henhouse. (See Exhibit 1.) (*Mission Bay Alliance, Lippe, letter, July 26, 2015 [O-MBA8L2-9]*)

"2. The DSEIR attempts to mitigate the Project's criteria air pollutant emissions by limiting the off-road equipment used during construction to machinery equipped with, at a minimum, Tier 2 engines with 40 percent NOx verified diesel emission control strategies (VDECS), and at a maximum, Tier 4 or Tier 4 interim engines (Volume 2, p. 5.4-32). However, the DSEIR does not demonstrate the feasibility of this proposed measure. The Project will need to acquire approximately 195 pieces of equipment outfitted with Tier 2 and/or Tier 4 engines. Due to the limited supply of cleaner-burning off-road equipment, the

implementation of this measure, in its entirety, is highly unrealistic. As a result, the proposed Project should not rely on this mitigation measure to reduce emissions; rather the Project should pursue additional, feasible mitigation measures other than Tier 2/Tier 4 construction equipment to reduce the Project's criteria air pollutant emissions." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-27]*)

_____

"**Incorrectly Presumed the Use of Tier 2 and Tier 4 Interim Engines**

"In this updated analysis, it is presumed that all off-road construction equipment will be outfitted with, at a minimum Tier 2 engines with 40 percent NOx verified diesel emission control strategies (VDECS), and at a maximum, Tier 4 or Tier 4 interim engines (Volume 2, p. 5.4-32). There is no substantial evidence, however, to support the assumption that the roughly 195 pieces of off-road equipment utilized during Project construction will meet these standards. Furthermore, it may not be technically feasible to acquire machinery with Tier 2 or Tier 4 engines for the Project's entire construction equipment fleet. As a result, this mitigation measure should not be relied upon to reduce the Project's construction emissions to below levels of significance. Rather, the Project should pursue additional mitigation measures that are more technically feasible to implement.

"The United States Environmental Protection Agency's (USEPA) 1998 nonroad engine emission standards were structured as a three-tiered progression. Tier 1 standards were phased-in from 1996 to 2000 and Tier 2 emission standards were phased in from 2001 to 2006. Tier 3 standards, which applied to engines from 37-560 kilowatts (kW) only, were phased in from 2006 to 2008. The Tier 4 emission standards were introduced in 2004, and were phased in from 2008 – 2015.[10] These tiered emission standards, however, are only applicable to newly manufactured nonroad equipment. According to the United States Environmental Protection Agency (USEPA) "if products were built before EPA emission standards started to apply, they are generally not affected by the standards or other regulatory requirements."[11] Therefore, pieces of equipment manufactured prior to 2000 are not required to adhere to Tier 2 emission standards, and pieces of equipment manufactured prior to 2008 are not required to adhere to Tier 4 emission standards. Construction equipment often lasts more than 30 years; as a result, Tier 1 equipment and non-certified equipment are currently still in use.[12] It is estimated that of the two million diesel engines currently used in construction, 31 percent were manufactured before the introduction of emissions regulations.[13] Furthermore, in a 2010 white paper, the California Industry Air Quality Coalition estimated that approximately 7% and less than 1% of all off-road heavy duty diesel equipment in California was equipped with Tier 2 and Tier 3 engines, respectively.[14] It goes on to explain that "cleaner burning Tier 4 engines…are not expected to come online in significant numbers until 2014." Given that significant production activities have only just begun within the last year, it can be presumed that there is limited availability of Tier 4 equipment. Furthermore, due to the complexity of Tier 4 engines, it is very difficult if not nearly impossible, to retrofit older model machinery with this technology.[15] Therefore, available off-road machinery equipped with Tier 4 engines are most likely new. According to a September 20, 2013 EPA Federal Register document, a new Tier 4 scraper or bulldozer would cost over $1,000,000 to purchase.[16] It is also relatively expensive to retrofit a piece of old machinery with a Tier 3 engine. For example, replacing a Tier 0 engine with a Tier 3 engine would cost roughly $150,000 or more.[17] Therefore, before applying mitigation measures of this caliber to a Project, the applicant should consider both the cost of the proposed equipment as well as determine the probability of obtaining an entirely Tier 2 or Tier 4 construction fleet. Unless the Project applicant can demonstrate to the public, either through budget or through a signed contractual agreement with a contractor or supplier, that they will purchase/rent exclusively Tier 2 or Tier 4 construction equipment, this mitigation measure should not be relied upon as a feasible way of reducing Project emissions.

"**Footnotes:**

[10] Emission Standards, Nonroad Diesel Engines, available at: https://www.dieselnet.com/standards/us/nonroad.php#tier3

[11] "Frequently Asked Questions from Owners and Operators of Nonroad Engines, Vehicles, and Equipment Certified to EPA Standards." United States Environmental Protection Agency, August 2012. Available at: http://www.epa.gov/oms/highway-diesel/regs/420f12053.pdf

[12] "Best Practices for Clean Diesel Construction." Northeast Diesel Collaborative, August 2012. Available at: http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf

[13] Northeast Diesel Collaborative Clean Construction Workgroup, available at: http://northeastdiesel.org/construction.html
[14] "White Paper: An Industry Perspective on the California Air Resources Board Proposed Off-Road Diesel Regulations." Construction Industry Air Quality Coalition, available at: http://www.agc-ca.org/uploadedFiles/Member_Services/Regulatory-Advocacy-Page-PDFs/White_Paper_CARB_OffRoad.pdf
[15] "Tier 4 – How it will affect your equipment, your business and your environment." Milton Cat, available at: http://www.miltoncat.com/News/Documents/Articles/For%20the%20Trenches%20-%20Tier%204.pdf
[16] Federal Register Volume 78, Number 183. United States Environmental Protection Agency, September 20, 2013. Available at: http://www.gpo.gov/fdsys/pkg/FR-2013-09-20/pdf/2013-22930.pdf
[17] Federal Register Volume 78, Number 183. United States Environmental Protection Agency, September 20, 2013. Available at: http://www.gpo.gov/fdsys/pkg/FR-2013-09-20/pdf/2013-22930.pdf

(*Mission Bay Alliance, Lippe, letter, July 26, 2015 [O-MBA8L2-32]*)

Response AQ-6a: Mitigation of Construction–related Impacts

Comments state that Tier 2 and Tier 4 off-road construction equipment, use of which is identified as mitigation for significant construction-related impacts under Mitigation Measure M-AQ-1, may not be sufficiently available and do not represent feasible mitigation measures.

Regarding the feasibility of obtaining Tier 2 and Tier 4 off-road construction equipment, the City of San Francisco has recently updated is Clean Construction Ordinance and implementation guidance, which applies to the City's own projects and is consistent with the requirements of Mitigation Measure M-AQ-1 and codified by the City (Ordinance No. 28-15). As a part of the implementation guidance, the City Planning Department presents the results of a statewide data summary[20] gathered by the California Air Resources Board as part of compliance with the In-Use Off-Road Diesel Regulation. The data indicate the available construction equipment at various engine tier levels. These data indicate that in 2014 approximately 59 percent of all off-road equipment in the state were operating with Tier 2 engines or better. Given that the majority of equipment statewide is capable of complying with the conditions of Mitigation Measure M-AQ-1, it is reasonable to conclude that the measure represents feasible mitigation.

When an EIR determines that a particular environmental impact would be "significant," the EIR must propose and describe feasible mitigation measures that will minimize or reduce the impact. (Pub. Resources Code, § 21100, subd. (b)(3); CEQA Guidelines, §§ 15126, subd. (e), 15126.4; 15370.) If an EIR determines that an impact would be less than significant, however, there is no duty to propose mitigation. (See CEQA Guidelines § 15126.4(a)(3) ["Mitigation measures are not required for effects which are not found to be significant."]; *Santa Clarita Organization for Planning the Environment v. City of Santa Clarita* (2011) 197 Cal.App.4th 1042, 1056 [same].) Similarly, if an EIR concludes that the proposed mitigation measures will reduce an impact to a less than significant level, the agency has fulfilled its obligation to mitigate that impact. In other words, while an EIR is required to describe feasible measures which could minimize significant impacts, CEQA does not require that mitigation measures must eliminate environmental impacts altogether. (See CEQA Guidelines, § 15370; see also *Oakland Heritage Alliance v. City of Oakland*

[20] San Francisco Department of the Environment et.al., *San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects*, Final August 2015 available online at https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp. Accessed September 10, 2015.

(2011) 195 Cal.App.4th 884, 899 ["A less than significant impact does not necessarily mean no impact at all."]; *National Parks and Conservation Assn. v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1359 [CEQA does not require a finding of "zero impact"].)

Here, the SEIR identifies mitigation measures that would reduce construction-related ROG emissions below the applicable threshold of significance. Because construction-related ROG emissions would be less than significant with the mitigation proposed in the SEIR, there is no duty to identify additional mitigation measures that would further mitigate the impact.

Issues Raised by Commenters: Construction Mitigation—Truck Idling (AQ-6b)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-9

"**a. Mitigation Measure M-AQ-1 does not comply with CEQA's legal requirements.**

"Mitigation Measure M-AQ-1 (at DSEIR, p. 5.4-35) does not comply with CEQA's legal requirements. As discussed above, the requirement that off-road equipment meet Tier 2 standards is illusory, and therefore ineffective, because the Project Sponsor will not be able to obtain enough equipment meeting this standard.

"M-AQ-1 includes a limit on idling time of two minutes, and provides exceptions to this limit as provided in state law (DSEIR, p. 5.4-36), but utterly fails to describe what these exceptions are. The DSEIR must fully describe this measure in order for the public and City decision makers to assess its effectiveness.

"M-AQ-1 requires the Project Sponsor prepare a Construction Emissions Minimization Plan, and the Project Sponsor must certify compliance with the Plan. (DSEIR, p. 5.4-36.) This is asking the fox to guard the henhouse. (See Exhibit 1.) (*Mission Bay Alliance, Lippe, letter, July 26, 2015 [O-MBA8L2-9]*)

Response AQ-6b: Construction Mitigation–Truck Idling

Comments suggest that the DSEIR does not explain exceptions to limits on idling times and the mitigation is therefore inadequate.

Exceptions to limits on idling times cited in the SEIR rely on those specified in the California Code of Regulations (CCR) Title 13, Division 3, § 2485 (on-road) and § 2449(d)(2) (off-road). Examples of these exceptions would include traffic conditions and safe operating conditions. CCR Title 13 provides 14 specific instances where such exception would apply. Moreover, to ensure compliance the measure – as with all mitigation measures include in the Draft SEIR – will be included in the Mitigation Monitoring and Reporting Program. The ultimate responsibility to review the compliance records prepared by the project sponsor and to confirm compliance properly rests with OCII.

Issues Raised by Commenters: Construction Mitigation— Compliance Certification (AQ-6c)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-9 O-MBA8L2-19

"**a. Mitigation Measure M-AQ-1 does not comply with CEQA's legal requirements.**

"Mitigation Measure M-AQ-1 (at DSEIR, p. 5.4-35) does not comply with CEQA's legal requirements. As discussed above, the requirement that off-road equipment meet Tier 2 standards is illusory, and therefore ineffective, because the Project Sponsor will not be able to obtain enough equipment meeting this standard.

"M-AQ-1 includes a limit on idling time of two minutes, and provides exceptions to this limit as provided in state law (DSEIR, p. 5.4-36), but utterly fails to describe what these exceptions are. The DSEIR must fully describe this measure in order for the public and City decision makers to assess its effectiveness.

"M-AQ-1 requires the Project Sponsor prepare a Construction Emissions Minimization Plan, and the Project Sponsor must certify compliance with the Plan. (DSEIR, p. 5.4-36.) This is asking the fox to guard the henhouse. (See Exhibit 1.) (*Mission Bay Alliance, Lippe, letter, July 26, 2015 [O-MBA8L2-9]*)

"Similarly, M-AQ-2a begins with "The project sponsor shall implement the following measures as feasible:"... The introduction of "as feasible" is a poison pill, since the measure does not conclusively identify the party responsible (and liable) for determining sub-component measure feasibility. This determination must not be left to the project sponsor, but, rather, vested with a qualified independent contractor chosen by and reporting solely to the OCII, or to the BAAQMD on behalf of OCII, to ensure measure implementation at every truly "feasible" turn. Without specifying duties for the accurate determination of what constitutes "as feasible", and then ensuring that those duties are actually implemented by a non-conflicted 3rd party (which, as written currently, the project sponsor cannot possibly fulfill without potential for conflict of interest), M-AQ-2a lacks necessary enforceability and cannot be expected to produce those real, quantifiable, surplus mitigated emission benefits claimed in the DSEIR.

"Finally, M-AQ-2b leaves it to the project sponsor to calculate the amount of emission offsets required to satisfy the project's estimated ozone precursor burden of 17 tons per year, after they have decided what is feasible for Tier 4 equipment to be used at the site and what then to report to OCII under the requirements of M-AQ-1. In total, the construction mitigations proposed in the DEIR are riddled with potential conflicts of interest by leaving the determination of compliance and feasibility to the very party that must identify, implement and pay for them. As written, they cannot be relied upon to deliver the emission benefits that the DEIR assumes will actually occur. The DEIR must be revised to place a qualified, independent, 3rd party entity at the project site daily for the 26 month project duration, making them responsible and liable for accurate, weekly (not quarterly) verifications of equipment emission rates and reductions in reports to the City." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-19]*)

Response AQ-6c: Construction Mitigation – Compliance Certification and Operational Mitigation Feasibility

Comments state that requiring the project sponsor to certify compliance with the conditions of **Mitigation Measure M-AQ-1: Construction Emissions Minimization** is insufficient to ensure adequate implementation of mitigation. This requirement C of **Mitigation Measure M-AQ-1** is

only an intermediate step in the process of implementing a Construction Emissions Control Plan (CEMP). This step requires the project sponsor to play a review role in the mitigation measure. Subsequent to this certification, the CEMP must then be submitted to OCII (or its designated representative) for review and approval (requirement A of **Mitigation Measure M-AQ-1)**. Consequently, the project sponsor would not be the only reviewing party so as to ensure adequate implementation of **Mitigation Measure M-AQ-1**. Rather, the lead agency – here, OCII – retains authority to monitor and enforce the measure. The Mitigation Monitoring and Reporting Program will reflect this requirement.

With regard to the use of the term "as feasible" in **Mitigation Measure M-AQ-2a**, changes to SEIR text page 5.4-42 have been revised as indicated in the Response AQ-6f below.

Please see Response AQ-6a regarding availability of off-road equipment with Tier 2, Tier 3, and Tier 4 engines.

Issues Raised by Commenters: Use of Renewable Diesel as Construction Mitigation Measure (AQ-6d)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-17

"**IV. Construction and Operational Mitigation Options Have Not Been Thoroughly Reviewed for Diesel Alternatives**

"Mitigation Measure M-AQ-1 at DSEIR pg. 5-4.36 under item B requires reporting of alternative fuel quantities used to power construction vehicles and equipment at the project site during its 26 month duration. M-AQ-1 should be revised to require the use of low-emission and/or low- CO2 alternative fuels unless costs are substantially (-100%) greater than routine diesel fuel costs. One such product that should have been carefully evaluated in the DSEIR is "Diesel HPR", made from 98% renewable content (a rate about 4 times greater than regular B-20 biodiesel) and currently marketed at 18 locations throughout northern CA and the Bay Area. The price for this ultra-low carbon-intensity diesel, said to have better performance characteristics than traditional petroleum diesel fuel, is competitive with standard onroad and offroad diesel available in CA (as advertised recently in the Sacramento area at $2.89 a gallon).

"Fossil diesel has a cetane rating of 40. The HPR Diesel product, or similar, has a cetane rating of 74. That level of higher cetane results in lower PM and NOx---which are needed reductions for the project. Because the density of the fuel is slightly lower, so is the chemical energy per unit volume (3%). But because the cetane rating is so much higher PM otherwise not emitted is converted into productive energy, with tractive horsepower (per unit volume) slightly higher than fossil diesel (1%).

"Onroad project-serving construction vehicles that cannot otherwise operate without diesel fuel should also be required to use the very low carbon-intensity "Diesel HPR" or similarly effective product, with receipts proving purchase and use provided to the independent, onsite construction mitigation manager (referred to inappropriately as an "Air Quality Specialist" in the DSEIR, as noted elsewhere in this letter) for regular, weekly relay to the OCII. ("Similarly effective" does not mean use of B-20, since its proportion of bio-derived fuel will not exceed 20%, whereas the Diesel HPR product or similar will come almost entirely from renewable sources.)

"Additionally, the project will rely on several emergency diesel gensets---these power units will produce emissions during regular testing, and are very likely to emit far greater quantities of emissions during any actual power outages. Those units should be operated on an alternative, low-emission non-diesel fuel. If not possible, those diesel units should be operated solely on the "Diesel HPR" or similar product. No information is found in the DEIR that discusses whether the diesel (and not alternatively fueled) genset option is critically necessary, whether lower-emitting options are available for them, and why those options are or are not permissible for use at the project.

"See http://www.sacbee.com/news/business/article15203738.html for more information on the Diesel HPR product, and particularly its locations for purchase, costs, and emission benefits over traditional diesel fuel." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-17]*)

Response AQ-6d: Use of Renewable Diesel as Construction Mitigation Measure

One comment suggests that the use of renewable diesel (Diesel HPR) should be considered as a potential mitigation measure to reduce construction-related impacts of ROG and NOx.

While not considered as part of the Draft SEIR analysis, a search of dispensing locations for renewable diesel revealed that the nearest such facility is presently over 12 miles from the project site and procurement of fuel would result in additional NOx and ROG emissions from regular fuel transport to project equipment. Consequently, such a mitigation measure may not result in meaningful additional NOx and ROG reductions. Regardless, the following SEIR text on page 5.4-36 is revised as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined) to add this option to element 4 of Mitigation Measure M-AQ-1: Construction Emissions Minimization:

> 4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but are not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used. Renewable diesel shall be considered as an alternative fuel if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. The plan shall also include estimates of ROG and NOx emissions.

This revision does not change the analysis or conclusions presented in the SEIR.

With regard to the suggested use of alternative fuels for back-up generators, natural gas-fueled generators are subject to reliability problems in an emergency such as an earthquake if natural gas transmission is interrupted. For safety reasons, provision of backup power to evacuate an

event center full of spectators via diesel fuel stored on-site represents a more prudent technology for the proposed event center. As noted above, use of renewable diesel has been added as a text revision to the menu of available measures in Mitigation Measure M-AQ-2a, Reduce Operational Emissions, as indicated in Response AQ-6f below.

Issues Raised by Commenters: Implementation and Enforceability of Mitigation Measure M-AQ-1 (AQ-6e)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-18

"**V. Construction Mitigation Is Unenforceable and Places Inappropriate Reliance on Project Sponsor for Interpretation and Compliance Determinations**

"At DSEIR pg. 5.4-35, Mitigation Measure M-AQ-1 is identified and discussed for reducing project- related construction equipment emissions. Under this measure's Item A, a Construction Emissions Minimization Plan is required:

> "**Construction Emissions Minimization Plan.** Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the OCII or its designated representative for review and approval by an Air Quality Specialist."

"The measure then goes on to lay out "Compliance Alternatives" that require use of specified types of engines with prescribed emission standards (known as Tiers) utilizing VDECS (Verified Diesel Emission Control Strategies) to reduce equipment NOx emissions and particulates.

"Because the project's construction emissions are estimated to exceed the BAAQMD's NOx threshold of significance, and due to the serious nature of diesel particulate matter (DPM) as a toxic air contaminant subject to EPA and CARB regulations resulting from PM2.5 emissions for which the region is designated nonattainment, it is essential that this measure be implemented and executed effectively for the duration of the project. As written, however, the measure lacks enforceability because there is no recognized definition of or qualification process provided in the DSEIR for "Air Quality Specialist" who will pass judgment on the adequacy of construction equipment and emissions levels to be submitted by the project sponsor for approval.

"While the BAAQMD has agency positions designated "Air Quality Specialist", those positions possess skillsets exclusive to their particular area of expertise, ranging across the sub-specialties of air quality planning, permitting, compliance and enforcement, stationary source inspection, engineering, air monitoring, incentive programs, etc. There is no generic "air quality specialist", as implied in the DEIR's use of the term, and the DSEIR fails to identify the necessary skillsets for this important position. Ensuring compliance with the components of M-AQ-1 will require an individual experienced with CEQA mitigation requirements; air quality regulations and VDECS technology options and functionality; construction site operations and safety issues; a wide variety of offroad and onroad construction equipment and vehicle engines; hands-on engine and VDECS experience to ensure daily compliance with the applicable Compliance Alternative; and precise, effective record-keeping skills, across the 26 month construction duration. The "'Specialist" must be present during all work hours at the site for each day of construction work across the two-plus years of work that would involve operations of construction engines and vehicles at the 11-acre site.

"Because of the importance of the role of the "air quality specialist" in ensuring compliance with M-AQ-1 across the many phases and months of the Arena's construction, this position must be independent, full-

time on the project site, and required to provide weekly report submittals to OCII. At pg. 5.4-36, reporting to OCII is required on a quarterly basis. This is without doubt too long a duration since equipment will come and go on a daily basis, and as written now M-AQ-1 can (and probably will) permit a project sponsor "Specialist" to creatively develop post-hoc equipment compliance records that may appear legitimate but are, in fact, not. Considering that there are no checks and balances built into the Measure, the Lead Agency cannot ensure that compliance with the essential objective of the mitigation measure will actually occur.

"Because of the unusual nature of the duties of the Measure's "Specialist", and as a result of the need for independence from the Applicant to prevent conflict of interest, the EIR must discuss filling the position with a capable, qualified BAAQMD employee under contract to OCII. Should this not be possible, the position must be filled by a qualified, independent contractor chosen by and subject only to the authority of OCII.

"Further, M-AQ-1 specifies numerous sub-part requirements (A 1 through 5) to be included in the Construction Emissions Mitigation Plan, and in each case compliance with those sub-parts is left to the "project sponsor". So, too, is compliance with the Measure's additional duties required under M-AQ-1 items B and C. This is not appropriate when considering the extent, complexity, and costs that will be incurred for effective mitigation measure compliance across the 26-month construction period; permitting the project sponsor to create, implement, report, and determine compliance with the Measure is akin to having the fox guard the henhouse and must not be allowed.

"As written, the measure is not enforceable due to the subjective, undefined nature of "Air Quality Specialist" who will approve the project sponsor's Construction Emissions Mitigation Plan. Further, it is unacceptable that the Measure will permit the project sponsor to determine compliance with each of the measure's components, record and report information signifying compliance, and then, under part C certify their own compliance with the Plan and its various requirements.

"We have inspected construction project sites, under air district contract, to determine compliance with air district-imposed construction equipment mitigations and have found uniformly poor compliance; to exemplify, at one residential subdivision project in south Sacramento County we determined that only one offroad construction vehicle out of nearly twenty were actually compliant with the mitigation requirements that had been imposed on the project by the Lead Agency. This is because there has traditionally been very little, if any, post- EIR follow-through to verify mitigation compliance by Lead Agencies or by the local air district after the CEQA project has been approved for development and construction has started. Knowing this, construction and development firms commonly let air quality mitigations go unmet, although records purporting to show compliance can be easily formulated and submitted post hoc in order to fulfill a paper requirement. Without an independent, qualified 3rd party contractor onsite each day to track, verify, and record emissions- and activity-related information on construction vehicles used at the project site to ensure the EIR's mitigations are implemented effectively, the project is very unlikely to produce more than a token of the emission reductions claimed in the DSEIR." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-18]*)

Response AQ-6e: Implementation and Enforceability of Mitigation Measure M-AQ-1: Construction Emissions Minimization

A commenter states that there are not sufficient mechanisms in place to ensure that **Mitigation Measure M-AQ-1: Construction Emissions Minimization** will be successfully implemented and that the term "air quality specialist" is not succinctly defined by skill sets or capabilities.

As discussed in the Response AQ-6d above, the Construction Emissions Minimization Plan (CEMP) must be submitted to OCII for review and approval (requirement of Mitigation Measure M-AQ-1). OCII staff or its designated representative will coordinate their review with

designated air quality specialists[21] at the San Francisco Planning Department (SF Planning), as necessary.

The City and OCII have successfully monitored implementation of emissions minimization requirements on numerous construction projects over the past several years. Examples of past and ongoing projects with CEMP emissions minimization requirements include Candlestick Point-Hunters Point Shipyard Phase II Development Project, which requires staged increases in the percentage of Tier 4 equipment; the Seismic Upgrade of BDPL Nos. 3 & 4 at Hayward Fault Project, which had one year of tiered engine requirements for on-road spoils hauling trucks and off-road construction equipment; and the Pacific Rod and Gun Club Upland Soil Remedial Action Project, which also had tiered engine requirements for off-road construction equipment. Not only does the City's track record demonstrate the capability of, and success in, monitoring implementation of emissions minimization requirements, but agencies are presumed as a matter of law to comply with their legal obligations such as monitoring and implementing a Mitigation Monitoring and Reporting Program prepared for the purposes of CEQA compliance. (*Bus Riders Union v. Los Angeles County Metropolitan Transportation Agency* (2009) 179 Cal.App.4th 101, 108 ["[a]ll presumptions of law are in favor of the good faith of public officials …"]; *San Joaquin River Exchange Contractors Water Authority v. State Water Resources Control Bd.* (2010) 183 Cal.App.4th 1110, 1135; Evid. Code, § 664.)

Furthermore, SF Planning has developed a CEMP compliance spreadsheet[22] for the purposes of demonstrating compliance with the City's Clean Construction Ordinance, which assigns SFEP the role of verifying compliance of City contractors with the requirements of the ordinance. The SFEP requires the contractor to provide the identification number, engine tier certification, and engine serial number for each piece of off-road equipment to be used, inclusive of subcontractor and rental equipment. The contractor must complete this equipment list, which is a component of the CEMP, prior to issuance of a construction permit, monthly during construction activities, and a final report within six month of the completion of construction.

The provisions of this mitigation measure satisfy CEQA's requirement that the lead agency make mitigation measures an enforceable condition of its approval.

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[21] The SF Planning has an air quality group with technical expertise in CEQA-related air quality technical analysis, including the ability to assess, availability and quality of existing data; evaluation of air quality modeling parameters and potential air quality impacts; and development, evaluation, and monitoring of air quality mitigation measures. Air quality specialists within the group provide an analysis of a project's potential to emit criteria air pollutants, toxic air contaminants, and greenhouse gases, as well as the potential for pollutants to adversely affect sensitive receptors. Air quality specialists are familiar with modeling programs including, but not limited to: CalEEMod, URBEMIS, EMFAC, AERMOD, and CAL3QHCR Line Source Dispersion Model.

[22] Available at https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp.

Issues Raised by Commenters: Feasibility of Mitigation Measure M-AQ-2a (AQ-6f)

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-19

"Similarly, M-AQ-2a begins with "The project sponsor shall implement the following measures as feasible:"... The introduction of "as feasible" is a poison pill, since the measure does not conclusively identify the party responsible (and liable) for determining sub-component measure feasibility. This determination must not be left to the project sponsor, but, rather, vested with a qualified independent contractor chosen by and reporting solely to the OCII, or to the BAAQMD on behalf of OCII, to ensure measure implementation at every truly "feasible" turn. Without specifying duties for the accurate determination of what constitutes "as feasible", and then ensuring that those duties are actually implemented by a non-conflicted 3rd party (which, as written currently, the project sponsor cannot possibly fulfill without potential for conflict of interest), M-AQ-2a lacks necessary enforceability and cannot be expected to produce those real, quantifiable, surplus mitigated emission benefits claimed in the DSEIR.

"Finally, M-AQ-2b leaves it to the project sponsor to calculate the amount of emission offsets required to satisfy the project's estimated ozone precursor burden of 17 tons per year, after they have decided what is feasible for Tier 4 equipment to be used at the site and what then to report to OCII under the requirements of M-AQ-1. In total, the construction mitigations proposed in the DEIR are riddled with potential conflicts of interest by leaving the determination of compliance and feasibility to the very party that must identify, implement and pay for them. As written, they cannot be relied upon to deliver the emission benefits that the DEIR assumes will actually occur. The DEIR must be revised to place a qualified, independent, 3rd party entity at the project site daily for the 26 month project duration, making them responsible and liable for accurate, weekly (not quarterly) verifications of equipment emission rates and reductions in reports to the City." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-19]*)

Response AQ-6f: Feasibility of Mitigation Measure M-AQ-2a: Reduce Operational Emissions

In response to a comment stating that the term "as feasible" in M**itigation Measure M-AQ-2a: Reduce Operational Emissions** is vague, the following SEIR text on page 5.4-42 is revised as follows (deleted text is shown as ~~strikethrough~~ and new text is <u>underlined</u>). In addition, as discussed in Response AQ-6d, an additional measure is added regarding alternative diesel fuel as indicated below.

Mitigation Measure M-AQ-2a: Reduce Operational Emissions

The project sponsor shall implement the following measures ~~as feasible~~:

- Provision of outlets for electrically powered landscape equipment
- <u>Use of renewable diesel to power back-up diesel generators if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential.</u>

- **Mitigation Measure M-TR-2eb: Additional Strategies to Reduce Transportation Impacts** (see Section 5.2, Transportation and Circulation, Impact TR-2)
- **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Section 5.2, Transportation and Circulation, Impact TR-11)

This revision does not change the analysis or conclusions presented in the SEIR.

With regard to review of and assessment of feasibility of mitigation, by a non-conflicted third party, SF Planning has an air quality group with technical expertise in CEQA-related air quality and health risk who would assist OCII in determination of adequate demonstration of infeasibility.

13.13.8 Emissions Offset Mitigation Measure (AQ-7)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-BAAQMD-1	O-MBA8L2-11	O-MBA8L2-19	O-MBA8L2-20
O-MBA8L2-24	O-PBNA-12	O-PBNA-13	

"If a stationary source of mitigation cannot be identified near the Arena, then mitigation could take the form of additional hybrid and electric buses for the SFMTA." (*Potrero Boosters Neighborhood Association, J.R. Eppler, letter, July 27, 2015 [O-PBNA-12]*)

"Air District staff greatly appreciates the opportunity to work with the City to address the potentially significant air quality impacts estimated for this Project. Project design features and the mitigation measures identified in the DSEIR will substantially lessen the local and regional air quality impacts from construction and operation of the Project.

"However, even with these Project design features and on-site mitigation measures, air quality impacts from the Project still exceed the City's thresholds of significance. Therefore, Mitigation Measure M-AQ-2b Emissions Offsets (M-AQ-2b) commits the Project applicant to providing funds to achieve additional emission reductions to reduce air emissions below the thresholds of significance. To this end, M-AQ-2b states that the Project applicant would provide funding of $321,646 to the Air District to fund emissions reduction projects in the region in order to offset the remaining criteria pollutant emissions generated by both the construction and operation activities from the Project.

"However, as Air District staff previously has discussed with the City, the Project Applicant would need to contribute $620,922 to fully offset the remaining criteria pollutant emissions from this Project through the Air District's grant programs. The Air District recommends that the DSEIR MM-AQ-2b be updated to reflect this funding amount." (*Bay Area Air Quality Management District, Jean Roggenkamp, letter, July 20, 2015 [A-BAAQMD-1]*)

"**a. Mitigation Measure M-AQ-2b does not comply with CEQA's legal requirements.**

"Mitigation Measure M-AQ-2b requires the Project Sponsor pay a fee to the BAAQMD that the BAAQMD will use to purchase ozone precursor offsets. The purpose is to offset the amount by which the project's ozone precursors emissions exceed the numerical thresholds discussed in the previous section of this letter.

"Therefore, to the extent the thresholds are invalid, as argued above, M-AQ-2b fails to reduce ozone precursor emissions to less-than-significant levels. Further, the DSEIR does not even consider the feasibility or effectiveness of more robust mitigation strategies that could reduce ozone precursor emissions further below the (invalid) thresholds. (See DSEIR, p. 5.4-39, Table 5.4-9, "Estimated Emissions Reduction Required".)

"The amount of the offset fee required by M-AQ-2b is calculated by multiplying the total amount of annual criteria pollutant emissions exceeding the annual (invalid) thresholds by $18,030 per weighted ton of criteria pollutant emissions; then adding 5% of that product for BAAQMD's administrative fees, as follows:[10]

ROG tons	4.4
NOx tons	12.6
PM tons x 20	0
Subtotal	17
Fee per ton	$18,030.00
Subtotal	$306,510.00
Admin fee 5%	0.05
Admin fee	$15,325.50
Total Fee	$321,835.50

"The DSEIR indicates M-AQ-2b requires the Project Sponsor to pay only $321,835.50, which is the amount required to offset one year's worth of the Project's operational criteria pollutant emissions.(See DSEIR, p. 5.4-41.) But the sports and entertainment arena portion of this Project has an operational life of at least 50 years, probably much longer,[11] and the office towers will last even longer. In contrast, the life spans of offset credit sources are much shorter than the expected life span of this Project. (See Exhibit 1.) Therefore, the actual amount required to offset the Project's above-threshold ozone precursor emissions is much higher than $321,835.50. Therefore, the DSEIR's premise that M-AQ-2b will achieve a complete offset of the Project's above threshold construction and operational criteria pollutant emissions is misleading and false.[12]

"To address this deficiency, M-AQ-2b must be amended. The DSEIR must disclose the average life span of the offset credit sources the BAAQMD typically buys, then amend M-AQ-2b to require recalculation of the offset fee or other offset requirement after the average life span of such offset credit sources to account for their limited life span, changes in emissions, changes in attainment status, etc. In addition, M-AQ-2b must be amended to include a mechanism, in the event that BAAQMD does not spend the offset fee and returns it, to ensure the required offsets are purchased through another bona fide, verifiable offset program.

"Accepting, *arguendo*, the validity of the 17 ton offset requirement, the DSEIR's discussion of Mitigation Measure M-AQ-2b leaves many questions unanswered regarding BAAQMD's offset program. For example, the effectiveness of the measure depends directly on the validity of numerous assumptions, including: (1) the assumption that $18,030 is enough to purchase a ton of criteria pollutant emissions; (2) the assumption that the offset market has 17 tons of criteria pollutant emissions that can be reduced by engine retrofits or other offset techniques; (3) the assumption the Project Sponsor will accurately measure actual construction and operational emissions for purpose of determining how many tons of criteria pollutants must be offset; and (4) the assumption that BAAQMD has and will have reliable verification procedures in place ensuring that 17 tons of offset will actually be achieved.

"**Footnotes:**

[10] 54 lbs per day of ROG emissions equals 10 tons per year.

[11] Oracle Arena was built in 1966, 49 years ago, and is still functional.

[12] The DSEIR indicates that construction-related criteria pollutant emissions are mitigated by including them in the operational period emission mitigation strategy. (DSEIR, p. 5.4-34.)

(*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-11]*)

"Similarly, M-AQ-2a begins with "The project sponsor shall implement the following measures as feasible:"... The introduction of "as feasible" is a poison pill, since the measure does not conclusively identify the party responsible (and liable) for determining sub-component measure feasibility. This determination must not be left to the project sponsor, but, rather, vested with a qualified independent contractor chosen by and reporting solely to the OCII, or to the BAAQMD on behalf of OCII, to ensure measure implementation at every truly "feasible" turn. Without specifying duties for the accurate determination of what constitutes "as feasible", and then ensuring that those duties are actually implemented by a non-conflicted 3rd party (which, as written currently, the project sponsor cannot possibly fulfill without potential for conflict of interest), M-AQ-2a lacks necessary enforceability and cannot be expected to produce those real, quantifiable, surplus mitigated emission benefits claimed in the DSEIR.

"Finally, M-AQ-2b leaves it to the project sponsor to calculate the amount of emission offsets required to satisfy the project's estimated ozone precursor burden of 17 tons per year, after they have decided what is feasible for Tier 4 equipment to be used at the site and what then to report to OCII under the requirements of M-AQ-1. In total, the construction mitigations proposed in the DEIR are riddled with potential conflicts of interest by leaving the determination of compliance and feasibility to the very party that must identify, implement and pay for them. As written, they cannot be relied upon to deliver the emission benefits that the DEIR assumes will actually occur. The DEIR must be revised to place a qualified, independent, 3rd party entity at the project site daily for the 26 month project duration, making them responsible and liable for accurate, weekly (not quarterly) verifications of equipment emission rates and reductions in reports to the City." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-19]*)

"**VI. Operational Mitigation Measure for Electrical Outlets is Vague and Unenforceable**

"Mitigation Measure M-AQ-2a at DSEIR pg. 5.4-42 is designed to reduce the project's operational emissions, requiring the project sponsor to provide outlets for electrically powered landscape equipment "as feasible." As written, this measure is unenforceable since it permits the sponsor to determine feasibility. There is no doubt that the measure will be feasible, since electric power will be ubiquitous across the project site in built structures, at their exteriors, and in power supplied to lighting and other exterior improvements across the project's eleven acres.

"Additionally, the mitigation measure should be revised to require that the project sponsor and any future property owners or tenants require in any landscaping contracts the requirement that landscape maintenance firms at the project use only electrically powered landscape equipment. Merely requiring outlets without mandating their use for landscaping onsite renders this portion of M-AQ-2a entirely unreliable for producing actual emission benefits." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-20]*)

"**X. Mobile-Based Emission Offsets Are Unlikely To Produce Needed Project-Lifetime Reductions**

"Mitigation Measure M-AQ-2b at DSEIR pg. 5.4-42 identifies the use of emission offsets for the project, requiring the project sponsor pay a mitigation-offset fee to the Bay Area Air Quality Management District's (BAAQMD) Strategic Incentives Division. The measure is designed to offset operational project emissions that have been estimated to exceed the DSEIR's air quality thresholds of significance. As noted at pg. 5.4-42:

> "...the project sponsor shall pay a mitigation offset fee to the Bay Area Air Quality Management District's (BAAQMD) Strategic Incentives Division in an amount not to exceed $18,030 per weighted

ton per year of ozone precursors plus a 5 percent administrative fee to fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin (SFBAAB). This fee is intended to fund emissions reduction projects to achieve reductions of 17.0 tons per year of ozone precursors."

"There is a serious, fundamental flaw in the logic applying to the measure's requirement to purchase emission offsets, since emission reductions developed through the BAAQMD's Strategic Incentives Division are based on mobile source emission reduction projects with limited and intentionally impermanent lifetimes. These projects typically operate for several years before they are rendered obsolete by new vehicle emission control standards and technologies, and thus they must not be expected to produce the 17 tons per year of ozone precursor offsets, year in and year out, across what is at least a 30 year project planning lifetime.

"Accordingly, M-AQ-2b must be revised to require emission offsets for project operations for, at a minimum, the aforementioned 30 year life of the project. To exemplify, if the BAAQMD purchases mobile emission offsets with an emission reduction life of less than 10 years, the project sponsor must then pay mitigation-offset fees for mobile emission reductions until emission offsets are realized for the minimum 30 year period. Without such protection the project can be expected to offset its significant ozone precursors for no more than one-third of its lifetime; this is clearly inconsistent with CEQA's interest in mitigating the project's significant impacts across its planned lifetime." (*Mission Bay Alliance, Lippe, letter, July 26, 2015 [O-MBA8L2-24]*)

"As a result, 80% of the funds called for in Mitigation M-AQ-2b should go to reducing the impacts in the area of the Arena itself." (*Potrero Boosters Neighborhood Association, J.R. Eppler, letter, July 27, 2015 [O-PBNA-13]*)

Response AQ-7: Emissions Offsets Mitigation Measure

The commenter states that the project applicant must provide a greater amount of funds than is required under Mitigation Measure M-AQ-2b (Emissions Offsets) to fully offset the project's criteria pollutant emissions. Under CEQA, a lead agency can only impose mitigation on the project applicant to the extent necessary to reduce an impact to a less-than-significant level.

Among other constraints, a lead agency's authority to impose mitigation is limited by the U.S. Constitution. As explained in CEQA Guidelines section 15041, subdivision (a), "[a] lead agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the 'nexus' and 'rough proportionality' standards established by case law." (Citing *Nollan v. California Coastal Commission* (1987) 483 U.S. 825, *Dolan v. City of Tigard* (1994) 512 U.S. 374, and *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854; see also CEQA Guidelines, § 15126.4, subd., (a)(4)(A), (B).)

Mitigation measures must have an "essential nexus" (i.e., connection) to a legitimate government interest. (CEQA Guidelines, § 15126.4, subd, (a)(4)(A), citing *Nollan v. California Coastal Commission* (1987) 483 U.S. 825.) The mitigation measures must also bear a "rough proportionality" to the project's adverse impacts, and if the mitigation measure is an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. (CEQA Guidelines, § 15126.4, subd, (a)(4)(B), citing *Dolan v. City of Tigard* (1994) 512 U.S. 374 and *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854.)

The nexus between the mitigation measure and a legitimate government interest is outlined on pg. 5.4-41 of the Draft SEIR. The mitigation measure is required (the nexus) as a result of the project's operational emission levels of ROG and NOx exceeding the SEIR's significance thresholds. Mitigation Measure M-AQ-2b, Emission Offsets, is identified to offset project operational emissions of ROG and NOx to the extent they exceed the significance thresholds by funding the implementation of one or more emission reduction projects within the air basin. The BAAQMD administers the Carl Moyer program within the San Francisco Bay Area Air Basin (SFBAAB), which establishes the cost-effectiveness criteria for funding emissions reduction projects at $18,030 per weighted ton of ROG, NOx and PM emissions.[23,24] The program has established guidelines and criteria for the funding of emissions reduction projects. The BAAQMD administers the Carl Moyer program within the SFBAAB.

The "rough proportionality" standard means that the type and amount mitigation must roughly correspond in size, degree, and intensity to the project impact. In other words, an agency may not impose mitigation (including mitigation fees) on a project that is greater than necessary to mitigate a particular impact of the project to a less than significant level. (*Dolan v. City of Tigard, supra,* 512 U.S. 374; see also *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854, [$280,000 "recreation fee" assessed against a property owner as a condition of approving a residential project did not satisfy the "rough proportionality" standard of *Dolan*].)

Here, the proportionality of the mitigation to the air quality impact is based on the existing Carl Moyer program cost effectiveness criteria and a 5 percent administrative fee. Using this criteria, it was determined that a payment of $321,646 to the Strategic Incentives Division of the BAAQMD to implement emission reduction projects within the SFBAAB would be the appropriate fee to offset the regional criteria pollutant emissions generated by operation of the proposed project that would remain in excess of the applicable thresholds. This is based on 4.4 tons per year of ROG and 12.6 tons per year of NOx during operation of the project, or a total of 17.0 tons per year of ozone precursors at the rate of $18,030 per weighted ton plus the administrative fee, the rate established under the Carl Moyer program. Estimated emissions offsets for construction emissions for the project (which would occur during the construction period before project operation commences) are less than 17 tons per year, so this payment would also mitigate for the project's construction emissions, but as explained in SEIR p. 5.4-34, if actual construction emissions exceeded this amount, additional offset fees would be assessed. The $321,836 fee matches the fee rates adopted by other established Carl Moyer programs in both Sacramento and San Joaquin county air basins.

The project sponsor would implement Mitigation Measure M-AQ-2b (Emission Offsets) through payment of the $321,836 offset fee, which has a clear nexus between the project's operational air quality impacts and the BAAQMD's authority to implement emission reduction projects as part

[23] The following equation is used to calculated the Weighted Emissions Reductions: Weighted Emissions Reductions= NOx reductions (tons/year)+ROG Reductions (tons/year) +(20 x (PM Reductions (tons/year))).

[24] California Air Resources Board. Memorandum Re: Carl Moyer Program: Review and Update of the Cost-Effectiveness Limit and Capital Recovery Factors for 2015. March 27, 2015. Available online at: http://www.arb.ca.gov/msprog/mailouts/msc1509/msc1509.pdf. Accessed April 24, 2015.

of the Carl Moyer program. Therefore, $321,836 offset fee identified in Impact AQ-2 was calculated to be "roughly proportional" to the operational air quality impacts, using the offset funding equation of $18,030 per weighted ton of ROG, NOx and PM emissions and a 5 percent administrative fee.

SF Planning has been in communication with BAAQMD with regard to its suggestion that a higher fee may be warranted to offset project emissions to a less than significant level and found that BAAQMD could not establish that an increased rate beyond that of the Carl Moyer Program plus a five percent administrative fee could meet the "rough proportionality" standard required under CEQA. The Carl Moyer fee structure was reviewed and updated by CARB in March of 2015 and became fully implemented on July 1, 2015.[25] The offset costs cited in Mitigation Measure M-AQ-2b Emission Offsets are consistent with those of the CARB and other operating California air districts. For example, in the Sacramento Metropolitan Air Quality Management District, the off-site construction mitigation fee rate is $18,030 per ton of excess NOx emissions as of July 1, 2015 (plus an administrative fee of 5 percent) and is based on the cost effectiveness formula established in California's Carl Moyer Incentive Program. In the San Joaquin Valley Air Pollution Control District, the Indirect Source Review (ISR) program requires that an offsite reduction fee of $9,350/ton plus a 4 percent administration fee be applied for NOx emission reductions that cannot be achieved through onsite emission reduction measures. Furthermore, the offset costs in Mitigation Measure M-AQ-2b is consistent or even higher than comparable offset programs in the SFBAAB.[26]

The comment states that Mitigation Measure M-AQ-2b, Emission Offsets, fails to reduce ozone precursors to less-than-significant levels. The Draft SEIR identifies Impact AQ-2 as significant and unavoidable even with the implementation of Mitigation Measure M-AQ-2b. This finding is based upon acknowledgement that implementation of an emissions offset project would either be conducted by the BAAQMD and would be dependent in part on the actions of a third party and not fully within the control of the project sponsor or alternatively, the project sponsor would identify and fund an emissions offset project. In either case, the fee would be designed to fully mitigate for the impact for the life of the project, as explained above. However, because no specific mitigation projects have been identified by either the BAAQMD or the project sponsor at this time, the appropriate conclusion is that the impact is *significant and unavoidable with mitigation*.

Another commenter states that the offset amount presented on page 5.4-41 of the SEIR would only offset a single year of emissions. This assertion is incorrect. Emissions offset programs replace existing high-polluting engines with cleaner more efficient engines and the incremental benefit of these replacements are realized for successive years into the future until the original engine would have reached the end of its useful life [27] or its operation is prohibited by regulation

[25] *Ibid.*
[26] Keinath, Michael, Rambol Environ, 2015. Analysis of the Proposed Offset Program for the Golden State Warriors. October 19, 2015.
[27] Keinath, Michael, Rambol Environ, 2015. Analysis of the Proposed Offset Program for the Golden State Warriors. October 19, 2015.

(e.g., California Code of Regulations, Title 13, Division 3, § 2449(d)(2) (in-use off-road diesel regulation)). Other offset programs, such as the shoreside power unit implemented by the Port of San Francisco pursuant to the Final EIR for the 34th America's Cup and James R. Herman Cruise Terminal and Northeast Wharf Plaza (Case No. 2010.0493E) continue to offset hoteling emissions of diesel ships in dry dock at Pier 70.

One comment suggests a specific mitigation alternative by funding hybrid and electric buses for the SFMTA. Mitigation Measure M-AQ-2b allows the BAAQMD discretion in its choice of mitigation projects, which would most effectively offset project emissions. BAAQMD Grant programs include the Carl Moyer program or the option to upgrade or replace heavy-duty diesel vehicles and equipment, which may include SFMTA transit vehicles.

Another commenter states concern that the project sponsor would act alone in the ultimate determination of the quantity of offsets to be procured. To address this concern, a text change has been made to Mitigation Measure M-AQ-2b requiring the project sponsor to provide calculations to the satisfaction of OCII or its designated representative of the amount of emissions offset. The SEIR text page 5.4-42 is revised as follows (deleted text is shown as ~~strikethrough~~ and new text is underlined):

Mitigation Measure M-AQ-2b: Emission Offsets

Upon completion of construction, and prior to issuance of certificate of occupancy, the project sponsor, with the oversight of OCII or its designated representative, shall either:

1. ~~p~~Pay a mitigation offset fee to the Bay Area Air Quality Management District's (BAAQMD) Strategic Incentives Division in an amount not to exceed $18,030 per weighted ton per year of ozone precursors per year requiring emissions offsets plus a 5 percent administrative fee to fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin (SFBAAB). This fee is intended to fund emissions reduction projects to achieve reductions of 17.~~0~~ tons ~~per year~~ of ozone precursors per year, the estimated tonnage of operational and construction-related emissions offsets required. Documentation of payment shall be provided to OCII or its designated representative.

   The project sponsor shall provide calculations to the satisfaction of OCII or its designated representative of the final amount ~~calculate the amount~~ of emissions ~~offset required~~ from construction activities based on the reporting requirements of Mitigation Measure M-AQ-1, which shall consider the final destination of off-hauled soil and construction waste materials by on-road trucks, contributions from Electrical Power Distribution System Expansion, and the degree of compliance with off-road equipment types that were ~~determined to be~~ commercially available. If the calculated construction emissions of ozone precursors require~~s~~ offsets in excess of 17.~~0~~ tons per year, then the applicant shall provide the additional offset amount commensurate with the calculated ozone precursor emissions exceeding 17.~~0~~ tons per year.

   Acceptance of this fee by the BAAQMD shall serve as an acknowledgment and commitment by the BAAQMD to: (1) implement an emissions reduction project(s) within one year of receipt of the mitigation fee to achieve the emission reduction objectives specified above; and (2) provide documentation to OCII or its

designated representative and to the project sponsor describing the project(s) funded by the mitigation fee, including the amount of emissions of ROG and NOx reduced (tons per year) within the SFBAAB from the emissions reduction project(s). If there is any remaining unspent portion of the mitigation offset fee following implementation of the emission reduction project(s), the project sponsor shall be entitled to a refund in that amount from the BAAQMD. To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements~~.~~ or

2. Directly implement a specific offset project to achieve reductions of 17 tons per year of ozone precursors (or greater as described in item 1 above). To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements. Prior to implementation of the offset project, the project sponsor must obtain OCII's approval of the proposed offset project by providing documentation of the estimated amount of emissions of ROG and NOX to be reduced (tons per year) within the SFBAAB from the emissions reduction project(s). The project sponsor shall notify OCII within six months of completion of the offset project for OCII verification.

This revision does not change the analysis or conclusions presented in the SEIR.

13.13.9 General Comment Related to Air Quality Impacts (AQ-8)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA8L2-14 O-MBA8L2-25 O-MBA8L2-30

"This review and commentary focuses on the DEIR's use of flawed construction mitigation measures that will not deliver purported emission benefits; a failure to provide substantive discussion on whether wastewater improvement-related emissions made necessary for completion of the Event Center project should have been reviewed in the DSEIR; failure to meaningfully evaluate and mitigate with effective alternatives to diesel equipment and diesel fuel, including requirement to use zero-emission electric options when appropriate; the unjustified use of trip-related emissions of major sports events from the Oracle Arena for application to the project's sports arena; failure to evaluate the use of the latest available OEHHA health risk guidance known to be under discussion during the preparation of the DSEIR; the Lead Agency's reliance on thresholds of significance that have not been adopted in compliance with CEQA Guidelines; and the use of emission offsets with substantially less lifetime mitigation value than that relied upon by the Lead Agency in the DSEIR." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-14]*)

"In summary, we believe the project DSEIR's treatment of air quality impact analysis and mitigation has inaccurately characterized certain project emissions, applied mitigation measures which are unenforceable or will simply not be implemented effectively if they are substantively implemented at all,

failed to use thresholds of significance previously adopted by the Lead Agency's Board of Directors pursuant to CEQA Guidelines, and has incorrectly assumed the transfer of Warriors game-related operational emissions established for the Oracle Arena to apply to the project arena to be built in San Francisco." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-25]*)

"A revised DSEIR should be prepared to address these inadequacies and to incorporate mitigation to reduce impacts which otherwise would affect regional air quality, and health impacts from toxic air contaminants." (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-30]*)

Response AQ-8: General Comments Related to Air Quality Impacts

This group of comments consists of either introductory or conclusion paragraphs that summarize overall air quality issues raised by the commenter(s). All of the specific issues raised in these summary paragraphs are addressed in detail under the appropriate sub-topic headings included in this Section 13.13, Air Quality, of the Responses to Comments document.

13.14 Greenhouse Gases Emissions

13.14.1 Overview of Comments on Greenhouse Gases

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.5, Greenhouse Gas Emissions. These include topics related to:

- GHG-1: Setting
- GHG-2: Approach to Analysis

13.14.2 Setting (GHG-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-Sierra-8

"The SEIR notes that there are many GHG regulations – both state and local – with which the project must comply. It credits these laws with reducing emissions of greenhouse gases in San Francisco. However, the Sierra Club notes that a large part of the reason the City's GHG emissions levels have dropped is because of the closure of the PG&E power plant in the Bayview a few years ago. (*Volume 2, 5-5-11*)" (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-8]*)

Response GHG-1: Setting

The comment states that the closure of the PG&E power plant has reduced the City's greenhouse gas (GHG) emissions. This statement is correct. SEIR Section 5.5 states that in 2010 the two largest sources of GHG emissions in San Francisco were motorized transportation and natural gas sectors. The closure of stationary sources, such as the PG&E power plant closure, is one factor in citywide GHG reductions. The San Francisco Climate Action Plan[1] addresses reductions due to efforts in the transportation, energy efficiency, renewable energy, and solid waste sectors. The GHG Reduction Strategy considers additional GHG reductions from policies affecting land use. Meeting City and statewide GHG reduction targets for 2020 and beyond will require concerted effort in all sectors, as addressed in the San Francisco Climate Action Plan, the San Francisco Greenhouse Gas Reduction Ordinance, and the San Francisco Greenhouse Gas Reduction Strategy.

[1] San Francisco Department of the Environment and San Francisco Public Utilities Commission, 2004. Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Gas Emissions. September.

13.14.3 Approach to Analysis (GHG-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-2	O-MBA7S2-5	O-MBA7S2-41	O-Sierra-3
O-Sierra-6	O-Sierra-10	O-Sierra-11	PH-Cornwell2-3
PH-Greenstein-2	PH-Meserve-4	PH-Vaughan-2	PH-Vaughan-3
PH-Vaughan-5			

"Under AB 900, a "Leadership Project" receives an expedited CEQA review process and other streamlining benefits. (Pub. Resources Code, § 21178 et seq.) Leadership projects are supposed to create high quality permanent jobs and innovative measures to reduce environmental impacts, including greenhouse gas ("GHG") emissions. As a result of the certification received under AB 900, the DSEIR claims that the Project will "not result in any net additional GHG emissions." (DSEIR, p. 5.5-10.)

"As explained below and in the attached technical comments by SCS Engineers, dated July 20, 2015 ("SCS" attached as Exhibit A), the AB 900 Application process does not meet minimum standards for calculation of GHG emissions, nor does it provide a substitute for CEQA's EIR process or substantive standards. The DSEIR relies entirely on the existence of the AB 900 certification for its analysis of the Project's contribution to the cumulative impact to GHG emissions. While the AB 900 certification is not subject to judicial review (Pub. Resources Code, § 21184, subd. (b)(1)), the content of the Application for AB 900 certification does not substitute for an adequate analysis of GHG emissions in the DSEIR. As a result, the DSEIR fails to meet minimum standards of disclosure and also incorrectly concludes that GHG emissions are less than significant. These flaws in the DSEIR require revision and recirculation of the DSEIR with an adequate GHG analysis." (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-2]*)

"b. The Flawed AB 900 Application Cannot Substitute for an Adequate Analysis Under CEQA in the DSEIR.

"The DSEIR simply refers to the result of the AB 900 certification process, providing no additional analysis or disclosure in the DSEIR itself regarding the expected GHG emissions of the Project or how those impacts would be mitigated. To the extent the DSEIR intends to incorporate the faulty AB 900 Application into the DSEIR instead of setting forth the analysis in the DSEIR, it did not follow procedures required to do so. CEQA Guidelines section 15150 requires that "the incorporated part of the referenced document shall be briefly summarized where possible or briefly described if the data or information cannot be summarized." The AB 900 Application was not summarized or described in the DSEIR, nor was it included as an appendix. If the AB 900 Application is to be offered as environmental analysis in the DSEIR, it would have to be included as an appendix to the DSEIR so that the public could review it. (CEQA Guidelines, § 15147; *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442 (where lead agency "relied on information not actually incorporated or described and referenced in the FEIR, it failed to proceed in the manner provided in CEQA").)

"Nor can the DSEIR rely on analysis in the 1998 FSEIR. Though GHG emissions are briefly mentioned in the 1998 FSEIR (DSEIR, p. 5.5-1), this Project being proposed years later was not analyzed. Moreover, the approach to GHG emissions has changed dramatically in the intervening years.

"The approach to calculating GHG emissions in the AB 900 Application is also inconsistent with basic CEQA principles as well as the DSEIR's approach to analysis of other impacts of the Project. As described above, large components of the Project to which the AB 900 certification and the "no net increase in GHG emissions" allegedly apply were simply omitted from the inventory, including over 700,000 square feet of

retail and office uses. (DSEIR, Figure 3-5 and Table 3-1.) While there is no discussion in the DSEIR, the AB 900 Application claims that these other uses were "fully vested legal rights" permitted by the land use plan, and therefore did not quantify the GHG emissions from that part of the Project. (Leadership Application, p. 8.)

"The Leadership Project application process does not provide any direction to exclude aspects of the project from the Leadership Application. (Pub. Resources Code, § 21183, subd. (c).) Nor does it substitute the AB 900 certification for an adequate analysis under CEQA. Certainly if the Legislature had intended that an approved Leadership application could substitute for mandated analysis in an EIR, it would have so stated; it did not. As the certification is for the entire complex, including office and retail, there is no justification to exclude part of the project from the analysis. The result is an impermissible decrease of the GHG emissions calculated to occur as a result of the Project.

"The notion that having a vested right to do something affects the obligation under CEQA to disclose the impact of doing it has been squarely rejected. (*Communities For A Better Environment v. South Coast Air Quality Management Dist*. (2010) 48 Cal.4th 310, 323-25, citing Pub. Resources Code, §§ 21002.1, subd. (b), 21081, subd. (a)(1); CEQA Guidelines, § 14, §§ 15040, 15126.4, subd. (a)(2) [lead agency ability to condition project]; § 21081; CEQA Guidelines, § 15042 [lead agency ability to deny the project].) Moreover, consistency with a plan does not preclude the need for analysis. (See *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354.) Notably, neither the air quality nor the traffic impact chapters of the DSEIR attempt to include credit for baseline development claimed as "vested." The completely different approach taken by the DSEIR with respect to analysis of GHG emissions is unsupported and must be corrected; the correct baseline is "no project."

"The "mitigation" proposed for GHG emissions impacts is also contrary to CEQA's most basic requirements. Mitigation must be enforceable in order to be effective.. (CEQA Guidelines, § 15126.6, subd. (a)(2).) Here, as described above, the purchase of offsets may never occur, or if it does occur, may do nothing to reduce GHG emissions. The DSEIR's failure to identify enforceable mitigation measures is an error of law. (See *Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1260–1262; *Lincoln Place Tenants Association v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1508 ["mitigating conditions are not mere expressions of hope. . . ."].) To the extent that the City intends to incorporate the purchase of offsets as a "design feature" or otherwise incorporate it into the project description, recent case law clarifies that this strategy violates CEQA's mandate to disclose project impacts and separately address feasible mitigation measures. (*Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 655-56 (incorporating mitigation measures for redwood trees into the project description violated CEQA "[b]y compressing the analysis of impacts and mitigation measures into a single issue . . ."].)

As a result of the City's improper approach to analysis of GHG emissions from the Project, the GHG analysis is incomplete and must be rewritten. Moreover, the "less than significant" determination for the Project's GHG emissions is based on errors of law described above, including splitting the Project into smaller pieces and excluding several of these pieces from the GHG calculation and failing to identify enforceable mitigation measures. According to air quality experts versed in GHG emissions and the use of GHG offsets: "The GHG analysis provided and proposed MM I-C-GG-1 are not sufficient to demonstrate that the Project will result in no net increase in GHG emissions" and "the determination in the [DSEIR] that GHG emissions are a less than significant impact is erroneous." (SCS, p. 2.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-5]*)

"The GHG analysis used to support the determination that the Project met the requirements of AB900 is insufficient to demonstrate that the GHG emissions from the Project will be net zero and less than significant under CEQA for the following reasons:

- The GHG analysis makes unsupported assumptions about Oracle Arena, trip linkage, and energy use which artificially lower the expected GHG emissions from the Project and do not provide an accurate evaluation of the GHG emissions that can be expected to result from the Project.
- The GHG analysis does not require project monitoring and periodic GHG reporting to assure the accuracy of the projected emissions.

- The GHG offsets proposed as a mitigation measure are not required to be consistent with California GHG reduction goals and policies, could be used for other projects, and may not ever be required for the operational emissions."

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-41]*)

"The Sierra Club also believes there are other inadequacies in the SEIR. For example, the Warriors currently have about 150 full-time employees (Volume 3, Page 16). Have the project sponsors done an analysis of where these employees live, and to what extent GHG emissions will increase or decrease as a result of their commutes to the new location?" (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-3]*)

"The SEIR notes that the roughly 1,000 day-of-game/event staff at the Mission Bay site will be assumed to be new hires (Volume 3, Page 42). The SEIR is inadequate because of this assumption. Project sponsors have not actually determined the number of events that will still be held at the Oracle Arena or surveyed current part-time employees to determine where they live and how many might transfer to the Mission Bay site in lieu of losing hours, if not their jobs, at the Oracle Arena. If roughly 1,000 part-time day-of-game employees will commute to events at the Mission Bay site from the East Bay, or anywhere else in the Bay Area, what are the GHG impacts?" (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-6]*)

"The Sierra Club is also concerned that there is no requirement to purchase carbon credits until the site is 90 percent leased and occupied, and, for the arena, until 90 percent of the available booking dates are utilized. (Volume 2, 5-5-12). If more than 10 percent of the facility remains vacant and/or more than 10 percent of the available booking dates are never filled, the project sponsors will never have to purchase carbon credits – let alone mitigate for the impacts of all the additional car traffic and transit use on the ground. The Sierra Club believes that the project sponsors should mitigate for all GHG emissions." (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-10]*)

"Additionally, the Sierra Club thinks that the requirement to mitigate for greenhouse gas emissions should not end after 30 years, as the project sponsors propose, but should continue as long as the facility is in use." (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-11]*)

"So, you can offset carbon utilization and all the rest, but the bottom line is this is a really bad regional project." (*John Cornwell, public hearing transcript, June 30, 2015 [PH-Cornwell2-3]*)

"They made a promise to offset 100 percent of the arena's greenhouse gas emissions by paying to the state's Carl Moyer program, which funds the upgrade of vehicles such as dirty school buses, in terms of getting clean, fuel-burning buses. This focus on climate-change mitigation is the future of responsible building, and I'm proud that the Golden State Warriors are leading the way." (*Adam Greenstein, public hearing transcript, June 30, 2015 [PH-Greenstein-2]*)

"The project is also being mis-advertised as greenhouse gas neutral. Purchasing unverified assets from a broker for 4,000 tons per year of carbon dioxide is not mitigation and doesn't do anything to help the

localized air pollution that will become so much worse under the gridlocked conditions." (*Osha Meserve, public hearing transcript, June 30, 2015 [PH-Meserve-4]*)

"We don't know, additionally, in terms of the greenhouse gas emissions. It's my understanding that the project sponsors intend to purchase carbon offsets. We don't know what those offsets are, and we need to see that in the EIR." (*Susan Vaughan, public hearing transcript, June 30, 2015 [PH-Vaughan-2]*)

"To my knowledge, no greenhouse gas comparison has been done between this proposed project and just keeping the project in Oakland." (*Susan Vaughan, public hearing transcript, June 30, 2015 [PH-Vaughan-3]*)

"… and I'm wondering about increased greenhouse gas emissions, because employees might be taking the bridge across the river -- or, not the river -- the Bay." (*Susan Vaughan, public hearing transcript, June 30, 2015 [PH-Vaughan-5]*)

Response GHG-2: Approach to Analysis

These comments question the analysis and impact conclusions of the greenhouse gases (GHG) emissions section of the SEIR. Many commenters confuse the GHG analysis conducted for the AB 900 process with the GHG emissions impact analysis conducted for the SEIR as part of the CEQA environmental review process. Even though both the AB 900 process and the CEQA process require analysis of GHGs, the two processes have separate and distinct requirements and purposes. The AB 900 process involved a particular *quantitative* GHG analysis required by the California Air Resources Board (CARB). The SEIR analysis, performed consistent with CEQA Guidelines as described below, used a *qualitative* GHG analysis. This response describes the GHG emissions impact analysis used in the SEIR as required by CEQA. For further discussion of the AB 900 process and the Governor's certification of the proposed project as an environmental leadership project, please refer to Section 13.4 of this Responses to Comments document.

SEIR Section 5.5 (pp. 5.5-8 to 5.5-9) presents the significance thresholds used in the GHG emissions impact analysis and explains the approach to the analysis of the potential impacts of GHG emissions due to the proposed project. The GHG emissions significance thresholds are based on CEQA Guidelines Appendix G, section VII. These thresholds state that the project would have a potentially significant impact related to GHG emissions if the project were to: "generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases." The analysis used in the SEIR is consistent with CEQA Guidelines Sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of greenhouse gases and describes

the required contents of such a plan. This approach is in recognition of the fact that while no single project could generate enough GHG emissions to noticeably change the global average temperature, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and associated environmental impacts. Therefore, the impact analysis focuses on the project's contribution to cumulatively significant GHG emissions.

Accordingly, San Francisco has prepared its own Greenhouse Gas Reduction Strategy, which the BAAQMD has reviewed and concluded provides aggressive GHG reduction targets and comprehensive strategies that help the Bay Area move toward reaching the State's AB 32 goals. San Francisco's Greenhouse Gas Reduction Strategy identifies actions the City is implementing to achieve cleaner energy, energy conservation, and alternative transportation and solid waste policies. For instance, the City has implemented mandatory requirements and incentives that have measurably reduced GHG emissions; these actions include, but are not limited to, increasing the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of green building strategies, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City's transportation fleet (including buses), and a mandatory recycling and composting ordinance. The Strategy identifies 42 specific regulations for new development that would reduce a project's GHG emissions. San Francisco's policies and programs have resulted in a reduction in GHG emissions to below 1990 levels, exceeding statewide AB 32 GHG reduction goals.

The SEIR analysis for determining the significance of GHG impacts is based on finding consistency of the project with San Francisco's Greenhouse Gas Reduction Strategy. Because the City's local GHG reduction targets are more aggressive than those of the region or the State, consistency with the City's Greenhouse Gas Reduction Strategy necessarily demonstrates consistency with the State's GHG regulations, the Governor's executive orders, and the Bay Area 2010 Clean Air Plan. If the project is consistent with the City's Greenhouse Gas Reduction Strategy, then the project's impacts related to GHG emissions would be considered less than significant.

As described in Impact C-GG-1 (SEIR pp. 55.5-10 to 5.5-12), the project is consistent with the City's Greenhouse Gas Reduction Strategy, as documented on the Greenhouse Gas Analysis Compliance Checklist.[2] Although the project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and event-related, commercial, and office operations, the proposed project would be subject to and required to comply with many regulations adopted to reduce GHG emissions as identified in the Greenhouse Gas Reduction Strategy.

The proposed project would comply with the following regulations or their equivalent: Commuter Benefits Ordinance; Emergency Ride Home Program; Transportation Management

[2] Greenhouse Gas Analysis: Compliance Checklist, May 22, 2015. This document is on file and available for public review at the San Francisco Planning Department as part of Case File No. 2014.1441E.

Programs; Transit Impact Development Fee as applicable under the Mission Bay Redevelopment Plan; Jobs-Housing Linkage Program (residential uses less than ¼ -mile north of the project site); Bicycle Parking requirements (the project would exceed these requirements and provide a total of 586 bicycle parking spaces); Fuel Efficient Vehicle and Carpool Parking (providing 51 carpool spaces and 51 fuel efficient and vehicle charging stations); San Francisco Green Building Requirements (increased energy efficiency, purchase of renewable energy credits, reduction of potable water consumption by about 35 percent, enhanced energy commissioning); San Francisco Stormwater Management Ordinance (low impact development practices including filtration basins, rain gardens, and approximately 50,000 square feet of self-treating green roofs); San Francisco Water Efficient Irrigation Ordinance (the project's landscaped areas include low-water use planting selections, use of sedum and allium-based green roof materials, and soil mix design for a high available water holding capacity); Mandatory Recycling and Composting Ordinance (paper, glass, corrugated cardboard, plastic, and metals would be collected on site for recycling, and recycling bins and composting containers would be located throughout the buildings); San Francisco Construction and Demolition Debris Recovery Ordinance (to be included as part of the construction specifications); Street Tree Planting Requirements for New Construction (the project includes approximately 79 new street trees); Light Pollution Reduction (exterior lighting fixture selections will have minimum backlight/uplight/glare ratings as allowed by required illuminance levels); Construction Site Runoff Control (site is served by a separate storm sewer system and construction contractors would implement best management practices to comply with conditions of a site-specific stormwater pollution prevention plan); Enhanced Refrigerant Management; Finished Material Pollutant Control; and Regulation of Diesel Backup Generators. Therefore, on the basis of consistency with the Greenhouse Gas Reduction Strategy, the project's impacts on GHG emissions were determined to be *less than significant*.

Contrary to the commenters' assertions, the SEIR analysis of GHG emissions does not rely on the AB 900 process or the project's certification as an environmental leadership project under AB 900 for the impact significance determination. As described above, the SEIR uses a qualitative analysis to describe GHG emissions as permitted under CEQA Guidelines Section 15064.4. Thus, the SEIR does not need to quantify or calculate the extent to which GHG emissions will increase or decrease as a result of employee commutes to a new location or to quantitatively compare the GHG emissions of implementing the project with keeping the Warriors in Oakland, as asserted in Comments O-Sierra-3, O-Sierra-6, and PH-Vaughan-3. The results of the GHG analysis conducted as part of the AB 900 process are presented in the SEIR only to supplement and further support the findings of the *qualitative* CEQA GHG emissions impact analysis.

Also contrary to the commenters' assertion (Comment O-MBA7S2-5), the SEIR impact analysis of GHG emissions does not rely on the analysis in the 1998 Mission Bay Final SEIR, although the SEIR summarizes the discussion of GHGs from the 1998 document (see page 5.5-1). Instead, the SEIR relies on the analysis of the project's consistency with the City's Greenhouse Gas Reduction Strategy as explained above in this response.

The commenters (Comment O-MBA7S2-5) also assert that the SEIR GHG analysis should use "no project" as the baseline. As described above, the SEIR approach to GHG emission impact analysis

is based on the project's consistency with the City's Greenhouse Gas Reduction Strategy and does not rely on a methodology that compares a project with baseline conditions. Therefore, this assertion is incorrect as applied to the SEIR GHG emissions impact analysis.

The commenters (Comments O-MBA7S2-5, O-MBA7S2-41, and PH-Vaughan-2) assert that the SEIR fails to identify enforceable mitigation measures and that the GHG analysis does not require project monitoring. As described above, the GHG impact was determined to be less than significant based on the project's consistency with the City's Greenhouse Gas Reduction Strategy. Although no mitigation measures are required for this less-than-significant impact, the regulations listed in the Greenhouse Gas Analysis Compliance Checklist would be included in the Mitigation Monitoring and Reporting Program (MMRP), which, as described in Section 13.7, Response IO-2, would be part of the conditions of project approval.

Comments O-Sierra-10, O-Sierra-11, PH-Cornwall2-3, PH-Meserve-4, and PH-Vaughan-2 express concerns regarding the AB 900 requirements to purchase carbon credits and confuse the AB 900 requirements with the CEQA process. OCII acknowledges these concerns. The SEIR identifies Improvement Measure I-C-GG-1, Purchase Voluntary Carbon Credits, but this is not a mitigation measure. It is not required to reduce the project's impacts to less than significant, rather, this improvement measure is a reiteration of a project requirement under the AB 900 environmental leadership certification, though it would also serve to further reduce the project's less-than-significant GHG impact. Specific details of the amount of carbon offsets are not required to be included in the SEIR because CEQA does not require mitigation of less-than-significant impacts; those offsets would be developed during project implementation. Please see Section 13.4 for further discussion of the AB 900 process.

Comment PH-Greenstein-2 has confused SEIR Mitigation Measure M-AQ-2b, Emission Offsets, with Improvement Measure I-C-GG-1, Purchase Voluntary Carbon Credits. Mitigation Measure M-AQ-2b is intended to offset project emissions of criteria air pollutants in the San Francisco Bay Area Air Basin through a project similar to those under the Carl Moyer program (see SEIR pp. 5.4-42 to 5.4-43), while Improvement Measure I-C-GG-1 would offset GHG emissions in accordance with a methodology agreed upon by the California Air Resources Board.

To clarify the distinction between the CEQA GHG emissions impact analysis and the AB 900 GHG analysis, SEIR text on pages 5.5-10 to 5.5-12 is revised as follows (deleted text is shown as ~~strikethrough~~ and new text is <u>underlined</u>; text below does not include the footnotes in the original text, which remain unchanged):

> **Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)**
>
> Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas

combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with waste removal, disposal, and landfill operations.

The proposed project would increase the activity onsite primarily by introducing occupants of the new office buildings and commercial businesses as well as event attendees. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) as well as event-related, commercial, and office operations that would result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions. ~~However, as described above under Regulatory Framework, the proposed project is a certified environmental leadership project under AB 900 and CARB has determined that the project would not result in any net additional GHG emissions due in part to the voluntary purchase of carbon credits by the project sponsor (see Improvement Measure I-C-GG-1, below).~~

~~Moreover~~However, the proposed project would be subject to and required to comply with several regulations adopted to reduce GHG emissions as identified in the ~~GHG~~ Greenhouse Gas Reduction Strategy. The proposed project would comply with the following regulations or their equivalent: Commuter Benefits Ordinance; Emergency Ride Home Program; Transportation Management Programs (see Project Description and Appendix TMP); Transit Impact Development Fee to the extent applicable under the Mission Bay Redevelopment Plan; Jobs-Housing Linkage Program (residential uses less than ¼ -mile north of the project site); Bicycle Parking requirements (the project would exceed these requirements and provide a total of 586 bicycle parking spaces); Fuel Efficient Vehicle and Carpool Parking (providing 51 carpool spaces and 51 fuel efficient and vehicle charging stations); San Francisco Green Building Requirements (increased energy efficiency, purchase of renewable energy credits, reduction of potable water consumption by about 35 percent, enhanced energy commissioning); San Francisco Stormwater Management Ordinance (low impact development practices including filtration basins, rain gardens, and approximately 50,000 square feet of self-treating green roofs); San Francisco Water Efficient Irrigation Ordinance (the project's landscaped areas include low-water use planting selections, use of sedum and allium-based green roof materials, and soil mix design for a high available water holding capacity); Mandatory Recycling and Composting Ordinance (paper, glass, corrugated cardboard, plastic, and metals would be collected on site for recycling, and recycling bins and composting containers would be located throughout the buildings); San Francisco Construction and Demolition Debris Recovery Ordinance (to be included as part of the construction specifications); Street Tree Planting Requirements for New Construction (the project includes approximately 79 new street trees); Light Pollution Reduction (exterior lighting fixture selections will have minimum backlight/uplight/glare ratings as allowed by required illuminance levels); Construction Site Runoff Control (site is served by a separate storm sewer system and construction contractors would implement best management practices to comply with conditions of a site-specific stormwater pollution

prevention plan); Enhanced Refrigerant Management; Finished Material Pollutant Control; and Regulation of Diesel Backup Generators.

These regulations, as outlined in San Francisco's *Strategies to Address Greenhouse Gas Emissions*, have proven effective as San Francisco's GHG emissions have measurably ~~reduced~~decreased when compared to 1990 emissions levels, demonstrating that the City has met and exceeded the GHG reduction goals specified in EO S-3-05, EO B-30-15, AB 32, and the Bay Area 2010 Clean Air Plan for the year 2020. The proposed project was determined to be consistent with San Francisco's ~~GHG~~ Greenhouse Gas Reduction Strategy. Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations, and thus the proposed project's contribution to GHG emissions would not be cumulatively considerable or generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed project would result in a *less-than-significant* impact with respect to GHG emissions.

As described in Chapter 2 ~~In addition to compliance with the applicable provisions of the San Francisco's GHG Reduction Strategy or their equivalents~~, the project has been certified by Governor Brown as a leadership project under the Jobs and Economic Improvement Through Environmental Leadership Act of 2011 (AB 900). As discussed under Regulatory Framework above, on April 20, 2015, CARB determined that based on the documentation submitted by the project sponsor, the proposed project would not result in any net additional GHG emissions for purposes of certification under AB 900. CARB's determination and the Governor's certification of the project under AB 900 further supports the impact conclusion above that the project's GHG emissions would be a less-than-significant impact.

As part of the AB 900 application, the project sponsor has committed to purchase carbon credits from a qualified GHG emissions broker in an amount sufficient to offset all GHG emissions from project construction and operations, as reiterated in **Improvement Measure I-C-GG-1, Purchase Voluntary Carbon Credits**. Net additional GHG emissions would be calculated in accordance with the methodology agreed upon by CARB in connection with their determination and the AB 900 certification of the project. ~~Thus, the Governor's certification of the proposed project as a leadership project further supports the determination that the proposed project would not have a significant impact on global climate change due to GHG emissions.~~

~~Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations, and because the proposed project would not result in any net additional GHG emissions, the project would not contribute to cumulative GHG emissions impacts. As such, the proposed project would result in a *less-than-significant* impact with respect to GHG emissions.~~

This revision does not change the analysis or conclusions presented in the SEIR.

For comments and corresponding responses related to the AB 900 application and the associated analysis of greenhouse gases, please see Section 13.4, Response AB-1, of this Responses to Comments document.

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13.15 Wind and Shadow

13.15.1 Overview of Comments on Wind and Shadow

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.7, Wind and Shadow. These include topics related to:

- WS-1: Wind
- WS-2: Shadow

13.15.2 Wind (WS-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-32

"7. <u>Wind and Shadow – DSEIR Chapter 5.6.</u>

"a. Wind Impacts are Inadequately Analyzed.

"According to the DSEIR, a wind impact would be significant if it would alter wind in a manner that would substantially affect public areas. (DSEIR, p. 5.6-6.) Thus, the wind analysis only addresses offsite areas. (DSEIR, pp. 5.6-10 to -13.) Yet, this Project is so large that it also contains publicly accessible areas within the Project. While the DSEIR includes a discussion of wind impacts in these areas, it does so only for "informational purposes." (DSEIR, p. 5.6-18.) This analysis shows that exceedances of the criteria will occur, yet no mitigation is required. Instead, the DSEIR discusses "refinements that could be incorporated into the project . . . ." (DSEIR, p. 5.6-19.)

"The City's approach to addressing wind impacts violates CEQA's mandates that an EIR identify potentially significant impacts and set forth with specificity all feasible mitigation measures. The DSEIR must identify potentially significant impacts to public spaces within the Project site, and cannot conflate public disclosure of that impact with the separate and distinct analysis of feasible mitigation measures. (*Lotus, supra*, 223 Cal.App.4th at 655-56.) Further, the DSEIR may not defer formulation such mitigation measures in the absence of any performance standards and explanation as to why deferral is necessary. (*Communities for a Better Environment, supra*, 184 Cal.App.4th at 93.)" (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-32]*)

Response WS-1: Wind

The comment characterizes the proposed project as a large development with publically accessible but private recreational areas. This characterization is accurate. This characterization is also true of other existing and planned development throughout the Mission Bay Redevelopment Plan area, such as the adjacent UCSF Mission Bay campus.

CEQA does not specifically require analysis of potential wind impacts and the CEQA Guidelines do not provide any guidance on the subject of wind. (See CEQA Guidelines, Appendix G [wind not included as a resource area requiring analysis].) Nevertheless, the City generally includes an analysis of wind impacts in environmental documents. The City analyzes potential wind impacts by determining whether a project would exceed an applicable wind hazard standard.

City Planning Code Section 148's wind standards were developed for the reduction of ground-level winds in the City's C-3 (Downtown Commercial) District. The Mission Bay FSEIR determined the use of City Planning Code Section 148's wind hazard standards were an appropriate methodology and criteria for the original wind analysis conducted for the Mission Bay Redevelopment Plan. Consistent with the determination made in the Mission Bay FSEIR, the use of City Planning Code Section 148's wind hazard standards are also an appropriate methodology and criteria for the analysis of individual projects planned in the Mission Bay Redevelopment Plan area subject to additional wind analysis (e.g., projects exceeding 100 feet in height) per the Mission Bay South Design for Development, including the proposed project. (See, e.g., CEQA Guidelines, § subd. (b) ["The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved"]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068 [explaining agency discretion to fashion significance thresholds of significance]; see also *National Parks & Conserv. Assn. v. County of Riverside* (1999) 71 Cal.App.4th 1341, 1353 [endorsing use of existing environmental standards as thresholds of significance]; *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899 [same]; *Protect The Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1107 ["thresholds can be drawn from existing environmental standards, such as other statutes or regulations"].)

The intent and applicability of the City's Section 148 wind hazard standards are to assess the environmental impact of winds in public areas of substantial pedestrian use. Section 148 criteria are not applied to private open spaces (with or without public access), service areas, and other non-public areas. Consequently, the SEIR explicitly states that the potential project exceedance of this hazard criterion in off-site public areas would be a significant environmental impact. Because Section 148 criteria are not applied to private areas, the wind effects on on-site publically accessible open space are not considered a significant environmental impact. Accordingly, the SEIR appropriately analyzes project wind hazard effects at off-site public areas, and identifies feasible mitigation measures to reduce those effects. This approach has been applied by the City for other development projects, such as the redevelopment of Treasure Island / Yerba Buena Island, with the potential for wind impacts in public areas of substantial pedestrian use.

Please see Chapter 14, Revisions to the Draft SEIR, which provides additional wind analysis to demonstrate that specific design refinements identified by the project sponsor would meet the wind hazard standards set forth in Section 148, and thereby reduce project wind hazards to a less than significant level.

Because project wind effects on pedestrians at on-site, private open space may be of interest to members of the public and to decision-makers, the SEIR presents a separate discussion of

potential wind effects at the on-site areas of substantial pedestrian use. This discussion is for informational purposes only. While the wind analysis indicates three test points on the project site would exceed the wind hazard criterion, the SEIR notes that the project sponsor shall develop and implement a range of feasible design refinements to effectively reduce on-site wind effects, including but not limited to, the proposed addition of landscaping within the plazas; and the potential installation of vertical porous screens, overhead protection such as tilted foils and archways, and/or other screening features on the event center perimeter walkway and other publicly accessible areas. As explained above, however, wind effects at these locations are not considered significant impacts on the environment, and therefore, mitigation is not required.

It should also be acknowledged that the event center and office and retail building operators would have control of all on-site areas so as to be able to manage or preclude pedestrian access in the event of hazardous windy conditions (e.g., during a storm), which are actions typical of other private developments in the City that have on-site publically accessible open space. This would include the building podium roofs, food hall roof, event center bayfront terrace, as well as plaza areas and on-site pedestrian walkways. This can be effectively achieved through use of on-site security personnel, temporary signage and/or barriers to limit public access where needed and direct pedestrians to alternate access points and pathways.

The proposed use of on-site design refinements, in conjunction with proposed management practices to control pedestrian access when needed, would ensure that potential on-site wind hazard effects at on-site publically accessible areas would be addressed.

The comment states the EIR's analysis is flawed based on the Court of Appeal's decision in *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645. In that case, the court determined that the discussion of certain impacts in an EIR was inadequate because the EIR did not identify any standards of significance or apply such standards to its analysis of the project. The problem was compounded because the EIR relied on certain "Avoidance Minimization and/or Mitigation Measures" in the project description to conclude that the project would have no significant environmental impacts. The court noted that these measures, which included restorative re-planting, invasive plant removal, and use of specialized precision construction equipment, were intended to mitigate or offset impacts of the road construction on the adjacent redwood trees, and were not part of the project itself. Here, however, the Draft SEIR cites the specific wind hazard criteria with which the project must comply. The additional wind analysis provided in Chapter 14 (Revisions to the Draft SEIR) demonstrates that specific design refinements identified by the project sponsor would meet these standards. For these reasons, *Lotus* is inapplicable.

CEQA generally focuses on a project's significant effects on the environment, not the effects of the environment on a project. (See, e.g., *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455; *Baird v. County of Contra Costa* (1995) 32 Cal.App.4th 1464.) In other words, how the environment might affect users of the project (e.g., whether project users might be subject to windy conditions) is, under this line of authority, beyond CEQA's purview. Although, based on this line of authority, OCII could have omitted this discussion from the SEIR, OCII has, at its discretion, included such analysis in the SEIR.

13.15.3 Shadow (WS-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-33

"b. Shadow Impacts are Undisclosed.

"According to the DSEIR, the Project would have a significant shadow impact if it substantially affected a publicly-accessible open space area, such as Bayfront Park. (DSEIR, p. 5.6-6.) With respect to the methodology for assessing the Project's impacts, the DSEIR refers to the South Design for Development. (DSEIR, p. 5.6-8.) However, the land use designation in the Mission Bay Redevelopment Plan for the four-block Project area was designated as "Commercial Industrial (Mixed Use including Retail)." (DSEIR, Figure 3-3.) The proposed Project will require that the South Design for Development be modified to accommodate the arena and accompanying development, so it is not clear that the standards developed for the 1998 land use plan apply in this circumstance. Moreover, conditions have likely changed such that the South Design for development, which did not require any analysis of shadow for the months from October to February, no longer reflects current practices and values. Especially with the increased visitors to the area as a result of the Project throughout the year, shadow impacts on the very parks those people will use should be fully analyzed.

"The DSEIR's approach of ignoring the generally-applicable City standard is also inconsistent with the DSEIR's approach to analysis of wind impacts. With respect to wind, the DSEIR relies on Planning Code section 148 to determine what level of wind would constitute a substantial alteration, even though it is superseded by the South Design for Development Standards. (DSEIR, p. 5.6-6.) Yet the DSEIR does not mention the typically applicable standard – Section 295 of the Planning Code, also known as "Proposition K" and "the Sunlight Ordinance." The absence of a substantive standard for shadow is all the more reason to refer to Section 295 for purposes of analyzing shadow impacts.

> Section 295 mandates that new structures above 40 feet in height that would cast additional shadows on properties under the jurisdiction of, or designated to be acquired by the Recreation and Parks Department can only be approved by the Planning Commission if the shadow is determined to be insignificant or not adverse to the use of the park. Also, a recommendation from the Recreation and Parks Commission is required prior to the Planning Commission hearing.

"(S.F. Planning Department Application Packet for Shadow Analysis, available at: http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=539.) Impacts to Bayfront Park should be analyzed according to Section 295 to ensure that shadow impacts are disclosed and mitigated.

"In conclusion, the analysis in the DSEIR fails to adequately address the wind and shadow impacts of the Project under current conditions, using standards developed by the City to ensure public spaces are comfortable and enjoyable. The DSEIR should be revised and recirculated to provide a thorough analysis and incorporate all feasible mitigation. Such mitigation may include changes to the structures to address wind and shadow impacts both on and off the Project site." (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-33]*)

Response WS-2: Shadow

The commenter questions whether the shadow standards included in the South Design for Development would apply to the proposed project in light of the amendments to South Design for Development that would occur as a result of the project. As the comment indicates, and as

discussed in SEIR Chapter 4, Plans and Policies, the Mission Bay South Redevelopment Plan land use designation for the project site is Commercial Industrial/Retail. SEIR Section 4.2.3 notes that this land use designation permits office and retail uses, and secondary assembly and entertainment uses if the use generally conforms with the redevelopment objectives and planning and design controls, among other factors. The land use designation also permits arts and arts activities as a primary use. SEIR Section 4.2.3 also discusses the proposed amendments to the South Design for Development that would occur under the project, including for the event center height and bulk, additional tower and other provisions.

As discussed in the SEIR, the objective of the *Sunlight Access to Open Space* design standards is to ensure sunlight to, and limit the extent and duration of shadows on, Mission Bay Plan area public open spaces. Regardless of the land uses proposed by the project, and associated amendments that would occur for the South Design for Development, the Sunlight Access to Open Space design standards in the South Design for Development are wholly applicable to, and appropriate for, the proposed project. In fact, the Sunlight Access to Open Space design standards were specifically developed to apply to projects proposed in the Mission Bay Plan area for which exceptions (e.g., variances in height, bulk, etc.) are sought, including the proposed project.

The commenter states conditions have likely changed such that the South Design for development no longer reflects current practices and values. The commenter provides no evidence to support this claim. The Sunlight Access to Open Space design were, in fact, developed in consideration of addressing all planned development in the Mission Bay Plan area through Plan buildout. Accordingly, the shadow analysis conducted in the SEIR is cumulative in nature in that it takes into account shadow impacts from all building development adjacent to Bayfront Park, including the proposed project buildings. Furthermore, as discussed in the South Design for Development, the methodology accounts for assessing shadows on public open space in the Mission Bay Plan area during the most active months of year (March to September) and the most active times (10:00 a.m. to 4:00 p.m.). Finally, based on the shadows analysis conducted for the proposed project in the SEIR, the resultant shadowing of Bayfront Park from all assumed development, including the proposed project, is well under the significance threshold, and consequently, less than significant.

The commenter states that the SEIR ignores Planning Code 295 when assessing the project shadow impacts. This statement is incorrect. SEIR Section 5.6.2.2 notes that City Planning Code Section 295 (Sunlight Ordinance), which provides for the protection of public open spaces under the jurisdiction of the City Recreation and Parks Department from shadowing from new structures, does not apply to proposed development within the Mission Bay plan area, as no City Recreation and Parks Department open space is located within the Mission Bay plan area. The SEIR also notes that proposed development under the Mission Bay plan would not shade any nearby City Recreation and Parks Department open space area located outside the Mission Bay plan area at any time, and consequently, would have a less-than-significant effect on these facilities. However, as discussed above, the Sunlight Access to Open Space design standards were developed specifically for ensuring sunlight to, and limiting shadowing within Mission Bay Plan area open spaces, including Bayfront Park.

The commenter states that the SEIR should rely on Section 295 to analyze project shadow impacts, in the same fashion that the SEIR relies on Planning Code section 148 to determine project wind impacts. As discussed in Response WS-1, above, with respect to wind, the Mission Bay FSEIR determined that the wind hazard criterion in City Planning Code Section 148, was appropriate for the analysis of wind hazards in the Mission Bay Redevelopment Plan area. In contrast, the Mission Bay South Design for Development's Sunlight Access to Open Space design standards were specifically developed for, and are the adopted design standard governing shadow analysis in, the Mission Bay Redevelopment Plan area, and accordingly, were used to analyze the project's shadow effects in the SEIR. Because the Sunlight Access to Open Space standards apply to the project site, it would be inappropriate to instead rely on Section 295, which does not apply to the project site.

13.16 Recreation

13.16.1 Overview of Comments on Recreation

The comment and corresponding response in this section cover topics analyzed in the Initial Study, Section E.10, Recreation, which is included in Appendix NOP-IS of the SEIR. These included comments related to:

- REC-1: Bayfront Park
- REC-2: Open Space

13.16.2 Bayfront Park (REC-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-30

"**30. <u>The DSEIR Improperly Excluded Analysis of Impacts to Recreation – 1998 SEIR Chapter 5.M.</u>**

"The DSEIR did not address the Project's impacts on recreational facilities because the NOP/IS determined that no new or more severe significant impacts would occur than previously identified in the 1998 SEIR. As set forth more fully below, the information contained in the DSEIR supports a fair argument that use of Bayfront Park by thousands of crowded arena visitors will accelerate its substantial deterioration, which will be a significant environmental impact. (CEQA Guidelines, Appendix G, section XV(a).) . . . Even if the Project is considered a "revision" to the project analyzed in the 1998 SEIR, the addition of a massive, 18,000-seat arena will have a significantly greater impact to Bayfront Park than disclosed in the 1998 SEIR requiring analysis in a recirculated DSEIR.

"**a. Crowds From the Project May Substantially Degrade Bayfront Park.**

"The DSEIR failed to include an analysis of impacts to recreation based on the NOP/IS's determination there would be no new or more severe impacts than identified in the 1998 SEIR. (NOP/IS, pp. 61-64.) This conclusion is in error because a fair argument exists that the Project will result in potentially significant impacts to recreation and recreational facilities.

"The fundamental flaw in the NOP/IS's analysis is seen in the following statement: "The increase in demand for recreational facilities generated by the project would generally be consistent with that described in the Mission Bay FSEIR." (NOP/IS, p. 63.) This remarkable conclusion is unsupported by any citation or factual support. Rebutting this statement is the project description itself: an arena with a capacity of more than 18,000 seats holding up to 225 events per year. The expected huge crowds, and employees associated with the 580,000 square feet of commercial uses, would be crammed into an 11 acre parcel. The only respite to the congested arena environment would be 3.2 acres of alleged open space. While at first blush this might appear adequate, in reality this "open space" consists of small, disjointed spaces. Many of these spaces are located on the tops of buildings and unavailable to thousands of arena visitors.

"In contrast to the functionally unusable "open space" within the Project site, immediately across the street from the Project is the planned Bayfront Park – a single, expansive, ground level, landscaped park of 5.5 acres. It is very likely that the near-daily crowds of congested arena visitors will use Bayfront Park to gather both before and after shows rather than the oddly disjointed "open spaces" located on top of various buildings throughout the site.

These thousands of additional arena visitors are in addition to the people associated with the Project's 580,000 square feet of office space, the Project's 125,000 square feet of retail space, and all other people within the larger Mission Bay area who are anticipated to visit Bayfront Park. The open space needs of such arena crowds were nowhere contemplated in the 1998 SEIR. The Project will result in significantly accelerated physical deterioration of Bayfront Park, not disclosed in the 1998 SEIR, and is a significant impact under CEQA. (CEQA Guidelines, Appendix G, section XV(a).) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-30]*)

b. The Project Will Require Construction of Bayfront Park That May Have an Adverse Impact on the Environment.

"The DSEIR acknowledges the development of the Project triggers development of Bayfront Park and must be completed prior to occupancy. (DSEIR, p. 3-37-38.) In other words, development of the Project requires construction of Bayfront Park. (See, e.g., CEQA Guidelines, Appendix G, section XV(b).) Accordingly, construction of Bayfront Park is a "reasonably foreseeable consequence of the initial project," and requires analysis in the DSEIR. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 396.) It may not, as occurred here, be dismissed as a separate project for purposes of CEQA. (DSEIR, p. 3-37.) Serious questions exist about whether construction of Bayfront Park will result in adverse physical effects on the environment due to the presence of hazardous materials on that site. (*Ibid*.)

"As set forth above, the NOP/IS failed to disclose the present existence of hazardous waste in the soil within the Project site. The soil underlying the future Bayfront Park is similarly contaminated. (2006 RRMP, p. 2-5.) This contamination has not been disclosed in the NOP/IS or the DSEIR. Since it appears that Bayfront Park will be constructed along with the Project, the same questions are raised about hazardous materials impacts as discussed in sections 2(b) and (c) of this letter.

"The potentially significant impacts regarding hazardous materials are exacerbated because Bayfront Park will be a ground-level landscaped park. Having failed to disclose that the soil underlying Bayfront Park is contaminated, the NOP/IS also fails to explain whether such contaminated soil will be left in place and thereby expose visitors to hazardous materials. There is no discussion of whether an impermeable cap will be used to protect future park visitors from the existing contaminated soil.

"The failure to address these critical issues supports a fair argument that the Project will require construction of a recreational facility (i.e., Bayfront Park) that will have an adverse effect on the environment by facilitating the exposure of contaminated soils to humans and the environment. (CEQA Guidelines, Appendix G, section XV(b)). The City may not dismiss this potentially significant impact based on its own failure to conduct a reasonable analysis of the issue. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311 ("[t]he agency should not be allowed to hide behind its own failure to gather relevant data . . . . If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record").) The recirculated DSEIR will need to analyze this potential significant impact. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-30]*)

Response REC-1: Bayfront Park

The SEIR Initial Study Section E.10, Recreation, acknowledges that development of the proposed project would increase demand for recreational facilities. Such demand would be generally consistent with that described in the Mission Bay FSEIR for the entire Plan area and would be readily met by planned parks and open space areas developed as part of the Mission Bay Plan, as well as by existing facilities in the project vicinity. As reported in the Initial Study, the Mission Bay FSEIR indicated 47 acres of open space was proposed within the Mission Bay Plan area, of which more than 15 acres of new, non-UCSF parks and open space have been completed.

Pursuant to the Mission Bay Plan, open space would be constructed with each phase of Mission Bay development, in the amount of 0.46 acres of open space for each 1.0 acre of developable area until all open space is developed. The SEIR Initial Study, Recreation, also noted that the commercial uses proposed under the project would be located within the recommended 900-foot distance of open space, pursuant to the Mission Bay Plan.

Existing and planned urban recreational facilities, such as Bayfront Park, Agua Vista Park, Bay Trail, and the cycle track on Terry A. Francois Boulevard are/would be designed and constructed to withstand substantial use and are capable of serving large numbers of visitors. Similar use is currently experienced at existing recreational facilities in the vicinity of AT&T Park, including China Basin Park, South Beach Park, The Embarcadero Promenade, and Bay Trail, prior to and following San Francisco Giants baseball games. These facilities are regularly maintained by the applicable City departments to ensure substantial deterioration from use does not occur.

The commenter also mischaracterizes the publically-accessible on-site open space proposed as part of the project as functionally unusable. In fact, the largest open space component – the proposed Third Street Plaza, would be easily accessed from Third Street, comparable in size to the Union Square central plaza area, landscaped, and would offer both programmed and passive uses. Other proposed on-site publically accessible areas offering landscaping, walking opportunities and/or elevated viewing would include the Southeast Plaza, Bayfront Overlook, Food Hall roof and various on-site pedestrian paths. Convenient bicycle facilities would also be located throughout the project site, including bike racks, and during events, temporary bike corrals. These on-site areas would directly serve the project demand for recreational facilities, and consequently, would limit the project demand for use of, and any associated effects to, other existing nearby recreational facilities.

Given the availability of existing recreational facilities in the project vicinity and region and the ability of these facilities to accommodate large crowds combined with the inclusion of on-site publically accessible open space proposed by the project that would directly serve the project's demand for recreational facilities, the increased use of existing recreation facilities would not result in substantial physical deterioration of these resources, or otherwise result in physical degradation of existing recreational resources. As explained in the Initial study, the proposed project's impacts on recreational resources were determined to be less than significant, and no mitigation is required. Furthermore, the project would not result in any new or substantially more severe impacts than those previously identified in the Mission Bay FSEIR.

The comment also states that the SEIR is required to study the environmental impacts of Bayfront Park because the park is a "reasonably foreseeable consequence" of the project. This statement is incorrect. Bayfront Park is a planned linear park comprising Mission Bay plan parcels P21 through P24, and when completed, will extend from Mission Bay Boulevard south to Mariposa Street. The north portion of the park is already complete. Construction is underway in 2015 for the south portion of Bayfront Park, and construction of this portion of the park will be complete by the end of 2016. Following realignment of Terry A. Francois Boulevard, the central portion (Parcel P22) of Bayfront Park located east of the project site and consisting of approximately 5.5 acres will be

developed. Both the realignment of Terry A. Francois Boulevard and Bayfront Park public access improvements on P22 are triggered by development on Block 29-32 and would be implemented by the master developer, FOCIL-MB, LLC, prior to occupancy of buildings at the project site. (Draft SEIR, pp. 3-37 to 3-38.)

Although development on Block 29-32 "triggers" Bayfront Park public access improvements on P22 according the Mission Bay Plan, Bayfront Park is not part of the Project and therefore does not need to be analyzed in the Draft SEIR. Bayfront Park was planned as part of the Mission Bay Plan and analyzed in the Mission Bay FSEIR long before the project and will be implemented by the master developer, FOCIL-MB, LLC.

The case cited in the comment – *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376 (*Laurel Heights I*) – is inapposite. In *Laurel Heights I*, the court concluded that a university violated CEQA when the EIR prepared for the relocation of a medical facility analyzed only the initial occupancy of a portion of the new building, even though the university had plans to occupy the entire building. (*Id*. at pp. 397-399.) The court found the EIR was inadequate because it did not assess the environmental effects of full occupancy (i.e., the entire project). (*Ibid*.) In other words, the EIR's project description was defective because the lead agency had segmented or "piecemealed" a single project into smaller parts. Here, in contrast, the Draft SEIR analyzes the entire project, and Bayfront Park is not a future phase of the project. Thus, the development of Bayfront Park was properly approved separate from the project as part of the Mission Bay Plan.

Banning Ranch Conservancy v. City of Newport Beach (2012) 211 Cal.App.4th 1209, is instructive. In that case, the court held that two proposed projects in the city's general plan could be analyzed as separate projects even though an access road built as part of one project would provide access for the other. (*Id*. at pp. 1224-1227.) The court determined that analyzing the projects separately was not improper piecemealing because the project with the access road did not cause the other project to come into existence, as the general plan already contemplated the proposed developments and road construction. (*Ibid*.) The court further noted that a project is not impermissibly "piecemealed" if it "can be implemented independently." (*Id*. at pp. 1223-1224.) Because the two projects had independent utility and could be implemented independently of each other, there was no improper piecemealing, even though there was temporal overlap in the period during which both projects would be implemented. (*Ibid*.)

Similarly, here, the project does not cause Bayfront Park to come into existence. As explained above, Bayfront Park was planned as part of the Mission Bay Plan long before the project was proposed. Environmental review for the park has already been completed as part of the Mission Bay Plan and portions of the park have already been developed. Further, the project and Bayfront Park each have independent purposes, can be implemented independently, and have different project sponsors. Therefore, Bayfront Park was not required to be analyzed in the Draft SEIR as a component of the project.

The comment also suggests that further development of Bayfront Park will result in additional impacts regarding hazardous materials that have not been disclosed. As explained above, Bayfront

Park is not part of the project and is not being approved as part of the project. Rather, Bayfront Park was reviewed and approved as part of the Mission Bay Plan. Development of the park is subject to the controls in the Covenant and Environmental Restrictions recorded against all of the property in Mission Bay, and incorporates the provisions of the Risk Management Plan, which governs management of hazardous materials that might be found in site soil or groundwater during development and post-development. For additional information regarding hazardous materials, see Response HAZ-9.

13.16.3 Open Space (REC-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

I-Cunningham-5 I-Cunningham-7

"This is area no longer a Healthy SF but a STRESS SF. This community is already impacted with very dense structures. This area should be PRESERVED and developed as a GREENSPACE PUBLIC PARK. As far as I have seen from walking this neighborhood for over 3 years, there is definitely not enough OPEN SPACE allotted for the population. Preserving this area should be a priority for the City of San Francisco!" (*Micki Cunningham, email, July 23, 2015 [I-Cunningham-5]*)

"I appeal to the Planning Department to step up, turn this proposition around and instead consider funding an OPEN SPACE 'Heritage' Project – one that this world-class city needs and deserves and an oasis to be enjoyed for many years by the surrounding neighborhoods, the guests and children of UCSF, local workers and visitors. I implore you to consider preserving what little is left of our beautiful waterfront by creating a gem to be enjoyed like Golden Gate Park on the western edge of our city." (*Micki Cunningham, email, July 23, 2015 [I-Cunningham-7]*)

Response REC-2: Open Space

The commenter indicates that the community is already impacted with very dense structures, that there is not open space allotted for the population, and the area should be preserved and developed as a greenspace public park. The commenter also requests that the City consider funding an open space heritage project.

These comments do not specifically address the adequacy of the SEIR. However, the commenter is referred to the SEIR Initial Study Section E.10, Recreation, which describes open space planning for the Mission Bay Plan area. As discussed in the Initial Study, Section E.10, implementation of the Mission Bay Plan would develop 47 acres of open space within the Mission Bay plan area, of which more than 15 acres of new, non-UCSF parks and open space have been completed.

As discussed in SEIR Chapter 3, within the project site vicinity, the planned Bayfront Park will extend from Mission Bay Boulevard south to Mariposa Street. The north portion of the park (located east of Terry A. Francois Boulevard, between Mission Bay Boulevard South and just south of Pierpoint Lane) is complete. Construction of the south portion of Bayfront Park (located west of Terry A. Francois Boulevard, between 16th Street and Mariposa Street) is expected to be complete by the end of 2016. Following realignment of Terry A. Francois Boulevard, the central portion of Bayfront Park located east of the project site and consisting of approximately 5.5 acres will be developed. The Bayfront Park public access improvements triggered by development on Block 29-32 would be implemented by the master developer prior to occupancy of buildings at the project site. In addition, Agua Vista Park, located just outside the Mission Bay Plan area but adjacent to the planned Bayfront Park, has just completed undergoing a renovation.

The SEIR Initial Study Section E.10 addressed potential impacts of the project on recreation and open space. Impact RE-1 (pp. 62 to 63) determined that the proposed project would not increase the use of existing parks and recreational facilities such that substantial physical deterioration of the facilities would occur or otherwise result in physical degradation of existing recreational resources. Please note also that 3.2 acres of publically accessible open space are proposed on the project site as part of the project; and the project would provide a number of elevated views of the Bay.

13.17 Utilities

13.17.1 Overview of Comments on Utilities

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.7, Utilities and Service Systems and the Initial Study, Section E.11, Utilities, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- UTIL-1: Water Supply – Conveyance System
- UTIL-2: Water Supply – Water Supply Assessment
- UTIL-3: Wastewater System – Description and Environmental Effects of New Facilities
- UTIL-4: Wastewater System – Wastewater Flow Projections
- UTIL-5: Wastewater System – Fair Share Mitigation
- UTIL-6: Wastewater System – Description of Interim Improvements
- UTIL-7: Wastewater System – Wastewater Flows during Interim Period
- UTIL-8: Stormwater System – Impact Analysis
- UTIL-9: Stormwater System – Sizing of Stormwater System

13.17.2 Water Supply – Conveyance System (UTIL-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-24

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a. Inadequate Analysis of Water Supply and Conveyance Facilities.

The DSEIR impermissibly fails to consider whether the Project will result in the construction or expansion of any water conveyance facilities that may result in significant environmental impacts. This approach is based on the claim that the NOP/IS establishes that there are no significant impacts. (DSEIR, p. 5.7-9.) The NOP/IS, however, fails to provide sufficient information to make any conclusion in this issue by deferring any meaningful analysis. (NOP/IS, pp. 68-69.)

> More specifically, the NOP/IS acknowledges:
>
> If the water distribution system as approved under the Mission Bay Infrastructure Plan is inadequate to meet the project's demand, the project sponsor would be responsible for funding the construction of required new water mains and appurtenances. The construction of the new water mains and appurtenances would require excavation, trenching, soil movement, and other activities typical of construction of development projects in San Francisco.

(NOP/IS, p. 69.)

This analysis is flawed in several respects. First, having acknowledged that the infrastructure may not be adequate for the Project, and that construction of an unknown scope may be necessary to install this infrastructure, the SDEIR may not simply defer analysis of whether the infrastructure is adequate. And yet that is precisely what the City purports to do, stating in relevant part: "As part of the standard permit review process, the Mission Bay master developer, in coordination with the project sponsor, would be required to request a hydraulic analysis of the SFPUC water distribution system to confirm that the existing and planned water distribution system is adequate to meet the project's water distribution

demands, including fire suppression system pressure and flow demands." (NOP/IS, p. 69.) No explanation is given as to why this assessment could not have been made prior to the release of the DSEIR, which is the intended vehicle to provide public disclosure of these very issues. As a result, the decision-makers and the public are left completely in the dark about the very matter at issue, namely whether additional infrastructure is required and, if so, the scope of construction work that may be necessary to install that infrastructure.

The environmental impacts of construction may not be lightly dismissed as done in the NOP/IS. (NOP/IS, p. 69.) While construction of water conveyance facilities might, generally speaking, be "typical of construction of development projects in San Francisco," the Project site includes soil and groundwater contamination that make such construction activities anything but "typical." (Exhibit B, comments A1, A2, A3, B1, B3, B4, B5, B6, C1.)

The DSEIR fails as an informational document because it impermissibly defers any meaningful analysis of water conveyance facilities. Moreover, there is substantial evidence of a fair argument that construction of these facilities, if required, may result in significant environmental impacts. The recirculated DSEIR needs to address this issue. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-24]*)

Response UTIL-1: Water Supply – Conveyance System

The comment contends that the analysis presented in the Initial Study fails to consider whether the project will result in the construction or expansion of any water conveyance facilities that may result in significant impacts. The comment then asserts an hydraulic analysis should have been prepared to determine the project's final water distribution demands prior to publication of the Draft SEIR, and concludes that the Draft SEIR fails as an informational document because it defers analysis of whether water conveyance infrastructure is adequate to serve the project. OCII disagrees with these comments.

Contrary to the commenter's claim that the DSEIR "impermissibly fails to consider whether the Project will result in the construction or expansion of any water conveyance facilities that may result in significant environmental impacts", substantial evidence supports the conclusion that the proposed project is not anticipated to require construction or expansion of any water conveyance facilities. The 1998 Mission Bay FSEIR includes an assessment of the impacts of construction of the community services and utilities required to serve the entire Mission Bay plan area to build out of 6,000 dwelling units and 30,000 projected employees, including fire protection, police protection, public health services, recreation and parks, schools, solid waste, water supply, sewers and wastewater treatment, energy transmission capacity and infrastructure, and telecommunications. The 1998 FSEIR describes and evaluates the impacts from construction of low pressure (drinking water), high pressure (fire suppression), and reclaimed water systems, including installation of pipelines, hydrants, valves and fittings. As discussed in the 1998 Mission Bay FSEIR and in the Utilities and Services section of the Initial Study (p. 65 and Impact UT-1, pp. 66 through 68), the FSEIR estimated that the Mission Bay Plan would require approximately 2.9 million gallons per day (mgd) of potable water at full build out. The water conveyance system for the Mission Bay Plan area was constructed to accommodate this demand.

The entitled water demand for Blocks 29-32 under the Mission Bay Plan is 0.15 mgd. Water delivery infrastructure, including water mains located along Third and South Streets, has been

sized to accommodate this estimated demand along with estimated fire flow demands in accordance with the Mission Bay Infrastructure Plan. Water mains to be installed by the master developer at 16th Street and Terry A. Francois Boulevard independent of the project will also accommodate these demands. As discussed in Impact UT-1 of the Initial Study (p. 66), the total estimated water demand for the proposed project would be 0.1 mgd, based on compliance with current building code requirements, which require more water conservation measures than previous code versions. This estimated demand is 0.05 mgd less than the entitled demand under the Mission Bay Plan. As such, the entitled water demand exceeds the project's requirements. In addition, there are several existing service laterals extending from the utility mains along South Street that would be used to service the project site. Therefore, the proposed project will result in a less than significant impact associated with construction or expansion of any water conveyance facilities.

In addition, the Initial Study notes that as part of the standard permit review process the project proponent will be required to conduct a hydraulic analysis. OCII is not required to perform this additional analysis as part of the CEQA process. Specifically, the fact that additional studies might be helpful to further support a conclusion reached by the lead agency does not mean they must be conducted pursuant to CEQA. (Clover Valley Foundation v. City of Rocklin (2011) 197 Cal. App. 4th 200, 245; see also CEQA Guidelines, § 15204, subd. (a).) Moreover, the hydraulic analysis can only be conducted once detailed building construction plans are completed and under review by the Department of Building Inspection and other departments, including SFPUC and San Francisco Fire Department. CEQA on the other hand, calls for environmental review to be done much earlier, "as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment." (CEQA Guidelines Section 15004.) Therefore, it was proper for OCII to prepare this SEIR now even though it would be premature to prepare the final hydraulic analysis at this time.

Additionally, although OCII does not anticipate that the hydraulic analysis will demonstrate a need for water conveyance facility upgrades, the Initial Study discloses that, if required, "[t]he construction of new water mains and appurtenances would require excavation, trenching, soil movement, and other activities typical of construction of development projects in San Francisco, and similar to those activities analyzed in the Mission Bay FSEIR for the various infrastructure improvements." Therefore, the Initial Study and Draft SEIR conclude that impacts of any improvements to the water conveyance system for the proposed project have been adequately disclosed in the 1998 Mission Bay FSEIR.

Of particular note, the 1998 FSEIR states "[t]renching and removal of soils for installation of water lines could unearth contaminated soils. This issue is discussed in "Exposure From Construction Activities" under "Impacts During Project Development" in Section V.J, Contaminated Soils and Groundwater: Impacts." Section V.J. Contaminated Soils and Groundwater Impacts of the 1998 FSEIR includes a detailed assessment of impacts resulting from construction in areas containing hazardous materials in soil and groundwater, including installation of water conveyance systems and other infrastructure under the Mission Bay Plan.

The FSEIR discloses significant impacts and identifies applicable regulations and feasible mitigation measures that would reduce the significant impacts from construction in areas containing hazardous materials to less than significant levels. Thus, the Initial Study correctly concludes that, even if water conveyance facility upgrades were needed, "[t]he proposed project would not result in new or more severe impacts associated with construction of new water facilities or pipelines than previously identified in the [1998 Mission Bay] FSEIR." (Impact UT-2, p. 69.)

13.17.3 Water Supply – Water Supply Assessment (UTIL-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-23 O-MBA7S2-25

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4. <u>The DSEIR's Analysis of Utilities and Service Systems Violates CEQA –DSEIR Chapter 5.7.</u>

The DEIR's analysis of utilities and service systems fails to comply with CEQA's mandates. First, the DSEIR relies upon a water supply assessment for an earlier, different project, in a different location, prepared before the City had its water rights curtailed. The DSEIR also fails to address necessary stormwater infrastructure issues and relies on the prior NOP/IS that affirmatively misrepresents the capacity of that anticipated system. Finally, the DSEIR impermissibly defers virtually all substantive analysis and mitigation regarding needed wastewater infrastructure. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-23]*)

Similarly, the DSEIR dismisses the question of adequate water supply without analysis, relying on the lack of potentially significant impacts identified in the NOP/IS. (DSEIR, p. 5.7-1.) The NOP/IS states that the City is relying on a water supply assessment ("WSA") prepared in May 2013 for the then-proposed arena site located at Piers 30-32 ("2013 WSA"). The DSEIR fails as in informational document with respect to water supply issues because it may not rely on the 2013 WSA.

First, the DSEIR does not address how the proposed Project is a revision of the Piers 30-32 project for purposes of Water Code section 10910. While the two projects may share some common features of an arena, there are considerable differences. The projects are at different locations. Further, the prior project proposed 208,844 square feet of residential uses and 178,406 square feet of hotel uses, that are eliminated in the current Project that proposes 580,000 square feet of commercial uses. The basic site plans are different for the two projects.

Second, even if the proposed Project could be considered a revision to the abandoned Piers 30-32 project, the DSEIR may not rely on the prior WSA because there has been a significant change in circumstances since preparation of the 2013 WSA. (Wat. Code, § 10910, subd. (h).) Water Code section 10910, subdivision (h)(2) provides that a prior WSA may not be subsequently relied upon when there are "[c]hanges in the circumstances or conditions substantially affecting the ability of the public water system . . . to provide a sufficient supply of water for the project." The ongoing drought is a major change in circumstances that substantially affects the City's ability to provide water to the Project. On June 26, 2015 the State Water Board sent the City a notice curtailing its pre-1914 water rights. With no relief to the drought in sight, it is reasonable to expect further curtailments to the City's water rights. This change in circumstances prohibits the City from relying on the 2013 WSA for the project. And the DSEIR's failure to discuss this critical water

supply issue renders it inadequate as an informational document. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-25]*)

Response UTIL-2: Water Supply – Water Supply Assessment

The comments contend that the analysis of the available water supply presented in the Initial Study incorrectly relies on a water supply assessment for an earlier version of the project at a different location where the site layout and some of the site uses were different than the currently proposed project. The commenter misrepresents the nature of the water supply assessment and conditions triggering the need for a revised water supply assessment.

As discussed in the Utilities and Services section of the SEIR Initial Study (Impact UT-1, pp. 66 through 68), a water demand memorandum prepared by the sponsor for the proposed project, which considered the current site and uses, conservatively estimated that the potable water demand for the currently proposed development at Blocks 29-32 would be 0.100 mgd,[1] The Initial Study concluded that there would be sufficient water supply for the proposed project because the proposed project's demand is less than the 0.109 mgd approved by the SFPUC in the July 9, 2013, Water Supply Assessment for the proposed Event Center and Mixed-Use Development Project previously proposed at Piers 30-32 and Seawall Lot 330, which included a slightly different sized event center and different square footages of commercial and retail uses.[2] This demand is also less than the 0.15 mgd entitled demand for Blocks 29-32 estimated in the 1998 Mission Bay FSEIR.[3]

The SFPUC made the same conclusion in a letter dated November 25, 2014.[4] In this letter, the SFPUC stated that an additional Water Supply Assessment is not necessary for the Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 because the following factors listed in Water Code Section 10910(h) that warrant preparation of another Water Supply Assessment do not exist:

- There are no changes to the project that result in a substantial increase in water demand.
- There has been no change in the circumstances or conditions which would substantially affect the ability of the SFPUC to provide a sufficient supply of water for the currently proposed project.
- There is no new information that might affect the conclusions of previous Water Supply Assessment that sufficient water supplies are available.

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1 BKF Engineers, 2014. *Mission Bay Blocks 29-32—Water Demand Memorandum*. Technical Memorandum to Clarke Miller, Strada Investment Group from Sravan Paladugu, P.E. and Jacob Nguyen, P.E. BKF No. 20136004-20, November 14, 2014.

2 SFPUC, 2013. Water Supply Assessment for the Event Center and Mixed-Use Development Project at Piers 30-32 and Seawall Lot 330. July 1, 2013.

3 BKF Engineers, 2014. *Mission Bay Blocks 29-32—Water Demand Memorandum*. Technical Memorandum to Clarke Miller, Strada Investment Group from Sravan Paladugu, P.E. and Jacob Nguyen, P.E. BKF No. 20136004-20, November 14, 2014.

4 SFPUC, 2014. Letter to Chris Kern, San Francisco Planning Department. November 25, 2014.

Proposed Project at Mission Bay Blocks 29-32. OCII acknowledges that the location of the project has changed and that the design of the project is not identical to the previous proposal. However, the currently proposed project would result in less of a demand on the SFPUC's regional water supply system than the previously proposed project at Piers 30-32 and Seawall Lot 330. Further, unlike the previous project, the proposed project at Mission Bay Blocks 30-32 would be subject to San Francisco's Non-potable Water Ordinance which applies to projects located within San Francisco's designated recycled water use area as of November 1, 2015. In accordance with this ordinance, all new buildings with a gross square footage of at least 250,000 square feet must be constructed, operated, and maintained using available alternate water supply sources for toilet and urinal flushing, as well as for irrigation. Use of an alternative water supply for these purposes would reduce the potable water demand of the project in the future when such sources become available. Both the previously analyzed project and the proposed project are located in San Francisco which is served by the SFPUC's regional water system. Therefore, as stated by the SFPUC in their November 25, 2014 letter, the relocation and redesign of the proposed project at Mission Bay Blocks 29-32 does not affect the conclusions of the previous Water Supply Assessment that the SFPUC has sufficient water supply to serve the project.

Changes in Circumstances or Conditions. The commenter's statement that the drought constitutes a change in circumstances that prohibits reliance on the 2013 Water Supply Assessment is unsupported. Not only did the SFPUC confirm by its 2014 letter that no changes had occurred since 2013 that warranted a new assessment, but the commenter's presumption that drought conditions were not reflected in the earlier assessment is incorrect. The SFPUC's water supply assessment reflects its water supply planning that takes into account an 8.5-year design drought, consisting of the 1987-92 drought, the 1976-77 drought and another 18 months of hypothetical drought – in other words, a more conservative drought estimate than is on record since the SFPUC's current water system was constructed in the early 1900s.

These assumptions of the need to plan for an 8.5-year drought are documented in San Francisco's 2010 Urban Water Management Plan,[5] and being implemented through the SFPUC's adopted Water System Improvement Program (WSIP). Water supply planning under the WSIP includes using various water supplies and implementing water efficiency and conservation measures to ensure an adequate water supply for its service area, including during these hypothetical drought conditions. In fact, water conservation by San Francisco and the SFPUC's regional water customers in 2015 has exceeded the water savings goal of the WSIP by almost 4 billion gallons through September of 2015,[6] resulting in less of a regional potable water demand than planned for in the WSIP. This has reduced demands on the regional water system during the current drought.

San Francisco's ability to supply water to the project, as reflected in the SFPUC's 2013 Water Supply Assessment, has not been affected by the State Water Resources Control Board's (State Water Board) curtailment actions this year. On June 26, 2015, the SFPUC received a "Clarification Notice of Unavailability of Water for Statements of Water Diversion and Use S002637, S014379,

5 SFPUC, 2011. 2010 Urban Water Management Plan for the City and County of San Francisco. June 2011.
6 San Francisco Water Power, Sewer. *Drought Update.* Presentation by Steven R. Ritchie, Assistant General Manager, Water Enterprise. September 22, 2015.

S018734 and S018735 of City and County of San Francisco" (Clarification Notice) issued by the State Water Board. The SFPUC responded to the Clarification Notice stating that it was not currently diverting water at three of the four identified points of diversion, and that water diversions from Canyon Ranch Creek to Camp Mather are supported by pre-1914 appropriative water rights that predate the 1903 cutoff date used in the notice.

On July 15, 2015, the State Water Board issued a "Partial Rescission of April, May and June 2015 Curtailment Notices and Clarification of State Water Board Position Re: Notices of Unavailability of Water for Those Diverting Water in the Sacramento River Watershed, San Joaquin River Watershed and Delta, and Scott River" (Partial Rescission). The Partial Rescission specifically applies to eight notices, including the June 26, 2015 Clarification Notice to San Francisco, and explains, "[t]o the extent that any of the notices described above contain language that may be construed as an order requiring you to stop diversions under your affected water right, that language is hereby rescinded." Thus, SFPUC's ability to divert water from the Tuolumne River watershed and meet its projected water delivery service levels were not affected by the Clarification Notice. In sum, this notice does not constitute new information that affects the SFPUC's ability to supply water to the project.

Therefore, drought conditions do not constitute new circumstances that would affect the SFPUC's ability to provide a sufficient water supply.

New Information. There is no new information that affects the SFPUC's ability to supply water to the project.

As demonstrated above, the SFPUC would have a sufficient water supply for the project even under drought conditions, and impacts on water supply would remain less than significant.

See Response UTIL-1 regarding capacity of the water conveyance system.

See Response UTIL-8 regarding stormwater infrastructure.

13.17.4 Wastewater System – Description and Environmental Effects of New Facilities (UTIL-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-2 O-MBA11L5-10 O-MBA7S2-29 O-MBA8L2-15

I. The DSEIR Is Not Sufficient as an Informational Document with Respect to the Project's Wastewater Treatment Infrastructure Impacts.

The DSEIR concedes the Project's cumulative wastewater flow, in combination with other approved projects, will exceed the Mariposa Pump Station's capacity, and therefore, the Project will have a significant and unavoidable impact because it "would require or result in the construction of new

wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects." (DSEIR, p. 5.7-13 - 5.7-20 [Impact C-UT-2].) But the DSEIR's disclosure of the nature and severity of the potentially significant impacts of building these new wastewater treatment facilities falls far short of CEQA's requirements.

The DSEIR generally describes the type of new wastewater treatment facilities that might be built, stating:

> the SFPUC anticipates that improvements might include actions such as complete pump station replacement, enlarging or realigning the existing sewer main on Mariposa Street between 3rd Street and the Mariposa Pump Station; upgrading and adding dry weather pumps with potential temporary wet weather pump modifications; upgrading or replacing the dry-weather sump in the pump station; constructing new connections to the transport and storage box structure and rehabilitating the structure; and improving the hydraulic capacity of the downstream gravity sewers, if needed. If a new dry weather pump station is required, it could potentially be constructed within approximately a quarter mile radius of the existing Mariposa Pump Station.

(DSEIR, p. 5.7-14.)

The DSEIR then identifies a number of potentially significant impacts of constructing new wastewater treatment facilities necessitated by the Project, stating:

> These construction activities would be expected to result in temporary increases in truck and construction employee traffic, noise, and air pollutant and greenhouse gas emissions. In addition, depending on the site-specific design and location, the pump station improvements could result in physical effects on cultural resources, biological resources, water quality, and hazardous materials.

The DSEIR then vaguely suggests that these impacts could be mitigated to less than significant levels by adopting "typical" mitigation measures, stating:

> Most, if not all, of these potential impacts can generally be mitigated to a less-than-significant level with typical mitigation measures, similar to those identified in the Initial Study and the SEIR for this project. Long-term operational impacts would likely be less than significant because operation of the pump stations would be similar to existing operations of these facilities.

(DSEIR, p. 5.7-14.)

These vague descriptions fail to discharge the City's legal obligations under CEQA to fully describe the Project, including its "reasonably foreseeable consequence" of necessitating the construction of additional wastewater treatment facilities, and to include an "analysis of the environmental effects" of this future action and the mitigation measures that may reduce those impacts. (See e.g., *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 396 (*Laurel Heights I*) ["an EIR must include a analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects].)

As shown in both the DSEIR's analysis of mitigation measures and the Mission Bay Alliance's comments on many types of impacts that construction of additional wastewater treatment facilities will cause (e.g., air quality, noise, traffic), the "mitigation measures ... identified in the Initial Study and the SEIR for this project" do not ensure that "impacts can generally be mitigated to a less-than-significant level." (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-2]*)

Also, the numbers for Mariposa Pump Station capacity and wastewater or stormwater flows are confusing. For example, DSEIR page 5.9-35 says the Mariposa wet- and dry-weather pump stations have a "combined capacity of 11.2 mgd." DSEIR page 5.7-7 also refers to "the combined capacity of the Mariposa pump station and transport/storage structure (11.2 mgd)."[6] But DSEIR page 5.9-34 says: "The potential effect would be greatest in the reconfigured Mariposa sub-basin, which has a *wet weather capacity of 12 mgd* (italics added)." Which is correct?

Footnote:

[6] "In the event that wet weather flows in the Mariposa subbasin exceed the combined capacity of the Mariposa pump station and transport/storage structure (11.2 mgd), the excess flows are discharged to the Bay as a combined sewer discharge after receiving flow-through treatment in the transport and storage structure."

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-10]*)

The DSEIR's analysis of cumulative wastewater impacts also fails to provide necessary information to the public and decision-makers. While acknowledging that permanent improvements are necessary, the DSEIR fails to provide any information about the environmental impacts of these improvements. (DSEIR, pp. 5.7-13 – 14.) The DSEIR dismisses this deficiency because "SFPUC has not completed the planning and design of specific improvements," (DSEIR, 5.7-14), but this does not alleviate the duty of a lead agency to disclose available information. (CEQA Guidelines, § 15144.) One critical piece of information with respect to future construction activity, ignored in the DSEIR, is that a substantial amount of such construction would likely occur in areas of existing soil and groundwater contamination. (Exhibit B, comments A1, A2, A3, B1, B3, B4, B5, B6, C1.) The DSEIR's conclusory dismissal of the impacts associated with constructing necessary wastewater infrastructure fails to address that issue.[5]

Footnote:

[5] Further discussion regarding the City's abdication of its CEQA duties with respect to wastewater treatment is addressed in the July 26, 2015, letter submitted by Tom Lippe.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-29]*)

II. Construction Emissions From Wastewater Improvements Have Not Been Adequately Reviewed in the DSEIR

At DSEIR pg. 1-9, significant environmental impact areas in the Event Center environmental review process are identified. One of those includes sewer processing plant and related utility improvements made necessary for the Events Center and associated development of the 11 acre project area:

> "As indicated on Table 1-2, the SEIR determined that the proposed project would result in significant and unavoidable impacts in the areas of....utilities (construction of new or upgraded wastewater facilities, and determination by the San Francisco Public Utilities Commission that it currently has inadequate capacity to serve the project's wastewater demand)."

Based on the language noted above, it appears the DSEIR's project at Mission Bay Blocks 29 - 32 cannot proceed without sewer and associated utility improvements. However, at DSEIR pg. 1-43 it appears that the project is considered by the Lead Agency to not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Then, at DSEIR pg. 1-44 information from measure M-C-UT-4 shows that the project sponsor must pay for "fair share" improvements to the Mariposa Pump Station:

> The project sponsor shall pay its fair share for improvements to the Mariposa Pump Station and associated wastewater facilities required to provide adequate sewer capacity within the project area and serve the project as determined by the SFPUC. The contribution shall be in proportion to the wastewater flows from the proposed project relative to the total design capacity of the upgraded pump station(s). The project sponsor shall not be responsible for any share of costs to address pre-existing pump station deficiencies.

However, at DSEIR, pg. 5.7-13, it appears the wastewater improvements are made necessary by the project and that it cannot proceed without them:

> "Therefore, permanent improvements to the pump station and a long term increase in capacity would be needed to accommodate the proposed project in combination with other proposed and planned development in the Mission Bay South Plan area. In addition, as discussed in Section 5.9,

> Hydrology and Water Quality, the increased wastewater flows from **the proposed project** (emphasis added) in combination with other foreseeable future projects could increase the volume of combined sewer discharges (CSDs) from the Mariposa Pump Station which could necessitate improvements to the Mariposa wet weather pump station."

If the DSEIR project necessitates the improvements to local wastewater treatment facilities and related utility improvements, the associated construction emissions should be analyzed and mitigated as appropriate within the DSEIR and not piecemealed to some other review process or ignored altogether. No information is found in the DSEIR's Air Quality element that shows that construction-related emissions from the necessary wastewater utility improvements were recognized and evaluated within the DSEIR. (*Mission Bay Alliance, Thomas Lippe, letter, July 26, 2015 [O-MBA8L2-15]*)

Response UTIL-3: Wastewater System – Description and Environmental Effects of New Facilities

The comments state that the SEIR is inconsistent in its statements as to whether the project will cause the need for new wastewater treatment facilities. The comments also contend that construction of improvements to the Mariposa Pump Station to accommodate cumulative wastewater flows within the Mariposa sub-basin of San Francisco's combined sewer system are a reasonably foreseeable consequence of the proposed project and that the SEIR does not adequately disclose the nature and severity of impacts related to construction of the needed improvements.

As concluded in Impact UT-5 of the SEIR (pp. 5.7-11 through 5.7-13) and modified in Section 14.4, Changes in Distribution of Wastewater Flows, the proposed additional discharge of 0.892 mgd of peak wastewater flows from the project site to Mariposa Pump Station would increase the total peak wastewater flows to 3.43 mgd, which is within the 3.5 mgd capacity of the pump station with the recently completed interim improvements described on SEIR p. 5.7-7 and in Response UTIL-6. Therefore, the project would not require the construction of new or expanded wastewater treatment facilities and this project level impact would be less than significant.

However, with the addition of flows from reasonably foreseeable future projects as discussed in Impact C-UT-2 of the SEIR (pp. 5.7-13 through 5.7-17) total wastewater flows to the pump station could exceed the pump station capacity. As a result, the SFPUC would need to construct permanent improvements to the Mariposa Pump Station to accommodate future wastewater flows. The project thus contributes to a cumulative impact related to the need for permanent improvements to the pump station.

The cumulative analysis presented in Impact C-UT-2 of the SEIR addresses the potential impacts of future permanent improvements to the Mariposa Pump Station. As explained in the CEQA Guidelines, "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." (CEQA Guidelines, § 15130, subd. (b).) "[A] good faith and reasonable disclosure of such impacts is sufficient." (*Association of Irritated Residents v. County of*

Madera (2003) 107 Cal.App.4th 1383, 1403; see also *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, 933-934 [same].)

Impact C-UT-2 explains that the project, in combination with past, present, and foreseeable future development in the drainage area of the Mariposa Pump Station, would require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. As the owner and operator of the combined sewer system, the SFPUC is responsible for design and construction of the needed improvements to the wastewater facilities in the Mariposa sub-basin. The SFPUC has not identified the specific improvements that would be required to accommodate wastewater flows from the reasonably foreseeable projects and site-specific analysis cannot be performed until they are identified by the SFPUC. (SEIR, p. 5.7-15.) For this reason, site-specific environmental review for the future improvements cannot be included in the SEIR.

Although it is not possible to analyze the impacts of construction of the permanent pump station improvements in greater detail than provided in the SEIR because the SFPUC has not identified specific improvements required, Impact C-UT-2 discloses the type of environmental impacts that would be expected from construction of new wastewater treatment facilities or expansion of existing facilities and the likelihood that such impacts will occur. This discussion satisfies CEQA's requirements for cumulative impacts analyses. (CEQA Guidelines, § 15130, subd. (b); see also *Association of Irritated Residents v. County of Madera*, *supra*, 107 Cal.App.4th at p. 1403 [cumulative impacts analysis satisfies CEQA when it "sets forth the possible cumulative impacts . . . and then analyzes the likelihood of the actual occurrence of such impacts"].)

Any future permanent improvements to address cumulative wastewater impacts are not part of the project and are not a reasonably foreseeable consequence of the project itself. (SEIR, pp. 5.7-11 to 5.7-13 [the existing wastewater treatment facilities have sufficient capacity for the proposed project by itself].) Rather, as explained in Impact C-UT-2, the improvements would be necessary only as a result of the combined demand on the wastewater system from the project in combination with other future cumulative development projects in the drainage area of the Mariposa Pump Station. Future improvements in the SFPUC's wastewater system are beyond the project sponsor's control.

Moreover, as courts have confirmed, "where future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences." (*Lake County Energy Council v. County of Lake* (1977) 70 Cal.App.3d 851, 854–855; *Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 372; see also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 739 ["CEQA does not require discussion in an EIR of future developments which are unspecified and uncertain. Such an analysis would be based upon speculation about future environmental impact."].) Although any future improvements under the cumulative scenario are uncertain, Impact C-UT-2 provides a reasonable discussion of potential impacts based on information known or reasonably assumed today. Further, as acknowledged in Impact C-UT-2, CEQA environmental review of the future improvements/replacement of the Mariposa and/or Mission Bay Sanitary Pump Station, associated force mains, and conveyance system would ensure that measures to avoid or minimize

impacts on the environment would be considered in the approval process for these improvements. (SEIR, p. 5.7-15.) Thus, the environmental impacts of any future improvements will be fully analyzed when they are ripe for review.

The case cited in comment O-MBA11L5-2, *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376 (*Laurel Heights I*), is inapposite. In *Laurel Heights I*, the court concluded that a university violated CEQA when the EIR prepared for the relocation of a medical facility analyzed only the initial occupancy of a portion of the new building, even though the university had plans to occupy the entire building. (*Id*. at pp. 397-399.) The court found the EIR was inadequate because it did not assess the environmental effects of full occupancy (i.e., the entire project). (*Ibid*.) In other words, the EIR's project description was defective because the lead agency had segmented or "piecemealed" a single project into smaller parts. Other CEQA cases hold that, where a project depends on infrastructure improvements, the environmental analysis must address impacts associated with providing those improvements. (*Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d. 818 [EIR for mining operation should have examined impacts of extending waterlines to serve the mine].)

Here, by contrast, there is sufficient capacity to accommodate wastewater flows generated by the project. Improvements to the Mariposa sub-basin of San Francisco's wastewater system are required to accommodate possible future development in the area; the project alone does not trigger the need for these improvements. Impact UT-5 analyzes the entire project, and the future improvements are not a reasonably foreseeable consequence of the project. Nor are the improvements necessary for the project to proceed. (See *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209, 1220-1227 [EIR for park project did not need to analyze impacts of adjacent proposed development, despite shared roadways, approval of park did not make development reasonably foreseeable].)

The comments state the SEIR dismisses potential impacts associated with future improvements under the cumulative scenario. These comments are incorrect. SEIR Impact C-UT-2 acknowledges the need for future improvements and provides a reasonable discussion of the potential impacts that could occur from their construction (SEIR, pp. 5.7-13 to 5.7-17.) Because the project, along with past, present and reasonably foreseeable projects, would contribute to the need for improvements, the SEIR conservatively concludes that the project's contribution to the need for new improvements would be cumulatively considerable. The impact is significant and unavoidable because the solution, construction of improvements, is outside the project sponsor's control and the specific improvements, and, therefore, the magnitude of specific effects is uncertain. The analysis in the SEIR satisfies the requirements for cumulative impacts analysis under CEQA.

Note that the text on page 5.9-34 of the SEIR incorrectly states the wet weather capacity of the Mariposa Pump Station. The fourth sentence of the third paragraph on page 5.9-34 is revised as follows to reflect the correct capacity (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> The potential effect would be greatest in the reconfigured Mariposa sub-basin, which has a wet weather capacity of ~~12~~ 11.2 mgd.

In addition, the last paragraph on page 1-9 of the SEIR is revised as follows to reflect that the significant and unavoidable impact related to utilities is a cumulative impact (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> As indicated on Table 1-2, the SEIR determined that the proposed project would result in significant and unavoidable impacts in the areas of transportation and circulation (traffic impacts at multiple intersections and freeway ramps, and transit demand on regional transit providers exceeding capacity); noise (substantial permanent increase in roadway noise and crowd noise affecting sensitive receptors); air quality (construction and operational emissions of ozone precursors exceeding thresholds), wind (substantial increase in wind hazard hours at off-site public areas); and utilities (construction of new or upgraded wastewater facilities, and determination by the San Francisco Public Utilities Commission that it currently has inadequate capacity to serve the project's wastewater demand in combination with other reasonably foreseeable future projects).

These revisions do not change the analysis or conclusions presented in the SEIR.

13.17.5 Wastewater System – Wastewater Flow Projections (UTIL-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-22 A-UCSF-23 A-UCSF-24 A-UCSF-26

Page 5.7-2, the DEIR indicates that the Mission Bay FSEIR determined that the projected increases in wastewater generation and storm water flows could be accommodated by the planned infrastructure at Mission Bay, and that the Mission Bay Plan's effects on wastewater and stormwater collection and treatment facilities would be less than significant. The DEIR now states that wastewater capacity will be inadequate when Project flows are added to existing and planned flows. But the DEIR presents no evidence other than a letter to SFPUC from its consultant, Hydroconsultant Engineers, as to current demands on the wastewater and stormwater collection and treatment facilities at Mission Bay and concerning what happened to make the 1998 prediction untrue. The DEIR discussion suggests that UCSF development at Mission Bay is the reason why peak flows would exceed the capacity of the dry weather pump stations, but this contention is contradicted by the analysis recently conducted by UCSF's consultants, as described below. In response to the UCSF's review of the supporting studies listed in the DEIR on page 5.7-7 (SF-DPW I SF-PUC memos "Mariposa Pump Station (MPS) Dry Weather Flow Hydraulic Analysis" dated February 3, 2015, and "Hydraulic Assessment of Mission Bay Sanitary Pump Station" dated February 25, 2015), UCSF undertook sanitary sewer flow monitoring to address questions in those analyses of the actual sewage flow contributions UCSF has to the respective pump stations. This information was provided to the City, however the relevant information from this study does not seem to be incorporated into the DEIR.

Page 5.7-7, the DEIR indicates that the SFPUC is performing interim improvements at the Mariposa Pump Station to accommodate planned and approved peak wastewater flow rates from UCSF that would exceed the Mariposa Pump Station's dry weather capacity. Also, at page 5.7-12, a similar statement is made that the peak flows from UCSF are contributing to peak dry weather flows from the Mariposa subbasin that now exceed the Mariposa Pump Stations dry weather capacity and therefore interim improvements are being

made. The interim improvements described in the DEIR include connecting the existing 10-inch dry weather force to the 20-inch wet weather force main as well as upsizing the influent sewer to the pump station.

The February 2015 SF DPW memo did describe the same force main improvements, but the increases in dry weather flows were not attributed to UCSF. UCSF's consultants, Freyer & Laureta, Inc., prepared a May 15, 2015, memorandum presenting results of flow monitoring from Blocks 24a/b, 25a, and Phase I of the UCSF Medical Center. The memorandum concluded that the cumulative measured average and peak sanitary sewer flow rates from these UCSF facilities was generally less than both the Mission Bay Master Plan and 2014 LRDP estimated sanitary sewer flow rates. (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-22]*)

Page 5.7-13 through 17, the discussion related to Impact C-UT-2 indicates that the projected peak flow rates from the UCSF planned development of Block 25b, Block 33/34, Block 40, and Phase 2 of the MCMB is 1.2 mgd. However, the 1.2 mgd projected peak flow rate includes both Phase 1 and Phase 2 of the Hospital construction. The correct projected peak wastewater flow rate from Block 25b, Block 33/34, Block 40, and Phase 2 of the Hospital should be 0.95 mgd based on the LRDP. (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-23]*)

Page 5.7-16, the statement that UCSF flows to the Mission Bay Pump Station would be 6.63 mgd with full LRDP development is not accurate. See 2014 LRDP Draft EIR at page 7-99 (indicating that the estimated peak flow increase to the Mission Bay Block P15 pump station from UCSF's proposed growth under the 2014 LRDP would be 0.23 mgd, resulting in a need for P15 pump station capacity of 6.63 mgd.). (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-24]*)

Page 5.7-19, the DEIR indicates again that existing and planned UCSF development at Mission Bay would result in a major contribution to cumulative wastewater flows in the subbasin. (See responses above) (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-26]*)

Response UTIL-4: Wastewater System – Wastewater Flow Projections

The comments state that projected wastewater flows from the University of California San Francisco (UCSF) are not the reason that interim improvements were required to the Mariposa Pump Station and also states that UCSF flows are lower than those analyzed in the SEIR. The comments question why previous flow monitoring results from UCSF were not included in the SEIR analysis.

Projected dry weather flows to the Mariposa Pump Station are addressed in a memorandum describing a hydraulic analysis conducted by the San Francisco Public Works (SFPW).[7] This memo discusses total existing and anticipated dry weather wastewater flows to the Mariposa Pump Station; the existing dry weather flows are based on flow monitoring by the SFPW and anticipated dry weather flows from the project and future development at UCSF as well as from Block 40 and other planned development within the drainage area of the Mariposa Pump Station. Existing and

[7] San Francisco Department of Public Works, Memo to Manfred Wong and Bessie Tam of the San Francisco Public Utilities Commission, *Mariposa Pump Station (MPS) Dry Weather Flow Hydraulic Analysis*. February 3, 2015.

projected wet weather flows are addressed in the wet weather analysis conducted by Hydroconsult Engineers.[8] The Hydroconsult report is included as Appendix HYD of the SEIR.

As stated in the SFPW memorandum, the SFPUC has constructed interim improvements based on SFPW's dry weather flow monitoring to accommodate existing developments in the Mission Bay plan area, including the UCSF's Phase 1 Medical Center, which began operation in early 2015. The SFPUC determined that these interim improvements were necessary based on measured flows to the Mariposa Pump Station. The SFPUC completed these improvements in the summer of 2015, were planned prior to evaluation of the proposed project, and were determined necessary regardless of project implementation. Because the improvements have been completed, they are part of the existing environmental setting.

While UCSF has conducted independent flow monitoring this past spring that may more accurately detail UCSF's flow contribution to existing dry weather flows, incorporation of UCSF's data into the SEIR analysis would not alter the conclusions of Impacts UT-5 or C-UT-2, which address project-related and anticipated cumulative wastewater flows to the Mariposa Pump Station, respectively. Therefore, no changes to the SEIR are necessary.

In response to the comment about flows to the Mission Bay Pump Station, the first sentence on SEIR p. 5.7-16 is revised as follows to address total flows to the Mission Bay Pump Station (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> As discussed above in Impact UT-5, total wastewater flows to the Mission Bay Pump Station would be ~~3.53~~ 3.48 mgd with the addition of flows from the proposed project. UCSF has indicated to the SFPUC that under full build out of its recently approved LRDP, ~~UCSF~~ total flows to this pump station would be 6.63 mgd, close to the most recently measured capacity of 6.7 mgd.

This revision does not change the analysis or conclusions presented in the SEIR.

13.17.6 Wastewater System – Fair Share Mitigation (UTIL-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-UCSF-25

Page 5.7-13 through 5.7-17, it is not clear why Impact C-UT-2 does not require mitigation involving a fair share contribution by the project sponsor; rather it states that no mitigation is currently available. (*University of California San Francisco, Lori Yamauchi, letter, July 27, 2015 [A-UCSF-25]*)

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[8] Hydroconsult Engineers, Inc. 2015. *Combined Sewer Impact Analysis, Golden State Warriors Arena EIR*. February 25.

Response UTIL-5: Wastewater System – Fair Share Mitigation

The comment questions why the Impact C-UT-2 does not require mitigation involving a fair share contribution by the project sponsor.

As discussed below, Impact C-UT-2 analyzes the physical impacts related to construction or expansion of new wastewater facilities while Impact C-UT-4 analyzes whether the existing facilities have capacity to accommodate projected wastewater flows. Fair share mitigation is required for Impact C-UT-4.

Impact C-UT-2 (SEIR pp. 5.7-13 through 5.7-17) addresses whether "the proposed project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects." This impact focuses on the physical impacts of construction of new or expanded wastewater facilities. As discussed in Impact C-UT-2, construction of pump station improvements, and possibly replacement of the Mariposa Pump Station, would be required to accommodate cumulative flows from reasonably foreseeable future development in the Mission Bay South area. Impacts related to construction of these improvements are considered significant and unavoidable because specific plans and design for permanent pump station improvements have not been finalized and CEQA environmental review has not been completed. Therefore, it is not possible at this time to conclude whether impacts resulting from these improvements could be mitigated to a less than significant level. Furthermore, implementation of any improvements to the City's pump stations and force mains is outside of the project sponsor's control and there is uncertainty in timing as to when the SFPUC will be able to complete the necessary capacity improvements. There is no feasible mitigation available to the project sponsor related to these physical impacts as discussed in the SEIR.

Impact C-UT-4 (SEIR pp. 5.17-19 through 5.7-21) addresses whether "the project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would result in a determination by the SFPUC that it has inadequate capacity to serve the project's projected wastewater demand in addition to its existing commitments." This impact focuses on whether the existing facilities have the capacity to accommodate cumulative wastewater flows in the Mariposa sub-basin of the SFPUC's combined sewer system. As concluded in Impact C-UT-4, the SFPUC has determined that there is currently inadequate capacity to serve the project's wastewater demand in combination with anticipated increased wastewater flows from other projects (including UCSF's demand and other reasonably foreseeable development). The impact analysis determined that the project's contribution to this impact would be cumulatively considerable, and therefore, this cumulative impact on the wastewater system was determined to be *significant and unavoidable with mitigation*.

Implementation of Mitigation Measure M-C-UT-4, Fair Share Contribution for Pump Station Upgrades, would offset the project's contribution to this significant and unavoidable impact. But, the SEIR determined that the impact would still be significant and unavoidable, even with the fair share contribution from the project sponsor because the SFPUC has not completely defined

the necessary improvements, and implementation of the improvements to the City's wastewater system is outside of the project sponsor's control.

13.17.7 Wastewater System – Description of Interim Improvements (UTIL-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-3 O-MBA7S2-28

Finally, the DSEIR states:

> In the event that additional future wastewater flows would exceed the pump station capacities before the needed wastewater system improvements could be completed, it is assumed that the SFPUC would make internal operational or piping changes to accommodate the additional flows in the interim in order to remain in compliance with RWQCB permit requirements. The interim system modifications would be subject to the approval of the RWQCB under the terms of the Bayside NPDES permit. Approval by the RWQCB would ensure that water quality of the Bay would be protected during the interim period. Any interim system modifications are assumed to be operational or internal to the existing pump stations and therefore would not result in any physical environmental effects.

This remarkable passage suggests that the City is prepared to approve and allow construction of this Project without ensuring the construction of additional, adequate, sewage treatment capacity required by the Project. This is the opposite of responsible planning. Moreover, the City is apparently poised to take this action based on several unsupported assumptions. First, the DSEIR assumes, without discussion or evidentiary support, that interim modifications will not have a significant effect on the environment.

Second, the DSEIR assumes the Project's wastewater impacts on the Bay will only be "interim" until the SFPUC builds or expands permanent new wastewater treatment facilities; and that in this supposedly "interim" period, the Regional Water Quality Control Board will mitigate any "interim" impacts to less than significant. But there is no evidence to support the assumption the Project's wastewater can be treated to avoid significant adverse effects on Bay water quality before the SFPUC builds or expands permanent wastewater treatment facilities. Nor is there evidence that Regional Water Quality Control Board regulation during any purported "interim" period would avoid significant adverse effects on Bay water quality. Nor is there any evidence as to how long this purportedly "interim" period will last, or how many other projects that will cumulatively exceed the Mariposa Pump Station's capacity will commence operations during this purportedly "interim" period.

Indeed, this DSEIR's approach represents a total abdication of the City's legal responsibility under CEQA to identify the Project's significant effects, to identify mitigation measures that would substantially reduce those effects, and to adopt all feasible mitigation measures that would substantially reduce those effects. To put it colloquially, punting the problem to the SFPUC or Regional Water Quality Control Board does not pass muster under CEQA. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-3]*)

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c. The DSEIR Deferred Analysis of Wastewater Impacts.

The DSEIR's analysis with respect to wastewater capacity and infrastructure is similarly flawed. After acknowledging that the City does not have sufficient wastewater capacity to address project-level impacts, the DSEIR very generally mentions vague "interim improvements to temporarily increase the dry-weather capacity" of the Mariposa Pump station. (DSEIR, p. 5.7-12) In failing to explain when these interim

improvements will be completed or to analyze their environmental impacts, the DSEIR fails as an informational document. (*Ibid*.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-28]*)

Response UTIL-6: Description of Interim Improvements

The comments question whether construction of interim improvements to the Mariposa Pump Station would result in any physical environmental effects. The comments also question how long the interim period will be and what types of operational changes may be necessary to accommodate future wastewater flows before long-term improvements to the Mariposa Pump Station are completed.

As discussed on SEIR p. 5.7-7 and addressed above in Response UTIL-4, construction of the interim facilities improvements was completed in the summer of 2015 and was necessary to accommodate existing planned and approved developments in the Mission Bay Plan area, including the UCSF's Phase 1 Medical Center, which began operation in early 2015. The interim facilities improvements consisted of connecting the 10-inch dry weather force main to the 20-inch wet weather force main and upsizing the influent sewer, which increased the capacity of the dry-weather pump station to 3.5 mgd in dry weather conditions. These interim improvements have been completed and are in operation; they were necessary regardless of whether the proposed project is constructed. With the completion of these improvements, there is sufficient capacity to accommodate project-related wastewater flows. Therefore, impacts related to construction of the interim facilities improvements are not related to or triggered by the proposed project. Thus, it is not necessary to analyze the environmental impacts related to construction of these improvements in the SEIR for the proposed project.

The following text revision is included on SEIR page 5.7-7 to reflect the status of construction of the interim facilities improvements (deleted text is shown as ~~strikethrough~~ and new text is underlined; text below does not include the footnotes in the original text, which remain unchanged):

> The Mariposa Pump Station consists of a dry-weather and wet-weather pump station. The dry weather pump station was built in 1954 and ~~has~~ originally had a capacity of 1.2 mgd. The SFPUC constructed interim improvements to the pump station in 2015 to accommodate ~~With the addition of~~ peak wastewater flows from the planned and approved development in the plan area, including those of the University of California, San Francisco (UCSF) ~~developments in the Plan area, the SFPUC anticipates that peak flows would exceed the capacity of the dry-weather pump station. To address this need for additional capacity, the SFPUC is~~. The interim improvements consisted of connecting the 10-inch dry weather force main to the 20-inch wet weather force main and upsizing the influent sewer, which ~~will~~ increased the capacity of the dry-weather pump station to 3.5 mgd in dry weather conditions ~~on an interim basis until long-term improvements can be constructed to permanently increase the capacity of the pump station.[5] Completion of this connection is expected by fall of 2015~~.

This revision does not change the analysis or conclusions presented in the SEIR.

Total peak wastewater flows to the Mariposa Pump Station would be 3.43 mgd with the addition of the estimated 0.892 mgd peak flows from the proposed project as reported in Impact UT-5 (SEIR pp. 5.7-11 through 5.7-13). This total peak wastewater flow volume is close to the 3.5 mgd interim capacity of the Mariposa Pump Station. The total peak flows of 3.43 mgd assumes that all peak flows from the various developments in the drainage area of the Mariposa Pump Station would occur simultaneously, a highly unlikely occurrence. Nonetheless, the capacity of the Mariposa Pump Station with the completion of these interim improvements is adequate to handle projected project peak flows. Average flows would be approximately 1.4 mgd which is far less, meaning that the pump station would seldom, if ever, need to accommodate the total peak flow volume.

The SFPUC has concluded that long-term permanent improvements to the Mariposa Pump Station will be required in order to handle anticipated, cumulative future flows. As noted in Impact C-UT-2 of the SEIR (p. 5.7-15), the SFPUC has not identified a timetable for completing the long term improvements to the Mariposa Pump Station, and has not developed specific plans or designs for construction of the proposed improvements. But, in the unlikely event that additional cumulative flows were to exceed the pump station capacity before the SPUC completed permanent pump station improvements, the SFPUC could make internal operational or piping changes to accommodate the additional flows on a temporary basis and comply with RWQCB permit requirements. The SFPUC has identified several specific operational changes that could be made to accommodate future flows should the interim Mariposa Pump Station capacity of 3.5 mgd be exceeded before the long-term improvements are constructed. These temporary changes could include:[9]

- Routing of dry weather flows to existing wet weather transport/storage boxes to temporarily store select peak flows until flows can be pumped to the Southeast Water Pollution Control Plant, as consistent with the SFPUC's Bayside National Pollutant Discharge Elimination System (NPDES) permit requirements.

- Reducing flows within the Mission Bay basin by modifying sewers/sewer connections to allow temporary redirection of some flows to other basins, as feasible, including potential increased routing of flows from the proposed event center (or other Mission Bay facilities) to Mission Bay Sanitary Pump Station or Channel Pump Station, as appropriate.

As discussed on SEIR p. 5.7-15, these operational changes would be conducted under the terms of the Bayside NPDES permit and thus would not affect water quality of the Bay. The modifications explained above would be implemented by SFPUC through operational or internal modifications to the existing pump stations and would therefore not result in any physical environmental effects from construction activities.

[9] San Francisco Public Utilities Commission. Email from Craig Freeman to Chris Kern, San Francisco Planning Department. August 28, 2015.

See Section 13.21, Hydrology and Water Quality, Response HYD-3, for further discussion regarding potential water quality effects during the interim period.

13.17.8 Stormwater System – Impact Analysis (UTIL-7)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-26

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b. The DSEIR Provides a Misleading Discussion of Stormwater Treatment Facilities.

The DSEIR also fails as an informational document with respect to its analysis of stormwater treatment because it provides both inconsistent and misleading information about the facilities intended to handle stormwater runoff.

First, the DSEIR is internally inconsistent with the NOP/IS, upon which it purportedly relies. With respect to stormwater facilities, the NOP/IS asserts that the impact is potentially significant (IS, p. 64 Table 11.c) and will be analyzed in the DSEIR (IS, p. 72.) The subsequent DSEIR, however, states that it is not providing a project level analysis of the issue, asserting in relevant part:

> With respect to stormwater facilities, however, the stormwater system improvements already construction and currently under construction address both the near-term and long-term needs. . . . ***A separate project impact analysis is not provided.***

(DSEIR, p. 5.7-10 (emphasis added).)

The DSEIR violates CEQA because it fails to address the potentially significant impacts of project-level stormwater infrastructure. While the DSEIR provides some analysis of cumulative stormwater impacts, it concludes that the impact is less than significant with no need for any mitigation. (DSEIR, p. 5.7-18.) Thus, the NOP/IS and the DSEIR play a shell game with respect to analysis of stormwater impacts. It is unclear what the DSEIR's ultimate conclusion is regarding project-level stormwater infrastructure impacts, and no substantial evidence supports this unknown conclusion. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-26]*)

Response UTIL-7: Stormwater System – Impact Analysis

The comment suggests that the SEIR provides inconsistent and misleading information regarding stormwater treatment because impacts related to construction of stormwater facilities are found to be potentially significant in the Initial Study, and less than significant in the SEIR.

Impacts related to construction of new or expanded stormwater facilities were considered potentially significant in the Initial Study because it was determined that this discussion warranted a more detailed analysis in the SEIR pending further refinement of the proposed project design. Based on the further analysis, the SEIR determined that the stormwater system improvements already constructed and currently under construction address both the near-term and long-term needs in the Mission Bay South area as discussed on p. 5.7-10 of the SEIR. Therefore, the impact analysis in the SEIR accounts for the effects of stormwater flows of the

project in combination with the flows from past, present, and foreseeable future projects within the drainage basin. Thus the project's direct impacts are analyzed in the context of cumulative impacts.

Based on the more detailed analysis presented in Impact C-UT-3 of the SEIR (p. 5.7-18), the SEIR concluded that impacts related to construction of new or expanded stormwater facilities would be less than significant. This determination was based on the fact that the project site would be served by the Mission Bay South storm drain infrastructure, as constructed and operated by the master developer in accordance with the approved Mission Bay South Infrastructure Plan. The stormwater analysis completed for the proposed project concluded that the capacity of the separated stormwater system as built is adequate to serve the project as well as other development projects that would be constructed at full build out of the Mission Bay South area.[10] Therefore, the project, either individually or cumulatively, would not require the construction of new stormwater drainage facilities nor expansion of the existing facilities. The project-level analysis is incorporated into the cumulative analysis, and a separate project-level analysis is not required.

13.17.9 Sizing of Stormwater System (UTIL-8)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-27

Setting aside the internal inconsistency, the DSEIR's ultimate conclusion of less than significant cumulative impact is based on a misleading characterization of the Project's stormwater infrastructure. The DSEIR asserts:

> The project stormwater analysis completed for the project sponsor concluded that the capacity of the separated stormwater system as built is adequate to serve the project as well as other development projects that would be constructed at full buildout of Mission Bay South.

(DSEIR, p. 5.7-18.)

This representation is inaccurate and misleading. A technical report, referenced in a footnote but not actually attached as an Appendix to the DSEIR, describes the stormwater facilities very differently. (DSEIR, p. 5.7-18, fn 20 citing "BKF, Mission Bay Blocks 29-32 – Stormwater Memorandum, January 6, 2015" ("Stormwater Memorandum").) The Stormwater Memorandum provides a more accurate description of the stormwater infrastructure, and provides in relevant part:

> The storm drain system and pump station are designed to handle runoff from a 5-year storm event. During larger events such as a 100-year storm event, runoff is conveyed through the streets to a controlled overflow to the Bay.

(Stormwater Memorandum, p. 6.)

[10] BKF, Mission Bay Blocks 29-32 – Stormwater Memorandum, January 6, 2015

Thus, the Project's stormwater system can in no way handle project-level stormwater runoff, much less the Project's runoff in combination with cumulative projects. This is because the system has the capacity to handle only up to five-year storm events, which is significantly smaller than the 100-year capacity typically required. Any storm larger than a five-year event will result in flooding the streets.[4] In light of this anticipated flooding, the Project, which includes multiple levels below grade, will "be sufficiently flood proofed to prevent 100-year overland flow in perimeter streets from entering below grade structures or inundating utilities and equipment." (Stormwater Memorandum, p. 6.) The necessity to flood proof the Project due to inadequate stormwater facilities was never addressed in the DSEIR. Moreover, to the extent that increasing impervious surfaces on the Project site will result in additional flooding in the public streets that are shared by other structures, the DSEIR fails to address the need for additional flood proofing of other buildings in the area.

The analysis contained in the Stormwater Memorandum is also inconsistent with the DSEIR's analysis of flooding risks, which is based on the NOP/IS's analysis of Impact HY-4. Contrary to the information provided in the NOP/IS, the Project would result in exposing people and structures to a significant risk of loss and injury due to flooding for any event above the five-year event. (CEQA Guidelines, Appendix G, Section IX(i).) This is true for both the Project site as well as offsite. Finally, the strategy of relying on public streets as de facto spillways significantly contributes to substantial additional sources of polluted runoff. (CEQA Guidelines, Appendix G, Section IX(e).) This represents a new significant impact that was never addressed in the DSEIR.

The resulting public safety risk created by this situation cannot be overstated. The Project includes an 18,000-seat arena. In instances where arena events occur during moderate storm events (anything above a five-year event), thousands of visitors to the arena will exit onto streets that are serving as flood channels for stormflow. The combination of flooded streets, thousands of densely-packed pedestrians, at-grade transit cars and automobiles – all at night – presents a very dangerous situation that has never been discussed, analyzed, or mitigated in the DSEIR.

Footnote:

[4] The Stormwater Memorandum asserts that use of public streets to channel storm flows in this manner was analyzed in a *Revised Summary Drainage Study for the South of Channel Watershed for Mission Bay Project*, dated December 1, 2000, yet this document was not posted on the OCII as required for the project to comply with the streamlining requirements of AB 900.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-27]*)

Response UTIL-8: Sizing of Stormwater System

The comment correctly quotes an excerpt from Impact C-UT-3 of the SEIR, but incorrectly interprets this information. The comment states that the Mission Bay South stormwater infrastructure cannot handle project-related stormwater runoff because it only has the capacity to handle a five-year storm event rather than a 100-year storm event. The fact that the separate stormwater system serving the project site has adequate capacity is consistent with the statement that the system is designed to handle runoff from a five-year storm event.

The Mission Bay South stormwater infrastructure has been constructed in accordance with the Mission Bay South Infrastructure Plan. Design of the stormwater infrastructure to accommodate flows from a five-year storm event is consistent with both the Mission Bay Subdivision Regulations that apply to the proposed project and the Subdivision Regulations that apply to the remainder of San Francisco (adopted on March 24, 2015). This is standard design practice, and therefore, compliance with these practices by definition would provide adequate stormwater drainage capacity.

The commenter is correct that one hundred-year storm flows in excess of the five-year storm event would be directed to the Bay via street areas and other approved corridors designed to accommodate the 100-year flows. This is also consistent with the Mission Bay South infrastructure plan and subdivision regulations. Further, the overland flow analysis of the separated storm drain system design for the Mission Bay project concluded that the design meets all requirements of the Mission Bay Subdivision Regulations; stormwater flows generated by the 5 year storm event can be conveyed within the underground storm drain system, and excess run-off produced by the 100-year storm event can be contained within the street rights-of-way prior to release into the China Basin Channel or the San Francisco Bay.[11] It is not necessary to exceed the established design criteria for the stormwater system to alleviate on-or off-site flooding risks.

As discussed in Section 13.21, Hydrology and Water Quality, Response HYD-6, under CEQA, impacts related to flooding would be significant if the project would expose people or structures to a significant risk of loss, injury, or death involving flooding or if structures placed within a 100-year flood zone would impede or redirect flood flows. Because the corridors used to convey stormwater flows in excess of the five year storm are designed to accommodate 100-year flood flows in accordance with the subdivision regulations, the project would neither impede nor redirect flood flows, nor would the project expose people or structures to substantial flood risks. Therefore, impacts related to flooding would remain less than significant. Further, the stormwater system is designed to accommodate flood flows from the entire Mission Bay plan area at full build out. Therefore, the system is designed to accommodate flows from the proposed project site, even with the increased impervious surfaces, and no flood proofing measures are necessary to protect the on-site or downstream structures from existing flood risks.

See Section 13.21, Hydrology and Water Quality, Responses HYD-2 and HYD-6 for responses to the commenters concerns regarding the potential for polluted stormwater runoff and on and for additional analysis of off-site flooding.

[11] Santina & Thompson Inc. Overland Flow Analysis for the Mission Bay Project. December 1, 2000.

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13.18 Public Services

13.18.1 Overview of Comments on Public Services

The comments and corresponding responses in this section cover topics analyzed in SEIR Section 5.8, Public Services, and the Initial Study, Section E.12, Public Services, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- PS-1: Law Enforcement
- PS-2: Fire Protection
- PS-3: Schools

13.18.2 Law Enforcement (PS-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

A-CHP-3	I-Lange-2	I-Zboralske-14	I-Zboralske-15
I-Zboralske-29	I-Zboralske-32		

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"Furthermore, in addition to a potential increase in overall traffic congestion, Area resources may also be negatively affected with a potential increase in the number protective service details associated with this event center." (*Department of California Highway Patrol, C. Sherry, letter, August 3, 2015 [A-CHP-3]*)

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"The stadium would impact … level of crime in the city. Regardless of proposed income incentives from this project, I feel we have too many outsiders coming into the city and they only add to the … crime level." (*Donna Lange, email, July 23, 2015 [I-Lange-2]*)

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"Section 5.8 – Public Services

"This section evaluates if the project would require new or physically altered governmental facilities to maintain adequate public safety. This is a misleading measure. We should really be assessing the issues associated with providing the broad range of public services to the geographic area impacted by the project.

"There is no way to evaluate if there are more or fewer calls on special event days compared to non-event days. There is no way to determine which days of the week and hours of the day are peak response times. Simple raw data does not give us the information we need to determine if the proposed arena project, along with all the other projects, will cause service delays or disruptions.

"The San Francisco Police Department (SFPD) is currently understaffed by as many as 300 officers. Although they plan to aggressively hire recruits and increase staffing, this process is arduous and slow. SFPD intends to offer up to three (3) new academy classes with as many as 50 recruits per class over the next several years. Unfortunately, during the next three years they will lose other staff members to retirement, lateral transfer, disability leave and others who choose to transition into other career fields.

"The process of recruiting, hiring and training an individual to become a fully functioning and solo officer can easily take up to 18 months. This means that even if you have staff "on paper" there are likely many officers in various stages of the employment and training process. Individuals, who are not yet fully trained and have not completed the FTO program and are not qualified to perform solo officer duties. A police department's current staffing level is merely a number. The more important number is how many physically able and qualified officers can actually be deployed to staff events and/or handle calls for service. These numbers are usually quite different.

"Furthermore, if SFPD is successful in sponsoring an academy class with 50 recruits, it is unlikely that all new hires will pass the police academy. Others will fail to complete the rigorous Field Training Program and some will fail to complete their probationary period. This is the nature of police hiring and training programs. It is a predictable outcome that occurs in all local law enforcement agencies.

"It is therefore highly unlikely that SFPD can achieve full staffing levels by mid-2018. Any new officers would be inexperienced. It can easily take several years or more for new hires to become truly skilled and competent in handling the broad range of police calls that occur in municipal jurisdictions after achieving solo officer status.

"Because SFPD will not, in my view, ever reach its authorized staffing level it may be stretched to safely, professionally and adequately staff another 250+ special events each year. They may be required, at times, to have staff pull double shifts (working patrol and then stay over to work an event), require some form of mandatory overtime and utilize creative scheduling practices.

"With respect to staffing levels at special events, the document indicates:

- Staffing levels are determined by SFPD's Event Commander in coordination with the event sponsor in advance of the event as well as by levels established in event security/operations plans. The Department of Parking and Traffic typically provides traffic control services for special events.

"Without more specificity, I am not able to determine if adequate resources and [*sic*] being utilized for on-site security by sworn members of SFPD and parking control officers (PCOs).

"I can tell you from my own personal experience that sponsors have a financial incentive for fewer personnel usage because they often pay for these services. Sponsors often try to supplant the use of sworn officers and trained PCOs with far less expensive "private security" personnel. Unfortunately, when things go bad – and they will at some point, the ultimate burden to respond and resolve an incident will rest with the sworn police officers and PCOs.

"Private security guards can be a deterrent and provide valuable services, particularly inside venues, but for the most part they will not be arresting, citing or physically ejecting people from an event site. They will not be writing a detailed crime report, but rather are usually treated as "witnesses." They will observe, report on conditions and request assistance from uniformed sworn officers or PCOs in enforcement-related incidents or in any circumstance in which the personal safety of a patron or themselves is involved." (*James Zboralske, email, July 27, 2015 [I-Zboralske-14]*)

"The numbers reported appear to be crimes that require reporting under the FBI's Uniform Crime Reporting Program. These are crimes that all police departments report annually. They serve as a basis to compare crime rates between jurisdictions in an "apples to apples" approach or crimes that occur year over year for comparison purposes.

"While interesting you'll notice that there is no mention of any of the following:

- Actual police calls for service (CFS) in the area
- CFS types and frequencies on event days versus non-event days
- Number of self-initiated detentions, stops, citations issued and arrests made by SFPD
- Number of parking citations issued and vehicles tows by PCOs

- Statistics relating to the many **quality of life issues – previously listed**
- Vehicle collisions
- Disturbance calls
- Disorderly conduct calls
- Alcohol or drug-related calls and crimes
- Total number of crime reports taken
- Response times to crimes in the event area.
- Alarm calls
- Incidents occurring at public transportation facilities
- Incidents occurring on public transportation vehicles of all types
- Number of private person arrests made

"Having accurate statistics relating to these types of incidents (in addition to the FBI UCR) gives you significantly more information to evaluate and determine accurate levels of overall police activity in any given area.

"Critical information is not provided for analysis in the report. Simply put, utilizing the FBI Uniformed Crime Reporting for SFPD alone is a very ineffective way to gauge the actual level of police, parking and traffic related incidents in a given geographical area or associated with special events.

"Given the location of the proposed project it would be prudent to obtain the more comprehensive crime statistics and information from the following agencies:

- University of California Police Department
- The California Highway Patrol
- Port of San Francisco Police Office
- Bay Area Rapid Transit Police Department (BART)

"Once the appropriate information is gathered from all relevant sources a detailed analysis of the actual impacts to public safety could be evaluated." (*James Zboralske, email, July 27, 2015 [I-Zboralske-15]*)

"The City's current infrastructure can't efficiently and effectively handle the large influx of people to an estimated 250+ yearly events in our neighborhood. The police and fire departments did not adequately address relevant issues in their sections of the report." (*James Zboralske, email, July 27, 2015 [I-Zboralske-29]*)

"People living, working or visiting the area would be exposed to a tremendous increase in the number of quality of life incidents and upsurge in crimes. These increases would degrade our personal quality of life. Local residents and local workers often bear the unpleasant burden of over-development, poor infrastructure and the increases in crime, nuisances and disruptions that it brings." (*James Zboralske, email, July 27, 2015 [I-Zboralske-32]*)

Response PS-1: Law Enforcement

A commenter questions the use of the significance criteria presented in the SEIR used to judge the significance of impacts to public services. This significance criteria presented in Section 5.8.5.1 (p. 5.8-9) in the SEIR was adapted from Appendix G in the CEQA Guidelines. It is important for the commenter to understand that the scope of the SEIR is to address potential physical environmental impacts of the project. Accordingly, the context for judging impacts to law enforcement services in

the SEIR is if the proposed project would result in substantial adverse physical impacts associated with the provision of or need for new or physically altered law enforcement facilities in order to maintain acceptable service levels, the construction of which could cause significant environmental impacts.

General comments were received concerning the potential for the project to increase crime, and for the project to result in a potential increase in the number of "protective service details." Such comments do not raise "environmental" issues cognizable under CEQA, as both the potential increases in crime and potential impacts on police services are examples of social effects beyond the scope of CEQA. (See, e.g., *Baird v. County of Contra Costa* (1995) 32 Cal.App.4th 1464, 1469– 1470, fn. 2 ["increased crime...is not a proper subject of CEQA inquiry"]; CEQA Guidelines, § 15131, subd. (a) ["[e]conomic or social effects of a project shall not be treated as significant effects on the environment"]; see also *City of Pasadena v. State of California* (1993) 14 Cal.App.4th 810, 827–830 [in rejecting an attack on use of categorical exemption for the relocation of a parole office to an existing building, court explains that, although the proposed project may have had some social impacts, including the presence of people engaged in "irregular activities" into the affected area, "CEQA does not address the purely social effects of a project" without a physical change in the environment]; *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502, 1521–1522, fn. 13 ["project-specific demands for additional downtown housing implicate social and economic, not environmental, concerns and, thus, are outside the CEQA purview"]; *Saltonstall v. City of Sacramento* (2014) 234 Cal.App.4th 549, 584-587 [issue of crowd control at basketball arena not an environmental effect requiring analysis under CEQA].)

Because the potential for increased crime and increased demands on police departments are not environmental effects subject to CEQA, the standard sample questions in the model Initial Study found in Appendix G to the CEQA Guidelines focus instead on whether such social or economic effects might require the construction of new *facilities* that would involve environmental effects during construction and operation. (See CEQA Guidelines, appen. G, Sample Questions, XIV, "Public Services"; see also *Goleta Union School District v. Regents of the University of California* (1995) 37 Cal.App.4th 1025, 1031-1033 [CEQA is not concerned with the social effects of "classroom overcrowding per se," but is concerned with the physical effects of expanded school facilities constructed to address classroom overcrowding].) In light of these well-established legal principles, the City's significance criteria appropriately focused not on crime rates or the rapidity of police responses thereto, but on the possibility of physical effects from construction and operation of any new police facilities that might have been required because of the project.

Despite the fact that the above-referenced comments raising concerns about crime and police service impacts do not raise environmental issues subject to CEQA, the City nevertheless addresses such comments as follows.

In support of the SEIR, the San Francisco Police Department (SFPD) was directly consulted regarding potential impacts of the proposed project, and its contribution to cumulative impacts. As discussed in Impact PS-4 in the SEIR (pp. 5.8-14 to 5.8-16), the SFPD determined that the periodic increases in demand for law enforcement services would not require construction or need

for new or physically altered law enforcement facilities to serve the proposed project. The SFPD indicates that during non-event periods at the project site, the proposed project would require typical SFPD police protection services, similar to those services currently being provided to other mixed-use developments in the City. The SEIR notes that the newly-built and operational Public Safety Building, which includes the new SFPD headquarters and Southern District Station, conveniently operates only one-third mile from the project site. In addition, the SEIR discusses that the SFPD would increase local police staffing for games/events at the proposed event center, as specified in the event security/operations plans, similar to how SFPD routinely provides additional police protection for other games/special events in the City. Impact PS-4 also describes proposed space within the event center that would be dedicated for SFPD administrative and operational functions. Furthermore, a separate proposed command center at the event center would be used prior to, during, and after games/events by the SFPD, the San Francisco Fire Department (SFFD), the San Francisco Municipal Transportation Agency (SFMTA), and/or the project's private security and emergency medical personnel to coordinate incident response, facilitate communication and surveillance, and to implement the transportation management plan (TMP) and deploy parking control officers (PCOs). Consequently, adequate police protection services and facilities would be available and provided for the games/events at the project site, and such services would not detract from other SFPD police operations within the City. Given all these factors, the proposed project would have a less than significant impact related to the construction of new or physically altered police protection facilities.

A commenter discusses existing SFPD officer staffing levels and the Department's recruiting, hiring and training program, and opines that it would be unlikely that SFPD can achieve full staffing levels by mid-2018. SEIR Section 5.6.3.2 acknowledges that existing SFPD full-duty sworn officer staffing is presently below that mandated in the City Charter. However, the SEIR also explains that the SFPD predicts that, with implementation of its six-year hiring plan initiated in 2012, the mandated SFPD levels are expected to be reached in mid-2018.

A commenter indicates that private security at the event center would not be arresting, citing or physically ejecting people from an event site. This is correct, but the SEIR does not assume the project's private security would be handling law enforcement duties of sworn police officers. Rather, SEIR Impact PS-4 states that the event center, office and retail uses would provide their own on-site private security personnel and install proper security equipment, and that the event center would provide an on-site command center for on-site security personnel to monitor access to the site and provide continuous communications resources. The SEIR also notes that during games and events at the event center, the Warriors and/or event sponsor would provide increased private security to assist in on-site crowd management and public safety during events, and would use traffic control personnel to assist in implementing the TMP to facilitate safe movement of, and minimize potential conflicts among, pedestrians, bicyclists, and vehicles. However, the SEIR makes clear that increased levels of SFPD police protection personnel would be required on- and/or off-site for patrolling and responding to potential incidents(e.g., citations, ejections of fans from the arena and arrests, public intoxication, thefts from vehicles, and low-level assaults). The SFPD personnel required on- and/or off-site for games/events would be determined in advance of

the game/event by the SFPD's Event Commander in coordination with the Warriors and/or event sponsor, and would be specified in event security/operations plans.

A commenter indicates that the inclusion of more detailed SFPD crime statistics would provide more information to evaluate and determine accurate levels of police activity or associated with special events, and also that would be prudent to obtain more comprehensive crime statistics and information from the University of California Police Department, California Highway Patrol (CHP), Port of San Francisco Police, and Bay Area Rapid Transit (BART) Police. As discussed in the SEIR Section 5.8, the primary responder to law enforcement calls associated with the project would be the SFPD, and a 3-year summary of annual crime statistics from the SFPD for the Mission Bay Plan area is presented in the SEIR for informational purposes in connection with a description of the environmental setting. This level of crime statistic data is appropriate for the SEIR to provide an overview of existing crime level in the project area. Furthermore, as discussed above, the SFPD was directly consulted to receive their concerns regarding potential projects impacts to its services. Please note also that the Draft SEIR was distributed to UCSF, CHP, the Port of San Francisco, and BART for their review and comment; please see associated comment letters on the Draft SEIR that were submitted by these agencies (UCSF, CHP, and BART only) in this document. The commenter's request for additional crime statistics for SFPD or other law enforcement agencies would not yield any new meaningful information that would alter the analysis or change the conclusions reached in the SEIR regarding the significance of project impacts and/or contribution to cumulative impacts associated with law enforcement services.

General comments were made by commenters regarding the potential for the project to affect quality of life. As discussed in SEIR Section 5.8.5.2, Approach to Analysis, quality of life issues are not considered impacts under CEQA. In the assessment of impacts to public services, such quality of life effects would not result in adverse physical environmental impacts under CEQA unless such effects result in the need for the construction of new or physically altered governmental facilities in order to maintain acceptable levels of public services, *and* the construction of such facilities result in adverse physical environmental impacts. These quality of life issues would be considered as part of OCII and the City's project planning and approval processes, outside of the CEQA environmental review process. However, as discussed in the SEIR, the proposed project would incorporate certain services, facilities, and site management practices that would minimize the project's effects on the quality of life for the surrounding neighborhood. In addition to those proposed security personnel and facilities described above, the project proposes (i) use of traffic control personnel and implementation of a transportation management plan for games/events to facilitate safe movement of, and minimize potential conflicts among pedestrians, bicyclists, and vehicles; (ii) use of maintenance and cleaning staff to regularly clean and maintain the buildings and grounds and provide litter control; (iii) incorporation of public restroom facilities in proposed buildings and open space areas; and (iv) installation of recycling/trash/compost receptacles as required by the City. See also Section 13.2, Response GEN-2, regarding quality of life issues. Please see also, 13. 2, GEN-1A which discusses a City and County of San Francisco ordinance introduced for consideration by Board of Supervisors that would ensure that the incremental City costs of providing police, fire and public works services outside the premises are fully funded through the life of the project.

13.18.3 Fire Protection (PS-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

I-Zboralske-14 I-Zboralske-29

"This section evaluates if the project would require new or physically altered governmental facilities to maintain adequate public safety. This is a misleading measure. We should really be assessing the issues associated with providing the broad range of public services to the geographic area impacted by the project.

"There is no way to evaluate if there are more or fewer calls on special event days compared to non-event days. There is no way to determine which days of the week and hours of the day are peak response times. Simple raw data does not give us the information we need to determine if the proposed arena project, along with all the other projects, will cause service delays or disruptions.

"For example Table 5.8-2 addresses San Francisco Fire Department (SFFD) responses in the project area over a 12-month period. Staff at four fire stations responded to 10,702 medical responses and 4,968 fire calls. In total, SFFD responded to 15,670 incidents. For urban municipal fire departments, medical aid calls typically outnumber all other types of calls for service. Indeed, nearly 70% of the calls at the four stations were medical in nature. Should all the projects in the pipeline be constructed and occupied, the number of total calls will increase dramatically in the target area. With the increase of traffic congestion and associated factors of event management, SFFD response times under current staffing levels are likely to increase.

"There is no way to evaluate if there are more or fewer calls on special event days compared to non-event days. There is no way to determine which days of the week and hours of the day are peak response times. Simple raw data does not give us the information we need to determine if the proposed arena project, along with all the other projects, will cause service delays or disruptions. (*James Zboralske, email, July 27, 2015 [I-Zboralske-14]*)

"The City's current infrastructure can't efficiently and effectively handle the large influx of people to an estimated 250+ yearly events in our neighborhood. The police and fire departments did not adequately address relevant issues in their sections of the report." (*James Zboralske, email, July 27, 2015 [I-Zboralske-29]*)

Response PS-2: Fire Protection

The commenter questions the use of the significance criteria presented in the SEIR used to judge the significance of impacts to public services. This significance criteria presented in Section 5.8.5.1 (p. 5.8-9) in the SEIR was adapted from Appendix G in the CEQA Guidelines. It is important for the commenter to understand that the scope of the SEIR is to address potential physical environmental impacts of the project. Accordingly, the context for judging impacts to fire protection services in the SEIR is if the proposed project would result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire

protection facilities in order to maintain acceptable service levels, the construction of which could cause significant environmental impacts.

In support of the SEIR, the San Francisco Fire Department (SFFD) was directly consulted regarding potential impacts of the proposed project, and its contribution to cumulative impacts. As discussed in Impact PS-3 in the SEIR (pp. 5.8-12 to 5.8-14), the SFFD determined that the periodic increases in demand for fire protection and emergency medical services would neither adversely affect SFFD service standards nor require an increase in SFFD staff that would require the construction of new fire protection facilities. The SEIR notes that the newly-built and operational Public Safety Building, which includes the new SFFD Fire Station No. 4, conveniently operates only one-third mile from the project site, and several other existing fire stations are located within the project site vicinity as well. In addition, the City's high pressure emergency water infrastructure would serve the project site. As part of project operations for games and large events at the event center, the Warriors or other event sponsors would provide on-site medical services, including a first aid station and on-site medical personnel, to provide first aid to game/event patrons or employees that may require medical assistance, which would further reduce potential effects on general emergency medical response providers. The proposed development would also be designed to comply with the most up-to-date building and fire codes and include state-of-the-art fire safety measures and equipment, and provision of adequate emergency access ways around the project site for emergency vehicles. Project fire safety plans would be subject to review and approval by the SFFD. Furthermore, as part of the project, a proposed command center at the event center would be used prior to, during, and after games/events by the SFFD, SFPD, SFMTA, and/or the project's private security and emergency medical staff to coordinate incident response, facilitate communication and surveillance, implement the TMP, and deploy PCOs. Given all these factors, the proposed project would have a less than significant impact related to the construction of new or physically altered fire protection facilities.

The commenter references statistics for SFFD responses for fire stations in the project area that are presented in Table 5.8-2 in the SEIR. The commenter asserts that if all cumulative projects are developed, the number of total SFFD response calls would increase dramatically in the project area, and SFFD response times under current staffing levels are likely to increase. The summary of SFFD responses for the Mission Bay Plan area is presented in Table 5.8-2 in the SEIR for informational purposes to describe the environmental setting. However, it is not used to determine potential project impacts. Cumulative impacts to public services, including fire protection services, are addressed in Impact C-PS-2 in the SEIR. As discussed in Impact C-PS-2, the SFFD has not identified a citywide service gap, and determined that the increased need for fire protection services resulting from the proposed project and reasonably foreseeable projects would not be above levels anticipated by the SFFD. Given these factors, the project's contribution to cumulative impacts associated with fire protection services would not be considerable, and the impact would be less than significant.

Please see also, 13. 2, GEN-1A which discusses a City and County of San Francisco ordinance introduced for consideration by Board of Supervisors that would ensure that the incremental City

costs of providing police, fire and public works services outside the premises are fully funded through the life of the project.

13.18.4 Schools (PS-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

I-MacKenzie1-1 I-MacKenzie1-2 I-MacKenzie1-3

"One of many potential impacts that a "No Project Alternative" would have if the construction of the proposed Warrior's San Francisco Arena & Event Center is not built at this Mission Bay location, is a fact that has become crystal clear; that is, the Warriors would not be able to return to San Francisco in order to build a new state-of-the-art Arena & Event Center. This option would also prevent the opportunity to offer an indoor multi-purpose facility that would provide not only Warriors professional NBA basketball games, concerts and a variety of sports tournaments and games for numerous college, high schools and other youth programs, but it would also prevent the potential creation of an innovative Model indoor Education & Career Development Classroom within this facility capable of offering a wide range of social-economic benefits including education, career development programs and new businesses for an untold amount of public and private sector organizations, students and youth, young adults, families and our entire San Francisco-Oakland Bay Area Community as a whole.

"This is a unique opportunity to build an Event Center and Mixed-Use Development at Mission Bay on Blocks 29-32, that can offer unique and invaluable incentives, inspiration and real-world career guidance and skills development and leadership training opportunities for our youth that would disappear if this Warriors Arena project does not get built. This project can also inspire and create new jobs and careers, as well as build education and career development programs that will not be possible in any other central location in San Francisco, Oakland or other Bay Area cities. I believe it would be an unfortunate failure of our collective responsibilities if we do not cooperate as a city and community and demonstrate the successful leadership necessary to construct an NBA Arena in San Francisco at the Mission Bay location. This is a once in a life time opportunity for San Francisco leaders to collaborate effectively in order to build a professional sports facility integrated with a model visionary, innovative and strategically located indoor Classroom facility capable of enhancing and expanding our capacity to establish effective wide-ranging and healthy socio-economic growth and opportunities for our entire diverse, cross-cultural San Francisco community. At the same time, I believe our public and private sector agencies, corporate leaders and Non-Profit Foundations and officials can work together in collaboration with the Warriors in order to benefit, support and share their professional knowledge and experience inside this Arena & Event Center environment for all our San Francisco, Oakland and our Bay Area schools, youth, teachers, families and communities all year-round." (*Dennis MacKenzie, email, July 26, 2015 [I-MacKenzie1-1]*)

"Once again, the failure to build this Arena & Event Center - including the loss of socio-economic growth, enhanced and newly created business opportunities and a wide range of educational and career development programs, jobs, internships, practical real-world experience, leadership training and comprehensive support for our San Francisco, Oakland and Bay Area high school and college age students, non-profit youth and community organizations that can all be served year-round through visiting an indoor Warriors Arena Classroom - would be a huge loss for all sectors of our San Francisco, Oakland and the Bay Area Community; as well as the loss of creating an educational Model for our nations professional sports organizations and teams that would be worthy of emulation for future construction of Arenas and Stadiums throughout our country – and beyond.

"The potential loss of building this San Francisco Warriors professional NBA Basketball Arena & Event Center, would also include the lost opportunity to create a model facility with the visionary capacity to initiate and develop an Education and Career Development Classroom in collaboration with San Francisco government, public and private sector officials and business leaders, the San Francisco Unified School District, non-profit youth and community organizations; while at the same time, create effective partnerships with public-private Non-Profit Foundations and philanthropists for financial support and matching funds as well.

"The loss of this unique opportunity would also prevent enhancing and expanding much needed opportunities for our San Francisco-Oakland and Bay Area high schools and college students. This Mission Bay location also has the opportunity to inspire new businesses, and offer our public-private sectors and government leaders and agencies to work together in order to enhance and expand long-term, comprehensive socio-economic initiatives and cross-cultural, international sports and education exchange programs as well; if not, this will be instead - a huge and irreplaceable missed opportunity for our interdependent communities of San Francisco, Oakland and the entire Bay Area." (*Dennis MacKenzie, email, July 26, 2015 [I-MacKenzie1-2]*)

_____

"My comments and perspectives below address these above items contained within the SEIR, and the 'less than significant' impact, which will not require any additional schools to be built for our San Francisco Unified School District and family needs. With this in mind, I ask that our collective efforts envision this opportunity to build a Warriors Arena & Event Center in Mission Bay to be considered an invaluable opportunity for the Warriors, City and County of San Francisco's public and private sector officials, the SF Chamber of Commerce, Non-Profit Foundations and organizations – as well as business and community leaders to support the inclusion of an indoor Classroom to be built within this Warriors facility that can be accessible to all of our San Francisco Unified School District's high schools, students and teachers in order to initiate, create and establish an Educational Methodology Model 'Magnet Education & Career Development Classroom' within this Warriors Arena & Event Center in Mission Bay:

"I believe the proposal I have shared with the Warriors and all San Francisco public and private sector officials, agencies and leaders can create a "Model Magnet Sports Management & Facilities Operations Pathway" studies, including the numerous multi-media, journalism, business and other curriculums I've shared with you, the Warriors, all San Francisco Unified School District leaders and San Francisco officials that can contribute to our current challenge to attract parents and families to raise their children in San Francisco, and attend our San Francisco public schools. The numerous jobs and careers associated with any professional Basketball Arena and NBA team, ownership and organization, could initiate tremendously inspiring incentives for high school age students to listen to and learn from all the professionals presenting their knowledge, experience and guidance within this proposed state-of-the-art Warriors Arena and Event Center High School-College Career Pathway & Field Study Classroom. I trust there would be tremendous interest throughout our San Francisco and Bay Area communities and schools to participate and become involved in an education system that included real-world experience and training within this Warriors Arena in San Francisco's Mission Bay.

"This indoor Warriors Arena Classroom would have the capacity to create first-of-its-kind Model programs; including the ability to serve as a model for building future NBA Arenas throughout the country, and the Americas - as well as a unique opportunity to serve our community, city, state and country by establishing and building a National Model for other professional sports organizations and teams across the country for generations to come.

"In addition to my comments above addressing these issues contained within the SEIR, I respectfully ask that you and your OCII and Planning Department staff and city officials take into consideration the details of the comprehensive programs and positive influential impacts of this Arena that I have shared with you through my previous communications and materials in writing and in public comments at both the OCII and Planning Commission hearings regarding this Arena & Event Center, my proposal to include a high school classroom within this Arena, and this Environmental Impact Report.

"I respectfully ask that my proposal requesting the Warriors and SF city officials and leaders collaborate in order to include the far-reaching positive impact the construction of a High School-College Career Pathway & Field Study Classroom© within this SF-Warriors Multi-Use Arena & Event Center can have for San Francisco and this proposed project to be built on Blocks 29-32 in Mission Bay. I also ask that this Environmental Impact Report consider - and comment on - the immense potential loss that not building this Arena & Event Center would have; including the lost socio-economic benefits and educational programs and options lost through the failure to build this project would have without initiating a national Model Education and Career Development Classroom for the benefit of supporting our students, youth, young adults, families, communities and newly created business opportunities in the present - and for generations to come." (*Dennis MacKenzie, email, July 26, 2015 [I-MacKenzie1-3]*)

Response PS-3: Schools

The commenter indicates that not developing the proposed project, and the commenter's proposed "indoor Warriors Arena Classroom," would have a number of negative socio-economic effects, including loss of: socio-economic growth, business opportunities, educational and career development programs, jobs, internships, leadership training and support for Bay Area high school and college age students, non-profit youth and community organizations.

The commenter's proposed indoor Warriors Arena Classroom is not part of the proposed project, and consequently, is not considered for analysis in this SEIR. Furthermore, the assessment of economic or social effects is not within the purview of CEQA, unless an economic effect would itself result in an environmental impact (CEQA Guidelines Section 15131). All potential impacts of the proposed project on public schools are addressed in the SEIR Initial Study Section E.12, Public Services, which is included in Appendix NOP-IS of the SEIR. As discussed therein, the overall Mission Bay plan included the transfer of land within the plan area for a new 500-student elementary school to the San Francisco Unified School District (SFUSD) prior to issuance of building permits for the Mission Bay plan residential units. On this basis, the Mission Bay FSEIR concluded that Mission Bay plan impacts to public schools would be less than significant. Potential impacts associated with the construction and operation of the new school were included in the overall analysis of the Mission Bay plan in the Mission Bay FSEIR. That document also determined that the proposed school site within the Mission Bay plan area would not be large enough to house a middle school or high school, or all of the potential new elementary school students, and consequently, that additional classroom space would need to be developed by SFUSD outside of the Mission Bay plan area, most likely for all grade levels. The Mission Bay FSEIR concluded it was too speculative to identify impacts from construction of additional school facilities, although any new facilities that would be proposed by SFUSD would be subject to appropriate environmental review for site-specific physical environmental impacts.

Because the proposed project does not include a residential component, the proposed project will not bring new school-aged children to the area. Even if it did, however, there would be legal limitations on the City's ability to deal with any resulting increases in student numbers. Local governments' ability to mitigate for school-related impacts is limited under 1998 legislation commonly known as Senate Bill 50. Among other things, Senate Bill 50 eliminated local governments' ability to turn down development projects (whether legislative or adjudicatory in character) on the ground that they

would cause or exacerbate school overcrowding (Gov. Code, § 65996, subd. (b)); and, with some qualifications, the legislation capped the amount of fees that could be imposed on new development by school districts, cities, and counties (id., § 65995, subd. (h)).

Please also refer to the No Project Alternative in Section 7, Alternatives, in the SEIR for a discussion of potential environmental effects if the proposed project were not to be developed. Nonetheless, when deciding whether or not to approve the project, the OCII would consider the environmental impacts and all other relevant information, including social or economic effects.

13.19 Biological Resources

13.19.1 Overview of Comments on Biological Resources

The comments and corresponding responses in this section cover topics analyzed in the Initial Study, Section E.13, Biological Resources, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- BIO-1: General Approach to Analysis
- BIO-2: Setting
- BIO-3: Special-Status Species
- BIO-4: Sensitive Natural Communities
- BIO-5: Wetlands
- BIO-6: Avian Impacts

13.19.2 General Approach to Analysis (BIO-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-11 O-MBA11L5-12 O-MBA11L5-13 O-MBA11L5-20 O-MBA11L5-27

III. The DSEIR Is Not Sufficient as an Informational Document with Respect to Project Impacts on Biological Resources, Including Wetlands and Wildlife.

A. The City's decision to exclude the Project's impacts on biological resources from the DSEIR is erroneous.

The City's decision to exclude the Project's impacts on biological resources from the DSEIR (see DSEIR, p. 5.1-1) is erroneous as a matter of law. Both the NOP/IS and the DSEIR announce that their analyses are "tiered" to the 1998 Mission Bay FSEIR pursuant to CEQA Guideline 15168(c). (IS, p. 23-24; DSEIR, pp. 1-1, 5.1-2, 3.) Both the NOP/IS and the DSEIR also announce that the standards used to exclude resource topics from the DSEIR are the standards used to determine if a subsequent EIR is required under CEQA section 21166 and Guideline section 15162. (See NOP/IS, pp. 23-25; DSEIR, p. 5.1-3.)

Based on these predicates, the City decided to prepare a focused EIR, and to conduct no environmental review with respect to the following resources: Biological Resources, Aesthetics, Land Use Cultural Resources, Paleontological Resources, Geology and Soils, Recreation, Hazardous Materials, and Population and Housing. As discussed in more detail in the July 27, 2015, letter from the Mission Bay Alliance's legal counsel regarding "tiering," the City's assumption that it may prepare an EIR for this Project that tiers to the 1998 Mission Bay FSEIR is legally incorrect. As discussed in several comment letters submitted on behalf of the Mission Bay Alliance, and below regarding the Project's impacts on biological resources, the evidence relating to these excluded resource topics meets both the "fair argument" standard, as well as the CEQA section 21166 standards. Therefore, the City must prepare and recirculate for public review a Revised Draft EIR addressing all of the Project's environmental impacts. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-11]*)

B. There is substantial evidence supporting a fair argument the Project will have a significant adverse effect on biological resources.

While the NOP/IS give short shrift to on-site biological resources, there is substantial evidence, in the NOP/IS and the attached reports from Matt Hageman and Erik Ringelberg, supporting a fair argument the Project may have significant effects on (1) migratory birds; (2) off-site special status species downstream of the Project, including steelhead (Oncorhynchus mykiss); and (3) the on-site wetland and its ecology and associated wildlife. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-12]*)

With respect to migratory birds, the NOP/IS admits that the 1998 Mission Bay FSEIR did not assess the redevelopment Plan's effects on migratory birds. (NOP/IS, p. 81.) In addition, the NOP/IS concedes the Project may have significant impacts on migratory birds because it recommends the adoption of mitigation measures to substantially reduce these impacts, stating: "With implementation Mitigation Measures M-BI-4a, Preconstruction Surveys for Nesting Birds, and M-BI-4b, Bird Safe Building Practices, the project would not result in any new or substantially more severe significant impacts on resident or migratory bird species than those identified in the FSEIR." (NOP/IS, p. 81.)

This approach violates CEQA in a number of ways. First, as discussed above, the Project is a separate project from the 1998 Redevelopment Plan, or at a minimum, is not within the scope of the 1998 Mission Bay FSEIR. This fact precludes the City from "tiering" to the 1998 FSEIR for any resource, including impacts on biological resources such as migratory birds.[7] Second, trying to mitigate significant impacts before assessing their nature and extent puts the cart before the horse.[8] Third, as discussed above, the NOP/IS's concession that the Project may have significant impacts on migratory birds is substantial evidence supporting a fair argument the Project will have a significant adverse effect on migratory birds; therefore, the City is required to include an assessment of these impacts in the DSEIR.[9] Fourth, even if the City's assumption that CEQA section 21166 applies is correct, the addition of a 750,000 square foot sports arena and an additional 160 foot office tower to the Mission Bay Redevelopment Plan are substantial changes in the Redevelopment Plan that give rise to new potentially significant effects on birds that must be analyzed in the subsequent EIR.

Footnotes:

7 *Sierra Nevada Conservation, supra.*

8 CEQA does not permit an agency to simply adopt mitigation measures in lieu of fully assessing a project's potentially significant environmental impacts because mere acknowledgement that an impact would be significant is inadequate; the EIR must include a detailed analysis of "how adverse" the impact would be. (*Lotus v. Department of Transportation (2014) 223 Cal. App. 4th 645, 655-56; Galante Vineyards v. Monterey Peninsula Water Management Dist. (1997) 60 Cal. App.4th 1109, 1123; Santiago County Water Dist. v. County of Orange (1981) 118 Cal .App.3d 818, 831.)*

9 *Protect the Historic Amador Waterways, supra.*

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-13]*)

In our opinion, the SEIR, in several key areas related to biological resources, failed to adequately characterize the nature and the extent of the site's resources; failed to identify the full range of potential significant impacts from the proposed project on those resources; failed to examine those impacts at a sufficient level of detail to understand the project impacts; and, failed to provide adequate mitigation for those resources, both during construction and cumulatively. Specifically, key species and sensitive habitat(s) were left out of the discussion, and mitigation measures were missing, or inadequate, to reduce the impacts of the project on those species below the threshold of significance; and finally, significant changes have occurred at the site affecting both the applicable policies and the relevant resource use since the original analysis. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-20]*)

2014 NOP-IS

The 2014 NOP-IS Applies the Prior Impact Analysis to the Modified Current Setting

1. The NOP-IS (Pg. 76) re-characterizes the 1998 FSEIR in order to minimize the type, extent and value of current ecological features of the site. The analysis conflates the prior CEQA analysis with the current ecological conditions, without fully assessing the significant changes that currently exist under and the impacts of the project on the biological resources. The analysis further parses the "upland" species and habitat from the aquatic species and habitat, without identifying and relating the project impacts associated with each of those contexts. For example, the proposed project has both direct (loss of habitat) and indirect environmental impacts (potential contamination) to both terrestrial and aquatic resources, within and adjacent to the site (dust, groundwater and stormwater), but these impacts are not fully identified (impacts identified only to nesting and flying birds). The project must be evaluated with an associated impact analysis that defines the specific project impacts on the site's (and Plan Area) biological resources. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-27]*)

Response BIO-1: General Approach to Analysis

This group of comments address broad comments on the SEIR approach to analysis of biological resources. This responses provides the cross-references to other parts of the Responses to Comments document where the specific issues are addressed.

Initial Study and Tiering

Comments O-MBA11L5-11, O-MBA11L5-12, and O-MBA11L5-13 state it was improper for OCII to rely on the 1990 and 1998 EIRs and to use an Initial Study to scope out certain impacts from further review in the SEIR. These comments claim OCII was required to analyze biological impacts in the SEIR because the potential for impacts to biological resources meets the "fair argument" standard and the CEQA section 21166 standards. The comments further raise concerns: regarding the approach of tiering from the 1998 Mission Bay FSEIR; that the Initial Study fails to analyze significant impacts apart from the proposed mitigation; that migratory birds should have been analyzed in the Draft SEIR; and that the proposed project is a substantial change from the Mission Bay Redevelopment Plan that gives rise to new potentially significant effects on birds that must be analyzed in the SEIR. OCII disagrees.

For a general discussion of "tiering," and OCII's reliance on the 1990 and 1998 EIRs, please see Sections 13.3.7 and 13.3.8, Responses ERP-6 and ERP-7, of the Responses to Comment document. Those responses provide a general discussion of how OCII used the 1990 and 1998 EIRs to determine the scope of the SEIR, and discuss CEQA provisions that authorize this approach.

CEQA encourages agencies to rely on previously certified program EIRs in preparing subsequent EIRs. (See CEQA Guidelines, § 15168.) The CEQA Guidelines explain that when relying on a previously certified program EIR, a subsequent EIR should focus solely on environmental effects that were not already covered in the program EIR. (*Id*., subd. (d)(3).) The Guidelines recommend the use of "a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." (*Id*., subd. (c)(4).) The environmental review for the proposed project followed this recommended approach. OCII used an Initial Study to determine whether the environmental effects of the project were adequately covered in the 1998 Mission Bay FSEIR. To avoid waste of

public resources and duplication of analysis, the environmental effects that were already covered in the 1998 Mission Bay FSEIR were not analyzed again in the SEIR. OCII's determinations in this regard are supported by substantial evidence.

Further, the Initial Study is included as part of the SEIR (Appendix NOP-IS in Volume 3) and includes an analysis of potential impacts, including impacts to biological resources. It is not necessary to reproduce the text again under a separate section in the SEIR. The "substantial evidence" standard applicable to EIRs also applies to an agency's determinations regarding the scope of the EIR and the amount or type of analysis contained in the EIR. Here, the Initial Study is part of the proposed project's SEIR, and its scope, analysis, and conclusions are each governed by the same substantial evidence standard. Therefore, the comment's suggestion that the "fair argument" standard applies to the discussion of Biological Resources is not accurate. The comment seems to suggest the text of the Initial Study must be reproduced in the SEIR if it is to be governed under the "substantial evidence." But again, the Initial Study is already included as part of the SEIR and repeating that information would be redundant and is unnecessary.

The case cited in the comments to support the assertion that the fair argument standard applies, *Center for Sierra Nevada Conservation v. County of El Dorado* (2012) 202 Cal.App.4th 1156, is inapposite. *Center for Sierra Nevada Conservation* concerned the county's adoption of a negative declaration for an oak woodland management plan and mitigation fee program. The county's negative declaration was premised on its 2004 general plan and attendant EIR, which required onsite mitigation of the loss of oak woodland habitat, but anticipated the option of allowing developers to pay a conservation fee under an oak woodland management plan instead. Because neither the general plan nor the EIR specified the fee rate or how the collected fees should be used to mitigate the impact on oak woodlands, and because the record contained evidence that the manner in which the fees were collected and used could have impacts, the court held the county was required to prepare a tiered EIR before it adopted the oak woodland management plan and implemented the fee. (*Id*. at p. 1162.) As the court explained, the plan and fee program were separate projects from that analyzed in the program EIR. The court then explained that "[i]f a proposed new activity is a separate project, the 'fair argument' test should apply to an agency's decision whether to require a tiered EIR for the later project." Applying the fair argument standard, the court held the county could not rely on the negative declaration because there was substantial evidence supporting a fair argument that the oak woodland management plan and mitigation fee program would have a significant effect on the environment and therefore an EIR was required.

In this case, OCII is not relying on a negative declaration. Rather OCII prepared a SEIR for the proposed project and the analysis included in the Initial Study is part of the SEIR. Accordingly, the fair argument standard does not apply. In addition, the 1990 and 1998 Mission Bay EIRs anticipated development of the project site and, accordingly, analyzed whether the site contained biological resources that would be significantly affected by such development. The Initial Study summarizes this information. (See Initial Study, pp. 76-81.) The Initial Study supplemented this analysis with additional information obtained after preparation of the 1998 EIR. (See Initial Study, pp. 81-84.) For these reasons, the court's decision in *Center for Sierra Nevada Conservation* does not apply to the

current circumstances. (See *Citizens Against Airport Pollution v. City of San Jose* (2014) Cal.App.4th 227 Cal.App.47th 788, 800-802.)

Initial Study

An Initial Study is an appropriate tool to determine whether an environmental impact was adequately addressed in a prior EIR both for purposes of tiering and for determining the level of analysis required in subsequent environmental documents. As noted above, the CEQA Guidelines recommend that agencies use "a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." (CEQA Guidelines, § 15168, subd. (c)(4).) This approach – the use of initial studies to determine the level of analysis necessary for subsequent projects following program EIRs – has been upheld by the courts on numerous occasions. For example, in *Latinos Unidos de Napa v. City of Napa* (2013) 221 Cal.App.4th 192, 196, the court upheld the City of Napa's use of an Initial Study to amend its Housing Element based on a previously certified program EIR. Based on the Initial Study, the city concluded that its approval of revisions to its housing element and related general plan and zoning amendments would not result in any new significant environmental impacts that were not adequately analyzed in its 1998 General Plan program EIR. The court held that the city's determination was supported by substantial evidence and that no further environmental review was required pursuant to CEQA Guidelines section 15168, subdivision (c)(2). (*Latinos Unidos de Napa, supra,* 221 Cal.App.4th at p. 203; see also *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689 [upholding agency's use of an Initial Study to determine whether subsequent activities were adequately covered in program EIR].)

Here, OCII properly used an Initial Study to scope out impacts from further review that would not be significant or were adequately analyzed in the 1998 Mission Bay FSEIR. The "fair argument" standard does not apply to the conclusions in the Initial Study. Furthermore, the SEIR is a *focused* EIR prepared in accordance with CEQA Guidelines sections 15063(b)(1)(C) and 15168(d)(1). Like Public Resources Code section 21166, the "fair argument" standard does not apply to agency determinations that additional review is not necessary under CEQA Guideline sections 15063 or 15168. (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th at p. 1051.)

Under CEQA, an EIR must analyze a project's significant environmental impacts. Conversely, impacts that are not significant need not be analyzed in an EIR. Public Resources Code Section 21003, subdivision (f) states: "it is the policy of the state that... [a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in CEQA Guidelines section 15126.2, subdivision (a), which states that "[a]n EIR shall identify and focus on the significant environmental impacts of the proposed project" and section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment." Thus, CEQA provides that an EIR is not required to include detailed analysis of impacts that are not

significant. (See CEQA Guidelines, § 15128; *North Coast Rivers Alliance v. Marin Municipal Water District Board of Directors* (2013) 216 Cal.App.4th 614 ["CEQA does not require detailed analysis of an impact that is less than significant."].)

The CEQA Guidelines allow the use of an Initial Study to document project effects that are less than significant. (CEQA Guidelines, § 15063, subd. (a).) CEQA Guidelines section 15128 provides that "[a]n EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an Initial Study." Therefore, the use of the Initial Study to scope out impacts that would not be significant is not only appropriate, but encouraged under CEQA.

When an agency determines that a particular impact would not be significant, and therefore does not warrant further discussion in an EIR, those determinations are reviewed under the "substantial evidence" test. (*North Coast Rivers Alliance v. Marin Municipal Water District* (2013) 216 Cal.App.4th 614, 638-639 [lead agencies' brief statements under CEQA Guidelines section 15128 that impacts are less than significant must be upheld if supported by substantial evidence]; *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 47 Cal.App.4th 357, 375-376 [same]; see also *Protect The Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1113 [when an EIR contains a brief statement of reasons for concluding an impact is less than significant, then the petitioner has the burden of demonstrating "the conclusion was not supported by substantial evidence in the administrative record."].) Further, CEQA Guidelines section 15128 states that agencies may rely on Initial Studies to determine that impacts are less than significant. Thus, where an Initial Study concludes that detailed analyses of certain topics are unnecessary, those determinations must be upheld if supported by substantial evidence; the "fair argument" test does not apply under those circumstances.

The Initial Study prepared for the proposed project includes detailed analysis of potential impacts to biological resources and is included as part of the SEIR. This information appears at pages 76 to 84 of the Initial Study. Additional information appears in Appendix A to the Initial Study. As shown on SEIR Table 2-2 (pp. 2-20 to 2-21), no comments on the Initial Study's biological resources impact analysis were received during the 30-day public scoping period following issuance of the Notice of Preparation and Initial Study. The Initial Study identified and analyzed new potentially significant impacts on wildlife as described in Impact BI-4 and additional mitigation measures (M-BI-4a, Preconstruction Surveys for Nesting Birds and M-BI-4b, Bird Safe Building Practices), which were not identified in the 1998 Mission Bay FSEIR. These new impacts and associated mitigation measures are reflective of the current project conditions and of the City's adoption in 2011 of the Standards for Bird Safe Buildings (Planning Code Section 139). However, these new impacts were determined to be *less than significant* with mitigation incorporated. The same "substantial evidence" standard applicable to the SEIR applies to the analysis and conclusions in the Initial Study. Because the Initial Study is already included in SEIR, the text of the Initial Study does not need to be reproduced again in a separate section of the SEIR.

Tiering

CEQA affords a variety of mechanisms for relying on environmental review of successive projects to avoid duplicative analysis of environmental effects examined in previous EIRs. (See *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1373.) Relying on the environmental analysis in a previous EIR is particularly appropriate where, as here, a "program" EIR has been prepared for a large project or plan under which subsequent approvals or projects are anticipated.

Under CEQA and the CEQA Guidelines, agencies are able to rely on previously certified program EIRs in a variety of ways. For example, CEQA directs that EIRs shall be "tiered" whenever feasible. (Pub. Resources Code, § 21093, subd. (b).) "Tiering" refers to the coverage of matters in broader EIRs, with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the analysis in the previous EIR and "concentrating solely on the issues specific to the EIR subsequently prepared." (CEQA Guidelines, § 15385; see also Pub. Resources Code, §§ 21068.5, 21093, CEQA Guidelines, §§ 15152, 15168.) The CEQA Guidelines note that tiering is appropriate when the sequence of EIRs is "[f]rom an EIR on a specific action at an early stage to a subsequent EIR or a supplement to an EIR at a later stage." (CEQA Guidelines, § 15385, subd. (b).) When tiering is utilized, the later EIR will concentrate on the environmental effects that "were not analyzed as significant effects on the environment in the prior environmental impact report." (Pub. Resources Code, § 21068.5; see also *id*., § 21094(a); see also CEQA Guidelines, §§ 15152, 15385.) Tiering is encouraged under CEQA because it promotes efficiency and avoids "repetitive discussions of the same issues in successive" EIRs. (CEQA Guidelines, § 15152, subd. (b); see Pub. Resources Code, §§ 21068.5, 21093; Guidelines, § 15152 [same]; *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1318-1319.) In adopting CEQA's tiering provisions, the Legislature stated that tiering should be used "to exclude duplicative analysis of environmental effects examined in previous environmental impact reports." (Pub. Resources Code, § 21093, subd, (a).)

CEQA also allows lead agencies to rely on previously certified EIRs when preparing subsequent or supplemental EIRs for later activities or for determining whether any additional environmental review is required. Generally, once an EIR has been prepared, a public agency cannot require the preparation of a subsequent or supplemental EIR unless either: "(a) Substantial changes are proposed in the project which will require major revisions of the [EIR]. [¶] (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the [EIR]. [¶] (c) New information of substantial importance, which was not known and could not have been known at the time the [EIR] was certified as complete, becomes available." (Pub. Resources Code, § 21166; see also CEQA Guidelines, § 15162.) A change is "substantial" and "require[s] major revisions" in a previous EIR only if it involves new significant environmental impacts that were not considered in the previous EIR. (Guidelines, § 15162, subds. (a)(1), (a)(2).) If an agency determines that a subsequent EIR is required, CEQA directs that the analysis in the subsequent EIR should focus solely on environmental impacts that were not already analyzed in the previous EIR.

When relying on a previously certified program EIR, the lead agency must examine subsequent activities in the light of the program EIR to determine whether additional environmental review is required. (CEQA Guidelines, § 15168, subd. (c).) The CEQA Guidelines advise that "[w]here

the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." (CEQA Guidelines, § 15168, subd. (c)(4).) The CEQA Guidelines further provide that a program EIR can, and should, be used to streamline the analysis in a subsequent EIR. Section 15168 states that a program EIR can be used to "[f]ocus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before." (Subd. (d)(3).) The ability to scope out environmental impacts from further analysis when preparing a subsequent EIR that tiers off of a program EIR is further evidenced by CEQA Guidelines section 15168, subdivision (c)(2), which states that "[i]f the agency finds that pursuant to [CEQA Guidelines] Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve [a subsequent] activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required." (See *Latinos Unidos de Napa v. City of Napa* (2013) 221 Cal.App.4th 192, 203 [upholding use of Initial Study to determine whether environmental impacts of later activity were adequately analyzed in previously certified program EIR]; see *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301, 1316 [describing process for determining scope of analysis of project within the context of a previously certified program EIR]; *Citizens for Responsible Equitable Environmental Development v. City of San Diego Redevelopment Agency* (2005) 134 Cal.App.4th 598 [upholding agency's determination that impacts of hotel project were adequately addressed in previously certified program EIR].) Therefore, here, the Draft SEIR properly tiered off the 1998 Mission Bay FSEIR and did not need to analyze impacts that were determined to be adequately analyzed in the previous EIR.

An agency's determination that an environmental impact was adequately analyzed in a previous EIR, and therefore does not need to be analyzed again in a subsequent EIR, is reviewed under the "substantial evidence" standard, not the "fair argument" standard. "In reviewing an agency's decision not to require additional environmental review pursuant to section 21166, courts are not reviewing the record to determine whether it demonstrates a possibility of environmental impact, but are viewing it in a light most favorable to the agency's decision in order to determine whether substantial evidence supports the decision not to require additional review." (*Latinos Unidos de Napa v. City of Napa* (2013) 221 Cal.App.4th 192, 204-205, internal quotations and citations omitted.) The substantial evidence standard applies regardless of whether the previous EIR was a "program" EIR or a "project" EIR. (See *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1049-1050 ["the same substantial evidence standard applies to subsequent environmental review for a project reviewed in a program EIR or a project EIR"], citing *Latinos Unidos de Napa v. City of Napa*, *supra*, 221 Cal.App.4th at pp. 201–202 [substantial evidence standard applies in reviewing an agency's determination that a project's potential environmental impacts were adequately analyzed in a prior program EIR]; *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689, 704 [substantial evidence standard applies when agency has already prepared a program EIR and the question is whether implementing later phases of the program will result in new impacts].)

Recirculation

For discussion regarding recirculation of the SEIR, please see Section 13.3.6, Response ERP-5.

General Comments on Biological Resources

Comment O-MBA11L5-20 states that the SEIR failed to adequately characterize the nature and extent of the site's biological resources and claims that significant changes have occurred at the site affecting both the applicable policies and relevant biological resources since the analysis conducted in the 1998 Mission Bay FSEIR. Similarly, Comment O-MBA11L5-27 asserts that the Initial Study "re-characterizes" the 1998 FSEIR in order to minimize the ecological features of the site and that the analysis conflates the prior CEQA analysis with the current ecological conditions. Both comments are mistaken.

As described in Response BIO-2, below, the biological resources setting description is provided under Impact BI-1 (pp. 77 to 79) and Appendix A of the Initial Study, and is based on conditions at the time of preparation of the Initial Study (2014). Follow-up site visits in 2014 and 2015 confirm reconnaissance survey observations of the project site remain accurate as do descriptions of site conditions within the Initial Study.[1] The Initial Study also includes a comparison of the current conditions with the site conditions described in the 1998 Mission Bay FSEIR. This updated setting information also states that "there have been no substantial changes with respect to the circumstances under which the proposed project would be undertaken, nor has any new information become available." This conclusion applies to updates of applicable policies and the relevant resource use. Impact BI-5 (p. 83) analyzes the relevant biological resources policies or ordinances currently applicable to the proposed project, and finds that the project does not conflict with such policies and ordinances.

Comment O-MBA11L5-20 also presents general statements asserting that the SEIR failed to identify the full range of potential significant impacts, examine those impacts at a sufficient level of detail, and provide adequate mitigation. OCII disagrees. The Initial Study clearly addresses the full range of biological resources issues identified in CEQA Guidelines Appendix G, Section IV, (a) to (f). Criteria (a), (b), (c), (d), and (e) are addressed in the Initial Study (pp. 76 to 84) in Impacts BI-1 (regarding special status species), BI-2 (regarding sensitive natural communities), BI-3 (regarding wetlands), BI-4 (regarding wildlife), and BI-5 (regarding biological resources polices or ordinances), respectively. Criterion (f) regarding conflicts with adopted or approved habitat conservation plans is addressed on page 76, which explains why this criterion does not apply to the proposed project. Due to the non-specific nature of this comment regarding the level of detail and adequate mitigation, the responses regarding the adequacy of the analyses are addressed throughout this Section 13.19 under various sub-topics, including the existing conditions at the site (Response BIO-2), special-status species (Response BIO-3), sensitive natural communities (Response BIO-4), wetlands (Response BIO-5, and birds (Response BIO-6). As indicated in those responses, mitigation measures are identified consistent with CEQA Guidelines section 15126.4 for any impacts determined to be significant or potentially significant.

Comment O-MBA11L5-27 states that the analysis parses the upland species and habitat from the aquatic species and habitat without identifying and relating the project impacts associated with

[1] WRA, Inc. 2015. *Technical Memorandum: Biological Reconnaissance at the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32.* October 1.

each of those contexts. The commenter is mistaken. The separate discussions of upland and aquatic biological resources are part of the summary of the biological resources impacts in the 1998 Mission Bay FSEIR and do not refer to the Initial Study impact analysis. Instead, the biological resource impacts of the proposed project are analyzed and discussed under five general categories — special-status species, sensitive natural communities, wetlands, wildlife, and biological resources policies or ordinances — each of which is analyzed in detail in Impacts BI-1 through BI-5, as described above. Contrary to the commenter's assertion, the Initial Study indeed analyzes the specific project impacts on the biological resources currently present at the project site.

For a discussion of the existing conditions or Setting used for the impact analysis of biological resources, please see Response BIO-2, below.

In response to Comment O-MBA11L5-12, regarding the potential for the proposed project to have significant effects on biological resources, please refer to responses below relevant to the specific topics raised. For a discussion of sensitive species concerns and critical habitat, please see; Response BIO-3: Special-Status Species, and Response BIO-4: Sensitive Natural Communities (including steelhead), respectively. For a discussion of the regulatory status, ecology, and habitat value of the onsite ponded depression, please see Response BIO-5: Wetlands. For a discussion of impacts on migratory birds, please see Response BIO-6: Avian Impacts.

13.19.3 Setting (BIO-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-21

ECOLOGICAL CONDITIONS REVIEW

The project area has two boundaries, the larger "Mission Bay Redevelopment Plan Area Boundary," (Plan Area) which is described in the 1998 FSEIR and the current "site" boundary (site), which includes Blocks 29-32 within that larger planning boundary (Figure 1). Both boundaries will be used for the purposes of discussion as they relate to the corresponding environmental analysis documents and the project's potential impacts on biological resources. A current aerial photo is provided for detailed site context (Figure 2).

The Plan Area's near surface soils are the result of mixed fills and have been identified by the Natural Resource Conservation Service as: 134, Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes (Figure 3). The soils are the result of historic filling of the Mission Bay with debris, earthquake waste spoils, and other material to reclaim the site from the San Francisco Bay (ESA 2014; Pg. 1). This soils information is consistent with other analyses, developed by others, discussed later.

The U.S. Fish & Wildlife Service, National Wetlands Inventory (NWI) identified several features adjacent to the Plan Area, but none within the site (Figure 4). The relative elevation of these features both within (and nearby) the project boundary appear to correlate with the local shallow water table (ESA 2014; LTR 2015; Pg. 13-14 and Figures A-2 and A-3).

The site itself appears to be a largely ruderal area that has been subject to various anthropogenic disturbances, within an urban setting, containing two large surface parking areas. The site currently contains an open water feature, actively used by wildlife, and a narrow swale to the east (Figure 5). The site's current conditions are detailed in the following site observations.

SITE OBSERVATIONS

The Blocks 29-32 footprint consists of two large paved areas (Southwest parking lot approximately 79,910 sq.ft./1.83 ac. and Northeast parking lot approximately 91,776 sq.ft./2.11 ac.)[1] currently being used as paid parking lots; an area of soil stockpiles (31,066 sq.ft./0.71 ac) on the eastern edge of the property (Terry A. Francois Boulevard); and an adjoining large open field, open water (22,115 sq.ft./0.51 ac) and wetland swale complex, (904 sq.ft./0.02 ac.) (closest to the Southwest parking lot) shown on Figure 2. A series of photographs were taken of the site and the adjoining areas (Attached Photo Plates).

At the time of observation, the open water area encompassed the majority of the water feature, with a patchy, but substantial fringe of palustrine emergent (predominately alkali bulrush [Bolboschoenus maritimus]) and riparian plants (willows [Salix sp.]). The emergent plants and shrubs were concentrated on the two narrower ends of the water feature. The narrower channel and the seasonal wetlands apparent from the aerial photographs (Figures 2a-i) were not clearly visible from the site perimeter fence(es).

Numerous native birds were observed within, and in some cases flying to and from the water body. Several Canada geese (Branta canadensis) were seen, including what appear to be adult plumage juveniles; three killdeer (Charadrius vociferous), including two juveniles; a female mallard and a juvenile (Anas platyrhynchos); several crows (Corvus brachyrhynchos); two non-native Eurasian collared-doves (Streptopelia decaocto); and numerous non-native rock doves/pigeon (Columba livia). The site has significant use for nesting and foraging by these bird species.

2015 DSEIR

The DSEIR uses an incomplete description of the environmental setting in its impact assessment.

The DSEIR incompletely characterizes the site's biological resources in the project site description and existing uses. The sole description of the site as it related to its biological resources in the DSEIR is as follows:

"Immediately east of, and adjacent to, Parking Lot B is a depressed area (measuring approximately 320 feet by 280 feet) created by an excavation and backfill associated with a prior environmental cleanup of that portion of the site. A surface swale extends west within this portion of the site to allow for drainage of surface water into the depression." (Pg. 3-10)

This description fails to mention any of the site biological resources, such as plants or animal or habitats, or the fact that there is a large permanent pond and wetland features in the middle of the site. There is no mention of wildlife use and the existing habitat(s) on the site in the DSEIR. The site's biological resources, including waters, wetlands, wildlife habitat and species are then not discussed at all in the DSEIR (except for the Appendix containing the NOP-IS).

Footnote:

[1] 2015 Google Earth

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-21]*)

Response BIO-2: Setting

The commenters' observations and review of ecological conditions are noted and are not inconsistent with the setting information presented in the Initial Study.

The commenter cites page 3-10 of the SEIR, which describes the proposed "Project Site and Existing Uses" within Chapter 3, Project Description, and incorrectly states that this is the "sole description

of the site as it relates to its biological resources." A complete description of the project setting in the context of biological resources (e.g., the vegetation communities and wildlife habitat within and surrounding the project) is included in Impact BI-1 of the Initial Study (pp. 77 to 79). Impact BI-3 (pp. 79 to 80) expands on the discussion of the deeper excavation at the site, including vegetation. Impact BI-4 (pp. 81 to 82) includes additional discussion regarding wildlife habitat and use at the site. Appendix A of the Initial Study lists the special-status species reported or with potential to occur near the project site. Thus, the Initial Study provides an accurate description of the existing setting regarding biological resources. As previously stated, return visits to the proposed project site following publication of the Draft SEIR confirm conditions as described in the Initial Study persist. With the mitigation measure identified in the Initial Study, the proposed project would result in no new or more severe significant impacts on biological resources compared to those identified in the 1998 Mission Bay FSEIR.

13.19.4 Special-Status Species (BIO-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-22

The DSEIR failed to protect species and identify the appropriate list of sensitive natural communities, as well as Critical Habitat designations

1. The potential for Western pond turtles and California red-legged frog is stated as “low” since by their estimation, “No suitable habitat present.” However, the perennial pond feature (and for the frog a constructed water feature in particular) is not ideal, but it is certainly suitable habitat. In particular, the analysis (and inferred conclusion) is faulty since low potential does not mean “no” potential, and therefore reasonable steps should be taken to establish or reject the presence of the species and as needed, mitigation. These simple mitigation measures are commonly applied to similar activities throughout California, and include rare plant surveys, and targeted (focused) species surveys.[2,3,4] The rare plant surveys must be timed to the appropriate season, and the focused surveys for the right life stage of the target species. In our experience both in preparing EIRs, and supporting similar construction projects, that in virtually every case, where natural(ized) features exists that can potentially support species of concern, there is an additional mitigation measure that provides a preconstruction survey (or surveys); and if species of concern are likely to occupy the site, the preparation and implementation of a Worker Environmental Awareness Plan (WEAP). The DSEIR solely has a pre-construction breeding bird survey.

Footnotes:

[2] http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf
[3] http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/rare_plant_protocol.pdf
[4] https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-22]*)

Response BIO-3: Special-Status Species

The commenters indicate that the proposed project could affect special-status species, specifically western pond turtle and California red-legged frog, and that appropriate surveys should be conducted. For the reasons described below, OCII disagrees with the comment.

Before conducting protocol surveys for determining special-status species presence in a study area, it is industry standard to evaluate factors such as historical occurrence, land use activities, and presence of key habitat components to determine whether surveys are necessary given the likelihood for species occurrence on site. As described in the Initial Study (pp. 78 to 79), a search of relevant databases (CNDDB[2], USFWS[3], and CNPS[4]) was performed in support of the analysis to establish the regional context of special-status plant and animal species in the project vicinity, and the reconnaissance survey documented site-specific vegetation communities and habitat components that might support sensitive species.

While several special-status plant species have been historically documented within the project vicinity, their natural habitats have long since been eliminated by past industrial and commercial land uses in the Mission Bay area. In the small portion of the site that is not currently hardscaped or gravel, opportunistic non-native and invasive species are dominant. Rare and sensitive plant species often require specialized growing conditions (e.g., soil chemistry, hydrology) and intact natural communities, and they are generally less tolerant of human disturbance. Given the historical industrial uses of the site, low species diversity, and lack of native species overall, further efforts to inventory vegetation during floristic protocol-level[5] surveys were not performed, nor are they warranted.

The USFWS 2005 Survey Guidance[6] for California red-legged frog prescribes an assessment of locality records and potential habitat within a one mile (1.6 km) proximity radius of the project in advance of conducting formal surveys. A review of CDFW's CNDDB records in GIS identified no documented occurrence of California red-legged frog within one mile of the project site; several occurrences documented in Golden Gate Park are the closest records to the project site, approximately five miles to the west. A formal survey protocol for western pond turtle is not adopted by CDFW, though the same database search and visual habitat assessment was performed with the habitat requirements of this species in mind. The closest records for western

2 California Department of Fish and Wildlife (CDFW), 2014. California Natural Diversity Database (CNDDB) Rarefind 5. Biogeographic Data Branch, Sacramento, CA. Data dated September 3, 2014.
3 U.S. Fish and Wildlife Service (USFWS), 2014. Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the San Francisco North and San Francisco South U.S. Geological Survey 7.5-minute Quadrangles. USFWS Endangered Species Division.
4 California Native Plant Society (CNPS), 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). Sacramento, California. http://www.cnps.org/cnps/rareplants/inventory/ (accessed September 10, 2014).
5 CDFG, 2009. Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities. California Natural Resources Agency. November 24.
6 USFWS, 2005. *Revised Guidance on Site Assessments and Field Surveys for California Red-legged Frog.*

pond turtle are documented more than five miles from the project site in Golden Gate Park (6.5 miles), Pine Lake Park (7.5 miles), and North Lake (Lake Merced) (8 miles).[7,8]

The aquatic habitat on the project site consists of an isolated ponded excavation less than an acre in size created by past soil remediation activities. More importantly, it is situated within a former industrial site that is surrounded by dense urban development with no connectivity to other suitable habitat for California red-legged frog or western pond turtle. While shallow ponded water and some aquatic vegetation does occur within the excavation, other habitat elements that attract and sustain California red-legged frog — such as deep pools, overhanging riparian vegetation, connection to upland dispersal sites with small mammal burrows, viable prey base, and woody emergent vegetation to attach egg masses during the breeding season — are absent from the site. The lack of muddy sediment, basking sites, hydrologic connectivity to other water bodies, and small, shallow pool create low-quality environment for western pond turtle. Limited opportunities for colonization by either California red-legged frog or western pond turtle since soil remediation of the site was conducted in 2005 means that the likelihood for these species to be present are slim given the extent of development in the project vicinity and absence of nearby occupied habitat from which individuals could disperse to the project site.

Finally, neither the California red-legged frog nor western pond turtle has been observed by qualified biologists during reconnaissance-level surveys of the ponded depression located on the site conducted on August 28, 2014 in support of the Initial Study, or on return visits to the site September 24, 2014[9], September 10, 2015[10], and October 1, 2015 to verify site conditions and species absence. Algae blooms occupy the entirety of ponded water within the depression. Such conditions can result in low dissolved oxygen concentration that is inhospitable and even lethal to aquatic organisms[11,12].

Table 2 in Appendix A of the Initial Study (p. A-7) is revised, as shown on the following page, to more accurately characterize the potential for occurrence for California red-legged frog and western pond turtle based on all of the above information and considerations (deleted text is shown in ~~strikethrough~~ and new text is <u>underlined</u>).

This revision does not change the analysis or conclusions presented in the Initial Study. As indicated in the Initial Study (pp. 77 to 79), project-related impacts to special-status species would be less than significant and would not result in any new impacts, or increase the severity of previously-identified impacts, to special-status species.

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7 CDFW, 2015a. CNDDB GIS Database. Biogeographic Data Branch, Sacramento, CA. Data dated August 31.
8 CDFW, 2015b. California Natural Diversity Database (CNDDB) Rarefind 5. Biogeographic Data Branch, Sacramento, CA. Data dated August 4.
9 WRA, Inc. 2015. *Technical Memorandum: Biological Reconnaissance at the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32.* October 1.
10 *Ibid.*
11 Paerl, Hans W., Rolland S. Fulton, Pia H. Moisander, and Julianne Dyble. *Harmful Freshwater Algal Blooms, With an Emphasis on Cyanobacteria*. The Scientific World, vol. 1, pp. 76-113, 2001. doi:10.1100/tsw.2001.16
12 Clean Water Team (CWT) 2004. *Dissolved Oxygen Fact Sheet, FS-3.1.1.0(DO).* in: The Clean Water Team Guidance Compendium for Watershed Monitoring and Assessment, Version 2.0. Division of Water Quality, California State Water Resources Control Board (SWRCB), Sacramento, CA.

TABLE 2
SPECIAL-STATUS ANIMAL SPECIES REPORTED OR WITH POTENTIAL TO OCCUR NEAR THE EVENT CENTER AND MIXED-USE DEVELOPMENTAREA AT MISSION BAY BLOCKS 29-32

Common Name *Scientific Name*	**Federal Status**	**State Status**	**Habitat Description**	**Potential to Occur in the Action Area**
Reptiles and Amphibians				
Western pond turtle *Emys marmorata*	--	CSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	**Absent ~~Low~~.** Low-quality habitat for this species occurs in the shallow, ponded depression of the site that lacks hydrologic connectivity to other more diverse sites and basking substrate preferred by western pond turtle. Closest occurrence records are documented more than five miles from the project site in Golden Gate Park, Pine Lake Park, and North Lake (Merced).[1] Surrounding dense, built-up environment and absence of nearby occupied habitat makes colonization of the ponded depression by western pond turtle since site remediation in 2005 highly unlikely. ~~No suitable habitat present.~~
California red-legged frog *Rana draytonii*	FT	CSC	Freshwater ponds and slow streams with emergent vegetation for egg attachment.	**Absent ~~Low~~.** Low-quality habitat occurs within the shallow, ponded depression of the project site that lacks deep pools, overhanging riparian vegetation, connection to upland dispersal sites, viable prey base, and woody emergent vegetation to attach egg masses during the breeding season. Closest occurrence records are documented five miles from the project site in Golden Gate Park.[1] Surrounding dense, built-up environment and absence of nearby occupied habitat makes colonization of the ponded depression by California red-legged frog since site remediation in 2005 highly unlikely. ~~No suitable habitat present.~~

[1] CDFW, 2015a. California Natural Diversity Database (CNDDB) GIS Biogeographic Data Branch, Sacramento, CA. Data dated August 31, 2015.

The Initial Study does not rely solely on the 1998 Mission Bay FSEIR to support the conclusion that impacts to special-status species would be less than significant. A qualified biologist conducted a reconnaissance survey of the project site and surrounding area. Follow-up site visits confirm information from the reconnaissance survey. The Initial Study describes the potential for

impacts in detail and relies on recent, project-specific, site reconnaissance surveys and other relevant information. (See Initial Study, pp. 77 to 79.) The potential for special-status species to occur near the project site is documented in the Initial Study in Appendix A and the conclusions further supported by referenced information in this Responses to Comments. Based on the observations and analysis described in the Initial Study, and similar to the conclusions of the 1998 Mission Bay FSEIR for the entire plan area, the Initial Study concludes that, with the identified mitigation measures, the project would not have a substantial adverse effect on special-status species and the impact would therefore be less than significant. Thus, the proposed project would not result in any new impacts, or increase the severity of previously-identified impacts, to special-status species. This determination is supported by substantial evidence.

13.19.5 Sensitive Natural Communities (BIO-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-14	O-MBA11L5-15 see also Water Quality	O-MBA11L5-24	O-MBA11L5-32
O-MBA11L5-33 see also Water Quality			

_____

With respect to impacts on special status species, the NOP/IS states:

> At the time of preparation of the Mission Bay FSEIR, the project site contained several buildings and facilities and was noted as lacking any notable vegetative habitat, with no state listed threatened, endangered or rare plants, or rare, threatened or endangered animal species known to occur in the upland portion of the Mission Bay plan area, including the project site. Subsequent to that time, the project site has been subject to building removal, grading, excavation, and construction of paved surface parking lots, fencing and utilities on portions of the site. Other than the creation of the depression as a result of remediation actions, no other changes in the site since the preparation of the FSEIR have altered the characteristics of the site in relation to biological habitat. These changes in conditions on the project site have not altered the fact that the site provides no suitable habitat for any sensitive or special status species due to the sparse and ruderal nature of onsite vegetation, as well as the site's location in a densely urbanized environment, as confirmed through the reconnaissance survey and database review of special status species occurrences within the vicinity of the project site. In addition, there have been no substantial changes with respect to the circumstances under which the project would be undertaken, nor has any new information become available that demonstrates new or more severe impacts associated with the proposed project.

(NOP/IS, pp. 78-79.)

> But as Mr Ringelberg points out:
>
> the potential project impacts to the closest federally designated critical habitat is steelhead Oncorhynchus mykiss are ignored. This habitat runs directly adjacent to the project area. In addition, San Francisco manzanita (Arctostaphytos franciscana) critical habitat is present approximately 2.6 miles to the west and should also have been identified and analyzed. The federal critical habitat analysis is missing, and the provided analysis itself is defective. The potential project's impact(s) to these listed species and their critical habitat are therefore unexamined. The

project's dust, stormwater, surface flooding, and groundwater place those species at risk from hazardous chemicals.

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-14]*)

(Exhibit 2, p. 11.)

As both Mr. Hageman and Mr. Ringelberg point out, none of the Project's CEQA documents assess the effects of toxic chemical runoff on Bay biota, including steelhead. Where, as here, the lead agency fails to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record because deficiencies in the record may enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." (Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296, 311.)

Further, there is substantial evidence in the reports from Matt Hageman and Erik Ringelberg supporting a fair argument the Project may have significant effects on steelhead from toxic runoff. Again, even if CEQA section 21166 applies, CEQA requires including this issue in the subsequent EIR. The Phase 11 reports showing the site is contaminated with a suite of toxic compounds is significant new information showing the potential for new significant effects not previously identified.[10]

Footnote:

[10] See Letter to Marty Glick re: Phase 2 Subsurface Investigation Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158; Phase II Environmental Site Assessment, Golden State Warriors Arena, Blocks 29-32, Mission Bay, San Francisco, California.

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-15]*)

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3. There is <u>significant new information</u> related to the federal designation of Critical Habitat for the listed anadromous fish, the steelhead (Oncorhynchus [Salmo] mykiss)[9]. The DSEIR failed to identify that the project has the potential to impact the defined Critical Habitat for the steelhead. This designation was completed in 2005 and was not described in the 1998 Mission Bay FSEIR. Neither the potential of the project activities to impact the steelhead (See: Other Biological Resource Issue Areas), or the designation of the status of this plan area was identified in the DSEIR.

Footnote:

[9] Federal Register / Vol. 70, No. 170 / Friday, September 2, 2005 / Rules and Regulations

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-24]*)

The Project Impact Evaluation Modifies the Appendix G Question in a Manner that Eliminates Critical Analysis

The project Impact Evaluation BI-1 fails to follow the language of Appendix G by removing the second half of the question, and reduces the subject matter and detail of its impact analysis accordingly (Pg. 77). The current (2015) Appendix G states:

IV. BIOLOGICAL RESOURCES -- Would the project:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Instead the NOP-IS states:

> "Impact BI-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations. (No Impact)"

The result of this text deletion is that the potential for the project to impact U.S. Fish and Wildlife Service designated critical habitat is not analyzed. Therefore, the potential project impacts to the closest federally designated critical habitat is steelhead Oncorhynchus mykiss are ignored. This habitat runs directly adjacent to the project area. In addition, San Francisco manzanita (Arctostaphytos franciscana) critical habitat is present approximately 2.6 miles to the west and should also have been identified and analyzed. The federal critical habitat analysis is missing, and the provided analysis itself is defective. The potential project's impact(s) to these listed species and their critical habitat are therefore unexamined. The project's dust, stormwater, surface flooding, and groundwater place those species at risk from hazardous chemicals. This issue is discussed in detail in Other Biological Resource Issue Areas. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-32]*)

OTHER BIOLOGICAL RESOURCE ISSUES

The DSEIR is silent on the potential project impacts on offsite fish and wildlife issues associated with stormwater and other discharges from the site to the surrounding area, Mission Creek Channel, and the San Francisco Bay. The DSEIR Appendix MIT Mission Bay FSEIR Mitigation Measures: Applicability to Proposed Project K. Hydrology and Water Quality section (MIT-27 through -29) states that the project would fall under different mitigation measures under different programs (such as the General Stormwater Permit) and that the detailed mitigation requirements from the 1998 FSEIR would not be used. The site's hazardous material history show that the proposed project construction activities pose risks to the environment and its biological resources through the release of hazardous chemical to surface waters, through wind redeposition, stormwater drainage, or unabated stormwater sheet flow above a 5-year design rain event (BBL 2006, LTR 2005). The RMP has not protected these resources because it was not intended to covers these features, followed superseded analytical methods, and even if it was applicable and current, has had implementation failures. Some of these issues are identified in greater detail in a separate document, SWPPP Memorandum BSK Associates, 2015.

There is a direct route from the site to the surrounding area, including the Bay, from dust and stormwater. Stormwater can take several routes off the site, and may enter a sediment trapping system, or not, and flows over a 5-year event run unabated into neighboring properties and the Bay. Currently, there are what appear to be multiple failures to implement and maintain effective Best Management Practices (BMPs) for dust and stormwater. The DSEIR fails to identify these risks and conditions, and fails to identify the potential environmental impacts from the substantially changed new environmental conditions as a result of the site remedial activities. The DSEIR further identifies that there were detailed mitigation measures for these potential impacts as they related to stormwater (but not biological resources) in the FSEIR, but that they deleted the hazardous material protective elements and simplified the sediment management. The site stormwater operations have management issues that need reconciliation, but the evidence shows a likelihood of these contaminants reaching surface waters, despite the prior BMPs and this must be fully analyzed and the mitigation measures modified correspondingly to reflect those significant new conditions in order to protect biological resources, designated critical habitat and listed fish and wildlife. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-33]*)

Response BIO-4: Sensitive Natural Communities

Critical Habitats for Franciscan manzanita and Steelhead

Comment O-MBA11L5-14 accurately quotes from the Initial Study, and Comments O-MBA11L5-32 accurately identify critical habitat for Franciscan manzanita (*Arctostaphylos franciscana*), Unit 6[13], approximately 2.6 miles from the proposed project site, and critical habitat for steelhead (*Oncorhynchus mykiss*) near the project site in San Francisco Bay.[14] The commenter asserts that these habitats should have been identified and analyzed in the Initial Study. OCII disagrees for the reasons described below.

Franciscan manzanita

Critical habitat for Franciscan manzanita is distant from the site, situated in remainders of undeveloped habitat, and characterized by soils formed from serpentinite, greenstone, or Franciscan formation[15] – rock types that do not occur in the fill soils at the edge of the San Francisco Bay or within the project site. As reported in Initial Study, there is no potential for Franciscan manzanita to occur at the project site. (See Initial Study, Appendix A, p. A-2.) The mechanisms for impact to critical habitat situated 2.6 miles from the project suggested by the commenter, including dust, stormwater, surface flooding, and groundwater, are not present. There is no mechanism for the transport of dust, stormwater, surface water or groundwater from the project site to a site located 2.6 miles away, considering the dense urban environment, intervening structures and landscaping, and stormwater infrastructure. For these reasons, Franciscan manzanita was considered but excluded from further consideration as potentially occurring on the site, or for critical habitat to be impacted by the proposed project.

The commenter may be assuming a cautious stance based on the occurrence of Franciscan manzanita that was discovered in the median of the Doyle Drive/Highway 1 interchange during demolition of that structure as part of the Presidio Parkway project (as described in the Initial Study, Appendix A). Understandably, that discovery led biologists in the City to be more careful about deeming seemingly disturbed sites free of special-status plant species. In the case of the Doyle Drive discovery, however, the manzanita occurred on an isolated median that was not safely accessible prior to its demolition, whereas the entirety of the proposed project site is accessible, visible, and with certainty, free of any manzanitas or the particular soils that characterize critical habitat for Franciscan manzanita.

Site boring results document minimal presence of naturally occurring asbestos which is associated with serpentine soils; however that element alone does not provide suitable habitat for this species. Table 1 in Appendix A designates Franciscan manzanita as "absent" due to the lack of supportive habitat as already described, and lack of woody shrubs within the project site other than coyote bush (*Baccharis pilularis*) and willows (*Salix* sp.).

13 78 FR 125, June 28, 2013
14 70 FR 52488, September 2, 2005
15 *Ibid.*

Thus, any further analysis of the potential impacts of the project on Franciscan manzanita in the Initial Study is unwarranted.

Steelhead

Comment O-MBA11L5-24 cites the 2005 designation of San Francisco Bay as critical habitat for steelhead as "significant new information" beyond resources assessed in the 1998 Mission Bay FSEIR. The comment is correct that, in 2005, San Francisco Bay was designated "critical habitat" for the steelhead.[16] This information is "new," in that it post-dates the preparation of the 1998 Mission Bay FSEIR. However, the designation of critical habitat for the steelhead does not result in any new or more severe significant effects that were not previously identified.

Critical habitat is defined in Section 3(5)A of the Endangered Species Act as the specific portions of the geographic area occupied by the species in which physical or biological features essential to the conservation of the species are found. Specific areas outside of the geographic area occupied by the species may also be included in critical habitat designations upon a determination that such areas are essential for the conservation of the species. As part of the designation of critical habitat for steelhead it was determined that the CALWATER Hydrologic Subareas (HSAs) would be the analytical unit used in delineating specific areas in which those pertinent physical or biological features are found. The proposed project site at Mission Bay Blocks 29-32 falls within the San Mateo Bayside HSA, which, as part of the 2005 determination, was excluded from designated critical habitat for Central California Coastal steelhead distinct population segments (DPS). The nearest designated stream critical habitat is Arroyo Corte Madera del Presidio, located approximately 11 miles north, and San Francisquito Creek, about 20 miles south of the project site. Similarly, the San Mateo Bayside HSA, as well as the neighboring South San Francisco Bay HSA, is excluded from the designation of critical habitat for Central Valley steelhead DPS.[17]

There is substantial evidence that the project will not result in any new or more severe impacts to special-status species than those analyzed in the 1998 Mission Bay FSEIR. (See Initial Study, pp. 77 to 79.) The 1998 FSEIR examined the potential that development in the plan area would affect special-status species, including special-status fish species. The 1998 FSEIR included information regarding fish species located in the China Basin Channel and the Bay in the vicinity of the plan area. The 1998 FSEIR noted: "No threatened or endangered fish species are known to inhabit the waters of China Basin Channel nor the San Francisco Bay Estuary in the vicinity of the Project Area." (1998 FSEIR, p. V.L.5.)

The comment states that toxic run-off from the site could adversely affect steelhead. There is no evidence, however, that steelhead are present adjacent to the site. The designation of the Bay as "critical habitat" for steelhead does not mean that steelhead are present immediately adjacent to the project site. (See *North Coast Rivers Alliance v. Marin Municipal Water District Board of Directors*

[16] 70 FR 52488, September 2, 2005
[17] ESA, 2015. *Technical Memorandum: Presence of Steelhead in San Francisco Bay adjacent to the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32, San Francisco, CA.* October 1.

(2013) 216 Cal.App.4th 614 [upholding description of environmental setting for project located in bay]; *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal.App.4th 1209 [rejecting claim that the designation of the project site as "critical habitat" meant the entire site was occupied by protected species].) In fact, as explained below, there is substantial evidence showing that the presence of steelhead near the project site is unlikely. Moreover, as described in detail in Section 13.21, Response HYD-2, stormwater runoff during both construction and operation of the project would be managed in accordance with applicable regulatory requirements which would preclude the generation of polluted runoff from the project site.

Little is known about the transit times and migratory pathways of steelhead within San Francisco Bay. Results from a 2008-2009 study of outmigration and distribution of juvenile hatchery-raised steelhead released in the lower Sacramento River show that steelhead spend an average of 2.5 days in transit time within San Pablo and San Francisco Bays.[18] The study concluded that transit time was greater in the upper estuary (Suisun Bay and Delta) than in the lower estuary (San Francisco Bay). This could be due to lower salinity in the upper estuary that serves as a transition between fresh and salt water, allowing steelhead to transition from freshwater to saltwater. Although information on migratory pathways of juvenile steelhead were largely inconclusive, a positive correlation between smolt captures and water depth was observed between 3 and 37 feet, suggesting that the deeper the water, the more fish were present (up to 37 feet deep).[19] Studies conducted by National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife (CDFW) indicate that the primary migration corridor is through the northern portions of San Francisco Bay (Raccoon Straight and north of Yerba Buena Island).[20,21] Additionally, a recent study evaluating 30-years of Interagency Ecological Program (IEP) monthly mid-water fish trawl data and three-years of acoustic tag data of hatchery-raised salmonids suggests that the presence of outmigrating juvenile salmonids (steelhead and Chinook salmon [*Oncorhynchus tshawytscha*]) along the Port of San Francisco waterfront appeared to be more the result of capture by tidal flow rather than active foraging or intentional swimming to those areas of the Bay.[22,23]

The seasonal timing, short residence time, and depth preferences of migrating steelhead indicate that any presence in the immediate proximity of Mission Bay Blocks 29-32 is likely to be incidental and of brief duration. This is further supported by the exclusion of the San Mateo

[18] Klimley, P., D. Tu, W. Brostoff, P. LaCivita, A. Bremner, and T. Keegan. 2009. Juvenile Salmonid Outmigration and Distribution in the San Francisco Estuary: 2006-2008 Interim Draft Report. Prepared for U.S. Army Corps of Engineers.
[19] *Ibid.*
[20] NMFS (National Marine Fisheries Service). 2015. Biological Opinion for the San Francisco-Oakland Bay Bridge Seismic Safety Project to address the Pier 3 Demonstration Project (WRC-2015-2708).
[21] NMFS, 2012. Biological Opinion for the 34th America's Cup (2011/06500).
[22] Jahn, A. 2011. Young Salmonid Out-migration through San Francisco Bay with Species Focus on their Presence at the San Francisco Waterfront. Draft Report. Prepared for the Port of San Francisco. January 2011.
[23] ESA, 2015. *Technical Memorandum: Presence of Steelhead in San Francisco Bay adjacent to the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32, San Francisco, CA.* October 1.

Bayside and South San Francisco Bay HSAs from designated critical habitat for Central California Coastal steelhead DPS and Central Valley steelhead DPS, respectively.[24,25]

Even if steelhead were present adjacent to the project site, the adverse effects on steelhead described in the comments would not occur. Section 13.21, Response HYD-2, describes how stormwater runoff from the proposed site would be managed consistent with Construction General Stormwater permit and the NPDES permit, how contaminated soils to a minimum depth of 12 feet throughout the project site would be removed during project construction consistent with the Risk Management Plan and Site Mitigation Plan, and how overall implementation of regulatory requirements would prevent the generation of polluted runoff from the project site. The State Water Resources Control Board and the San Francisco Bay Regional Water Quality Control Board (RWQCB) are charged with protecting water quality in the San Francisco Bay Region. These agencies carry out that duty by implementing programs and enforcing regulations and permit requirements to protect beneficial uses of water in the region. The Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin specifically designates marine habitat, migratory fish, and preservation of rare and endangered species, as beneficial uses.[26] In other words, the regulations and permit requirements imposed by the water board, including the Construction General Stormwater Permit and the NPDES program, are specifically designed to protect habitat for fish that may be present in the Bay, including steelhead. Thus, obligatory compliance with the regulations and permit requirements would ensure that the proposed project does not have water quality impacts that adversely affect steelhead in the unlikely event they were to be present in the Bay directly adjacent to the site. Any potential effects associated with contaminated stormwater runoff into San Francisco Bay would be avoided during construction through compliance with the Construction General Permit and implementation of a Stormwater Pollution Prevention Plan (SWPPP) as described in the Section 13.21, Response HYD-2.

Commenter concerns regarding contaminated stormwater runoff on steelhead in San Francisco Bay following development of the proposed project are also addressed in Section 13.21, Response HYD-2, which describes how removal of the top twelve feet of soil from the site and compliance with the requirements of the Risk Management Plan and Site Mitigation Plan would ensure that stormwater runoff would not be contaminated once the project is constructed.

In addition to stormwater runoff, commenters also express concerns for potential impacts on steelhead habitat due to dust or wind deposition, surface flooding, and groundwater. With respect to dust, compliance with the DPH-approved Dust Monitoring Plan (see Section 13.22, Response HAZ-3) and compliance with Mitigation Measure M-HZ-1 regarding any asbestos material that could become airborne would ensure that dust suppression measures required to be

24 70 FR 52488, September 2, 2005

25 ESA, 2015. *Technical Memorandum: Presence of Steelhead in San Francisco Bay adjacent to the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32, San Francisco, CA.* October 1.

26 California Regional Water Quality Control Board (CRWQCB), 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).* Oakland, CA. March 20. Available online at: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf.

implemented by the contractor in accordance with Article 22B of the San Francisco Public Health Code, San Francisco Building Code Section 106A.3.2.6.3, and California's Asbestos Air Toxic Control Measures, 17 CCR Division 3, Chapter 1, Subchapter 7.5 Section 93105, would minimize offsite transport of dust through wind deposition. Issues regarding transport of contaminant due to surface flooding would be addressed the same as those associated with stormwater runoff, described above and in Response HYD-2 (i.e., removal of contaminated soil during project construction and compliance with NPDES permit requirements). With respect to groundwater, as described in Section 13.21, Response HYD-1, groundwater discharges from construction dewatering activities would be treated to meet appropriate discharge limitations, including the requirements of Article 4.1 of the San Francisco Public Works Code and the NPDES permit, to ensure protection of water quality of receiving waters. Once the project is constructed, there would be no exposure to groundwater and groundwater dewatering would not be required because the basement structures would be fully waterproofed and designed for hydrostatic pressures.

Therefore, based on the lack of evidence that steelhead are present in the Bay directly adjacent to the project site and that implementation of protection measures required by established regulations would ensure that hazardous chemicals present in soils on the project site would not affect the Bay from dust, stormwater, surface flooding, or groundwater, the commenters' concerns regarding impacts on steelhead are not justified.

Use of Appendix G Language on Biological Resources Evaluation

Comment O-MBA11L5-32 refers to modification of the impact statement language within the Initial Study's Impact BI-2 with the intent to exclude analysis; this is inaccurate. The commenter cites the first criterion (a) under Biological Resources in Appendix G, but then quotes Impact BI-2 from the Initial Study, which correspondence to a different criterion (b) in Appendix G. In any case, the Initial Study format includes the specific wording of each CEQA significance criterion as part of the checklist question. (See Initial Study, p. 76.) Impacts BI-1 and BI-2 simply summarize the corresponding significance criterion; this action does not change the force of the statement or the outcome of the analysis, which states that no sensitive natural community, including critical habitat for both Franciscan manzanita and steelhead, would be affected by project implementation for the reasons discussed below. Although the Initial Study uses the standard recommended in Appendix G, it should be noted that the Appendix G questions are not required thresholds of significance under CEQA. (See *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068 [Appendix G questions are not required thresholds of significance; an agency has discretion to deviate from Appendix G questions in developing project- or impact-specific thresholds].)

Comments addressing special-status species other than steelhead or Franciscan manzanita and their associated critical habitat are discussed above under Response BIO-3: Special-Status Species.

Subsequent Environmental Review Requirements

Comment O-MBA11L5-15 questions OCII's conclusion that the subsequent environmental review requirements were not triggered with respect to impacts to special-status species, specifically steelhead, resulting from contaminated stormwater runoff into San Francisco Bay and designated critical habitat for the federally-listed threatened fish. The comment states that there is substantial evidence supporting a fair argument that the proposed project will result in new or more severe environmental impacts than those analyzed in the 1998 Mission Bay FSEIR. The comment cites documents prepared by its consultants to support its claim.

The comment is incorrect that the fair argument standard applies. As explained above in Response BIO-1, General Approach to Analysis, the "substantial evidence" standard applies to OCII's determination that the proposed project would not result in any new or more severe impacts triggering the need for subsequent environmental review. "In reviewing an agency's decision not to require additional environmental review pursuant to section 21166, courts are not reviewing the record to determine whether it demonstrates a possibility of environmental impact, but are viewing it in a light most favorable to the agency's decision in order to determine whether substantial evidence supports the decision not to require additional review." (*Latinos Unidos de Napa v. City of Napa* (2013) 221 Cal.App.4th 192, internal quotations and citation omitted; see also *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1049-1050 ["the same substantial evidence standard applies to subsequent environmental review for a project reviewed in a program EIR or a project EIR"]; *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal.App.4th 689, 704 [substantial evidence standard applies when agency has already prepared program EIR and the question is whether implementing later phases of the program will result in new impacts].)

The comment's disagreement with this conclusion is noted. Under the "substantial evidence" standard, such disagreement does not mean OCII's determination is wrong or that additional analysis is required. The court "does not pass upon the correctness of the EIR's environmental conclusions, but only upon its sufficiency as an informative document." (*A Local & Regional Monitor v. City of Los Angeles* (1993) 12 Cal.App.4th 1773, 1793; citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392.) Moreover, as explained by the California Supreme Court, in reviewing for substantial evidence, a court "may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable," for, on factual questions, a reviewing court's task "is not to weigh conflicting evidence and determine who has the better argument." (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 392. 393.) "A project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study . . . might be helpful does not make it necessary." (*Id*. at p. 415; see also CEQA Guidelines, § 15151 ["Disagreement among experts does not make an EIR inadequate"].)

13.19.6 Wetlands (BIO-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-16	O-MBA11L5-25	O-MBA11L5-26	O-MBA11L5-28
O-MBA11L5-29	O-MBA11L5-30	O-MBA11L5-34	O-MBA11L5-31 see also Hazards
O-MBA11L5-35	O-MBA13S4-1		

With respect to potential impacts on the on-site wetland, the NOP/IS indicates the DSEIR will not assess impacts on the wetland even though the 1998 FSEIR did not, and could not have, analyzed the wetland since it was apparently created sometime after 2005. (See Exhibit 2, Figure 1 and accompanying text.)

Typically if there is a potential wetland resource, there would be a formal delineation prior to release of the DEIR so the resource can be analyzed, and appropriate mitigation developed. Here, the NOP/IS claims it may not be jurisdictional (p. 80), and at the same time attempts to suggest mitigation (p. 81) in case it is. But the mitigation suggested is not enforceable, in violation of CEQA. Further, as discussed above, trying to mitigate impacts before assessing their significance puts the cart before the horse. (*Lotus v. Department of Transportation, supra*.)[11]

In addition, the NOP/IS' evidentiary basis for dismissing the wetland from the DSEIR is flimsy, stating:

> Because the excavation depressions on the site are small, isolated features resulting from recently completed hazardous materials remediation activities and are surrounded by paved areas and urban development, these features do not provide the important biological habitat functions and values that are typically associated with federally protected wetlands.

(NOP/IS, pp. 78-79.) But as Mr. Ringelberg points out:

> Conversely, and in rebuttal to their prior assertion that there are readily substitutable habitats nearby, small wetland features can have exceptional ecological value, in particular if they are one of the few remaining features in an urban setting.

(Exhibit 2, p. 6.)

Further, there is substantial evidence in the report from Erik Ringelberg supporting a fair argument the Project may have a significant effect by destroying the on-site wetland. Again, even if CEQA section 21166 applies, CEQA requires including this issue in the subsequent EIR because the presence of the wetland is a change in circumstances since certification of the 1998 FSEIR that gives rise to the potential for new significant effects not previously identified.

Footnote:

[11] Also, the NOP/IS fails to even mention the state wetland policy (WRAPP) under Porter Cologne (fn. 49).

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-16]*)

The Project's impacts adequately are not fully disclosed in the DSEIR

1. The project fails to identify, assess, and mitigate for the proposed project impacts on the biological resources associated with the site water bodies.

2. The DSEIR analysis restates that there are no new or significant changes to biological resources and appears to rely entirely on the NOP-IS (Pg. 1-9; Pg. 5.1-1; Pg. 1-58/59). Despite these statements, there is in fact a significant new impact identified in the DSEIR from the project to birds identified in the text on

Pg. 3-28, "The project sponsor proposes to incorporate bird-safe design measures that would reduce the potential effects of the proposed buildings, signage and lighting on birds." And, that impact requires and was provided a new mitigation measure: The project sponsor shall design and implement the project consistent with the San Francisco Standards for Bird-Safe Buildings and Planning Code Section 139, as approved by OCII. OCII shall consult with the Planning Department and the Zoning Administrator concerning project consistency with Planning Code Section 139." (Pg. 1-59)

Nowhere in the DSEIR is there an analysis of which bird species would be subject to these strike impacts, what time of year, or which types of impacts they were subject to. There was no discussion of the determination of thresholds for the bird injury and/or death associated with the project, and no explanation about how or why the mitigation proposed would be sufficient to reduce those injury and/or deaths below a specified threshold. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-25]*)

The Project's impacts are not appropriately mitigated in the DSEIR

The DSEIR analysis, at a minimum, should have been fully developed to reflect the 2015 federal Wetland Policy modifications, the observations of its own wetland experts, and the numerous state and federal wetland policies and regulations that apply to this site. It is our opinion that the DSEIR fails to mitigate for impacts to waters and wetlands at the site; as well as the potential impacts to biological resources within and around the site through contact with hazardous waste. Effective mitigation measures are available to reduce the impacts below significance. These comments are more fully explained under the NOP-IS analysis below. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-26]*)

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2. There are substantially new ecological conditions at the site that differ from the description provided in the FSEIR, the project analysis under the NOP-IS newly identifies water bodies as wetland features, but fails to provide analysis of the project impacts on those features, define their regulatory status, and identify suitable mitigation according to its regulatory status (NOP-IS, Pg.78; ESA 2014; WRA 2014). For example, if the features are only determined to be regulated by the State there is typically one set of mitigation measures similar to those identified in the IS-NOP, if they are both state and federal, additional measures may be required, however those measures are dependent on a series of tests, and since the project may be subject to CWA 404(b)(1) provisions, significant additional analysis and mitigation may be required.

Instead, the analysis claims that the habitat is: "…limited due to the sparse and ruderal nature of onsite vegetation, as well as the site's location in a densely urbanized environment. While several bird species were observed foraging and hunting onsite, these species are common to San Francisco and would continue to be supported by vegetation communities and water features found in the project vicinity." By its own admission the analysis states that these features would be permanently lost, but that impact doesn't matter because there is some other place for the species to go. It fails to fully define what the biological impacts are, and then identify where (to which nearby features) these species would go.

Further the analysis states: "Because the excavation depressions on the site are small, isolated features resulting from recently completed hazardous materials remediation activities and are surrounded by paved areas and urban development, these features do not provide the important biological habitat functions and values that are typically associated with federally protected wetlands." Conversely, and in rebuttal to their prior assertion that there are readily substitutable habitats nearby, small wetland features can have exceptional ecological value, in particular if they are one of the few remaining features in an urban setting.

This biological resource information in the NOP-IS was only analyzed in a cursory manner, simply recapitulating the site observations, without fully identifying and evaluating the CEQA-required biological resource impacts from the project. Without a full technical understanding of which resources are impacted, mitigation cannot, and indeed was not, adequately developed- as these measures depend on the nature and extent of the resources impacted. The standards of significance are not identified, and fail

to show the application of thresholds to the project impacts for wetlands and other special ecological habitats.

For example, on Pg. 78 of the analysis, the NOP-IS identifies use of the site's open water and wetland by a variety of native plants and animals:

"Site reconnaissance revealed the deepest part of the excavation within this area contains standing water with a mixture of ruderal vegetation described above, and wetland plants, including alkali bulrush (*Bolboschoenus maritimus*), brass buttons (*Cotula coronopifolia*), fat-hen (*Atriplex prostrata*), and saltgrass (*Distichlis spicata*), present around its perimeter. The standing water supports common wildlife as evidenced by a snowy egret (*Egretta thula*) hunting at the water's edge and a black phoebe (*Sayornis nigricans*) sallying insects from a vegetative perch."

Despite these observations, the analysis fails to accurately characterize the site habitats, and reconcile the appropriate list of species regulatory concern (Table 1, Attachment 1). The habitats observed by BSK (2014) and ESA (2014) at the site appear to include: open water, shallow water with emergent vegetation (alkali wetland), mud flats, riparian fringe (locally called scrub), ruderal grassland, seasonal wetlands, and open/disturbed shrubland. California identifies one of these habitat types as sensitive: Bolboschoenus maritimus (Salt marsh bulrush marshes) Alliance, status S3[10] (S3 = Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.)

For illustration of the biological resources analysis defects, as they related to waters and wetlands, the following section provides a site waters and wetland feature history and summary analysis of how the provided data and analysis are insufficient or incorrect.

WATERS AND WETLAND FEATURE HISTORY

The term "wetlands" from a Clean Water Act (CWA) 404 perspective generally means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands typically include swamps, marshes, bogs, and similar areas. These are typically identified using a three-part test, examining the presence of water, wetland (hydric) soil, and wetland dependent (hydrophytic) vegetation, following specific guidance(s). The federal CWA section 404(b)(1) Guidelines list both wetlands and mud flats as types of "special aquatic sites."

A wetland under California's regulations contains the following features, an area that is covered by shallow water or where the surface soil is saturated, either year-round or during periods of the year; where that water coverage has caused a lack of oxygen in the surface soil; and, has either no vegetation or plants of a type that have adapted to shallow water or saturated soil. Some examples are fresh water marshes, bogs, riparian areas, vernal pools, coastal mud flats and salt marshes. In this case, there are both a permanent water body and a seasonal feature (possibly a small complex) with wetland characteristics by the admission of the experts who prepared the environmental documentation for the project. These characteristics meet the definitions contained in the various regulations, including 14 CCR 13577(b), Cal. Pub. Res. Code § 30121. The open water feature and its wetland (hydrophytic) vegetation were verified in the field, and through the use of aerial photos, showing their presence over time, both by season and by year.

The site is within the footprint of the historic Mission Bay, which has been filled in over time (ESA 2014; Pg. 1). The original Bay muds are still found below the site, as evidenced by the site soil borings (LTR 2015; Pg. 13 and Figures A-2 and A-3). The excavation intercepted local shallow groundwater and is evidently maintained by that natural source (LTR 2015; Pg. 14). The site also has seasonal wetland features which appear to be dominated by stormwater. It is not clear that these seasonal features would not be maintained for far longer in the spring, but they have been captured through an excavated trench apparently intended to drain them to the open water body (ESA 2014; Pg. 2). The site "remedial" activities thus captured the local water table and allowed for the expression of open water and wetland features (ESA 2014; Pg. 2). The ESA analysis goes on to specifically identify that the: "…deeper excavation and surrounding shallow depressions within the proposed project site are features that exhibit hydrology and

vegetation characteristics of wetlands. Hydric soil is presumed present due to the year-round inundation and presence of obligate wetland plants." (ESA 2014; Pg. 3)

Federal Jurisdiction-Wetlands created by human actions fall under discrete classes under Federal jurisdiction. Most typically these are agricultural features that are caused by the movement of water from one location to another, such as a dam providing water to a canal constructed in uplands. In this case however, the site was originally a tidal mudflat or estuary wetland which has since reverted back to a wetland (ESA 2014). In addition, even if it was not originally a water or wetland, it currently meets those adjacency, and direct hydrologic connectivity requirements under the Final Clean Water Rule (2015; 33 CFR Part 328 and 40 CFR Parts 110, 112, 116, 117, 122, 230, 232, 300, 302, and 401); and, even manmade wetlands and water bodies have restrictions on discharges under 33 CFR 323.4(b).

Footnote:

[10] https://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-28]*)

There are Federal exemptions for specific construction associated activities. These exemptions (33 CFR 323.4 - Discharges not requiring permits) are invalidated, however: "If any discharge of dredged or fill material resulting from the activities listed in paragraphs (a) (1) through (6) of this section contains any toxic pollutant listed under section 307 of the CWA such discharge shall be subject to any applicable toxic effluent standard or prohibition, and shall require a section 404 permit." (33 CFR 323.4(b)).

The site's water and soils include several chemicals identified under CWA section 307 as toxic pollutants (BBL 2006; LTR 2015).[11] Those chemicals include the following 12 Priority Pollutants found in the Phase II (LTR 2015; Table 4 and Table 5):

1. Benzene
2. Naphthalene
3. Cyanide
4. Antimony
5. Arsenic
6. Chromium
7. Copper
8. Lead
9. Mercury
10. Nickel
11. Selenium
12. Zinc

Footnote

[11] http://water.epa.gov/scitech/methods/cwa/pollutants-background.cfm

Therefore, the site is not exempted under 33 CFR 323.4 because it contains 12 of the chemicals identified as priority pollutants under section 307.

The proponents' consultant, WRA, in a separate analysis, claims exemption from the CWA under yet a different test (without identifying that any exemption is invalidated by the section 307 test described above (WRA 2014; Pg. 2)). WRA states that: "1986 (51 Fed. Reg. 41206) (e) Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States."

The site owner's continuing failure to backfill the excavation and its abandonment for the past decade, despite being under Order No. R2-2005-0028 and its RRMP, constitutes abandonment and its clear reversion to the definition of waters, wetlands and/or other special aquatic site. WRA's explanation, contrary to

demonstrating how the site may be exempted as an incidental construction feature, documents how that feature has been abandoned. Therefore the exemption also does not apply on that basis.

Indeed, there is no merit to the further argument made by WRA (Pg. 4) that: "As described in the RWQCB Order No. R2-2005-0028, the Project Area was to be excavated and backfilled in preparation for future development as part of the overall Mission Bay redevelopment plan." The site was not backfilled. It should be noted by WRA's argument there could never be a case for reversion under the CWA, because any naturalized feature would simply 'be ready' for some postulated future backfilling. The provided analysis fails to show: 1. How the feature has not reverted and 2. How the exemption override under 33 CFR 323.4 does not apply due to the presence of section 307 toxic chemicals. Regardless, WRA is silent on the open water and wetland features in context of the State water and wetland policy and applicable regulations.

California Jurisdiction-California does not have the same exemptions in its waters and wetland framework as exist under the CWA. California derives its authority from different sources (Porter-Cologne Water Quality Control Act and various other Acts) for its policies, and includes all man-made features under its jurisdiction. Therefore the site's water features, regardless of origin, appear to be regulated and protected waters and wetlands of the State. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-29]*)

The NOP-IS acknowledges that the project would result in the fill of a wetland (and without identifying it Pg. 76, its associated fringe riparian zone), however, the proponent has not yet (and does not propose to) characterized the wetlands to determine their jurisdictional status (Pg. 78). The failure to prepare the jurisdictional determination prior to public comment eliminates full public disclosure and the ability to assess the potential reasonableness and efficacy of mitigation measures. Moreover, the specified failure to establish specific (offsite) mitigation may violate CEQA's mandate to impose all feasible mitigation measures, and may fail to meet both Porter Cologne and the Clean Water Act permitting requirements for filling wetlands and waters. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-30]*)

SITE ABANDONMENT AND NEW EXPOSURES

The Site's Failure to Fill the Excavation Has Led to Wetland Formation and New and Unanalyzed Exposures

The site petroleum-related remedial activities exposed the local water table and allowed for the expression of wetland characteristics and the site which have become naturalized over time (ESA 2014; Pg. 2). These activities have resulted in the creation of stockpiles of material adjacent or near to these wetland features that in some cases: "…contains contaminants that exceed hazardous waste threshold concentrations and will require special handling and disposal," (LTR 2015; Pg. 1). These activities took place over several years culminating in a Phase II remedial action that left the excavated area open and abandoned in 2005 (LTR 2015; Pg. 6). The Revised Risk Management Plan (RRMP, BBS; Pg. 2-3 and 2-3) infers that the excavation was backfilled, however, it was not.

The RRMP further identifies that: "1. Because North Terminal, Parcel X4, OAS and 16th Street East OUs are currently under development, interim risk management measures (IRMMs) designed for undeveloped parcels are not relevant to the protection of human health on those OUs. If development ceases or areas are created with uncovered native soils, IRMMs may again be necessary." (BBS 2006; Table 1) The development of the site still has not occurred, and there is no evidence that the IRMMs have been applied.

The site's open water and wetland features are thus a direct result of the abandonment of a site cleanup allowed to revert back to a 'natural state' for approximately a decade. Not only did natural features evolve in response to this abandonment, but the very abandonment created conditions that may have exposed wildlife to a variety of hazardous chemicals through their use of that habitat (LTR 2015). (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-31]*)

CUMULATIVE IMPACTS

In our opinion, the project's impacts on listed species, waters and wetlands, and their loss, were not analyzed in sufficient detail or context to be able to understand what the likely cumulative impacts would be on those and other biological resources. It seems probable that there would be cumulatively considerable impacts from the project given the limited availability of those habitats, and that there are mitigation measures available for those impacts. However, the IS-NOP analysis discusses some broadly applicable mitigation measures for wetlands, then fails to identify or apply any of those mitigation measures in Table 1-2 (NOP/IS Pg. 1-58) Appendix MIT (Pg. MIT-30). There are only two mitigation measures described as applicable to biological resources at the site in the DSEIR, breeding bird use protection and bird strike impacts.

The DSEIR's cumulative impact analysis lacks the degree of detail that the 1988 DEIR completed and fails to apply that analysis to the current waters and wetlands, and contradicts the current DSEIR's findings:

"Wetland habitats in the San Francisco Bay Region continue to be eliminated and altered. Wetlands provide a continuity of habitat between the open waters of the Bay and upland areas. Wetlands increase the wildlife diversity by providing additional habitats, and by providing many of the animals' life history requirements (e.g., feeding, mating, and nesting) in one area." (1988 FEIR Pg. VI.M.12)

According to the project analysis: "The proposed project could potentially result in adverse effects on various bird species through disruption of nests, collisions with buildings, or disorientation from night lighting. These impacts, in combination with other projects along the San Francisco waterfront, could potentially result in cumulative impacts to birds." (NOP/IS Pg. 84) There is no assessment of how many birds or which species would be impacted and how the mitigation would achieve that reduction below the unstated threshold. The document then fails to identify how the mitigation measures would result in a less than significant finding over the cumulative impact analysis area. There is also no supporting analysis for these bird impacts in the 1988 FEIR or 1998 FSEIR. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-34]*)

HABITAT ANALYSIS

No Prior Interior Wetland Presence and Analysis

The 1998 FSEIR states: "This section focuses on the aquatic and wetland habitats of China Basin Channel. Terrestrial habitats in the remainder of the Project Area do not support any significant biological resources, as discussed in the Initial Study (see Appendix A)." At the time of that analysis, there were no documented interior water and wetland features at the site, and therefore the project impacts on waters and wetlands were not analyzed (Pg. II.30). It also is important to note that the mitigation used for the China Basin Channel may, and in some cases may not, be applicable to the project impacts on the current interior wetlands, and thus require significantly new and more detailed analysis for both the impact to these features, and the impacts on their associated species. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-35]*)

As described in the July 24, 2015, comment letter submitted by the Law Offices of Thomas Lippe regarding Hydrology, Water Quality and Biological Impacts ("Hydro Comments"), the Project site contains a wetland feature that is likely jurisdictional and will require permits from the U.S. Army Corps of Engineers ("Corps") and/or the State Water Resources Control Board in order to lawfully fill. (See Hydro Comments, pp. 11- 15, and Exhibit 2, pp. 2-3.) Specifically, the Project site contains a wetland area consisting of a large, permanent pond created by a narrow channel that seasonally contains surface waters and creates further, seasonal wetland features. (Exhibit 2, p. 2.) The area is replete with shrubs and riparian plants, and it serves as habitat for various species, including nesting and foraging sites for native birds. (Id. at pp. 2-3.)

Despite the existence of likely jurisdictional wetlands on the site, the DSEIR does not include the Clean Water Act ("CWA") 404 fill permit that will be needed to fill the wetland in the list of project approvals.

(DSEIR, pp. 3-51 to 52.) The need for a 404 fill permit also requires the Corps to prepare a Coastal Zone Management Act ("CZMA") consistency finding, as required by the Bay Conservation Development Commission ("BCDC") Management Program (see 16 U.S.C., § 1456, subd. (c)(3)), which should also be on the list of project approvals. (See CEQA Guidelines, § 15124, subd. (d).)

Under the CZMA, any applicant for a federal permit to conduct an activity, regardless of its location, will be required to certify its consistency if that activity will affect a land use, water use, or natural resource of the coastal zone. (See, e.g., Amber Res. Co. v. United States (Fed.Cir. 2008) 538 F.3d. 1358, 1363-1364; Southern Pacific Transp. Co. v. California Coastal Com. (N.D.Cal. 1981) 520 F.Supp. 800, 802-803.) Effects on coastal uses and resources need not be direct, but may include "any reasonably foreseeable effect," including "indirect (cumulative and secondary) effects which result from the activity and are later in time or further removed in distance, but are still reasonably foreseeable." (15 C.F.R., § 930.11, subd. (g).) It is likely that this Project will have effects on coastal resources, as the area to be filled is adjacent to the coastal zone. Coastal resources include biological and physical resources, such as vegetation and animals that are found in the state's coastal zone on a regular or cyclical basis. (15 C.F.R., § 930.11, subd. (b).) This Project site provides nesting and foraging habitat for several such species of birds. (See Hydro Comments, Exhibit 2, p. 3.) Thus, a consistency determination is necessary.

In summary, the DSEIR omits necessary project approvals and overlooks impacts associated with the Project's inconsistency with the BCDC Management Program. These omissions from the Project description and lack of analysis must be corrected prior to certification of the EIR. (*Mission Bay Alliance, Soluri Meserve, letter, October 7, 2015 [O-MBA13S4-1]*)

Response BIO-5: Wetlands

Regulatory Jurisdiction of Onsite Features

The comments state that the site contains a wetland area that falls under Clean Water Act jurisdiction and is subject to permitting and mitigation. OCII disagrees. The Initial Study (pp. 79 to 81) discusses the wetland jurisdictional issues related to this site, which states that "features may be exempt from regulatory jurisdiction under the Clean Water Act due to their creation incidental to construction activities." The comments do not agree with this statement. There is no disagreement as to the cause of the excavated area on the site, only whether it is now considered a "water of the United States". Both existing federal regulations and new information support the conclusion that the excavated areas resulting from excavation are not subject to federal or state regulation as "wetlands".

As noted in the Initial Study, the project site has been subject to extensive excavation to remediate hazardous materials contaminants. Past activities within the Pier 64 area which includes Blocks 29-32, specifically the former petroleum terminals and related pipelines, significantly affected environmental conditions. As a result, the Regional Water Quality Control Board (RWQCB) issued several Orders for the investigation and cleanup of the Pier 64 area, including Orders No. 98-028, 99-064, 01-137, and R2- 2003-0018. On June 15, 2005, the RWQCB adopted Order No. R2-2005-0028, which set forth the final cleanup requirements as well as superseded and rescinded the previous Orders. This Order set forth conditions for the removal of contaminants within the subsurface of Blocks 29-32 (referred to as the North Terminal Operating Unit in the Order). Site demolition and remediation activities preparatory to redevelopment of the site were started in 2001 and included demolition of structures, excavation of soils beneath

the former structures to remove petroleum contaminates, stockpiling of soils, and backfilling excavated areas. Approximately 80,000 cubic yards of soil from other portions of the Mission Bay site were used for backfill, but a small portion of one area was not backfilled due to lack of suitable soils and the eventual desire to develop the site such that final excavation and grading would be the responsibility of the future developer. The RWQCB issued a letter of no further action for soil remediation; however, the letter required the implementation of a groundwater monitoring plan to demonstrate that no further action was necessary for groundwater. In 2014, the RWQCB issued Order R2-2014-022, which states that any residual contamination in the Pier 64 Area poses acceptable risks to human health and the environment and can be effectively managed using the existing 1999 Mission Bay RMP.

The previous soil remediation excavations that created a depression on the site are construction activities necessary for the purpose of future redevelopment of the site. The current condition of the site, which as a result of the excavations and groundwater monitoring has now been determined by the RWQCB to require no further remediation beyond implementation of the RMP, is now part of a local land use permitting process involving redevelopment of a former industrial site. Remediation was a necessary precursor for the future use and was mandated by a state agency in accordance with state laws and regulations. Remediation involved extensive construction activity to remove buildings, underground storage tanks, and other related infrastructure. Since that time, redevelopment of the site has been actively pursued by OCII and private developers (i.e., major phase approvals as well as Basic Concept and Schematic Designs for each relevant major phase for Alexandria Real Estate Equities in 2006, and Salesforce.com in 2011, with the most recent approval on January 31, 2012). Currently, the site is subject to planning and study for the construction of the proposed project. At no time has the site been abandoned as a redevelopment project and subject to recapture under the Clean Water Act as a result of construction activities for remediation and preparation for future development. In fact, it is part of a long range plan for the redevelopment of the Mission Bay Plan area and is no different than any other portion of land within Mission Bay that is undergoing preparation for redevelopment.

The exempt nature of the site from Clean Water Act jurisdiction as a wetland was clarified recently when USEPA and Corps issued a definition of "waters of the United States" that became effective on August 28, 2015. While this regulation is now stayed by court order, it clearly states the intent of the USEPA and the Corps in relation to man-made excavations and notes that this and other exemptions codify "features and waters that the agencies have identified as generally not "waters of the United States" in previous preambles and guidance documents". The definition was published in the Federal Register (Vol. 80, No. 124), and states that the excavations subject to ponding due to construction-related activities are not jurisdictional under the Clean Water Act. One of these exemptions is applicable to the excavated depression within Blocks 29-32. It states:

> *Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;*
>
> 33 CFR 328.3(b)(4)

The exemption described in 33 CFR 328.3(b) are applicable "even where they otherwise meet" the definition of waters of the United States, including wetlands. Further, the Federal Register states:

> *This rule does not allow for this case-specific analysis to be used to establish jurisdiction—these waters are categorically excluded from jurisdiction.*
>
> Federal Register, Vol. 80 No. 124, p. 37098

In *Ohio v. U.S. Army Corps of Eng'rs (In re EPA & DOD Final Rule)* (6th Cir. Oct. 9, 2015, Nos. 15-3799/3822/3853/3887) 2015 FED App. 0246P, the Sixth Circuit stayed the Final Rule adopted by U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency: The Clean Water Rule (80 Fed.Reg. 37054 (June 29, 2015)). The court issued the stay to maintain the status quo on the basis that the Clean Water Rule may improperly expand the definition of "waters of the United States." In doing so, the court explained that the "status quo at issue is the pre-Rule regime of federal-state collaboration that has been in place for several years, following the Supreme Court's decision in *Rapanos v. United States*, 547 U.S. 715, 126 S. Ct. 2208, 165 L. Ed. 2d 159 (2006)." (*Id*. at pp. 19-20.) The above-described exemption does not constitute an expansion of the definition of "waters of the United States" and, therefore, was not part of the basis for issuing the stay. Moreover, as explained in the Clean Water Rule, the purpose of the exemption was to codify "features and waters that the agencies have identified as generally not 'waters of the United States' in previous preambles and guidance documents." (The Clean Water Rule (80 Fed.Reg. 37098 (June 29, 2015)).) "Codifying these longstanding practices supports the agencies' goals of providing greater clarity, certainty, and predictability for the regulated public and regulators." (*Ibid*.) Specifically, the exemption is "consistent with the agencies' 1986 and 1988 preambles, which generally excluded pits excavated for obtaining fill, sand or gravel, and there is no need to distinguish between features based on whether they are created by construction or mining activity." (*Ibid*.) Therefore, the Clean Water Rule demonstrates the intent of the exemption was to codify the status quo. While the court stayed the Clean Water Rule pending further judicial proceedings, the rationale for the exemption supports the conclusion that the U.S. Army Corps of Engineers would – whether or not the rule is stayed – conclude the depression, consistent with the 1986 and 1988 preambles, does not constitute a "water of the United States."

The excavations in Blocks 29-32 are related to construction and were constructed on dry land that was used for industrial purposes. The need for the remediation activities was a direct result of the site investigations done in preparation for redevelopment of the Mission Bay area. Building demolitions undertaken to clear the site, and the excavation of subsurface areas below those buildings to remove petroleum-contaminated soil, were all done in furtherance of the redevelopment of the site. The fact that there is now a soil depression left on the site as a result of these site clearing and remediation activities that is now "water filled" and may support wetland vegetation does not subject the site to wetlands jurisdiction under the Clean Water Act.

The commenters state that abandonment of the site serves as a means of recapture under Section 404 under existing regulation. In this case, the site has never been abandoned. Remediation was undertaken as part of the necessary preparation of the site for development and it is currently being permitted for development. There has been no abandonment of the site for its

approved use as part of the Mission Bay Redevelopment Plan area. Further, as explained above, the Clean Water Rule analysis demonstrates the USEPA and Corps longstanding expectation that if a depression is constructed on dry land and is the result of construction activities If a it is not subject to regulation under the Clean Water Act. Based on the facts presented in the Initial Study and as further explained here, the excavation on the project site is not subject to Clean Water Act jurisdiction.

Comment O-MBA-11-L5-29 states that 33 CFR Section 323.4 of the Clean Water Act regulations brings the excavations into Clean Water Act jurisdiction based on the presence of priority pollutants in the vicinity. Section 323.4 of the Clean Water Act regulations lists activities such as agriculture, logging roads, and temporary sediment basins that do not require permits from the Corps of Engineers. Section 323.4 provides for Section 404 permitting of discharges from these otherwise exempted activities if the discharges are to "waters of the United States" and therefore may add pollutants to such waters. Section 323.4 of the Clean Water Act regulations has no relevancy here. It does not define specific types of vegetated and ponded areas that are exempt from jurisdiction under 33 CFR Section 328.3(b)(4) as coming under Clean Water Act Section 404 permitting regulation. Instead, it says that otherwise listed exempt activities, none of which are relevant here, are subject to Section 404 permitting if they discharge to jurisdictional waters. In the case of Blocks 29-32, as discussed above, the recent Clean Water Rule supports the conclusion in the Initial Study that the "water filled" excavations are exempt from jurisdiction and are not considered "waters of the United States". Therefore, regardless of the activity proposed at the site that may affect these depressions, the activities are not subject to permitting under Section 404 of the Clean Water Act. Comments raised regarding the presence of hazardous materials have no bearing on the determination of exemption in this case. Therefore, the comment related to Section 323.4 of the Clean Water Act regulations is not applicable to the question of jurisdiction.

Comment O-MBA11L5-29 states the excavated features may be regulated by the State of California as "waters of the State". This comment ignores the fact that the excavations were the result of a RWQCB order to remediate the site prior to subsequent development. Neither the State Water Resources Control Board nor the RWQCB have a separate wetland regulatory policy. Their role as it relates to wetlands is to certify that actions taken by the Corps are consistent with state water quality regulations and programs. As such, the State has adopted and follows the jurisdictional determinations made by the Corps when issuing water quality certifications under the Clean Water Act or Waste Discharge Requirements under the Porter Cologne Act. The State does not conduct independent wetland determinations and relies on the expertise of the Corps to review and verify wetland jurisdictional determinations.

The State Water Resources Control Board is undertaking the development of a draft wetland policy and, in the most recent version of the policy (Version 6.5 January 28, 2013), states that "the Water Boards shall rely on the Corps' approved wetland delineation within the boundaries of the waters of the United States". In addition, the draft policy proposes to adopt the same exemptions as the Corps and USEPA as contained in 33 C.F.R. Part 328. While not presently approved, these draft documents provide an indication that the Board's approach will be consistent with the positions of the Corps and USEPA on these issues.

The RWQCB does regulate the excavation in question and the water within such excavations via their orders and approvals for cleanup and abatement. The Final Order governing remediation on site (Order No. R2-2014-0022, June 5, 2014) requires continued implementation of the Mission Bay Risk Management Plan (RMP). The 1998 Mission Bay FSEIR and the Initial Study on the proposed project both identify the RMP as the source for mitigation measures to manage water on-site during construction. The RMP foresees the entirety of Mission Bay being redeveloped. The Mission Bay RMP anticipates backfilling of excavations as being necessary during development (RMP pp. 4-1) and requires that dewatering during development be undertaken in accordance with applicable City ordinance and a site-specific SWPPP. The RWQCB has the authority to enforce the RMP (pp. 6 to7). Complying with these standards meets state Waste Discharge Requirements. The Risk Management Plan refers to the entire closure area as "under development". There are specific measures in place in the RMP for sites prior to development. Those pre-development measures are listed as not applicable to the Mission Bay Blocks 29-32 parcel because it is considered under development.

Comment O-MBA11L5-35 states that the mitigation identified in the 1998 Mission Bay FSEIR for the China Basin Channel may be applicable to the projects on the "current interior wetlands." As demonstrated above, the man-made excavations on site are not federal jurisdictional wetlands. Therefore, the fact that the 1998 FSEIR does not discuss wetlands in Blocks 29-32 is not relevant to the analysis as these areas are exempt from any jurisdiction under Section 404 of the Clean Water Act. In addition, the Initial Study does discuss the existing conditions on site, including the man-made excavations created incidental to construction activities. (See Initial Study, pp. 78; 79-80.) Thus, site conditions were adequately discussed and updated in the context of the SEIR.

Comment O-MBA13S4-1 states that the wetland feature on the project site is subject to a Clean Water Act 404 fill permit, and that as part of this permit, the Corps is required to prepare a federal consistency determination for review and concurrence by the Bay Conservation Development Commission (BCDC) in accordance with the federal Coastal Zone Management Act (CZMA). OCII disagrees. As described above, the features on the project site are not subject to permitting under Section 404 of the Clean Water Act. CZMA federal consistency review applies only when both of the following two conditions are met: (1) an activity is either proposed to be undertaken by a federal agency or requires a federal license, permit or other approval, and (2) the activity would have effects on resources in the Coastal Zone. Here, neither of these conditions are met because: (1) for the reasons described above, the site does not contain "waters of the US" and therefore does not require a Section 404 permit or any other federal license, permit or approval, and (2) filling the water-filled depression on the site would have no effect on resources in the Coastal Zone because the site is not located within the Coastal Zone (i.e., in or within 100 feet of the Bay) and does not affect resources in the Coastal Zone because it does not provide ecological functions or values associated with or supportive of coastal resources. Thus, the commenter is mistaken that the SEIR omits necessary project approvals.

Ecological Value of Onsite Features

The commenter states that the water-filled depression is of significant habitat value to local biological resources. In addition, the commenter alleges that the site has returned to its original

wetland condition. OCII acknowledges the commenters' opinions, but disagrees with their interpretation.

The Initial Study fully described the existing conditions at the project site including the excavated area that was created as part of the RWQCB-ordered soil remediation at the former industrial site. (See Initial Study, pp. 18, 77-81.) During the preparation of the 1998 Mission Bay FSEIR, the project site at Blocks 29-32 was developed with industrial and commercial uses, parking facilities and vacant land (including a gravel plant, bus company facility, equipment rental, storage yard, railroad tracks, auto body shop, warehouse, and parking), and the project site did not contain any notable vegetative habitat. Subsequently, demolition and soil remediation has been conducted at the site in anticipation of future development. As described in the Initial Study and in Response to Comment O-MBA11 L5-26, the remediation conducted at the site was for the purpose of redevelopment of the property. Final grading of the site was not completed pending the approval for the development of the property and a portion of the soil remediation contains a water filled construction related feature that was backfilled, but not to the final grade pending the final approvals and design for the contemplated development. As described in the Initial Study, the soil cleanup ordered by the RWQCB resulted in several small, shallow depressions with ephemeral ponding and one deep depression where contaminated soils were removed, but only partially backfilled such that the resulting depression intersects with groundwater and a small amount of water ponds throughout the year. Neither of these features are tidally influenced nor representative of the tidal mudflats that existed at this location over 100 years ago as suggested by the commenter.

The Initial Study describes the existing conditions with regard to the excavated area and determined that "the proposed removal of these features would not constitute a significant adverse impact on wetland habitat resources." (Initial Study, p. 80.) The Initial Study discloses that the soil remediation areas would be developed and explains such development would not constitute a significant impact under CEQA. Mitigation under CEQA is required only for significant impacts. Because development of the soil remediation area that ponded water was found not to be a significant impact, no mitigation is required under CEQA. The determination that development of the soil remediation area would not result in a significant impact on the environment is based upon the fact that the ephemeral depressions and larger water filled depression created recently as a result of remediation activities do not provide any of the physical functions and services associated with functional wetland ecology. These features to not provide important fish and wildlife habitat, stormwater management, flood protection, shoreline stabilization, groundwater recharge, or water purification. Nor do they provide any of the social benefits associated with wetlands, such as wildlife viewing, education or passive recreation opportunities.[27] Unlike the hypothetical scenario envisioned by a commenter –small wetland features with exceptional value and one of the last remaining wetland areas in an urban location – that is not the case here. The project site is primarily used for parking, and not, for example, proximate to the Bay where it could provide quality wetland habitat in an urban location. Instead, it is surrounded by existing buildings, roads, and

[27] WRA, Inc. 2015. *Technical Memorandum: Biological Reconnaissance at the Proposed Event Center and Mixed-Use Development at Mission Bay Blocks 29-32.* October 1.

urban infrastructure that precludes access and use by wildlife other than nuisance scavengers such as raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), Norway and black rat (*Rattus norvegicus, R. rattus*) or common birds accustomed to urban settings. These types of birds are opportunistic foragers and nesters, equally utilizing man-made and natural areas, and are not special-status species as described in the Initial Study.[28] Utilization of the on-site man-made excavated area by these urban bird species is not unique because of the ability for these species to adapt to heavily urbanized environments. For example, many species observed utilizing the man-made excavation are commonly observed in urban environments such as San Francisco. Potential impacts to urban birds protected under the Migratory Bird Treaty Act and nesting in the excavations or vegetation within the entirety of project site are mitigated by implementation of Mitigation Measure M-BI-4a (Preconstruction Surveys for Nesting Birds), as discussed in the Initial Study for non-special-status wildlife. (See Initial Study, pp. 81-83.) See Response BIO-6, below, for further discussion on avian impacts.

Another comment states wetland features can have "exceptional ecological value" especially if it they are one of the few remaining features in an urban setting." This is not an accurate characterization of the site. First, the excavation feature is of recent origin as a result of the remediation activity. It has not been present in this setting sufficiently long to develop habitat complexities that would support sensitive plants or animals. Secondly, there are many wetland features of superior size and quality in the region including those along Mission Creek within the Mission Bay Redevelopment Plan area, at Pier 98 just south of the project, and at Yosemite Slough at Candlestick Point State Recreational Area. Thirdly, the dense urban surroundings at this site make its use by wildlife very limited as discussed in the Initial Study and addressed under Response BIO-2, Setting and BIO-3, Special-Status Species.

Comment O-MBA-11-L5-28 questions why the excavations were not listed as a sensitive habitat based on the description of salt marsh bulrush marshes (*Bolboschoenus maritimus* alliance described in Sawer, Keeler-Wolf, and Evans 2008). The comment's characterization of the excavations on site as salt marsh bulrush marsh is inaccurate. As described in Sawyer, Keeler-Wolf, and Evans (2008) salt marsh bulrush marsh consists of communities dominated (>50% relative cover) by salt marsh bulrush (*Bolboschoenus maritimus)* located in seasonally flooded mudflats and tidal brackish marshes. Salt grass (*Distichlis spicata*) and brass buttons (*Cotula coronopifolia*) are by far the dominant species present in the excavations, and therefore the vegetation community present is better characterized as the *Distichlis spicata* herbaceous alliance, which is listed as an S4[29], and not considered to be limited in distribution and abundance

[28] As described in the Initial Study, the term "special-status" species includes those species that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as "Rare" or "Sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations, or local agencies such as counties, cities, and special districts. A principal source for this designation is the California "Special Animals List".

[29] CDFW employs a method of ranking plant and wildlife species and natural communities (*i.e.*, "elements") as a reflection of the condition (rarity or endangerment) within the state. A state ranking designation of S4 means the element is "apparently secure within California". Available at: (http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp).

within the State. Additionally, this vegetation community is regionally abundant both in areas connected to the San Francisco Bay and in areas disconnected from the Bay.

Mitigation

The comments cite several cases for the proposition that CEQA does not permit an agency to adopt mitigation measures in lieu of assessing a project's potentially significant environmental impacts. The CEQA problems identified in those cases are not present here. For example, in *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645 (*Lotus*), the court found a CEQA violation where the EIR did not identify any standards of significance or apply any such standards to its analysis of the project, and improperly assumed that certain mitigation measures included as part of the project description would avoid any significant environmental impacts. Specifically, the EIR in *Lotus* included "avoidance, minimization and/or mitigation measures" that were incorporated into the project description. Such measures included requirements for "specific construction techniques." The EIR concluded that "no significant environmental impacts are expected as a result of this project with implementation of the stated special construction techniques." (*Id*. at p. 651.) The court determined that the environmental review was insufficient for failing to properly evaluate the project's impacts on root systems of old growth trees. The court determined that the EIR did not include any information enabling the reader to evaluate the significance of these impacts. According to the court, the EIR's fatal flaw was that it "fails to identify any standard of significance, much less apply one to the analysis of predictable impacts of the project." (*Id.* at p. 655.)

The court explained that the agency's error was compounded by combining the mitigation measures into the project description and then concluding that any potential impacts would be less than significant. The EIR simply stated that there would be no significant impacts because the project incorporates "special construction techniques." (*Id.* at p. 657.) By failing to determine the significance of the impacts to the root zones in the first instance (i.e., without these techniques), the court found it impossible to determine whether mitigation measures would be required or to evaluate whether other measures should be considered. (*Id*. at p. 656-658.) The court defined the failure to discuss the significance of project impacts apart from the mitigation elements as a "structural deficiency" in the EIR. (*Id*. at p. 657.) The improper approach "preclude[d] both identification of potential environmental impacts arising from the project and also thoughtful analysis of the sufficiency of measures to mitigate those consequences." (*Id*. at p. 648.) None of the problems identified in *Lotus* are present here. The Initial Study presented facts based on a site investigation that thoroughly described site features and then concluded that removal of these features would not constitute a significant adverse impact because the features do not provide important biological habitat functions and values (pp. 80). Unlike the EIR at issue in that case, the Initial Study describes potential impacts to wetlands habitat in detail. As explained above and in the Initial Study, the overall value of Blocks 29-32 to support or sustain wildlife is limited due to the sparse and ruderal nature of onsite vegetation, as well as the site's location in a densely urbanized environment. While several bird species were observed foraging and hunting onsite, these species are common to San Francisco and would continue to be supported by vegetation communities and water features found in the project vicinity. Because the excavation depressions on the site are small, isolated features resulting from recently completed hazardous materials remediation activities and are surrounded by paved areas and

urban development, these features do not provide the important biological habitat functions and values that are typically associated with federally protected wetlands. As such, the proposed removal of these features would not constitute a significant adverse impact on wetland habitat resources.

The comment also cites *Galante Vineyards v. Monterey Peninsula Water Management Dist*. (1997) 60 Cal.App.4th 1109. In that case, the court found an EIR inadequate where it failed to discuss certain traffic and construction-related impacts, including the impact of fugitive dust on viticultural and horticultural enterprises. Instead, the EIR merely acknowledged that impacts from fugitive dust will be significant and unavoidable generally, without addressing the impact of fugitive dust on viticultural and horticultural enterprises. The court held that a more detailed account of the impacts was required to comply with CEQA Guidelines section 15151, which states that "[a]n EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences."

Similarly, in *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, also cited in the comment, the court held that the EIR failed to provide sufficient information concerning the delivery of water to a proposed sand and gravel mine. In its discussion of water demand, the EIR simply stated that there would be an "increase" in demand for water available from the Santiago County Water District and that this was a significant and unavoidable impact. But there was no information about what the specific impact would be; the EIR was "silent" on this issue. (*Id*. at p. 831.)

Here, in contrast, the Initial Study cited the 1998 EIR, and supplemented that analysis with additional information regarding biological resources at the site. All this information indicates that no wetlands or other sensitive habitat are present at the site. Moreover, the Initial Study disclosed for informational purposes that in the event that regulatory agencies determine that one or more of the features on the site are jurisdictional, as part of the permitting process they may require the project sponsor to achieve "no net loss" of the function and values of the features, and describes the type of actions that could be implemented as compensation for project-related impacts to jurisdictional waters. This language was included in an abundance of caution, even though the conclusion drawn in the Initial Study was that based on then-available information, the depressions on the site were not "waters of the United States." The rationale included in the Clean Water Rule, as discussed above, supports the conclusion of the Initial Study that the site features are not subject to federal wetlands jurisdiction. The type of actions described in the Initial Study that might be required under a permit are not required for the project because there are no jurisdictional waters on the site and impacts to habitat are less than significant.

Other Issues Raised

Comment O-MBA11L5-28 states that "the standards of significance are not identified, and fail to show the application of the thresholds to the project impacts for wetland and other special ecological habitats." This is not true. The Initial Study (p. 76) presents all significance criteria used in the biological resources impact analysis, and these criteria are consistent with CEQA

Guidelines, Appendix G, Section IV. For the analysis of wetlands impacts in Impact BI-3, the Initial Study applies the significance criterion "Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?" Based on this criterion, the project site would have no effect on federally protected wetlands, because as described above, the excavations subject to ponding on the project site are due to construction-related activities and are not jurisdictional under the Clean Water Act. See Response BIO-4, above on sensitive natural communities regarding impacts on other special ecological habitats.

Comment O-MBA11L5-34 asserts that the Initial Study does not address cumulative impacts on wetlands. As previously stated, the water filled depression within the proposed project site is not a jurisdictional wetland feature as it was created as a result of RWQCB-ordered remediation activities, and is of low habitat value. Thus, project implementation would not contribute to the destruction of wetlands in the San Francisco Bay area.

For the portion Comment O-MBA11L5-16 that states that CEQA requires this issue to be in the SEIR (and not the Initial Study), refer to Response BIO-1, above.

For the portion of Comment O-MBA11L5-25 addressing bird impacts, refer to Response BIO-6, below.

13.19.7 Avian Impacts (BIO-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-13	O-MBA11L5-23	O-MBA11L5-25	O-MBA11L5-34
O-Audubon-1	O-Audubon-2	O-Audubon-3	

With respect to migratory birds, the NOP/IS admits that the 1998 Mission Bay FSEIR did not assess the redevelopment Plan's effects on migratory birds. (NOP/IS, p. 81.) In addition, the NOP/IS concedes the Project may have significant impacts on migratory birds because it recommends the adoption of mitigation measures to substantially reduce these impacts, stating: "With implementation Mitigation Measures M-BI-4a, Preconstruction Surveys for Nesting Birds,, and M-BI-4b, Bird Safe Building Practices, the project would not result in any new or substantially more severe significant impacts on resident or migratory bird species than those identified in the FSEIR." (NOP/IS, p. 81.)

This approach violates CEQA in a number of ways. First, as discussed above, the Project is a separate project from the 1998 Redevelopment Plan, or at a minimum, is not within the scope of the 1998 Mission Bay FSEIR. This fact precludes the City from "tiering" to the 1998 FSEIR for any resource, including impacts on biological resources such as migratory birds.[7] Second, trying to mitigate significant impacts before assessing their nature and extent puts the cart before the horse.[8] Third, as discussed above, the NOP/IS's concession that the Project may have significant impacts on migratory birds is substantial evidence supporting a fair argument the Project will have a significant adverse effect on migratory birds; therefore, the City is required to include an assessment of these impacts in the DSEIR.9 Fourth, even if the City's assumption that CEQA section 21166 applies is correct, the addition of a 750,000 square foot sports arena

and an additional 160 foot office tower to the Mission Bay Redevelopment Plan are substantial changes in the Redevelopment Plan that give rise to new potentially significant effects on birds that must be analyzed in the subsequent EIR.

Footnotes:

[7] *Sierra Nevada Conservation, supra.*

[8] CEQA does not permit an agency to simply adopt mitigation measures in lieu of fully assessing a project's potentially significant environmental impacts because mere acknowledgement that an impact would be significant is inadequate; the EIR must include a detailed analysis of "how adverse" the impact would be. (*Lotus v. Department of Transportation (2014) 223 Cal. App. 4th 645, 655-56; Galante Vineyards v. Monterey Peninsula Water Management Dist. (1997) 60 Cal. App.4th 1109, 1123; Santiago County Water Dist. v. County of Orange (1981) 118 Cal .App.3d 818, 831.)*

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-13]*)

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2. The potential use (given the habitat values present and prior observations by others) of the site for at least foraging habitat is identified for Peregrine falcon[5], Red-tailed hawk, American kestrel[6], Great blue heron[7], American goldfinch[8] but its loss is not mitigated for (NOP-IS Appendix A. Table 2 A-8). Note: Two species that do not appear to meet the section 3503.5 Eggs, Nests, and Nestlings Protected under the California Department of Fish and Game Code provisions are identified as such in the text.

Footnotes:

[5] Identified as "present" in 1998 FSEIR Table K.2

[6] Identified as "present" in 1998 FSEIR Table K.2

[7] Identified as "present" in 1998 FSEIR Table K.2

[8] Identified as "present" in 1998 FSEIR Table K.2

(*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-23]*)

The Project's impacts adequately are not fully disclosed in the DSEIR

1. The project fails to identify, assess, and mitigate for the proposed project impacts on the biological resources associated with the site water bodies.

2. The DSEIR analysis restates that there are no new or significant changes to biological resources and appears to rely entirely on the NOP-IS (Pg. 1-9; Pg. 5.1-1; Pg. 1-58/59). Despite these statements, there is in fact a <u>significant new impact</u> identified in the DSEIR from the project to birds identified in the text on Pg. 3-28, "The project sponsor proposes to incorporate bird-safe design measures that would reduce the potential effects of the proposed buildings, signage and lighting on birds." And, that impact requires and was provided a new mitigation measure: The project sponsor shall design and implement the project consistent with the San Francisco Standards for Bird-Safe Buildings and Planning Code Section 139, as approved by OCII. OCII shall consult with the Planning Department and the Zoning Administrator concerning project consistency with Planning Code Section 139." (Pg. 1-59)

Nowhere in the DSEIR is there an analysis of which bird species would be subject to these strike impacts, what time of year, or which types of impacts they were subject to. There was no discussion of the determination of thresholds for the bird injury and/or death associated with the project, and no explanation about how or why the mitigation proposed would be sufficient to reduce those injury and/or deaths below a specified threshold. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-25]*)

CUMULATIVE IMPACTS

In our opinion, the project's impacts on listed species, waters and wetlands, and their loss, were not analyzed in sufficient detail or context to be able to understand what the likely cumulative impacts would be on those and other biological resources. It seems probable that there would be cumulatively

considerable impacts from the project given the limited availability of those habitats, and that there are mitigation measures available for those impacts. However, the IS-NOP analysis discusses some broadly applicable mitigation measures for wetlands, then fails to identify or apply any of those mitigation measures in Table 1-2 (NOP/IS Pg. 1-58) Appendix MIT (Pg. MIT-30). There are only two mitigation measures described as applicable to biological resources at the site in the DSEIR, breeding bird use protection and bird strike impacts.

The DSEIR's cumulative impact analysis lacks the degree of detail that the 1988 DEIR completed and fails to apply that analysis to the current waters and wetlands, and contradicts the current DSEIR's findings:

"Wetland habitats in the San Francisco Bay Region continue to be eliminated and altered. Wetlands provide a continuity of habitat between the open waters of the Bay and upland areas. Wetlands increase the wildlife diversity by providing additional habitats, and by providing many of the animals' life history requirements (e.g., feeding, mating, and nesting) in one area." (1988 FEIR Pg. VI.M.12)

According to the project analysis: "The proposed project could potentially result in adverse effects on various bird species through disruption of nests, collisions with buildings, or disorientation from night lighting. These impacts, in combination with other projects along the San Francisco waterfront, could potentially result in cumulative impacts to birds." (NOP/IS Pg. 84) There is no assessment of how many birds or which species would be impacted and how the mitigation would achieve that reduction below the unstated threshold. The document then fails to identify how the mitigation measures would result in a less than significant finding over the cumulative impact analysis area. There is also no supporting analysis for these bird impacts in the 1988 FEIR or 1998 FSEIR. (*Mission Bay Alliance, Thomas Lippe, letter, July 24, 2015 [O-MBA11L5-34]*)

I am writing on behalf of the Golden Gate Audubon Society in response to the Draft SEIR for the Event Center and Mixed-use Development project at Mission Bay Blocks 29-32. We were pleased to see that this SEIR included planned mitigations for possible impact to resident and migratory birds. Two specific areas are addressed: Mitigation Measure M-Bl-4a: Preconstruction surveys for nesting birds; and Mitigation Measure M-Bl-4b: Bird-Safe Building Practices (refer to details in table 1-2, biological resources, initial study section E13; vol 1 pages 1-58, 1-59). Also the project description in section 3 (page 3-28) mentions Bird-Safe Design: "*The project sponsor proposes to incorporate bird-safe design measures that would reduce the potential effects of the proposed buildings, signage and lighting on birds.*" The bird-safe building codes are important regulations that San Francisco has adopted – making our city a national leader in environmental stewardship. **We hope that you will do your utmost to meet and even exceed the bird-safe building design codes.** (*Golden Gate Audubon, Cindy Margulis, letter, July 17, 2015 [O-Audubon-1]*)

There are some open questions regarding the planned open space near the project (Bayfront Park, and Agua Vista Park). It is not clear if the scope of this SEIR includes those spaces. These are additional areas of possible impact to bird populations on the shoreline. For example, the old piers off the Bayfront Park area served as the last remaining sites in San Francisco where Caspian Terns had nested collectvely. Replacement nesting platforms were proposed to be built by the Port of SF as required mitigation for America's Cup (and hasn't been done as promised yet). The shoreline beach area is also used by birds on migration, so further development of this area could have deleterious impact on wildlife use. Part of the beauty and attraction of these areas is the waterfront, so to the extent that you can incorporate natural waterline and structures that sustain the presence of charismatic wildlife (such as birds), you are serving both the people and the health of the San Francisco Bay. We encourage you to consider native plantings and features that support native wildlife. To the extent that these natural resources are negatively impacted, it will be necessary to mitigate for those impacts. (*Golden Gate Audubon, Cindy Margulis, letter, July 17, 2015 [O-Audubon-2]*)

Thank you for your consideration of comments on this project. We encourage project leaders to be familiar with the biological report which both Golden Gate Audubon had submitted a few years back pertaining to this general area. It is called, *A Summary Report of Avian Surveys Conducted in 2008 at Dilapidated Piers* and *Other Structures along the Port of San Francisco's Southern Waterfront Properties* which was provided to the Port of San Francisco. As the project proceeds, GGAS would like to be kept informed about the results of the surveys, and proposed construction plans to reduce instances of collisions with birds. We can be reached at (510) 843-2222. (*Golden Gate Audubon, Cindy Margulis, letter, July 17, 2015 [O-Audubon-3]*)

Response BIO-6: Avian Impacts

For the portion Comment O-MBA11L5-13 that states the City was prohibited from relying on the environmental analysis in the 1990 and 1998 EIRs, refer to Response BIO-1, above.

The comments state that the SEIR does not provide an adequate analysis of impacts to birds, including resident and migratory birds, disruption of nests, bird strikes and collisions with buildings, or disorientation from night lighting. Those statements are incorrect. The analysis in the Initial Study (Impact BI-4, pp. 81 to 83) is included as part of the SEIR and is summarized in several places. (See SEIR, pp. 1-58 to 1-59, 7-8, and 7-12.)

The analysis in the Initial Study satisfies CEQA requirements for the discussion of potential impacts by explaining that the proposed project could interfere substantially with the movement of native resident or migratory wildlife species resident or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Initial Study then describes the potential impacts to migratory birds in detail, including potential impacts to nesting birds during construction, the potential for bird collisions with buildings of the proposed project, and potential for artificial night lighting effects on birds (Initial Study, pp. 81 to 83). The Initial Study explains that potential impacts to resident and migratory birds such as nest disruption or take of an active nest during project construction would be considered significant without mitigation, and identifies mitigation measures that would reduce the impact to a less-than-significant level by requiring pre-construction nesting bird surveys prior to specific construction activities to identify active nests within or nearby the project site and establishing protective buffers around active nests until young have fledged. Similarly, the Initial Study discloses the potential for the project to result in avian collisions with buildings and disorientation from nighttime lighting, and identifies mitigation measures that would reduce the impact to a less-than-significant level. As the Initial Study notes, such a discussion was included because the 1990 and 1998 EIRs did not expressly address such impacts. The Initial Study augments the 1990 and 1998 EIRs by expressly addressing these issues.

The Initial Study describes potential impacts to migratory birds and explains that the proposed project could interfere substantially with the movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (See Initial Study, p. 81.) The Initial Study explains the specific types of impacts that could occur and proposes mitigation measures that will reduce the impacts to a less than significant level. (See Initial Study, pp. 81-83.)

Because the Initial Study identifies potential impacts apart from the proposed mitigation, the problems identified in *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, which is cited in the comment, are not present here. Further, the Initial Study describes the potential impacts in detail and properly concludes that impacts to bird species would be less than significant with implementation of the identified mitigation measures. Thus, unlike the other cases cited in the comment – *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1123 and *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831 – the Initial Study does not simply make bare conclusions regarding the significance of the impact without providing any analysis or discussion.

The Initial Study also addresses the *Standards for Bird-Safe Buildings* adopted by the City in 2011.[30] The adoption of these standards post-dates the preparation of the 1990 and 1998 EIRs. These standards appear at Planning Code Section 139. The standards address "location-related hazards" and/or "feature-related hazards" for birds on the wing and describe glass and façade treatments, wind generators and grates, and lighting treatments for buildings which can reduce avian collisions. The standards do not apply to the Mission Bay Plan area. Nevertheless, the Initial Study incorporates mitigation requiring compliance with these standards in order to avoid hazards to birds (Mitigation Measure M-BI-4b, Bird Safe Building Practices). The Standards for Bird-Safe Buildings (Standards) state all buildings within an Urban Bird Refuge[31] present location-related hazards for birds. A portion of the proposed project site facing the eastern waterfront occurs within 300 feet of Bayfront Park, which when completed would qualify as an Urban Bird Refuge. Thus, that portion of the project site would require certain treatments when new buildings are constructed within the "bird collision zone"[32]. Some examples include: creating a visual signal, or a visual/noise barrier that alerts birds to the presence of glass objects, such as ceramic dots, or frits[33] applied between layers of insulated glass to reduce transmission of light.

Feature-related hazards include building- or structure-related features that are considered potential "bird traps" regardless of location (e.g., glass courtyards, transparent building corners, or clear glass walls on rooftops or balconies). Buildings or structures that include these elements must treat 100 percent of these elements with bird safe glazing.

Specific bird-safe design elements to be incorporated into the proposed project have not been finalized, but the project sponsor would be required to implement Mitigation Measure M-BI-4b, Bird Safe Building Practices, which requires that the proposed project be designed and implemented consistent with the City's Standards as stated in the Initial Study (pp. 82 to 84). This

[30] San Francisco Planning Department, 2011. *Standards for Bird-Safe Buildings.* Available at: http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%2011-30-11.pdf.

[31] An Urban Bird Refuge is defined in the Standards for Bird-Safe Buildings as: any area of open space two acres or larger that is dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, water features, or wetlands; within 300 feet of open water; and some green rooftops.

[32] The "bird collision zone" is that portion of the building that begins at grade and extends upward for 60 feet.

[33] Frits are lines, dots, or other patterns incorporated into the glass or applied on its surface to make it more visible.

measure would be included in the project's Mitigation Monitoring and Reporting Program (MMRP) and included as a condition of project approval. Implementation of this measure would mitigate the adverse effect of avian collisions to a less than significant level.

The comment states it was inappropriate for the SEIR to rely on compliance with the City's Standards for Bird-Safe Buildings and Planning Code Section 139 as mitigation for the impact. This statement is incorrect. In upholding an EIR's mitigation measures as sufficient, courts have consistently held that a "condition requiring compliance with environmental regulations is a common and reasonable mitigation measure." (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1070 [upholding mitigation measure for riverbed sand gravel mining project which required compliance with Surface Mining and Reclamation Act]; *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 898–912 [EIR relied on required future compliance with provisions and standards of Seismic Hazards Mapping Act and State and City Building Codes designed to reduce risk of ground failure, prevent building collapse, and protect public safety]; *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912, 932–934 [required compliance with applicable Title 24 energy efficiency standards was proper basis for city to determine if project's energy use impacts would be less than significant].) It was therefore appropriate for OCII to rely on the City's Standards for Bird-Safe Buildings and Planning Code Section 139 for mitigation, and compliance with those regulatory requirements provides substantial evidence that the impacts will be less than significant.

The comment requests a seasonal analysis of bird species vulnerable to collision with the proposed event center. The comment also requests a discussion of bird strike thresholds of significance to determine the efficacy of Initial Study Mitigation Measure M-BI-4b: Bird Safe Building Practices, and the project's commitment through implementation of the mitigation measure to comply with the City's adopted Standards even though the Mission Bay redevelopment area is not subject to the Planning Code, including Section 139. Estimating bird strikes on a species-by-species basis for the proposed arena would be speculative given the state of expert knowledge on this topic. Available bird collision fatality data have not been collected using standardized survey methods, making it difficult to compile and correlate information from which to draw sound conclusions of seasonal or species vulnerability that could be broadly applied to buildings in North America, including those similar to the proposed event center. In a recent effort to better estimate annual bird-strike fatality using a systematic analysis of multiple data sources, researchers encountered regional (species vulnerability) and seasonal (higher mortality during periods of migration) data biases due to studies largely conducted east of the Mississippi River and few performing monitoring year-round; such biases reveal the need for more research across seasons and in underrepresented regions including the West Coast.[34] The Loss et al. study is regarded as the most comprehensive analysis on the topic of avian collisions with buildings and refined the annual mortality rate of birds killed by building collisions to between 365-988 million birds from the previously accepted range of between 100 million and

[34] Loss, S. R., T. Will, S.S. Loss, and P.P. Marra (2014). Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. The Condor Vol. 116: 8-23.

1 billion birds.[35] Loss et al. did conclude with a 95 percent confidence interval that high-rise buildings (12 stories or higher), which would include the proposed event center and office towers, caused the lowest total mortality on an annual basis compared with low-rise residential and non-residential buildings (4 to 11 stories tall) and residential buildings (1 to 3 stories tall); however, high rises had the highest median annual mortality rate (24.3 birds per building) versus residential (2.1 birds per building) and low rises buildings (21.7 birds per building).[36] Sheer quantity, density, and the presence of feeders which attract birds are cited as reasons for residential and low-rise buildings killing more birds on an annual basis than high-rises.

While further research is needed to understand the nuances of seasonal and species-specific vulnerability to building collisions, other studies cited by Loss et al. have concluded or agree that avian mortality rates increase with the "percentage and surface area of buildings covered by glass,[37,38,39] the percentage and height of nearby vegetation,[40,41] and the amount of artificial night lighting emitted from windows."[42,43] The understanding that the presence of specific architectural elements increases or reduces bird strikes has resulted in many cities developing and incorporating bird-safe building standards into their municipal codes as the most accepted way to reduce potential collisions on a broad scale.

San Francisco's adopted Standards for Bird Safe Buildings were developed in consultation with the American Bird Conservancy and Golden Gate Audubon and based in part on guidelines published by the New York City Audubon Society, Inc. (May 2007), the Audubon Minnesota (May 2010) and an unpublished draft of the now published American Bird Conservancy National Guidelines (2011). The City's Standards reflect the most current and accepted measures to prevent bird strikes. Committing the proposed project to compliance with these Standards through Mitigation Measure B-MI-4b is intended to reduce bird strikes that would otherwise happen if specific bird-safe design elements were not incorporated into the event center architecture. While the Initial Study identified potential bird collisions as a new impact under the proposed project not previously identified in the 1998 Mission Bay FSEIR, implementation of Mitigation Measure B-MI-4b would avoid or minimize the adverse effects to a less-than-significant level and therefore not constitute a new significant or substantially more severe impact. As already discussed, thresholds to measure the efficacy of bird-

35 Klem, D., Jr., 1990. Collisions between birds and windows: Mortality and prevention. Journal of Field Ornithology 61: 120–128.
36 Loss, S. R., T. Will, S.S. Loss, and P.P. Marra (2014). Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. The Condor Vol. 116: 8-23.
37 Hager, S. B., B. J. Cosentino, K. J. McKay, C. Monson, W. Zuurdeeg, and B. Blevins, 2013. Window area and development drive spatial variation in bird–window collisions in an urban landscape. PLoS One 8:e53371.
38 Klem, D., Jr., C. J. Farmer, N. Delacretaz, Y. Gelb, and P. G. Saenger, 2009. Architectural and landscape risk factors associated with bird–glass collisions in an urban environment. The Wilson Journal of Ornithology 121:126–134.
39 Borden, W. C., O. M. Lockhart, A. W. Jones, and M. S. Lyons, 2010. Seasonal, taxonomic, and local habitat components of bird–window collisions on an urban university campus in Cleveland, OH. The Ohio Journal of Science 110:44–52.
40 Klem et al. 2009
41 Borden et al. 2010
42 Evans Ogden, L. J., 2002. Summary Report on the Bird Friendly Building Program: Effect of Light Reduction on Collision of Migratory Birds. Fatal Light Awareness Program, Toronto, ON, Canada.
43 Zink, R. M., and J. Eckles, 2010. Twin Cities bird–building collisions: A status update on ''Project Birdsafe.'' The Loon 82:34–37.

safe design elements have not been established by industry experts. In the cumulative context of buildings along the San Francisco Bay waterfront, the incremental impact of bird collisions due to the project contributing to a cumulative impact would be reduced to less than significant under the proposed project with mitigation committing the project proponent to incorporate the City's Standards for Bird Safe Buildings, the industry-accepted method to minimize bird-strikes.

Bayfront Park and Agua Vista Park are located within the Mission Bay South Redevelopment Plan area, but is outside of the project site (see SEIR Figure 3-4, p. 3-11). Comment O-Audubon-2 indicating the use of these areas by bird populations is acknowledged. Impacts on biological resources to these areas were addressed in the 1998 Mission Bay FSEIR. For further discussion on the project's relationship to Bayfront Park and other adjacent open space areas, please see Section 13.6, Responses RE-1 and RE-2.

OCII acknowledges the biological report referenced by the Golden Gate Audubon Society (Comment O-Audubon-3) regarding avian surveys along the Port of San Francisco's Southern Waterfront Properties. Preconstruction nesting bird survey results and construction plans for the proposed event center that present specific bird-safe design elements would be available from OCII to Golden Gate Audubon upon request.

As noted in the Initial Study, and in the 1990 and 1998 EIRs, biological resources present in the area generally consist of landscaping or ruderal (weedy) vegetation. Such vegetation does not have significant biological value. (1998 Mission Bay SEIR, chap. V.L.) The Initial Study contains additional, site specific information regarding the project location. As the Initial Study states: "As described above in Impacts BI-1, BI-2, BI-3, and BI-4, the project site currently consists of either paved or undeveloped ruderal areas, with one notable depressed area containing some standing water, and overall habitat supportive of sensitive wildlife and plants is of marginal quality. With the exception of birds, the proposed project, like other projects within the City's urbanized waterfront area, would have little or no potential to affect sensitive plants or wildlife, and therefore would not contribute to cumulative impacts on biological resources in the project area." (See Initial Study, p. 84.)

Foraging and nesting habitat for common, mainly seed-eating birds is adequately characterized in the Initial Study given the disturbed nature of the site and dominance of non-native and invasive plant species. While raptors may have a transient presence within the project vicinity, they would not be strictly dependent on prey inhabiting the project site as resources that would sustain a prey base are also limited. The commenter's reference to juvenile birds observed foraging within the project site is not evidence of significant or high habitat value provided by the site. Each species observed by the commenter is common to the San Francisco Bay Area and highly adapted to the urban environment. Use of the project site by these species is more likely due to the lack of activity onsite versus the diversity and abundance of sustenance. Project development would relocate these transient users, but the loss of such marginal habitat on site would not threaten local avian populations or be considered of significance to necessitate compensatory mitigation. Superior habitat in quality and quantity that would support these same species occurs north of the project site in China Basin Channel. In addition, while not included under the project purview, the adjacent, planned Bayfront Park will likely include landscaped

and natural areas that offer similar or improved foraging and cover opportunities for local birds that would offset any perceived habitat loss associated with the proposed project development.

Comment O-MBA11L5-23 references some species identified in the Initial Study not eligible for protection under CDFG Code 3503.5, which specifically protects birds, eggs, and their nests in the orders Falconiformes or Strigiformes (birds of prey). Double-crested cormorant, great blue heron, American goldfinch, and barn swallow their eggs and nests receive protection under CDFG Code 3503, not CDFG Code 3503.5. Table 2 in Appendix A of the Initial Study (pp. A-8 to A-9) is revised as shown below to reconcile this error (deleted text is shown in ~~strikethrough~~ and new text is underlined).

TABLE 2
SPECIAL-STATUS ANIMAL SPECIES REPORTED OR WITH POTENTIAL TO OCCUR NEAR THE EVENT CENTER AND MIXED-USE DEVELOPMENTAREA AT MISSION BAY BLOCKS 29-32

Common Name *Scientific Name*	**Federal Status**	**State Status**	**Habitat Description**	**Potential to Occur in the Action Area**
Birds				
Double-crested cormorant *Phalacrocorax auritus*	--	WL, 3503 ~~3503.5~~	Coastal areas and inland lakes in fresh, saline, and estuarine waters.	**Low.** No suitable nesting habitat present at the proposed project site though colonies are known to nest on the Bay Bridge. Species may occur in adjacent Bay waters or over the project site on a transient basis.
Great blue heron *Ardea herodias*	--	3503 ~~3503.5~~	Shallow estuaries and fresh and saline emergent wetlands.	**Low.** May forage in standing water of the onsite basin.
American goldfinch *Carduelis tristis*	--	3503 ~~3503.5~~	Cismontane foothills; riparian and cropland habitats.	**Present.** Suitable habitat is present.
Barn swallow *Hirundo rustica*	--	3503 ~~3503.5~~	Open areas from coastal grassland and shrubland to mixed coniferous forests.	**Moderate.** Suitable habitat is present.

This revision does not change the analysis or conclusions presented in the Initial Study.

13.20 Geology and Soils

13.20.1 Overview of Comments on Geology and Soils

The comments and corresponding responses in this section cover topics analyzed in the Initial Study, Section E.14, Geology and Soils, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- GEO -1: Approach to Analysis
- GEO -2: 1998 Mission Bay FSEIR Analysis
- GEO -3: Mitigation for Liquefaction-related Hazards
- GEO -4: Foundation System Design
- GEO -5: Impacts of Pile Driving and Dewatering
- GEO -6: Mitigation for Corrosive Soil
- GEO-7: Construction on a Landfill

13.20.2 Approach to Analysis (GEO-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-11	O-MBA7S2-12	O-MBA7S2-13	O-MBA7S2-18
O-MBA7S2-20	O-MBA7S2-60	O-MBA7S2-62	O-MBA7S2-63
O-MBA7S2-76	O-MBA7S2-77	O-MBA7S2-79	O-MBA7S2-84
O-MBA7S2-86			

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3. Geology and Soils – 1998 FSEIR Chapter 5.H.

According to the NOP/IS, there are no new or more severe Geology and Soils impacts associated with the Project than were analyzed in the 1998 FSEIR. (NOP/IS, pp. 85-86.) Thus, the DSEIR did not address Geology and Soils. (DSEIR, p. 1-9.) The omitted analysis fails under any standard of review because the currently-proposed Project is different than the project described in the 1998 FSEIR and conditions have changed such that the 1998 FSEIR does not adequately describe it. The 1998 FSEIR also relies on outdated data and methodology to analyze Geology and Soils impacts. Moreover, the Project has never been subject to a thorough analysis regarding Geology and Soils Impacts in any document.

As described in the attached reports prepared by geotechnical engineer Lawrence Karp, CE, CEG ("Karp Geotech", attached as Exhibit C), BSK engineering geologist Martin Cline, CEG, and hydrogeologist Kurt Balasek, PG, CHG, QSD ("BSK Geotech", attached as Exhibit D), the 1998 EIR fails to provide adequate analysis of impacts related to Geology and Soils. In particular, the seismic and tsunami risks associated with the site and the Project have not been analyzed or mitigated to an acceptable level. As explained below, these unanalyzed impacts put the public at unnecessary risk and require that the DSEIR be revised and recirculated for public review. The recirculated DSEIR must include a thorough review of geotechnical conditions of this site and the resulting potentially significant impacts and mitigation required in the context of this Project. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-11]*)

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a. Seismic Hazards.

i. The Seismic Standards for the Site have Changed Since 1998.

The NOP/IS claims that there are "no new or more severe effects," ignoring "[s]ignificant changes to the California Building Code and the standard of practice for analyzing ground motion and liquefaction evaluation have occurred since the 1998 SEIR was published." (BSK, comment B1.) At the time the 1998 EIR was written, the San Francisco Building Code was based on different maps and seismic design standards were much less stringent. (Karp Geotech, p. 3.) Later mapping by the State delineates the site as subject to liquefaction-induced ground displacement, and no analysis of the parameters used in 1998 and those applicable today has been prepared to support the claim that there are no new or more severe impacts than discussed in the 1998 FSEIR. The ground motion parameters required of a public assembly use are also much more stringent now, as described by Dr. Karp. (Karp Geotech, pp. 3-4.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-12]*)

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ii. A Complete Geotechnical Investigation Has Not Been Completed.

The proposed Project, which is a "public assembly use" for occupancy greater than 300 requires a different and more thorough analysis with respect to seismic hazards than the "Commercial Industrial (Mixed Use including Retail)" land use designation analyzed in 1998. (Karp Geotech, p. 1; see also DSEIR, Figure 3-3.) The site has not been properly classified for a public assembly use and the prior geotechnical reports prepared for the site underestimate public response. Public assembly uses for occupancies greater than 300 require a different approach to engineering than a typical project.

The evaluation reports prepared for the site after the 1998 EIR do not address the Risk Category III Importance under the Building Code[2] and the data underestimates site response to strong motion. (Karp Geotech, p. 1.) Moreover, later documents, such as the 2011 Langan Treadwell Rollo Geotechnical Investigation, were prepared for previously- proposed office buildings, not an arena. The other more recent report by the same firm states it is "Privileged and Confidential – For Discussion Purposes Only" (BSK Geotech, comment B.2; Karp Geotech, p. 1) and is not stamped by an engineer. In any case, neither the 1998 EIR or these more recent reports classify the current site use or address Risk Level III Importance requirements.

Footnote:

[2] According to the California Building Code, § 1604.5: Risk Category III includes those "[b]uildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300."

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-13]*)

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vi. Hazards of Lateral Spread and Liquefaction Induced Boils Are Not Addressed.

In 1998, mapping for lateral spread risk did not include the site. (BSK Geotech, comment B5.) Liquefaction-induced sand boils have also been identified as a hazard since 1998. (BSK Geotech, comment C4.) These hazards individually and jointly must be analyzed in the context of an EIR in order to fully inform the public regarding the potential impacts of the Project consistent with CEQA. (See generally Pub. Resources Code, § 21002.)

In summary, a thorough analysis of all seismic risks that utilizes the most current methodologies must be performed to adequately protect the public. Candlestick Park provides a relevant case study of the need to ensure thorough analysis and mitigation. In 1985, Lawrence Karp was involved in a study of how Candlestick Park would perform in a serious seismic event, and attended a summary meeting in City Hall with Norm Karasick, the City architect. The discussion was about the cost of rebuilding the deteriorated concrete bleachers to then-current standards. It was recognized that one or more sections could collapse

in an earthquake. Mr. Karasick pointed out that the City probably would not want to spend the money to strengthen the bleachers, stating, "What are the odds there would be an earthquake during a game?" The City ultimately decided to do the work, and on October 17, 1989 the Loma Prieta earthquake occurred during a World Series game. Nobody was injured at the game. Had the City not engaged in that updated study, and mitigated to current standards, the result might have been disastrous. The same practice must be followed here. The City must correct its outdated and deficient seismic analyses in the recirculated DSEIR. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-18]*)

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c. Inadequate Mitigation is Provided for Geology and Soils Impacts.

i. There are No Effective Seismic Mitigation Measures.

No mitigation in the form required by CEQA is included for Geology and Soils Impacts despite the discussion of the need for mitigation measures identified in more recent site-specific geotechnical reports. (BSK Geotech, comment C2.) The NOP/IS relies on a combination of old and inadequate mitigation from the 1998 EIR, compliance with the Building Code, and future geologic and other investigations. All mitigation for the serious impacts associated with Geology and Soils has been impermissibly deferred.

While the NOP appears to point to mitigation developed in 1998 as applicable to the Project, DSEIR Appendix-MIT indicates that there are no mitigation measures listed that apply to the Project's Geology and Soils impacts. Yet the findings and conclusions of the geotechnical work completed for the site by Langan Treadwell Rollo identify numerous conditions requiring mitigation, including: "excessive static and dynamic settlements, liquefaction including sand boils, lateral spread, intense ground motion, shallow groundwater and corrosive soils." (BSK Geotech, comment C2.)

In 1998, the site's soils were identified as highly corrosive, which can damage concrete and metal used in foundation measures and other underground infrastructure. (See Karp Geotech, p. 5.) The NOP/IS states that Mitigation Measure H.7 from the 1998 FSEIR would require testing of the soil. (NOP/IS, p. 86.) Yet, Appendix MIT of the 2015 DSEIR states that this Mitigation Measure H.7 is not required. (DSEIR, MIT-22.)

With no site-specific or Project specific mitigation, the NOP/IS relies primarily on the Building Code to mitigate for seismic impacts. (NOP/IS, p. 87, 88, 90.) Yet reliance on a regulatory standard is inadequate when the underlying impacts have never been analyzed in the first place. While mitigation may properly be deferred in some instances (CEQA Guidelines, § 15126.4, subd. (a)(1)(B)), the "perfunctory listing of possible mitigation . . . [that] are non-exclusive, undefined, untested and of unknown efficacy," is inadequate. (Communities for a Better Environment v. City of Richmond (2010) 184 Cal.App.4th 74, 93.) Here, the DSEIR's lack of seismic analysis addressing this Project and this site severely compounds the problem.

According to the IS/NOP (pp. 87, 93) future geotechnical investigations will disclose the conditions and the required mitigation. Neither the future study nor the alleged future mitigation are enforceable. Moreover, to the extent these references relate to the contemporary geotechnical evaluations and investigations, such as the 2011 Langan Treadwell Rollo report for office buildings, they are inapplicable to the building type now proposed. These more recent reports also clearly state that they are not to be used for design purposes.

According to Dr. Karp, the current documents for the Project do "not include sufficient countermeasures to liquefaction" risks. (Karp Geotech, p. 5.) For instance, ground improvement measures also need to lessen the effects of strong motion in the underlying Bay Mud during earthquakes. (Karp Geotech, p. 5.) Countermeasures could include various actions, but those actions must be compatible with a piling system that would be subject to liquefaction loads and motion amplification from Bay Mud. (Karp Geotech, p. 5.) Specific measures to address differential settlement have not yet been developed. (BSK Geotech, comment B3, B6.) Mitigation must be developed in the context of a contemporary environmental review process. A test program should also be developed to evaluate these measures. (Karp Geotech, pp. 5-6.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-20]*)

As authorized, this review is based on information necessary to update a 1998 EIR for a current project proposed within an area bordered by 3rd, South, and 16th Streets, and Tell)' Francois Boulevard located on Mission Bay fills over Bay Mud. The four blocks are mapped within a seismic hazard area (CDM&G 2000a) requiring investigation (CDM&G 2000b) and mitigation of potential liquefaction hazards (CGS 2008). The site is also subject to amplification of strong motion due to soft ground (2013 SFBC, ASCE 2013). None of the geotechnical engineering reports for the property classify the site as required by current codes and standards.

Proposed Project

The project considered, on Blocks 29, 30, 31 and 32, is an event center and parking for the Golden State Warriors basketball team. The project includes two 160 foot office towers, gatehouse, food hall, and retail spaces. 17 years ago an EIR for another project was prepared (C&CSF 1998) based on information for an unspecified location in Mission Bay as no subsurface investigation for the proposed arena site had been undertaken. Later, the four blocks were investigated and reported (Treadwell & Rollo 2007, 2008a, 2008b) for other projects. Composite reports for four commercial buildings for the four blocks was produced for Alexandraa (Treadwell & Rollo 2008a) and salesforce.com (Langan Treadwell Rollo 2011). Subsequent evaluation reports for the arena (LTR 2014a, 2014b), marked "...privileged ...confidential...", have been issued but they do not classify the site nor do they address the Risk III Importance (ASCE 2013, 2013 SFBC) for a known project primarily intended for public assembly. The recent draft EIR (C&CSF 2015) does not address these issues and the current California requirements for mitigation of seismic hazards have not been followed.

Ground Conditions

Several years after the 1998 EIR was prepared, California's seismic hazard mapping program delineated the area of the proposed project (CMD&G 2000a) as being subject to liquefaction- induced ground displacement resulting from the shaking of saturated granular sediments that comprise the sands and other artificial fills placed in Mission Bay I 00 to 150 years ago.

The property, which was not the subject of a subsurface exploration program when the 1998 EIR was prepared, also includes deposits of Bay Mud of varying thicknesses under the fills that will produce ground amplification from strong motion generated by earthquakes. These hazards are different but related; liquefaction potential (sand) can be mitigated but the structure must be designed to resist soft ground (clay) amplification from strong motion. The data (exploratory boring logs showing materials, sampling, and testing) in the composite reports for the four block area (Treadwell & Rollo 2008a, Langan Treadwell Rollo 2011) verify that both potential hazards exist at the proposed project site.

Seismic Environment

The site is located in the earthquake active San Francisco Bay Area which is seismically dominated by the presence of the San Andreas Fault System. In the theory of plate tectonics, the San Andreas is the boundary between the northward moving Pacific Plate (west of the fault) and North American Plate (east of the fault) which is manifested by the San Andreas system. The faults in the system produce dextral horizontal shear movements resulting from the relative motion of the Pacific and North American plates. Based on history and theory, the land of the proposed project site (sand and rubble fill over Bay Mud)[1] will be subjected to strong shaking from earthquakes generated along both the active San Andreas (8 miles to the west) and Hayward (10 miles to the east) faults.

The northwestward movement of the Pacific Plate relative to the North American Plate persistently causes right-lateral slip across the major faults and deformation between the faults. In the Bay Area, this movement is distributed across a complex system of strike-slip, right lateral parallel and subparallel faults. The San Andreas fault ruptured on 4118/1906 (estimated M = 8.0) and last severely shook the area on 10/17/89; other earthquakes that epicentered relatively recently along the San Andreas fault occurred on 10/1/69 (Santa Rosa, M = 5.7) and 3/22/57 (Daly City, M = 5.3). Maximum moment magnitudes (scaled size of earthquakes in terms of energy released)[2]are San Andreas Mw = 7.9, and Hayward Mw = 6.9.

The U. S. Geological Survey forecasted a 67% probability that one or more earthquakes of M = 7.0 (0.20 to 0.45g) or greater will occur on the San Andreas or Hayward faults by the year 2020 (Peterson 1996).

Shortly afterwards, the Working Group on California Earthquake Probabilities concluded that the Hayward - Rogers Creek fault system has a 32% probability of generating a large earthquake (M = 6.7 to 7.4) by the year 2030. The average earthquake recurrence interval for the East Bay is roughly 220 years, give or take 100 years As for ground rupturing, there has been a quiescent period of seismic activity after the great 1906 earthquake on the San Andreas fault and there has been no rupturing along the Hayward fault for more than 100 years. The 1998 EIR does not cogently explain the seismic environment of the site.

Research, including trenching by the USGS at the Mira Vista Country Club in the Berkeley Hills, indicates that the northern segment of the Hayward fault is overdue for a characteristic major earthquake (Schwartz & Lettis 1998). On 8/24/14, in not unusual ground conditions, a damaging M = 6.0 earthquake occurred off the northern segment in Napa.

Liquefaction (cyclic mobility, which occurs when loose granular soils that are saturated undergo a rapid loss in shear strength as a consequence of ground shaking, and movement amplification of the Bay Mud due to strong motion, will occur at the proposed project site (and nearby sites) during significant earthquakes. This is the reason why California mapped the seismic hazard zones in the state in 2000 and requires mitigation of the seismic hazards.

Ground Motion Parameters

The National Earthquake Hazards Reduction Program ("2009 NEHRP") document "Recommended Provisions for Seismic Regulations for New Buildings and Other Structures" (FEMA 450-1) feeds into the ASCE (American Society of Civil Engineers) 7-10 "Minimum Design Loads for Buildings & Other Structures" (ASCE 2013) development process, and ASCE 7 in turn serves as the primary referenced standard in the 2012 International Building Code (2012 IBC). The 2013 San Francisco Building Code (2013 SFBC) is the City's iteration and adoption of the 2013 California Building Code, which is the State's iteration and adoption of the 2012 IBC. At the time the 1998 EIR was written the San Francisco Building Code was based on superficial maps in the Uniform Building Code (ICBO 1998) when seismic design standards were much less stringent than those of today.

Ground motion parameters, for this review of data in reports of subsurface investigation for the project site, all of which were gathered and presented after the 1998 EIR, were determined for the site using USGS ASCE 7 (2013) based calculation tools derived from published ground motion maps. Seismic ground motion values for use in characterizing and classifying the site for the current project are as follows:

General:

Site Location (USGS):	Latitude 37.7678°N Longitude – 122.3875°W
Risk Category (2013 SFBC Table 1604.5)[3]	III
Seismic Importance Factor I_e (ASCE 7 Table 1.5-2):	1.25

Mapped Acceleration Parameters (2013 CBC §1613.3.1):

Determination of Maximum Considered Earthquake (MCE) spectral response accelerations, mapped at short (0.2 second) person S_s and at a full second (1.0 second) period S_1, for the site:

Determined Site Classification (input Latitude/Longitude):	E
Short period (0.20 second) mapped spectral acceleration S_s:	1.500g
Site Coefficient F_a (2013 SFBC Table 1613.3.3(1); function/Site Class E & S_s):	0.900
Adjusted MCE 0.20 second period spectral response acceleration $S_{MS-B} = F_a S_s$:	1.350g
One second period mapped spectral acceleration S1:	0.600g
Site Coefficient F_v (2013 SFBC Table 1613.3.3(2); function/Site Class E & S_1):	2.400
Adjusted MCE one second period spectral response acceleration $S_{MJ-B} = F_v S_1$:	1.440g

Design Spectral Response Acceleration Parameters (2013 SFBC §1613.3.3):

Site Classification definitions are dependent on geotechnical data (2013 SFBC § 1613 .2.1; ASCE 7 §§20.3.2, 20.3.3(3) [softer soil category to be used due to differing criteria][4].

Defined Site Classification (2013 SFBC §1613.3.2 & ASCE 7 Table 20.3-1):	E
Site Coefficient F_a (2013 SFBC Table 1613.3.3(1); function/Site Class E & S_s):	0.900
Adjusted MCE 0.20 second period spectral response acceleration $S_{MS-D} = F_aS_s$:	1.350g
5% damped short period design spectral acceleration $S_{DS} = 0.67S_{MS-D} = 0.67(1.350)$:	0.905g
Site Coefficient F_v (2013 SFBC Table 1613.3.3(2); function/Site Class E & S_1):	2.400
Adjusted MCE one second period spectral response acceleration $S_{M1-D} = F_vS_1$:	1.440g
5% damped short period design spectral acceleration $S_{D1} = 0.67S_{M1-D} = 0.67(1.440)$:	0.965g

Seismic Design Categories (SDC); Risk Category III, $S_1 \geq 0.75$ (2013 SFBC §1613.3.5, ASCE 7 §11.6):

Determination of Seismic Design Category (SDC) is based on occupancy or use and level of expected soil/rock-modified seismic ground motion at the site (adjusted per ASCE 7 § 11.6).

Short period response acceleration SDC_{DS} (2013 SFBC Table 1613.3.5(1) adjusted):	E
One second period response accel. SDC_{D1} (2013 SFBC Table 1613.3.5(2) adjusted):	E

Mapped MCE Geometric Mean Peak Ground Acceleration PGA (ASCE 7 § 11.8.3, 2013 SFBC § 1805.5.12(2)):

PGA (USGS output):	0.523
Site Coefficient F_{PGA} (Site Class E, ASCE Table 11.8-1, PGA ≥ 0.50):	0.900
Peak Ground Acceleration adjusted for site class effects $PGA_M = F_{PGA}PGA$:	0.471g

The above ground motion parameters, reporting just recently required per ASCE 7 (ASCE 2013) where applicable under 2013 SFBC § 1805 .5 .12, and calculated for a structure having an occupant load greater than 300, must be used for analysis in a new EIR. Lateral force resisting systems must meet seismic detailing requirements and limitations set forth in ASCE 7 (2013 SFBC §1604.10).

Footnotes:

[1] A layered sequence of soft, plastic, expansive sediments forming the bottom of San Francisco (often referred to as "Younger Bay Mud"). Bay mud is a very weak, compressible soil,consisting of clay-sized and silt-sized particles interspersed with stringers and pockets of peat, fine sand, and minor amounts of gravel, and having a water content ranging from 30 to 92% (commonly 50 to 60% in the uppermost 50 to 100 feet of the deposit).

[2] The moment magnitude scale is used to measure earthquake magnitude Mw taking into account the size of the fault rupture, the stiffness of rock, and the amount of the movement of the fault using values that can be estimated from the size of several types of seismic waves; while the older Richter scale is a numerical scale used to measure the magnitude M of an earthquake using values based on the size of the earthquake's largest seismic waves.

[3] "Buildings and other structures that represent a substantial hazard to human life in the event of failure."

[4] Langan Treadwell Rollo 2011 (ASCE 7 Table 20.3-1):

B 29-8 8/31/11 Bay Mud, soft-wet 12-35' (21'>10')
B 32-1 5/1/07 Bay Mud, soft-wet 11-42' (31'>10'), MC=57% (>40%)
B 30-4 5/5/07 Bay Mud, soft-wet 25-50' (25'> 1 O'), MC=63-74% (>40%)
B 31-4 9/1/11 Bay Mud, soft-wet 12-35' (23'>10'), *s,,=400* psf(<500 psf)

Treadwell & Rollo *2008a* (ASCE 7 Table 20.3-1):

1030 (AGS) 3/1/00 Bay Mud, moist-soft 22-51' (29'> 1 O'), PI=58% (>20%)
1031 (AGS) 2/29/00 Bay Mud, moist-soft 16-55' (39'> IO'), PI=38-62% (>20%)

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-60]*)

The latest composite report for the site (Langan Treadwell Rollo 2011) anticipated four buildings. Alternative mitigation measures were recommended in the report for those buildings including "rapid impact compaction" ("RIC") "stone columns" and "compaction grouting". A more appropriate countermeasure, deep soil mixing of slurry at depth, has been suggested (Langan Treadwell Rollo 2014a). Gravel drains in backfilled bored holes to dissipate pore pressures are an effective countermeasure to liquefaction (Seed & Booker 1977). However, the proposed arena would probably be supported by piles

arranged in concentric circular or elliptical patterns, and those piles will be subject to not only liquefaction loads from saturated relatively loose granular materials in the sand and rubble fill but from strong motion amplification of the relatively soft cohesive materials of the Bay Mud. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-62]*)

By embedding the piles into a mat capping the piles, and strengthening the liquefiable sand in the fill (not by "compaction grouting" but by permeation grouting using microfine cement or Portland cement slurry mixed with the sand), and socketing the piles into the Colma (or bedrock near the south end of the site), the effective length of the prestressed concrete piles will be reduced considerably by fixing end conditions and shortening the effective lengths of piles within the Bay Mud. The undersigned believes a program of combination of techniques should be modeled and tested before project approval. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-63]*)

B1. Page 84 Topics: 14 Geology and Soils - lists the impacts for all subsections of the Geology and Soils Impacts as "No New or More Severe Significant Effects." Significant changes to the California Building Code and the standard of practice for analyzing ground motion and liquefaction evaluation have occurred since the 1998 SEIR was published. Geotechnical reports showing details of older analysis versus analysis based on newer ground motion criteria were not available for review. Without a comparison of the two analyses, it cannot be concluded that there are no new or more severe significant effects. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-76]*)

B2. Page 86 last paragraph: identifies the Langan Treadwell Rollo, Preliminary Geotechnical Evaluation Report, dated March 28, 2014 as the preliminary geotechnical evaluation for the project. Our review of that report indicates that the letter report carries the stamp "Privileged and Confidential – For Discussion Purposes Only" Furthermore, the geotechnical evaluation report states in the last paragraph "The conclusions and recommendations presented herein are preliminary and should not be relied upon for design." Other detailed geotechnical reports providing data and analysis were not referenced in the IS or available to review. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-77]*)

B4. Page 87 third paragraph states "As indicated by the project-specific geotechnical evaluation, no substantial changes have occurred nor has new information become available that would result in new or more severe project impacts related to seismic hazards including fault rupture, seismic groundshaking, seismically induced ground failures, or landslides." The referenced 2014 geotechnical report is insufficient in content and analysis to support this statement. A comparison of current and the 1998 derived ground motion design criteria, static and dynamic settlement values was not provided in the geotechnical report or the IS. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-79]*)

The IS failed to properly analyze, identify and address new or more severe significant effects. Recent Geotechnical reports (Langan 2014) identified new and significant impacts (lateral spread for example) that were not addressed in the IS. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-84]*)

C2. Pages 1-59 to 1-60, Table 1-2 Summary of Impacts and Mitigation Measures, Geology and Soils lists Impacts GE-1 through GE-5 and C-GE-1 with significance determinations of LS or Less-Than-Significant Impact (no mitigation required). This is contrary to the findings, conclusions and recommendations found in previous geotechnical evaluations (Langan 2014 and Langan 2011). The Langan geotechnical evaluations identified numerous conditions at the site requiring mitigation measures. The items included excessive static and dynamic settlements, liquefaction including sand boils, lateral spread, intense ground motion, shallow groundwater and corrosive soils. The Langan 2011 report presented numerous mitigation measures requiring extensive ground improvement modifications, specialized foundation design, dewatering and excavation shoring. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-86]*)

Response GEO-1: Approach to Analysis

The commenters state that the SEIR and Initial Study should present a thorough analysis of all seismic risks using current methodologies, and should not rely on compliance with building code requirements for addressing seismic risks. The commenters also raise a number of technical engineering issues, and express concern that, despite the huge investments at stake, the project might be constructed in a manner that leaves myriad geological problems unsolved. OCII disagrees and believes these concerns are unfounded.

There is a well-established regulatory framework and permitting process in place, enforced through the San Francisco Department of Building Inspection (DBI) Site Permit process and the San Francisco Building Code, which would require the detailed construction plans for the event center to be designed to current building code requirements for a "public assembly use" occupancy that would withstand seismic and geotechnical hazards as discussed in Impact GE-1 of the Initial Study. The extensive permitting and inspection process also would ensure that the building is constructed in accordance with the approved construction plans. The overall approach to analysis used in the Initial Study has been found to be legally adequate in numerous legal cases as explained further below. (See, e.g., *San Francisco Tomorrow v. City and County of San Francisco* (2014) 229 Cal.App.4th 498, 525.)

The San Francisco Building Code, referenced below, consists of the 2012 International Building Code as amended by the 2013 California Building Code (provided in Title 24 of the California Code of Regulations, Part 2) with amendments by San Francisco that address local requirements. The San Francisco Building Code also incorporates the 2012 International Residential Code as amended by the 2013 California Residential code and as further amended by San Francisco amendments(Ordinances 254-13 and 255-13, operative January 1, 2014.).

San Francisco Site Permit Process

As disclosed in the Preliminary Geotechnical Evaluation[1] of the site and in Impact GE-1 of the Initial Study (pp. 86 and 87), the project site is subject to the same seismic hazards as noted in the

[1] Langan Treadwell Rollo, Preliminary Geotechnical Evaluation, Block 29-32 Mission Bay, San Francisco, California. March 28, 1014.

comments, including ground shaking, liquefaction and related hazards, lateral spreading, and seismic ground settlement. The Initial Study also explains that the site is located in a liquefaction potential zone identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990. As discussed in Impact GE-1 of the Initial Study, in accordance with the extensive regulatory scheme to which the public assembly use building must comply, a site-specific geotechnical investigation and seismic analysis would be conducted to identify the site specific measures based on the specific detailed design of the building that are appropriate to address these effects and identify specific seismic design criteria for the structures.

The site specific geotechnical investigation is a standard requirement of the DBI for all new buildings as discussed in the DBI Information Sheet titled "Geotechnical Report Requirements,"[2] and is a requirement of Section 1803 of the San Francisco Building Code, which addresses soils and building and foundation systems. Under the building code, the investigation must address seismicity, liquefaction, corrosive soils, and other geological conditions present at the site. Section 1803.7 of the San Francisco Building Code requires completion of a geohazard report identifying geologic hazards and seismic conditions that must be addressed in the project design. The report must be prepared by a California-certified engineering geologist in consultation with a California registered geotechnical engineer. The report must consider the most recent version of California Geological Survey Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California for sites located within a seismic hazard zone. Section 1803 is detailed and establishes specific requirements that the assessment must cover as explained further below.

The geotechnical and seismic recommendations of the investigation would be consistent with current building code requirements for Risk Category III buildings, which would be ensured through DBI review of the building permit application submittals as discussed in the DBI Administrative Bulletins AB-032 (Site Permit Processing)[3] and AB-082 (Guidelines for Procedures for Structural Design Review).[4] As explained in AB-032, construction work at the site is controlled and scheduled by the DBI through the Site Permit process. The first step of the Site Permit process is submittal of a Site Permit submittal package that includes a Structural Design Criteria Document. AB-082 specifies that under the San Francisco Building Code, the DBI can require review of this document by an independent registered design professional in some cases. The Site Permit is not issued until the DBI is satisfied that the submittal package meets all code requirements.

The issuance of the site permit, the first step in the DBI's process, does not allow any actual construction on site. Construction of specific elements of the project are addressed through addenda to the overall building construction plans. Addenda to the site permit are required for

[2] City and County of San Francisco Department of Building Inspection, Information Sheet, Geotechnical Report Requirements. May 20. 2015.
[3] City and County of San Francisco Department of Building Inspection, Administrative Bulletin AB-032, Site Permit Processing. June 4, 2012.
[4] City and County of San Francisco Department of Building Inspection, Administrative Bulletin AB-082. Guidelines and Procedures for Structural Design Review. March 25, 2008.

each specific phase of construction. Each addendum to the site permit must be approved separately by the DBI for that phase of the construction process to proceed. Addenda are required to address grading, foundation design, superstructure design (basic building and structural frame), mechanical and electrical systems, and any work excluded from the superstructure and mechanical and electrical system addenda (a final addendum).

The 2014 Langan Treadwell Rollo Geotechnical Evaluation provides recommendations regarding foundation and building design in order to comply with applicable codes. These recommendations will be incorporated into the design of the event center and other buildings, including the sub-surface facilities and the designs will be submitted to the DBI for its approval. The following discussion identifies specific San Francisco Building Code standards to be incorporated into the design of the event center and other buildings at the site to address the identified hazards.

Liquefaction and Related Hazards. As noted in Impact GE-1 of the Initial Study, the site is in a zone of potential liquefaction per the California Department of Conservation's City and County of San Francisco Official Map dated 17 November 2000.[5] Guidelines for evaluating liquefaction hazards in this zone are provided in Special Publication 117A of the California Department of Conservation.[6] San Francisco Building Code Section 1803.5.12.2 (2013) provides further specifications for addressing liquefaction and related hazards. This section of the building code references the American Society of Civil Engineers/Structural Engineering Institute design standard "Minimum Design Loads for Buildings and Other Structures" (ASCE/SEI 7-10). San Francisco Building Code Section 1803.5.12.3 and ASCE/SEI 7-10 Section 11.8.3.3 require an assessment of potential consequences of liquefaction and soil strength loss. Design measures to be discussed are specified in San Francisco Building Code Section 1803.5.12.4 and ASCE/SEI 7-10 Section 11.8.3.4. The event center and other buildings on the site would be engineered to protect against the effects of liquefaction and related hazards in accordance with these standards. The engineered design must be approved by the DBI and in order to approve the design, the DBI must conclude that these standards have been met.

The proposed design would include a deep foundation that would extend below the soils that are subject to static and dynamic settlement and gain capacity on the underlying competent geologic materials. In addition, a structure slab would be designed to span between pile caps and would not rely on the ground for support. This design would address the potential for settlement due to liquefaction. Lateral pile capacity accounts for the loss of the strength in the potentially-liquefiable soils.

The basement excavations plus the working pad thickness would be sufficiently deep to remove the majority of the soil that would be subject to lateral spread. The remaining soil that is shown to

[5] California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000.

[6] California Department of Conservation. Guidelines for Evaluating and Mitigating Seismic Hazards in California. Special Publication 117A. 2008. Note that Special Publication is an update of the 1997 Special Publication 117 that is referenced in Section 1803.7 of the San Francisco Building Code.

be weak enough to be subject to lateral spreading does not create a continuous layer. As a result, lateral spreading should not occur.

Excessive static and dynamic settlements would be evaluated per ASCE/SEI 7-10 Section 11.8.2.c. Recommendations would be provided to mitigate the effects of settlement per ASCE/SEI 7-10 Section 11.8.2. By pile-supporting the structure and using a structurally-supported floor slab, the structure would not experience excessive settlement. These recommendations would be subject to review and approval by the DBI.

Earthquake Design Requirements. In accordance with the San Francisco Building Code, the structural design requirements of a building that address earthquake effects such as groundshaking are determined on the basis of the Site Class and other seismic parameters. The Site Class is determined in accordance with San Francisco Building Code Section 1613.3.2 and the referenced ASCE/SEI 7-10 Chapter 20. Based on the site soil properties, the site is designated Site Class F in accordance with ASCE/SEI 7-10 Section 20.3.1. The site-specific ground motion parameters for seismic design are required to be performed in accordance with ASCE/SEI 7-10 Chapter 21, per ASCE/SEI 7-10 Section 20.2. Earth pressures including a dynamic seismic lateral earth pressure due to design earthquake ground motions are required for below-grade walls per ASCE/SEI 7-10 Section 11.8.3.1. The site-specific geotechnical report would provide seismic design requirements for the project in accordance with these specifications. The engineered design of the event center and other buildings would be in accordance with the seismic design recommendations and would be reviewed by the DBI to confirm that these specifications have been incorporated into building design.

Shallow Groundwater. Based on previous investigations of the project site, groundwater is encountered at depths of about 6 ½ feet to 7 feet.[7] Therefore, the foundation walls and floor slabs would be waterproofed and designed to account for the hydrostatic pressures from shallow groundwater per San Francisco Building Code Section 1805.3. This design requirement would be confirmed by the site-specific geotechnical investigation conducted in accordance with Section 1803.5 of the San Francisco Building Code, and the design would be subject to review and approval by the DBI.

Corrosive Soil. If corrosive soils are identified by the site-specific geotechnical investigation conducted in accordance with Section 1803 of the San Francisco Building Code, in-ground improvements would be designed to account for the corrosive environment. Methods to design sub-surface facilities to account for corrosive soils include use of sulfate-resistant cement, cathodic protection, and the use of protective coatings. The design will be subject to review and approval by the DBI.

The SEIR considers that impacts related to seismic hazards such as ground shaking and seismically-induced ground failure (including liquefaction, lateral spread, and seismically-

[7] Langan Treadwell Rollo. Preliminary Geotechnical Evaluation, Block 29-32 Mission Bay, San Francisco, California. March 28, 2014.

induced settlement) would be significant if the project would expose people or structures to substantial adverse effects related to these hazards. Compliance with the above building code requirements, which are enforceable through the DBI's Site Permit process, would ensure that people and structures would not be exposed to such adverse effects. Therefore, as discussed on p. 87 of the Initial Study, impacts related to seismic hazards would be less than significant and no further analysis of seismic risks is required. Further, the project would not result in new or more severe significant impacts related to seismic and geotechnical hazards than previously identified in the 1998 Mission Bay FSEIR; in fact, the project would result in a lower risk from seismic and other geological hazards than disclosed in the 1998 FSEIR because it would be subject to newer building codes that are more protective than the building codes in effect at the time the 1998 Mission Bay FSEIR was published, as noted by the commenters.

As also noted in the comments, previous geotechnical investigations of the site have identified seismic and geotechnical hazards and included recommendations for the design of the specific projects previously analyzed (not the proposed project). Some commenters also provided recommended ground motion parameters, soil treatment, and pile design features to be addressed in the project design. These comments are noted. However, the project sponsor's geotechnical engineer would determine the specific seismic design criteria and measures to address seismic hazards for the proposed project based on the site-specific geotechnical investigation and seismic analysis for the proposed structures as discussed above. Previous geotechnical investigations conducted at the site for other projects would only be used to the extent that the information is applicable to the proposed project, and all seismic design analyses would be conducted according to current San Francisco Building Code requirements. This would ensure that geotechnical and seismic hazards are appropriately addressed in the structural design and foundations for the proposed project in accordance with current building code requirements.

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead and live loads. Therefore, structures designed in accordance with the San Francisco Building Code are designed to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. While conformance to the current building code recommendations cannot guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake, it is reasonable to expect that compliance with the San Francisco Building Code will result in a well-designed and well-constructed structure that would not collapse or cause loss of life in a major earthquake.

Adequacy of Approach to Analysis

The commenters are requesting a level of information and analysis that goes far beyond what CEQA requires of EIRs, which are supposed to strike a balance between giving the interested public too little information and too much. "The EIR must achieve a balance between technical accuracy and public understanding." (*Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 28.) Further, environmental review should be undertaken as early in the planning and design process as possible, so that environmental considerations can be taken into

account in the project program and design. (CEQA Guidelines Section 15004.) The level of detail demanded by the commenter is information that far exceeds the type of information available at the overall planning and design stage of a project.

The need to strike a balance regarding the amount of information to provide is evident from a number of provisions of CEQA. For example, CEQA Guidelines section 15124 states that the Project Description portion of an EIR "should *not* supply extensive detail beyond that needed for evaluation and review of the environmental impact," and thus requires only a "*general* description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities." (Emphasis added.) Based on this language, the Court of Appeal has held that it is actually possible for an EIR to provide *too much* information in a project description. (See *Dry Creek Citizens Coalition*, *supra*, 70 Cal.App.4th at p. 36 ["engineered drawings may well supply 'extensive detail beyond that needed for evaluation and review of the environmental impact' in violation of Guidelines section 15124"].)

One purpose behind these requirements limiting the detail in EIRs is to try to make CEQA documents "user-friendly." (*Dry Creek Citizens Coalition*, *supra*, 70 Cal.App.4th at p. 28.) This same concern informs the related requirement that EIRs "be written in plain language," as well as the admonition that EIRs should normally not consume more than 300 pages, even for "proposals of unusual scope or complexity." (CEQA Guidelines, §§ 15140, 15141.) The policy principle that EIRs are intended "to inform . . . the public generally of the environmental impact of a proposed project" (id., § 15003, subd. (c)) would be undermined if EIRs were so long and so technical as to deter all but the most intrepid and sophisticated readers (who also happen to have a lot of time to sort through hundreds or thousands of pages of text and technical materials).

In other contexts as well, courts have recognized that "engineering" and "design" detail can be developed *after* the completion of environmental review. (See *Ocean View Estates Homeowners Assn., Inc. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 400-401 [lead agencies "may leave the details to engineers," as "the design may change many times without requiring further environmental review."]; see also *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884, 910 ["site-specific investigations would also be required before final project design, which would include more detailed evaluations"].)

The courts' approval of the use of "performance standards" as a species of mitigation measure reflects this recognition that, in typical situations, considerable design and engineering work occurs *after* the completion of environmental review. Thus, in some situations, "'the details of exactly how mitigation will be achieved under identified measures can be deferred pending completion of a future study.'" (*Oakland Heritage Alliance*, *supra*, 195 Cal.App.4th at p. 884, 910, quoting *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 621.) As long as future studies are prepared with the goal of ensuring compliance with enforceable performance standards identified during the CEQA process, lead agencies and applicants can appropriately develop further design and engineering information after the public process is over and the project has been approved.

Among the performance standards that can be used in this manner are standards already enshrined in federal or state statutes, regulations, or enforceable codes. Many decisions issued by California courts have therefore recognized that an agency may rely on compliance with existing regulations or requirements in finding a project's impacts would be less than significant. (See, e.g., *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 1933 [holding agency could rely on project's compliance with Building Code's energy efficiency standards for conclusion that project would not have significant energy impacts, and therefore did not require mitigation]; *Oakland Heritage Alliance*, *supra*, 195 Cal.App.4th at pp. 903-905 [project's compliance with existing laws and regulations provided substantial evidence that seismic impacts would be less than significant]; *Citizens Opposing a Dangerous Environment v. County of Kern* (2014) 228 Cal.App.4th 360, 383-385 [same principle as applied to compliance with Federal Aviation Administration regulations relating to aviation dangers from tall structures]; *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214, 245-246 [federal regulations adopted by the National Marine Fisheries Service supplied adequate "performance standards" for allegedly deferred mitigation measures relating to fish hatchery genetic management]; see also *San Francisco Tomorrow v. City and County of San Francisco* (2014) 228 Cal.App.4th 1239, 1252 [in determining general plan consistency, the City's reliance on building codes and regulations to assist in its determination that a project will reduce potential hazards was proper].) In fact, reliance on compliance with the applicable regulatory framework is common and widely accepted practice. (See *ibid*.; see also *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 411-412 [citing compliance with regulatory standards as adequately addressing hazardous materials at school site].)

As noted above, numerous CEQA cases support the methodology used in Impact GE-1 of the Initial Study (pp. 86 and 87) for assessing geologic and seismic impacts. One in particular, *Oakland Heritage Alliance*, *supra*, 195 Cal.App.4th 884, is worth discussing at length. There, the court upheld an EIR that relied on compliance with existing Building Code requirements in finding seismic impacts would be mitigated to a less-than-significant level. The EIR included a discussion of Building Code requirements intended to promote structural safety in the event of an earthquake. (*Id*. at pp. 908-909.) The EIR explained that, as part of its investigation of seismic impacts, the developer had conducted a preliminary geotechnical investigation to determine overall engineering feasibility and to inform the preliminary designs. (*Id*. at p. 892.) The EIR required that before the issuance of a building permit for any portion of the project site, the developer would submit a design level investigation for the project that would "be in accordance with applicable City ordinances and policies and consistent with the most recent version of the California Building Code, which requires structural design that can accommodate ground accelerations expected from known active faults." (*Id*. at pp. 890-892.) The court noted that the Building Code and city regulations required investigation and recommendations to avoid seismic hazards. (*Ibid*.) The court concluded that compliance with the building code and other regulatory provisions, in conjunction with a geotechnical investigation, provided substantial evidence that the mitigation measures specified in that EIR would reduce seismic impacts to a less than significant level.

Similarly, the discussion of Impact GE-1 within the Initial Study (pp. 86 and 87), by which the City complied with the requirement of CEQA Guidelines section 15128 that an EIR contain "a statement

briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR," identifies the building codes and other applicable regulatory requirements that will ensure impacts are less than significant. As explained in Impact GE-1, the project would be designed in accordance with the recommendations of the site-specific geotechnical investigation that would be required under the San Francisco Building Code. This analysis builds upon, and cites, the analysis of seismic impacts in the 1998 FSEIR which notes that adherence to San Francisco Building Code requirements will address seismic hazards associated with building new structures in an area that is susceptible to earthquakes. (See 1998 SEIR, chap. V.H. [analysis of seismic impacts in Mission Bay plan area].) Thus, as the court in *Oakland Heritage Alliance* found, compliance with the existing regulations and recommendations in the site specific geotechnical investigation provides substantial evidence that these impacts will be less than significant.

Furthermore, compliance with the San Francisco Building Code requirements and related permit conditions is mandatory. It is therefore reasonable to assume that the proposed project will comply with these requirements. (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884 [holding it was reasonable for agency to expect that environmental regulations would be followed].) Moreover, although they are not project-specific mitigation measures, these existing regulatory requirements will be included in the Mitigation Monitoring and Reporting Program (MMRP) for the proposed project, which will further ensure that these requirements are complied with. (Pub. Resources Code, § 21081.6, subd. (a); *Lincoln Place Tenants Assn. v. City of Los Angeles* (2007) 155 Cal.App.4th 425, 446.)

The comments cite to the Langan Treadwell Rollo Geotechnical Evaluation prepared in 2014, and note that the report is marked "Privileged and Confidential – For Discussion Purposes Only." This notation may indicate that, at some point in time, the author intended that the report was intended to be kept confidential. By providing the report to OCII, a privilege (if any) ceased to apply, and the report became a public document. OCII may therefore rely on the report, along with other information in the record, for the information it contains. The notation does not affect the value of this information.

13.20.3 1998 Mission Bay FSEIR Analysis (GEO-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-68 O-MBA7S2-70 O-MBA7S2-72

A1. Section II.20 Summary-Seismicity, fourth paragraph indicates that structures would be supported on piles between 30 and 200 feet deep to reduce the effects of groundshaking and liquefaction. This type of structural support may provide mitigation of liquefaction hazard of the main building structure, however pile support systems do little to provide mitigation from liquefaction and settlement of surrounding utilities/roads and other support systems that may be damaged during a seismic event. Due to the shallow occurrence of the liquefiable layers, sand boils may develop

during a seismic event. Ground settlements due to development of sand boils can be large and unpredictable. Design of these surrounding systems, not proposed to be supported on piles, cannot withstand the effects of sand boils and can lead to excessive and differential settlement without further technical analysis, and mitigation measures such as recompaction. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-68]*)

A3 Section V.H.12 states that "To reduce potential effects in the Liquefaction Hazard Zone, Catellus has committed to construction of major structures in the Project Area on foundations supported by piles driven into dense sands, stiff clays, or bedrock in areas where such materials are too deeply buried by unengineered fill and/or Bay mud to provide adequate support for foundations." The conditions that trigger use of piles and areas where they are needed were not delineated and the method for determining the requirement criteria was not provided. Futhermore, as stated in section A1 above, piles alone may not provide sufficient mitigation for areas surrounding the building structures.

A4. Section V.H.13 states that "If not mitigated as described in Chapter VI of this SEIR, the above-described risks to people posed by seismically induced groundshaking and liquefaction would be significant impacts of the project." Many risks described in Section V.H.13 are from structures/facilities located outside the project area. The mitigation measures presented in Chapter VI of the SEIR are for structures/facilities located in the project area. It is not possible to mitigate hazards to structures located outside the project area by mitigation measures that were developed for structures located inside the project area.

A5. Section V.H.16 states "Some grading of the Project Area, including the excavation of some potentially liquefiable materials and replacement with engineered fill, would occur prior to the construction of underground infrastructure to ensure that the systems could be designed to accommodate expected settlement along their specific routes, and to prevent liquefaction damage." This is vague with respect to which areas will require regrading and how deep the fill replacement extends. The technical criteria that is to be used to determine if an area requires replacement was not provided.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-70]*)

A10. Section VI.88, Table VI.8, K.2b refers to designing connections between pile-supported structures and unsupported sidewalks and driveways to reduce the likelihood of separation due to settlement. This analysis identifies unknown, but high settlements that may occur due to liquefaction and development of surface sand boils. Sand boils occur when liquefied units reach the ground surface and sand is ejected from the ground surface. Settlements due to sand boils can be large and unpredictable and greater than what was presented in the report. Without adequate mitigation for these high unknown settlements, the impacts would be significant.

A11. Section VI.89, Table VI.8, K.2c refers to using flexible connections for utilities serving pile- supported buildings to accommodate the settlement expected. This analysis identifies unknown, but high settlements that may occur due to liquefaction and development of surface sand boils. Without adequate mitigation, the impacts would be significant.

A12. Section VI.89, Table VI.8, K.4 indicates that leveling jacks should be used on buildings with shallow foundations. This measure would not be effective to mitigate differential settlements due to liquefaction or dry seismic shaking settlements. High differential seismic settlements may cause building collapse or the over-turning of structures rendering leveling jacks useless.

A13. Section VI.91, Table VI.8, K.15 states that "As deemed necessary by geotechnical studies, make sandy materials more dense to reduce the potential for liquefaction." This appears to conflict with the requirement of pile-supported foundations. The requirement is vague with respect to

criteria to be used to determine how deep the densification should extend and is not adequate to mitigate a significant impact. Furthermore, the densification methods are not identified nor how this unknown process would work as mitigation.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-72]*)

Response GEO-2: 1998 Mission Bay FSEIR Analysis

The commenter provides a review of the 1998 Mission Bay FSEIR analysis of seismicity impacts and contends that the methodology utilized is outdated. A more thorough project-specific analysis is recommended, and the commenter states that technical criteria should be provided for determining the need to remove potentially liquefiable materials. The commenter also questions the feasibility of several measures discussed in the 1998 Mission Bay FSEIR to alleviate hazards related to seismically-induced settlement. OCII acknowledges this comment. However, as discussed below and in Response GEO-1, the detailed and site-specific analysis that would be conducted as part of the DBI's Site Permit process before construction can proceed, would ensure compliance with current building code requirements. The Mission Bay FSEIR mitigation measures related to geology and seismicity are not applicable to the proposed project.

As identified on pp. 85 and 86 of the Initial Study, the 1998 Mission Bay FSEIR concluded that compliance with building code requirements and construction of pile-supported structures would reduce seismic hazards related to construction of new buildings to an acceptable level. Consistent with the 1998 Mission Bay FSEIR, the analysis presented with respect to Impact GE-1 in the Initial Study (pp. 86 and 87) concluded that that seismic impacts related to the project would be less than significant with implementation of a site-specific geotechnical investigation and seismic analysis and incorporation of the recommendations in these studies into the building design as required by the San Francisco Building Code. The site-specific analysis would include a more thorough review of geotechnical and seismic hazards at the site and provide seismic design criteria for the project. Therefore, the project design would be based on the recommendations of the site-specific geotechnical investigation and seismic analysis, which would be in compliance with the current building codes as described above in Response GEO-1. The building code requirements applicable at the time the 1998 Mission Bay FSEIR was published are not applicable to the proposed project as the project must comply with the current San Francisco Building Code.

The measures identified in Table VI.8 of the 1998 Mission Bay FSEIR to alleviate settlement hazards (discussed in Items A.10 through A.13 of comment O-MBA7S2-72) are mitigation or improvement measures identified in the 1990 MB FEIR that were found to be addressed by existing regulations in 1998 and are no longer applicable to the project. However, in accordance with current building codes, the specific measures to be implemented for individual projects, such as potentially improving the fill materials to resist liquefaction, would be determined on the basis of site-specific geotechnical investigations and seismic analyses in accordance with the Site Permit process described above in Response GEO-1. For additional information on the applicability of these codes, see Response GEO-1.

Item A4 of Comment O-MBA7S2-70 states that it is impossible to mitigate hazards to structures outside of the project area with mitigation measures that are developed for structures located within the project area. The 1998 Mission Bay FSEIR text referred to is on p. V.H.13 and discusses hazards to the public within the project area primarily due to earthquake-induced damage to public transportation facilities and existing infrastructure, including local and regional roadways and bridges. While this impact was found to be significant, it was mitigated to a less than significant level with Mitigation Measures H.1 to H.6 of the 1998 Mission Bay FSEIR, which address requirements for storage of construction equipment for repairing roads and clearing debris; coordination of emergency response plans; preparation of a comprehensive emergency response plan for the entire Mission Bay Plan area; seismic rehabilitation of Fire Station 30; construction of a new fire station; and implementation of measures to facilitate and improve emergency access routes within the Plan area. These are area-wide emergency preparedness and emergency response measures and implementation of these measures is the responsibility of the master developer; they are not applicable to the proposed project, as indicated in Appendix MIT of the SEIR. In addition, the Public Safety Building at Third Street and Mission Rock was completed in the summer of 2014, and satisfies the requirements of Mission Bay FSEIR Mitigation Measure H.5 specifying construction of a new fire station.

Further, as discussed in more detail in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, San Francisco emergency response procedures and evacuation routes are addressed in Impact HZ-3 of the Initial Study (pp. 119 through 121). As summarized in that impact analysis, the City has a published Emergency Response Plan[8] dated 2010 and prepared by the Department of Emergency Management subsequent to publication of the 1998 Mission Bay FSEIR as part of the City's Emergency Management Program. This Plan addresses hazard mitigation and disaster preparedness and recovery, and identifies hazards to which San Francisco is particularly susceptible such as earthquake, hurricane, tsunami, flood, winter storm, and act of terrorism. Implementation of the San Francisco Emergency Response Plan, prepared in 2010 (subsequent to publication of the 1998 Mission Bay FSEIR) would ensure that adequate City resources and escape routes are available for response in the event of a major earthquake on one of the regional faults.

Item A5 of Comment O-MBA7S2-70 states that the discussion of grading to remove liquefiable materials is vague. The required extent of removal and replacement with engineered fill would be determined on the basis of the site-specific geotechnical investigation discussed on p. 87 of the Initial Study and would be conducted in accordance with the Site Permit process described in Response GEO-1.

[8] San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2010. Available at: http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154.

13.20.4 Mitigation for Liquefaction-related Hazards (GEO-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-14	O-MBA7S2-61	O-MBA7S2-68	O-MBA7S2-75
O-MBA7S2-78	O-MBA7S2-80	O-MBA7S2-88	O-MBA7S2-90

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iii. Seismic Risk Is Underestimated.

The site is subject to two geotechnical risks, liquefaction and amplification. (Karp Geotech, p. 2.) The liquefaction risks were not adequately analyzed in 1998 EIR for this Project type, and the 1998 EIR does not analyze amplification. Liquefaction and amplification "hazards are different but related; liquefaction potential (sand) can be mitigated but the structure must be designed to resist soft ground (clay) amplification from strong motion." (Karp Geotech, p. 2.)

With respect to liquefaction, the risk can be mitigated with various ground improvement techniques. (Karp, p. 5.) Techniques include overexcavation and compaction, however the extent of excavation needed to fully address liquefaction has not yet been determined. (BSK Geotech, p. 5.) According to the NOP/IS, excavation on-site would extend approximately 30 feet, requiring approximately 350,000 cubic yards of soils on-site to be excavated and removed from the site" (NOP/IS, p. 17, 89.)[3] No explanation is provided, however, as to how this amount of excavation was determined, or how it relates to the amount of material that must be removed due to contamination, or for geotechnical purposes. (BSK Geotech, comment A5; see also ante section 2. regarding Hazard Impacts.) Additionally, once soils are excavated, the 1998 SEIR and the NOP/IS do not specify when or how engineered fill would be used as opposed to other types of fill. All of these details would be part of a complete seismic analysis.

Footnote:

[3] See also comments on Air Quality submitted by Tom Lippe. The failure to accurately quantify the amount of soil excavation that will be required to address liquefaction and site contamination (see section 3. infra) also make the air emissions estimates and traffic impacts analysis unreliable. Additionally, availability of disposal sites cannot be analyzed without a reasoned estimate of needed excavation.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-14]*)

Mitigation of Seismic Hazards

California's Special Publication 117A (CDM&G 2008) mandates countermeasures to liquefaction because liquefaction has been a major source of damage during past earthquakes where deposits of saturated sands were present. The risk of liquefaction and associated ground deformation can be reduced by various ground-improvement techniques, but consideration of also lessening the effects of strong motion in the underlying Bay Mud (from transient porewater pressure increases) during earthquakes must also be part of mitigation. The EIR of 17 years ago (C&CSF 1998) contains no mitigation measures, and the newest draft EIR (C&CSF 2015) does not include sufficient countermeasures. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-61]*)

The SEIR failed to fully address high ground settlements and provide mitigation measures for impacts from sand boils. The SEIR failed to properly identify impacts and provide mitigation measures for areas of the project that may be impacted from liquefaction induced lateral spread hazards. The mitigation measures presented to address the impacts from high settlements due to liquefaction would not be

effective in all areas of development, in particular with respect to impacted areas located outside building footprints. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-75]*)

B3. Page 87 second paragraph states "On the basis of the preliminary geotechnical evaluation for the project, recommended measures for addressing these effects include improving the soil to resist liquefaction and lateral spreading as well as use of flexible utility connections, utility hangers, and hinged slabs to address differential settlement." As stated above in Section A10, high settlements may occur due to liquefaction and development of surface sand boils. Without adequate mitigation for these high unknown settlements, the impacts would be significant. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-78]*)

B5. The 2014 Langan Treadwell Rollo report also identified the potential hazard from lateral spread as high. The 1998 SEIR presented lateral spread as a hazard within several hundred feet of China Basin Channel. Due to the distance of the Site from from China Basin Channel (>2,000 feet), the lateral spread hazard identified in the 1998 SEIR would not have included blocks 29-32. This new hazard was not identified or acknowledged in the IS. A mitigation measure for the impact of lateral spread in the area between the proposed structure and San Francisco Bay was not presented in the IS or in the 2015 DSEIR. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-80]*)

C4. Page 6-5 under Section 6.3 Effects Found Not to be Significant in the Geology and Soils states "The project would not expose people or structures to geologic hazards; cause soil erosion or loss of topsoil; be affected by the presence of unstable soils or geologic units; be affected by the presence of expansive soils or soils incapable of adequately supporting wastewater disposal systems; or cause a substantial change of topography." This is in conflict with the newly identified hazards (Lateral Spread) and inadequately analyzed hazards (liquefaction induced sand boils) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-88]*)

The SDEIR failed to address and provide mitigation for newly identified significant hazards such as lateral spread. Much of the SDEIR relies on analysis from the IS and 1998 SEIR without fully addressing newly identified hazards, data gaps and the need to apply current methodologies to analyze project impacts. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-90]*)

Response GEO-3: Mitigation for Liquefaction-related Hazards

The comments state there are liquefaction, ground settlement, and lateral spread hazards at the project site and no mitigation measures are provided. Further, there is no documentation of how the extent of soil removal for the alleviation of liquefaction hazards was determined. OCII acknowledges these comments; however, the effects of liquefaction, ground settlement, and lateral spread hazards are adequately addressed in the Initial Study as discussed below, along with an explanation of how the volume of soil requiring removal was determined.

Liquefaction, lateral spread, and differential settlement risks at the project site are disclosed in the Preliminary Geotechnical Evaluation[9] of the site and in Impact GE-1 of the Initial Study (pp. 86 and 87). The Initial Study also notes that the site is located in a liquefaction potential zone identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990.[10] As discussed in the Initial Study's discussion of Impact GE-1 and in Response GEO-1 above, actions to address these hazards would be identified on the basis of the site-specific geotechnical investigation and seismic analysis conducted in accordance with the San Francisco Building Code and the DBI's Site Permit process, and actions would also be identified to address the effects of amplification, sand boils, and placement of engineered fill. Guidelines for evaluating liquefaction hazards in this zone are provided in Special Publication 117A of the California Department of Conservation.[11] San Francisco Building Code Section 1803.5.12.2 provides further specifications for addressing liquefaction and related hazards. This section of the building code references ASCE/SEI 7-10 Section 11.8.3. The design of the event center and other buildings must adhere to these standards in order to ensure that liquefaction hazards are addressed and the design must be approved by the DBI. In order to approve the design, the DBI must conclude that these standards have been addressed. Thus, the Site Permit process described in Response GEO-1 would address the requirements of the Seismic Hazards Mapping Act and California's Special Publication 117A "Guidelines for Evaluating and Mitigating Seismic Hazards in California" in accordance with standard DBI procedures. The amount of soil requiring excavation was determined on the basis of the project design, and includes soil that must be excavated to alleviate geotechnical hazards and accommodate the below ground features of the project. No additional excavation is required due to site contamination (see also Section 13.22 of this document, Response HAZ-3).

13.20.5 Foundation System Design (GEO-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-15 O-MBA7S2-64

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iv. The Pile System is Not Adequately Developed and is of Limited Assistance to Protect the Public.

The 1998 EIR and the NOP/IS refer to the use of piles for structural stability. (1998 FSEIR, p. II.20, V.H.12; NOP/IS, pp. 17, 86, 87, 88-91.) Piles would be subject to amplification, which was not studied in the 1998 DSEIR. (Karp Geotech, p. 5.) Moreover, piles are discussed only in the context of the arena structure. However, "[p]ile support systems do little to provide mitigation from liquefaction and settlement of

[9] Langan Treadwell Rollo, Preliminary Geotechnical Evaluation, Block 29-32 Mission Bay, San Francisco, California. March 28, 1014.

[10] California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000.

[11] California Department of Conservation. Guidelines for Evaluating and Mitigating Seismic Hazards in California. Special Publication 117A. 2008. Note that Special Publication is an update of the 1997 Special Publication 117 that is referenced in Section 1803.7 of the San Francisco Building Code.

surrounding utilities/roads and other support systems that may be damaged during a seismic event." (BSK Geotech, comment A1.) Settlement due to sand boils is a potential concern that has not yet been fully addressed in terms of impacts to supporting structures and necessary mitigation standards. (BSK Geotech, comments A10, A11.) These Project details must be studied in the context of an EIR. (See BSK Geotech, comment A4.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-15]*)

Vibrations from pile driving can also create additional risks, which have not been analyzed for this Project. (Karp Geotech, p. 6.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-17]*)

Arena Foundation System

The latest composite report for the site (Langan Treadwell Rollo 2011) was for four separate buildings, one on each of the four lots. The proposed arena (Langan Treadwell Rollo 2014a) will be the principal structure in a complex that includes other structures. The 2011 report provides foundation alternatives for each building mainly because the Colma formation (dense to very dense sand, silty sand, clayey sand) is thin at the southeastern part of the site. Structural steel piles should not be used as the Bay Mud is highly corrosive and cathodic protection systems are problematical (Karp 1977).

If the proposed arena project were to proceed, it is more than likely that the foundation system, arranged in a pattern of concentric circles or ellipses, would be comprised of either precast prestressed concrete piles or cast-in-place concrete piles that are drilled through casing that is part of the machinery with the piles concreted as the casing is withdrawn. Piles would derive their support from the Colma formation, except at the southern part of the site bedrock would be the supporting medium. For embedment in the Colma formation or very stiff to hard clay and bedrock where the Colma formation is not present, depth-limited augered piles could penetrate dense materials or precast prestressed concrete piles could be driven with steel stingers and where the Colma formation is not present, the piles could be piloted into the very stiff to hard clay or bedrock. Although various deep foundation alternatives are theoretically possible, the proposed current project, which is particularly sensitive due to its public assembly nature, should have a testing program instituted to test alternatives. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-64]*)

Response GEO-4: Foundation System Design

The comments state that use of a pile supported foundation system would not be sufficient to prevent liquefaction and settlement-related damage to utilities and infrastructure in the vicinity of the proposed project. The comments also provide recommendations for the placement of piles under the proposed project. OCII notes these comments, and the following text explains how these issues are addressed in the Initial Study.

The 1998 Mission Bay FSEIR seismic analysis presented on pp. V.H.10 to V.H.12 concludes that geologic and seismic impacts related to construction of new buildings under the Mission Bay Plan would be less than significant with compliance with building code requirements and construction of pile-supported structures. The Initial Study analysis presented in Impact GE-1 (pp. 86 and 87) is consistent with this conclusion. Response GEO-1, above, further clarifies why the conclusions of the Initial Study and 1998 Mission Bay FSEIR are valid and why the project would result in a lower risk from seismic and other geological hazards than disclosed in the 1998 FSEIR. The proposed project would be subject to newer building codes that are more protective than the building codes in effect at the time the 1998 Mission Bay FSEIR was published.

The exact configuration of the pile system would be determined by a structural engineer on the basis of the geotechnical report prepared in accordance with the San Francisco Building Code and the Site Permit process described in Response GEO-1, above. Subsequent to publication of the Initial Study, as described in the SEIR Chapter 3 (p. 3-46), the project sponsor has indicated that the proposed construction methods for the pile system would be to install augercast piles using drilling, as opposed to impact pile driving. The recommended configuration and design of the piles and entire foundation system would be subject to approval by the DBI under the Site Permit process which would ensure compliance with current building code requirements.

13.20.6 Impacts of Pile Driving and Dewatering (GEO-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-16 O-MBA7S2-66 O-MBA7S2-81 O-MBA7S2-82

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v. Impacts of Dewatering and Pile Driving Have Not Been Studied.

Dewatering necessary for construction has not yet been studied to the degree of detail needed to understand the required mitigation. A 2015 Langan Treadwell Rollo memorandum discusses dewatering, but does not address engineering effects of dewatering, such as the increase in effective stress that causes areal subsidence. (Karp Geotech, p. 6.) The NOP/IS unreasonably dismisses these risks with no analysis. (BSK Geotech, comment B6.)

Test programs, dynamic analyses and site-specific engineering are needed, and have not yet been completed, to identify the nature and extent of the impacts and the necessary mitigation to address these impacts. (Karp Geotech, p. 6.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-16]*)

Shoring & Groundwater

As an underground parking garage would be part of the project, secant piles, drilled in a circular or elliptical pattern to form a tension ring, would likely be the shoring, but drilling/concreting operations will encounter and displace groundwater that would have to be continuously tested for contaminants and otherwise managed under an advance plan. A Memorandum (Langan Treadwell Rollo 2015) suggests "Construction Dewatering Discharge Options" which may be helpful for that problem but the actual engineering effects of dewatering (increase in effective stress that causes areal subsidence) was not addressed. The effects upon surface improvements from dewatering in the area of the project must be studied before project approval.

Shoring of the excavations for the intended subgrade portions of the proposed current project, the appropriate method would be, as noted above, secant piles. Secant piles are sequentially drilled shafts that intersect each other to form a solid wall. Primaries (soft piles) are drilled apart in rows (or curves) closer together than the pile diameter. Primary shafts are augered and spoils removed with low water loss. Secondary shafts (hard piles) are augered between and arched into both of adjacent primaries, and wet-set reinforced with steel. In the saturated sand, it would be at this stage (casing/augering, and reinforcing) and afterwards (tolerance deviation from verticality, joints between overlapping piles, and movement) when groundwater and sand will be lost.

Depending on depth below groundwater level, hydrostatic pressures (head) are about one-half psi which will allow water and sand to migrate into the excavation. Pressure is only reduced if groundwater level drops outside the wall. When water is lost, increases in effective stress with vibrations from hard pile installations will densify the sand with differential settlement of improvements. The only methods to minimize water and sand flowing into the excavation with simultaneous drawdown of the groundwater level is to recharge outside the wall or construct the shoring in a circular pattern with large overlaps acting in ring compression.

Under current codes and standards, below grade walls for the proposed underground structures will require dynamic analysis (2013 SFBC §1803.5.12(1)) as well as engineered design to protect surface improvements, wall backdrainage, groundwater collection, piping, and discharge facilities. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-66]*)

B6. Page 88 under Settlement states "The Mission Bay FSEIR addressed settlement issues related to differential settlement of the underlying geologic materials that are relevant to the project site, but it did not address impacts related to settlement associated with excavation or dewatering. However, these impacts would all be less than significant, as described below." As stated above in Section A10, high settlements may occur due to liquefaction and development of surface sand boils for which mitigation has not been provided. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-81]*)

B7. Page 90 third paragraph states “In addition, noise and vibration concerns could limit the use of driven piles.” The structure foundation mitigation measures specify the use of driven piles and no other foundation mitigation method alternative was provided. (Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-82])

Response GEO-5: Impacts of Pile Driving and Dewatering

The comments state that the construction-related dewatering requirements of the proposed project are not studied at a sufficient level of detail; additional testing and analyses are necessary. The comments also provide a recommended shoring design for the excavations.

Geologic impacts related to construction dewatering and excavation shoring are addressed in Impact GE-3 of the Initial Study (pp. 88 through 91). Impacts related to these activities would be considered significant if they could potentially result in unacceptable amounts of subsidence or other unstable conditions. As discussed on p. 90 of the Initial Study, the subsidence effects of dewatering would be addressed in the site-specific geotechnical investigation for the project, which would be completed in accordance with the San Francisco Building Code and the DBI Site Permit process described in Response GEO-1, above. The investigation would also address the dynamic seismic lateral earth pressures on the foundation walls in accordance with Section 1803.5.12 of the San Francisco Building Code along with drainage requirements for the below ground structures in accordance with Section 1805 of the San Francisco Building Code.

The Initial Study also discusses monitoring that could be required to detect subsidence during construction on p. 90, and identifies measures that could be used to halt unacceptable levels of

settlement. With implementation of these measures in accordance with the building code and established DBI procedures, subsidence would be maintained within acceptable levels, and no additional mitigation beyond compliance with these codes and procedures is required. Any testing required to identify specific dewatering requirements and anticipated subsidence effects would be conducted as part of the site-specific geotechnical investigation.

The comments speculate about the appropriate shoring design. Several options for shoring are discussed in the discussion of Impact GE-3 of the Initial Study (p. 89). However, the geotechnical engineer would select the best shoring method based on compliance with the San Francisco Building Code, and the selection of shoring would be subject to the review and approval of the DBI, which is responsible for ensuring full compliance with all code requirements as part of the DBI Site Permit process described in Response GEO-1, above. Similarly, design of the below grade walls would also be reviewed by the DBI for compliance with the San Francisco Building Code requirements as enforced through the Site Permit process.

One comment also states that the mitigation measures specify the use of driven piles. However, the commenter is mistaken in that the discussion referred to on p. 90 of the Initial Study does not include any mitigation measures. Rather, the text discusses that piles may be drilled or driven into place and acknowledges that the use of pile driving could be restricted because of noise and vibration concerns. Subsequent to publication of the Initial Study, as described in the SEIR Chapter 3 (p. 3-46), the project sponsor has indicated that the proposed construction methods for the pile system would be to install augercast piles using drilling, as opposed to impact pile driving. Noise and vibration impacts associated with auger cast pile installation are discussed in Section 5.3 of the SEIR, Noise and Vibration, Impacts NO-1 and NO-3 and in Section 13.12, Responses NOI-4 and NOI-5.

Comments related to potential contaminants in the groundwater are discussed in Section13.21, Hydrology and Water Quality (see Response HYD-3).

13.20.7 Mitigation for Corrosive Soil (GEO-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-20

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c. Inadequate Mitigation is Provided for Geology and Soils Impacts.

i. There are No Effective Seismic Mitigation Measures.

No mitigation in the form required by CEQA is included for Geology and Soils Impacts despite the discussion of the need for mitigation measures identified in more recent site-specific geotechnical reports. (BSK Geotech, comment C2.) The NOP/IS relies on a combination of old and inadequate mitigation from the 1998 EIR, compliance with the Building Code, and future geologic and other

investigations. All mitigation for the serious impacts associated with Geology and Soils has been impermissibly deferred.

While the NOP appears to point to mitigation developed in 1998 as applicable to the Project, DSEIR Appendix-MIT indicates that there are no mitigation measures listed that apply to the Project's Geology and Soils impacts. Yet the findings and conclusions of the geotechnical work completed for the site by Langan Treadwell Rollo identify numerous conditions requiring mitigation, including: "excessive static and dynamic settlements, liquefaction including sand boils, lateral spread, intense ground motion, shallow groundwater and corrosive soils." (BSK Geotech, comment C2.)

In 1998, the site's soils were identified as highly corrosive, which can damage concrete and metal used in foundation measures and other underground infrastructure. (See Karp Geotech, p. 5.) The NOP/IS states that Mitigation Measure H.7 from the 1998 FSEIR would require testing of the soil. (NOP/IS, p. 86.) Yet, Appendix MIT of the 2015 DSEIR states that this Mitigation Measure H.7 is not required. (DSEIR, MIT-22.)

With no site-specific or Project specific mitigation, the NOP/IS relies primarily on the Building Code to mitigate for seismic impacts. (NOP/IS, p. 87, 88, 90.) Yet reliance on a regulatory standard is inadequate when the underlying impacts have never been analyzed in the first place. While mitigation may properly be deferred in some instances (CEQA Guidelines, § 15126.4, subd. (a)(1)(B)), the "perfunctory listing of possible mitigation . . . [that] are non-exclusive, undefined, untested and of unknown efficacy," is inadequate. (Communities for a Better Environment v. City of Richmond (2010) 184 Cal.App.4th 74, 93.) Here, the DSEIR's lack of seismic analysis addressing this Project and this site severely compounds the problem.

According to the IS/NOP (pp. 87, 93) future geotechnical investigations will disclose the conditions and the required mitigation. Neither the future study nor the alleged future mitigation are enforceable. Moreover, to the extent these references relate to the contemporary geotechnical evaluations and investigations, such as the 2011 Langan Treadwell Rollo report for office buildings, they are inapplicable to the building type now proposed. These more recent reports also clearly state that they are not to be used for design purposes.

According to Dr. Karp, the current documents for the Project do "not include sufficient countermeasures to liquefaction" risks. (Karp Geotech, p. 5.) For instance, ground improvement measures also need to lessen the effects of strong motion in the underlying Bay Mud during earthquakes. (Karp Geotech, p. 5.) Countermeasures could include various actions, but those actions must be compatible with a piling system that would be subject to liquefaction loads and motion amplification from Bay Mud. (Karp Geotech, p. 5.) Specific measures to address differential settlement have not yet been developed. (BSK Geotech, comment B3, B6.) Mitigation must be developed in the context of a contemporary environmental review process. A test program should also be developed to evaluate these measures. (Karp Geotech, pp. 5-6.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-20]*)

Response GEO-6: Mitigation for Corrosive Soil

The commenter questions why the text of the Initial Study states that Mitigation Measure H.7 from the 1998 Mission Bay FSEIR is applicable to the proposed project, but is not included as an applicable mitigation measure in Appendix MIT of the SEIR. Note that the referenced Initial Study text (p. 86) is a summary of the geology and soils impact analysis in the 1998 Mission Bay FSEIR. As stated in the Initial Study, Mitigation Measure H.7 from the 1998 Mission Bay FSEIR specifies requirements for testing for corrosive soils to support the design of piles for individual structures under the Mission Bay Plan. As explained below, that measure need not be applied to the proposed project.

Project-related impacts related to corrosive soil are addressed in the discussion of Impact GE-4 of the Initial Study (p. 91). As concluded in that impact analysis, the site-specific geotechnical investigation conducted in accordance with the San Francisco Building Code and the DBI's Site Permit process would address the potential for corrosion of the concrete piles where they are in contact with the artificial fill and young Bay Mud, and the related recommendations would include specifications for the concrete to ensure that the piles would not be adversely affected by corrosion. Therefore, for the proposed project, this impact is adequately addressed through compliance with the current building code, and implementation of Mitigation Measure H.7 of the 1998 Mission Bay FSEIR is no longer necessary to reduce impacts related to corrosive soil to a less-than-significant level as stated on p. 91 of the Initial Study.

See response GEO-1 above regarding reliance on building code requirements to ensure that impacts related to liquefaction and other seismic hazards are less than significant.

13.20.8 Construction on a Landfill (GEO-7)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

I-Hyde-3

"Do not build on a landfill." (*Kathryn Hyde, email, July 15, 2015 [I-Hyde-3]*)

Response GEO-7: Construction on a Landfill

As discussed in Section E.4 of the Initial Study, Cultural and Paleontological Resources (p. 46), the northern margin of Mission Bay, within the Mission Bay plan area, was historically used as a City landfill in the late 19th century and early 20th century. However, the proposed project site is not in an area that was used as a dump. Further, municipal garbage was not encountered in any of the borings completed as part of the recent Phase II Environmental Site Assessment conducted for the project (see Response HAZ-3 for a description of the Phase II Environmental Site Assessment). Artificial fill materials are present on the site, and the primary geotechnical hazard related to construction on fill is differential settlement. However, these fill materials did not come from a landfill. Measures to prevent differential settlement and requirements for engineered fill would be determined on the basis of the site-specific geotechnical investigation discussed on p. 87 of the Initial Study and would be conducted in accordance with the San Francisco Building Code and the DBI Site Permit process described above in Response GEO-1.

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13.21 Hydrology and Water Quality

13.21.1 Overview of Comments on Hydrology and Water Quality

The comments and corresponding responses in this section cover topics related to hydrology and water quality. These topics are analyzed in the SEIR, Section 5.9 Hydrology and Water Quality as well as in the Initial Study, Section E.15, Hydrology and Water Quality, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- HYD-1: Groundwater Quality
- HYD-2: Stormwater Runoff
- HYD-3: Water Quality – Interim Wastewater System Improvements
- HYD-4: Changes in Effluent Water Quality
- HYD-5: Wet Weather Discharges
- HYD-6: Flooding as a Result of Stormwater Runoff
- HYD-7: Flooding as a Result of Sea Level Rise
- HYD-8: Tsunami Risks

13.21.2 Groundwater Quality (HYD-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-67

Contamination

Although it is understood that others will discuss contamination, the subject is a very important environmental and geotechnical engineering concern for reasons that include intended subgrade excavation and construction. Mission Bay was used for many years as a dump and then a railroad yard. Bayward of the site there were fuel terminals that included tanks and pipelines which are known contributors to contamination. The Pier 64 area has received past attention under the auspices of developers (Langan Treadwell Rollo 2014b) but the extent and sufficiency of actual clean-up is not really known from second hand information. The report of geotechnical investigation produced for salesforce.com (Langan Treadwell Rollo 2011), 327 pages, contains no contaminant sampling, testing, or even recognition of the potential problem.

Contamination seems to have been dismissed as a thing of the past, but contaminants in groundwater do not simply go away without complete ground remediation. The 1998 environmental document is vague so "change" from then to now cannot be quantified. For instance, the "2001 Phase I Remedial Excavation" resulted in a record that "Soil containing residual oil below the target zone was left in place." (Langan Treadwell Rollo 2014b, pg 9). The observance of living birds congregating where water has ponded is not a reliable yardstick for declaring a site free of contamination. Hands-on testing by an independent laboratory would be appropriate measures that should be undertaken before a public assembly project at this site is approved. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-67]*)

Response HYD-1: Groundwater Quality

The comment states that the SEIR analysis should address the potential for groundwater contamination that was not addressed in previous geotechnical reports before locating a public assembly use on the site.

Water quality impacts associated with discharge of contaminated groundwater are addressed in Impact HY-1a of the SEIR (pp. 5.9-31 through 5.9-33). As acknowledged in that impact analysis, the groundwater may contain contaminants. The project sponsor has evaluated multiple options for discharge of groundwater produced during construction dewatering including the following: (1) directly discharging to the City's combined sewer system; (2) installing an on-site dewatering treatment system and discharging the treated water to the Bay through an existing outfall if the capacity of the Mariposa pump station would be exceeded with the discharge; and (3) a combination of the first two options. As explained in the SEIR, under any of these options, the groundwater would be treated to meet appropriate discharge limitations to protect water quality of receiving waters. (See SEIR, pp. 5.9-32 through 5.9-33.)

As discussed in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, the Phase II Environmental Site Assessment (Phase II ESA) completed by the project sponsor in 2015 included sampling to characterize the existing groundwater quality. Only the detected concentrations of sulfide and maximum measured pH exceed regulatory limits for batch wastewater discharges to the combined sewer system. As discussed in Impact HY-1a of the SEIR, potential options for discharge of groundwater during construction dewatering include discharge to the combined sewer system in accordance with Article 4.1 of the San Francisco Public Works Code, direct discharge to the Bay in accordance with the VOC and Fuel General NPDES permit, or a combination of the two. Under any of these options, the groundwater discharges would be required to comply with the applicable regulatory discharge limitations.

The project sponsor is currently discussing the groundwater quality as well as the anticipated discharge rates and volumes with the San Francisco Public Utilities Commission (SFPUC), the Port of San Francisco, and the Regional Water Quality Control Board (RWQCB) to determine the appropriate discharge authorization, oversight agency, and required treatment prior to discharge. In any event, all of the options identified in the SEIR for discharge of groundwater produced during construction dewatering would comply with water quality regulations and would ensure that groundwater will be treated as necessary to meet appropriate discharge limitations to protect water quality of receiving waters. Under any of the identified options, the impact would be less than significant because dewatering activities would comply with applicable water quality standards or waste discharge requirements, and, therefore, would not degrade water quality. (See SEIR, pp. 5.9-29; 5.9-32 through 5.9-33.)

Once the project is constructed, there would be no exposure to groundwater and groundwater dewatering would not be required because the basement structures would be fully waterproofed and designed for hydrostatic pressures. The recorded and enforceable Covenant for Environmental Restrictions prohibits use of ground water for domestic, industrial or irrigation purposes.

Therefore, there would be no impacts related to exposure to contaminants in groundwater once the site development has been completed.

Note that geotechnical investigations include sampling to identify possible geotechnical concerns at a site. Chemical analyses are not a required component of a geotechnical investigation and it is not a shortcoming of previous geotechnical investigations that they did not include chemical testing of the soil or groundwater.

See Section 13.22, Hazards and Hazardous Materials, Response HAZ-3 for further discussion regarding existing soil contamination at the site.

13.21.3 Stormwater Runoff (HYD-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-7	O-MBA115-14	O-MBA11L5-15	O-MBA11L5-19
O-MBA11L5-24	O-MBA11L5-33		

As discussed in the attached reports by Matt Hageman and Erik Ringelberg, the Project's CEQA documents (i.e., the 1998 Mission Bay FSEIR, 2014 NOP/IS, and 2015 DSEIR), fail to analyze or develop mitigation measures to reduce the Project's likely contribution of a suite of toxic chemicals, including PCBs, to San Francisco Bay in amounts deleterious to the Bay's biota. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-7]*)

With respect to impacts on special status species, the NOP/IS states:

> At the time of preparation of the Mission Bay FSEIR, the project site contained several buildings and facilities and was noted as lacking any notable vegetative habitat, with no state listed threatened, endangered or rare plants, or rare, threatened or endangered animal species known to occur in the upland portion of the Mission Bay plan area, including the project site. Subsequent to that time, the project site has been subject to building removal, grading, excavation, and construction of paved surface parking lots, fencing and utilities on portions of the site. Other than the creation of the depression as a result of remediation actions, no other changes in the site since the preparation of the FSEIR have altered the characteristics of the site in relation to biological habitat. These changes in conditions on the project site have not altered the fact that the site provides no suitable habitat for any sensitive or special status species due to the sparse and ruderal nature of onsite vegetation, as well as the site's location in a densely urbanized environment, as confirmed through the reconnaissance survey and database review of special status species occurrences within the vicinity of the project site. In addition, there have been no substantial changes with respect to the circumstances under which the project would be undertaken, nor has any new information become available that demonstrates new or more severe impacts associated with the proposed project.

(NOP/IS, pp. 78-79.)

But as Mr Ringelberg points out:

> the potential project impacts to the closest federally designated critical habitat is steelhead Oncorhynchus mykiss are ignored. This habitat runs directly adjacent to the project area. In

addition, San Francisco manzanita (Arctostaphytos franciscana) critical habitat is present approximately 2.6 miles to the west and should also have been identified and analyzed. The federal critical habitat analysis is missing, and the provided analysis itself is defective. The potential project's impact(s) to these listed species and their critical habitat are therefore unexamined. The project's dust, stormwater, surface flooding, and groundwater place those species at risk from hazardous chemicals.

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-14]*)

(Exhibit 2, p. 11.)

As both Mr. Hageman and Mr. Ringelberg point out, none of the Project's CEQA documents assess the effects of toxic chemical runoff on Bay biota, including steelhead. Where, as here, the lead agency fails to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record because deficiencies in the record may enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.)

Further, there is substantial evidence in the reports from Matt Hageman and Erik Ringelberg supporting a fair argument the Project may have significant effects on steelhead from toxic runoff. Again, even if CEQA section 21166 applies, CEQA requires including this issue in the subsequent EIR. The Phase II reports showing the site is contaminated with a suite of toxic compounds is significant new information showing the potential for new significant effects not previously identified.[10]

Footnote:

[10] See Letter to Marty Glick re: Phase 2 Subsurface Investigation Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158; Phase II Environmental Site Assessment, Golden State Warriors Arena, Blocks 29-32, Mission Bay, San Francisco, California.

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-15]*)

We have found significant shortcomings in the DSEIR in identifying impacts on Hydrology and Water Quality. A revised DSEIR should be prepared to address these inadequacies and to incorporate mitigation to reduce impacts which otherwise would degrade the water quality of San Francisco Bay.

Hydrology and Water Quality

The DSEIR acknowledges that the San Francisco Bay is impaired under Section 303(d) of the Clean Water Act for chlordane, DDT, dieldrin, dioxins, furan compounds, mercury, polychlorinated biphenyls (PCBs), invasive species, and trash (p. 5.9-22). Of these, PCBs are of the greatest concern for Project water quality impacts. A total maximum daily load (TMDL), limiting PCB discharges, has been issued by the San Francisco Bay Regional Water Quality Control Board (RWQCB) for PCBs in San Francisco Bay and it is proving very difficult and very costly for Bay Area cities, who are responsible for limiting PCB discharges, to meet. According to the RWQCB, Bay Area municipalities will spend millions of dollars to achieve the ten-fold reduction in PCBs required by the TMDL.[1]

The DSEIR utterly fails to evaluate how Project construction may result in discharge of PCBs to San Francisco Bay, leading to further impairment. Failure to conduct this analysis flies in the face of the TMDL mandate which requires reduction of PCB discharge to the Bay and ignores guidance issued by the San Francisco Bay Regional Water Quality Control Board (RWQCB) on reducing PCB discharges at sites that require cleanup and where buildings that likely contain PCBs in construction materials will be torn down.

The Project poses significant threats to water quality of San Francisco Bay from the release of PCBs upon construction from two sources: (1) contamination in soil at sites that will undergo cleanup; and (2) PCBs used in former building materials at the Project site.

Contaminated Sites Pose Potential PCB Impacts

The DSEIR fails to acknowledge the PCB-contamination threat posed from numerous sites that will require cleanup prior to Project construction. The Initial Study (IS), in summarizing information in the Mission Bay SEIR, stated that land uses at Blocks 29-32 included crude oil storage, offices, railroad tracks, trucking-related activities, maintenance and repair facilities, junk yard, stock corral, a gravel plant, bus company facility, equipment rental, storage yard, auto body shop, and a warehouse (p. 108). No evaluation of these sites for PCB-containing equipment was included in the DSEIR and no analysis of any spills that would have originated from such equipment was conducted.

The RWQCB has identified PCBs originating from sites undergoing cleanup on the margins of San Francisco Bay are a major threat to water achieving the TMDL, stating:

> Stormwater runoff from sites containing residual PCBs in soils after state and federal ordered cleanups contribute to PCB sediment concentrations in the Bay and such contributions must be essentially eliminated in order to achieve the TMDL target. For cleanup sites, the TMDL calls for implementing "on-land source control measures, to ensure that on-land sources of PCBs do not further contaminate in-Bay sediments."

The IS acknowledges the potential threats that contaminants pose during Project development, stating:

> The Mission Bay FSEIR discussed various types of construction activities, including excavation, grading, trenching, soil movement/transport, pile installation, building demolition and removal of underground storage tanks that would potentially expose workers and the public to contaminated soils, dust, soil gases and other hazards. The Mission Bay FSEIR also noted the potential for construction dust-related effects on the aquatic and terrestrial environment.

However, the Mission Bay FSEIR pre-dates the issuance of the RWQCB TMDL for PCBs in San Francisco Bay and mitigation in the Mission Bay FSEIR make no provisions for ensuring that PCBs are not mobilized and transported to the Bay during Project construction. As stated by the RWQCB:

> Of particular concern, and often overlooked, is the fact that PCBs in surface soil can be mobilized by stormwater runoff and flow to the Bay.

The RWQCB's concerns are justified by the failure of the DSEIR in identifying how Project construction might contribute to the PCB impairment of San Francisco Bay. The DSEIR, in ignoring this issue, provides no PCB-specific mitigation to prevent the flow of PCBs to the Bay upon construction. Mitigation identified in the Mission Bay FSEIR specified only minimum parameters to be included in a Risk Management Plan for the addressing contaminated soils and groundwater prior to and during construction of individual development projects.

PCBs, when spilled and released to soil, stick strongly to the soil particles that is entrained with stormwater when mobilized during rain events and which leads to PCB deposition in the Bay. The DSEIR offers no mitigation to address this likelihood, and only provides tepid assurance that stormwater will be managed consistent with "San Francisco Stormwater Design Guidelines" (p. 5.9-25). The cited San Francisco Stormwater Design Guidelines makes no special provisions for PCB contamination other than to say:

> Control of PCBs and mercury will be implemented through design measures that limit the mobilization of these pollutants in contaminated soils.[2]

The San Francisco Stormwater Design Guidelines make no further statements about what the PCB design measures would entail and how specifically PCB discharge in stormwater will be limited. The San Francisco Stormwater Design Guidelines are mute on the urgency that faces San Francisco in preventing PCB discharges, in stark contrast to the language use by the RWQCB in issuing the following edict in eliminating all PCB discharges from cleanup sites:

> … it is important that cleanup sites do not contribute any PCBs to surface water runoff. Remedial actions should be conducted so as to eliminate all means of conveyance of PCBs from cleanup sites, including sediment runoff, vehicular drag out, and airborne dust.

Because the issue of PCBs is not specifically addressed, the DSEIR offers an inadequate basis for making the following statement on stormwater contamination:

> Implementation of BMPs and other stormwater control measures required by the updated Phase II General MS4 NPDES Permit; Article 4.2 of the San Francisco Public Works Code, Section 147; and the City's Stormwater Design Guidelines would ensure that the project does not contribute to an increase in discharge of stormwater pollutants to the Bay in discharges from the separate stormwater system. Therefore, impacts related to degradation of water quality and providing an additional source of stormwater pollutants are less than significant in relation to direct stormwater discharges.

Without mitigation and specific measures to address PCB contamination in the Project area, the impacts from Project construction on the already impaired San Francisco Bay may be significant. The DSEIR should acknowledge the PCB contamination potential and offer concrete mitigation to address the stormwater transport of PCB-contaminated soils to the Bay. Concrete steps to incorporate, as mitigation in a revised DSEIR and prior to Project construction, include:

- A thorough parcel-by-parcel review of the potential use of PCB-containing equipment;
- Site inspections of each parcel which used electrical equipment and sampling of soil where PCB-containing equipment is identified; and
- Cleanup of PCB-impacted soil at concentrations that exceed 25 ug/kg, consistent with RWQCB guidance.[3]

PCBs in Originating from former land uses at the Project Site have not been Adequately Evaluated

Polychlorinated biphenyls (PCB) contamination originating from materials used in building construction is receiving intense scrutiny from regulatory agencies. The U.S. EPA has acknowledged that demolition of 1950s- to 1970s-era buildings, or cleanup of those sites, may disturb PCB-containing materials used in caulking and as a plasticizer in paints and other coatings.[4] In fact, a recent report has found that PCBs are prevalent in the caulk in Bay Area buildings constructed from 1950 to 1980. PCBs were detected in 88% of the caulk samples tested; 40% of the samples contained greater than 50 ppm PCBs and 20% contained greater than 10,000 ppm PCBs.[5] PCBs were used in electrical transformers manufactured between 1929 and 1977 and are a well-recognized source of soil contamination when fluid is leaked.[6]

According to the US EPA[7]:

> PCBs do not break down in our environment and can have severe health effects on humans. PCBs in the air eventually return to our land and water by settling or from runoff in snow and rain. In our water, PCBs build up in fish and can reach levels hundreds of thousands of times higher than the levels in water. Fish consumption advisories are in effect for PCBs in all five of the Great Lakes. PCBs are the leading chemical risk from fish consumption.

Because PCBs do not break down, PCBs may be present at the Project site from former land uses which include:[8]

- Bulk fuel storage and distribution (approximately 1902 to 1966).
- Railroad operations (approximately 1904 to 1939).
- A machine shop (approximately 1904 to 1927).
- A boiler house (approximately 1904 to 1927).
- Steel mill (approximately 1906 to 1928).
- Well casing manufacturer (1907 to 1975).
- Warehousing, shipping, and receiving operations for a variety of products including agricultural chemicals, lumber, food, automobiles, metals, etc. (approximately 1910 to 2006).
- A fruit cannery (approximately 1935 to 1961).
- Junk yards, vehicle parking, and vehicle maintenance facilities (approximately 1950 to 2004).
- Ready-mix concrete facilities (approximately 1972 to 2010).

Of these uses, the 1950s-1980 land uses, which include well casing manufacturing, warehousing, a cannery, junk yards, and concrete manufacturing, could have been operated out of building that were constructed with PCB-containing materials and which were supplied with power by PCB-containing transformers. If PCB-containing building materials, such as caulking or paint, were weathered and disposed in soils adjacent to the former buildings, the could remain at concentrations that would serve as a source for contamination of San Francisco Bay, upon erosion by wind or stormwater.

In fact, a limited study conducted in January 2015 did detect PCBs in soil at the Project site. In this study, which took soil samples from only seven locations at the 10.9-acre site, PCBs were detected at 0.016 mg/kg or 16 ug/kg in one sample of the seven locations.[9] Although this is less than the 25 ug/kg RWQCB cleanup requirement, it is 16 times greater than the target PCB sediment concentration of 1 ug/kg in San Francisco Bay.[10] Given that the Project site is located less than 500 feet from the Bay, construction activities that disturb soil pose a significant potential for documented PCBs at the Project site to be transported to the Bay.

I have found no analysis of PCBs used in the building materials of the previously existing structures at the site in the DSEIR or in the Mission Bay FSEIR or how PCBs, documented in soil at the Project site, may be mobilized by construction or by cleanup of contaminated sites, and transported to the Bay. The RWQCB has offered guidance on how to test for materials that may contain PCBs and how to evaluate sites undergoing cleanup on the Bay margin, guidance which was not mentioned in the DSEIR.

The failure to thoroughly analyze the presence of PCBs in the Project area and how Project construction activities would potentially mobilize the PCBs, leading to further impairment of San Francisco Bay, is a significant oversight which ignores a regulatory mandate for construction projects on the Bay margin to evaluate PCBs. A DSEIR should be prepared to include the results of a full evaluation of the potential of former Project site buildings to contain PCBs. A soil sampling study should be targeted to areas where PCBs may have been released or spilled. To ensure the adequacy of the PCB investigation, the study should be conducted under the oversight of the San Francisco Bay Regional Water Quality Control Board which should be engaged, specifically on the issue of potential PCB contamination to originate from Project construction.

The revised DSEIR should identify mitigation that would be necessary to protect PCB-containing materials from being mobilized though stormwater transport and aerial deposition to San Francisco Bay. The revised DSEIR should also include measures to protect construction workers and the health of adjacent residents who may be exposed to PCB-containing dust during demolition or renovation activities. The DSEIR should also identify proper disposal practices that are compliant with 40 CFR § 761.62 of the Toxic Substances Control Act. Under this provision, PCB bulk product waste must be disposed in a permitted solid waste landfill or through regulatory approval of risk-based process.[11]

Other Contaminants Pose Risks to the Bay

Recent sampling[12] at the Project site has detected soil contaminants, in addition to the PCB contamination noted above, that include:

- 1.2.4-Trimethylbenzene
- Acetone
- Carbon disulfide
- Ethylbenzene
- 2-Butanone
- Xylenes
- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(k.)fluoranthene
- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(l,2,3-c,d)pyrene
- Naphthalene
- Phenanthrene
- Pyrene
- Antimony
- Barium
- Beryllium
- Cadmium
- Cobalt
- Copper
- Mercury
- Molybdenum
- Silver
- Vanadium
- Zinc

Of these compounds, mercury is identified in the DSEIR as an impairment in San Francisco Bay under Section 303(d) of the Clean Water Act (p. 5.9-22). Mercury, along with the other contaminants listed above, may sorb tightly to soil and be mobilized and transported to the Bay when eroded by stormwater, further degrading water quality.

No specific provisions to manage these contaminants to prevent discharge to the Bay are included in the DSEIR. The DSEIR provides only vague assurance that stormwater will be managed consistent with "San Francisco Stormwater Design Guidelines" which do mention mercury (along with PCBs, as noted above) but offer no specific mitigation to manage these contaminants (p. 5.9-25).

A revised DSEIR should be prepared to identify specific stormwater best management practices (BMPs) to prevent the discharge of contaminated sediment during rain events. The BMPs should be tailored to the each of the contaminants documented in soil at the Project site to prevent discharge and should include consideration of the use of sorbent or flocculent materials, retention basins, berms, silt fences, and bales.

Footnote:

[1] San Francisco Bay Regional Water Quality Control Board, September 2013, San Francisco Bay PCBs TMDL Implementation at Cleanup Sites: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbs/SF%20Bay%20PCBs%20TMDL%20-%20Considerations%20for%20Cleanup%20Sites%20September%205%202013.pdf, p. 1

[2] San Francisco Stormwater Design Guideline, September 2009 http://www.sfwater.org/Modules/ShowDocument.aspx?documentID=2779, p. 14

[3] San Francisco Bay Regional Water Quality Control Board, September 2013, San Francisco Bay PCBs TMDL Implementation at Cleanup Sites: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbs/SF%20Bay%20PCBs%20TMDL%20-%20Considerations%20for%20Cleanup%20Sites%20September%205%202013.pdf, p. 2

[4] US EPA, PCBs in Caulk in Older Buildings: http://www.epa.gov/pcbsincaulk/

[5] San Francisco Estuary Project, PCBs in Caulk Project: http://www.sfestuary.org/taking-action-for-clean-water-pcbs-in-caulk-project/

[6] US EPA, Polychlorinated Biphenyls (PCBs) http://www.epa.gov/reg3wcmd/ts_pcbs.htm

[7] Ibid.

[8] Letter from the San Francisco Department of Public Health to Golden State Warriors Arena, June 8, 2015, p. 2

[9] Letter from the San Francisco Department of Public Health to Golden State Warriors Arena, June 8, 2015, p. 9

[10] San Francisco Bay Regional Water Quality Control Board, September 2013, San Francisco Bay PCBs TMDL Implementation at Cleanup Sites: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbs/SF%20Bay%20PCBs%20TMDL%20-%20Considerations%20for%20Cleanup%20Sites%20September%205%202013.pdf, p. 1

[11] US EPA, Contractors: Handling PCBs in Caulk During Renovation: http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/caulkcontractors.htm

[12] Letter from the San Francisco Department of Public Health to Golden State Warriors Arena, June 8, 2015, pp. 8-10

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-19]*)

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3. There is <u>significant new information</u> related to the federal designation of Critical Habitat for the listed anadromous fish, the steelhead (*Oncorhynchus [Salmo] mykiss*)[9]. The DSEIR failed to identify that the project has the potential to impact the defined Critical Habitat for the steelhead. This designation was completed in 2005 and was not described in the 1998 Mission Bay FSEIR. Neither the potential of the project activities to impact the steelhead (See: Other Biological Resource Issue Areas), or the designation of the status of this plan area was identified in the DSEIR.

Footnote:

[9] Federal Register / Vol. 70, No. 170 / Friday, September 2, 2005 / Rules and Regulations

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-24]*)

OTHER BIOLOGICAL RESOURCE ISSUES

The DSEIR is silent on the potential project impacts on offsite fish and wildlife issues associated with stormwater and other discharges from the site to the surrounding area, Mission Creek Channel, and the San Francisco Bay. The DSEIR Appendix MIT Mission Bay FSEIR Mitigation Measures: Applicability to

Proposed Project K. Hydrology and Water Quality section (MIT-27 through -29) states that the project would fall under different mitigation measures under different programs (such as the General Stormwater Permit) and that the detailed mitigation requirements from the 1998 FSEIR would not be used. The site's hazardous material history show that the proposed project construction activities pose risks to the environment and its biological resources through the release of hazardous chemical to surface waters, through wind redeposition, stormwater drainage, or unabated stormwater sheet flow above a 5-year design rain event (BBL 2006, LTR 2005). The RMP has not protected these resources because it was not intended to covers these features, followed superseded analytical methods, and even if it was applicable and current, has had implementation failures. Some of these issues are identified in greater detail in a separate document, SWPPP Memorandum BSK Associates, 2015.

There is a direct route from the site to the surrounding area, including the Bay, from dust and stormwater. Stormwater can take several routes off the site, and may enter a sediment trapping system, or not, and flows over a 5-year event run unabated into neighboring properties and the Bay. Currently, there are what appear to be multiple failures to implement and maintain effective Best Management Practices (BMPs) for dust and stormwater. The DSEIR fails to identify these risks and conditions, and fails to identify the potential environmental impacts from the substantially changed new environmental conditions as a result of the site remedial activities. The DSEIR further identifies that there were detailed mitigation measures for these potential impacts as they related to stormwater (but not biological resources) in the FSEIR, but that they deleted the hazardous material protective elements and simplified the sediment management. The site stormwater operations have management issues that need reconciliation, but the evidence shows a likelihood of these contaminants reaching surface waters, despite the prior BMPs and this must be fully analyzed and the mitigation measures modified correspondingly to reflect those significant new conditions in order to protect biological resources, designated critical habitat and listed fish and wildlife. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-33]*)

Response HYD-2: Stormwater Runoff

The comments contend that stormwater runoff from the project site would contain pollutants that could degrade Bay water quality and adversely affect Bay biota, including steelhead habitat. Particular contaminants of concern to the commenter include mercury and polychlorinated biphenyls (PCBs) that could be present as a result of past site activities and demolition of former buildings at the project site. However, as discussed in Impact HY-1 of the Initial Study and Impact HY-6 of the SEIR, stormwater runoff during both construction and operation of the project would be managed in accordance with applicable regulatory requirements, which would preclude the generation of polluted runoff from the project site. These requirements and project features that would preclude stormwater contact with contaminated soil once the site is developed are discussed below followed by an assessment of the potential for groundwater discharges to affect Bay water quality and biota.

Construction-Related Stormwater Runoff

As described on pp. 117 and 118 of the Initial Study, the project site has been subject to several site investigations, underground tank removals, and remedial actions to address contaminants in the soil and groundwater since publication of the 1998 Mission Bay FSEIR. In all, approximately 104,000 tons of soil have been removed from the site and most of the resultant excavations were backfilled. As a result, contaminants potentially resulting from demolition of many of the previous buildings and potential PCB-containing equipment at the site have likely been removed, or at least would not be present in their original location because of previous soil excavation and

backfilling activities. Under the proposed project, all of the soil in the upper 12 feet of the project site (and deeper in some areas) would be excavated and disposed of off-site, and there would be no potential for exposure to this soil once the project is constructed.

The project sponsor completed a Phase II Environmental Site Assessment (Phase II ESA) in 2015, as discussed in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, which evaluated soil quality at the project site. The Phase II ESA included installation of borings and collection of soil samples from throughout the site (including areas that have been excavated and backfilled plus areas outside of previous excavation limits) to provide an overall characterization of soil that would be excavated for the evaluation of health and safety, dust mitigation, and soil disposal requirements.

The PCB Aroclor 1254 was detected in one of the seven soil samples analyzed for PCBs; the concentration was 0.016 milligrams per kilogram (mg/kg). All other PCBs were not present above laboratory detection limits. Mercury was detected in 12 of the 17 soil samples analyzed for this parameter and the maximum concentration was 0.58 mg/kg. As noted in the comments, the Phase II ESA also identified sporadic detections of other chemicals in the soil.

However, none of the site soil or chemicals identified in the site soil would be transported offsite via stormwater runoff during construction because, as discussed in Impact HY-1 of the Initial Study (pp. 99 and 100), the construction contractor would implement the requirements of the State Water Resources Control Board (SWRCB) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (Construction General Stormwater Permit).[1] Implementation of the general permit requirements is also specified in Section 4.3.3 of the 1999 Mission Bay Risk Management Plan.[2] Further, implementation of the requirements of the 1999 Mission Bay RMP are enforceable on the site through a recorded Covenant of Environmental Restrictions. Per the 1999 Mission Bay RMP, a conceptual stormwater management plan has been prepared for the entire Mission Bay site. The RMP requires development of a site specific plan for each construction project that satisfies the RMP requirements as well as those of the general permit.

The RMP and the Construction General Stormwater Permit specify minimum best management practices (BMPs) to be implemented to ensure that stormwater discharges and authorized non-stormwater discharges do not contain pollutants that could cause or contribute to an exceedance of any applicable water quality objective or water quality standards in the receiving water. The applicable standards include those contained in the California Toxics Rule, the National Toxics Rule, and the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan). which all establish water quality standards.

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1 State Water Resources Control Board, National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities. Order No. 2009-0009-DWQ. NPDES No. CAS000002. Effective July 1, 2010.

2 Note that the 1999 Mission Bay Risk Management Plan requires implementation of State Water Resources Control Board Order No. 92-08 DWQ which was the construction general stormwater permit in effect at that time. The requirements of that order have been superseded by Order No. 2009-0009-DWQ, which is described in this response.

Under the Construction General Stormwater Permit, construction projects are characterized by the level of risk to water quality which is determined using a combination of the sediment risk of the project and the receiving water quality risk. Projects can be characterized as Level 1, Level 2, or Level 3, and the minimum Best Management Practices (BMPs) and monitoring that must be implemented during construction are based on the risk level. The BMPs are designed to prevent pollutants from contacting stormwater and keep all products of erosion and stormwater pollutants from moving off-site into receiving waters. They are specified in a Stormwater Pollution Prevention Plan (SWPPP) that must be prepared by a Qualified SWPPP Developer (QSD) and submitted to the RWQCB prior to beginning construction.

Sediment risk is determined based on the expected intensity of rainfall during the construction period, soil erodibility, and slope of the construction site. Therefore the sediment risk for the project would depend on when it is implemented, and the project would have a higher sediment risk if it were implemented during the rainy season rather than the dry season. Receiving water risk is based on whether the project drains to a sediment-sensitive water body. A sediment-sensitive water body is one that appears on the most recent 303(d) list for water bodies as impaired for sediment; has a USEPA-approved TMDL implementation plan for sediment; or has all three beneficial uses of cold freshwater habitat, fish migration, and fish spawning. San Francisco Bay (the receiving water) is not considered a sediment sensitive water body under the Construction General Stormwater Permit and cold freshwater habitat is not one of its identified beneficial uses.

Based on this, the Bay has a low receiving water risk under the Construction General Stormwater Permit. The project site would, therefore, be categorized as a Risk Level 1 or Risk Level 2 site under the general permit, depending on site specific factors. The general permit includes these narrative effluent standards for Risk Level 1 and 2 sites:

- Storm water discharges and authorized non-storm water discharges regulated by the general permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in Title 40 of the Code of Federal Regulations, Sections 117.3 and 302.4, unless a separate NPDES permit has been issued to regulate those discharges.
- Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve Best Available Technology for toxic and non-conventional pollutants and Best Conventional Technology for conventional pollutants.

Risk Level 2 dischargers are also subject to a pH Numeric Action Level of 6.5-8.5 and a turbidity Numeric Action Level of 250 Nephelometric Turbidity Units.

The BMPs required to meet these standards address good housekeeping practices, non-stormwater management, erosion and sediment control, and run-on and runoff control. In accordance with the Construction General Stormwater Permit, the project sponsor would need to install structural controls to prevent the offsite transport of sediment and other stormwater pollutants and ensure that construction-related discharges of stormwater do not cause an

exceedance of receiving water limitations, including limitations for turbidity. Under the Construction General Stormwater Permit, the project sponsor would be required to implement stabilization measures such as covering disturbed areas with mulch, temporary seeding, applying soil stabilizers, applying soil binders, and using fiber rolls or blankets to control erosion. In addition, the Construction General Stormwater Permit would require implementation of sediment control measures such as perimeter silt fences or straw wattles along with stabilization of construction site entrances to capture any soil that becomes eroded.

Compliance with the requirements of the RMP and Construction General Stormwater Permit would be ensured through the implementation of a SWPPP prepared by a qualified professional and submitted to the RWQCB. Compliance would be documented through regular inspections of the site throughout construction as well as post-storm inspections to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify any additional BMPs or corrective actions necessary. The inspections would be conducted by a qualified professional. The required Annual Report would document compliance with the Construction General Stormwater Permit and would identify any compliance issues and corrective actions taken.

For sites located in the watershed of an impaired water body such as San Francisco Bay, the Construction General Stormwater Permit requires compliance with the approved Total Maximum Daily Loads (TMDLs). The approved TMDLs for San Francisco Bay Mercury and San Francisco Bay PCBs are included in Section 7.2.2 and 7.2.3 of the Basin Plan, respectively. These TMDLs provide numeric targets and waste load allocations for discharges of mercury and PCBs to the Bay. They also include an implementation plan designed to ensure attainment of beneficial uses and water quality objectives for the San Francisco Bay. In both cases, the numeric targets are protective of human health and wildlife. The TMDL for mercury is 700 kilograms per year, and the wasteload allocation for San Francisco stormwater discharges to the Bay is 8.8 kilograms per year. The TMDL for PCBs is 10 kilograms per year, and the wasteload allocation for San Francisco stormwater discharges to the Bay is 0.2 kilograms per year. The implementation plans for both TMDLs specify that the allocations shall be achieved within 20 years. The implementation plans emphasize pollution control and specify that for construction sites, the TMDL allocations and targets can be met through the implementation of NPDES permit requirements. Accordingly, control measures must reduce discharges of mercury and PCBs based on Best Available Technology economically achievable. Because these requirements are consistent with the narrative effluent standards of the Construction General Stormwater Permit, implementation of BMPs in accordance with the general permit fulfills the requirements of the TMDLs and associated implementation plans.

Because of the required implementation of erosion and sediment control BMPs during construction, there would be no threat to Bay water quality or biota, including steelhead habitat, as a result of stormwater runoff during construction. Implementation of the requirements of the General Construction Stormwater Permit and 1999 Mission Bay RMP would ensure that construction-related stormwater discharges would not transport contaminated soil off site and would not violate water quality standards or otherwise substantially degrade water quality, as concluded in Impact HY-1 of the Initial Study (pp. 99 and 100).

An agency's decision to rely on BMPs to address a project's impacts has been upheld on numerous occasions under both federal and state law. (See *Hapner v. Tidwell*, 621 F.3d 1239, 1246 (9th Cir. 2010) [citing use of BMPs to reduce soil disturbance during logging operations]; *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451 F.3d 1005, 1015-16 [references to detailed BMPs incorporated into proposed timber sale supported the conclusion agency had taken "hard look" at project's impacts as required by National Environmental Policy Act]; *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1089 (9th Cir. 2013); [agency properly relied on BMPs imposed under the Clean Water Act as mitigation for wetlands impacts]; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 795-796 [upholding agency's reliance on mitigation measure requiring installation and maintenance of BMPs to address run-off].)

Post-Construction Stormwater Runoff

As discussed in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, the proposed project includes excavation of soil to a minimum depth of 12 feet throughout the project site, and off-site disposal of all excavated soil. Clean engineered backfill would be used where needed. The site would be occupied by buildings or paved. None of the existing soil on the site would be exposed at grade and all landscaped areas on the site would be above structures; clean soil would be brought in for all landscaped areas on the project site. This would preclude stormwater contact with contaminated soil once the site is developed. Therefore, stormwater runoff to the separate stormwater sewer system and runoff to the Bay in excess of the five year storm would not come into contact with the contaminants present in the existing onsite soils. There would be no threat to Bay water quality or biota, including steelhead habitat, as a result of stormwater runoff containing the existing soil once the project is constructed.

Groundwater Discharges to the Bay

Future risks in the project area associated with natural migration of groundwater discharging to the Bay are not an impact of the proposed project. Nevertheless, as described on p. 117 of the Initial Study, previous remediations have removed over 100 tons of contaminated soil from the project site along with separate phase hydrocarbons present in the groundwater. Project construction would remove an additional 350,000 cubic yards of existing soil to a minimum depth of 12 feet throughout the site. Combined, these activities would result in removal of the major source of groundwater contamination at the site. Therefore, once the project is constructed the potential for groundwater contamination would be greatly reduced relative to the conditions reported in the 1998 Mission Bay FSEIR.

Other Issues

See Section 13.19, Biological Resources, Response BIO-3, regarding designation of Critical Habitat for the steelhead.

See Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, regarding dust control measures that would be implemented in accordance with the project Dust Monitoring Plan. Implementation of these measures would preclude off-site transport of dust that could adversely affect adjacent areas, including any sensitive habitats, if present, for steelhead or San Francisco

manzanita habitat. See Section 13.19 for discussion of habitats and special-status species at and near the project site.

Note that the project would not include any demolition or renovation activities, therefore comments that the SEIR must address impacts associated with PCB-containing dust and disposal of PCB bulk waste as a result of these activities are not applicable to the proposed project. These issues were analyzed at a programmatic level in the 1998 Mission Bay FSEIR. The potential exposure to contaminants during construction activities and disposal requirements for wastes produced during site development are addressed in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3.

13.21.4 Water Quality – Interim Wastewater System Improvements (HYD-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-3

_____

Finally, the DSEIR states:

> In the event that additional future wastewater flows would exceed the pump station capacities before the needed wastewater system improvements could be completed, it is assumed that the SFPUC would make internal operational or piping changes to accommodate the additional flows in the interim in order to remain in compliance with RWQCB permit requirements. The interim system modifications would be subject to the approval of the RWQCB under the terms of the Bayside NPDES permit. Approval by the RWQCB would ensure that water quality of the Bay would be protected during the interim period. Any interim system modifications are assumed to be operational or internal to the existing pump stations and therefore would not result in any physical environmental effects.

This remarkable passage suggests that the City is prepared to approve and allow construction of this Project without ensuring the construction of additional, adequate, sewage treatment capacity required by the Project. This is the opposite of responsible planning. Moreover, the City is apparently poised to take this action based on several unsupported assumptions. First, the DSEIR assumes, without discussion or evidentiary support, that interim modifications will not have a significant effect on the environment.

Second, the DSEIR assumes the Project's wastewater impacts on the Bay will only be "interim" until the SFPUC builds or expands permanent new wastewater treatment facilities; and that in this supposedly "interim" period, the Regional Water Quality Control Board will mitigate any "interim" impacts to less than significant. But there is no evidence to support the assumption the Project's wastewater can be treated to avoid significant adverse effects on Bay water quality before the SFPUC builds or expands permanent wastewater treatment facilities. Nor is there evidence that Regional Water Quality Control Board regulation during any purported "interim" period would avoid significant adverse effects on Bay water quality. Nor is there any evidence as to how long this purportedly "interim" period will last, or how many other projects that will cumulatively exceed the Mariposa Pump Station's capacity will commence operations during this purportedly "interim" period.

Indeed, this DSEIR's approach represents a total abdication of the City's legal responsibility under CEQA to identify the Project's significant effects, to identify mitigation measures that would substantially reduce

those effects, and to adopt all feasible mitigation measures that would substantially reduce those effects. To put it colloquially, punting the problem to the SFPUC or Regional Water Quality Control Board does not pass muster under CEQA. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-3]*)

Response HYD-3: Water Quality—Interim Wastewater System Improvements

First, the commenter correctly quotes an excerpt from SEIR Section 5.7, Utilities and Service Systems, Impact C-UT-2. This passage is taken from the discussion on cumulative impacts on wastewater facilities, which relates to capacity of wastewater facilities and is not intended to provide an analysis of water quality impacts; the analysis of water quality impacts is presented in SEIR Section 5.9, Hydrology and Water Quality. To clarify the implications of this passage, the following cross-reference is added on SEIR page 5.7-13((deleted text is shown as ~~strikethrough~~ and new text is underlined; text below does not include the footnotes in the original text, which remain unchanged):

> While the system can currently accommodate project-related wastewater flows as discussed in Impact UT-5, the capacity of the Mariposa Sanitary Pump Station could be exceeded as future projects are implemented, including UCSF's Phase 2 Medical Center. It is assumed that the SFPUC will implement the permanent pump station and associated force main and conveyance piping improvements at the Mariposa Pump Station as soon as feasible, but the schedule for these improvements is currently unknown and completion could occur after the proposed project is constructed and operational.[15] In the event that additional future wastewater flows would exceed the pump station capacities before the needed wastewater system improvements could be completed, it is assumed that the SFPUC would make internal operational or piping changes to accommodate the additional flows in the interim in order to remain in compliance with RWQCB permit requirements. The interim system modifications would be subject to the approval of the RWQCB under the terms of the Bayside NPDES permit. Approval by the RWQCB would ensure that water quality of the Bay would be protected during the interim period. Any interim system modifications are assumed to be operational or internal to the existing pump stations and therefore would not result in any physical environmental effects. Please see Section 5.9, Hydrology and Water Quality, Impact HY-6, for the analysis of project impacts on water quality.

Second, the comment interprets the SEIR as saying that the project would have interim impacts on Bay water quality until permanent improvements to the Mariposa Pump Station are completed. The comment also states that there is no evidence that the Regional Water Quality Control Board regulation during the interim period would avoid significant adverse effects on Bay water quality. The commenter is mistaken. The SEIR Section 5.9, Hydrology and Water Quality, presents a full analysis of water quality impacts of the project and concluded that project-related wastewater flows would not adversely affect Bay water quality during the interim period.

Impact HY-6 of the SEIR (pp. 5.9-33 and 5.9-34) states that all wastewater generated from the proposed project would be conveyed to and treated at the Southeast Water Pollution Control Plant (SEWPCP) in accordance with the NPDES permit for the SEWPCP, the North Point Wet Weather Facility, and the Bayside wet-weather facilities (referred to as the Bayside NPDES Permit).[3] As the NPDES permitting agency, the RWQCB has oversight responsibility to ensure that the combined sewer system and SEWPCP are operated in a manner that would not result in unauthorized discharges that could adversely affect Bay water quality and that authorized discharges comply with specified effluent and receiving water effluent requirements. The NPDES permit (pp. 16 and 17) includes collection system management requirements that require the combined sewer system to be operated in a manner that does not result in a release of untreated or partially treated wastewater. Therefore, changes in flow conditions that could affect collection system management, such as upgrades to the Mariposa Pump Station, are subject to review and approval by the RWQCB.

The purpose of the Mariposa Pump Station is not to treat sewage, but rather to convey wastewater from the project area to the SEWPCP for treatment. Interim facilities improvements to the Mariposa Pump Station that were completed in the summer of 2015 (and are discussed in the SEIR p. 5.7-7, and in Response UTIL-6) are not part of the proposed project and have no bearing on the SFPUC's sewage treatment capacity. Rather, the facilities improvements provide conveyance capacity to deliver wastewater to the SEWPCP. By completing the interim improvements, as approved by the RWQCB, the SFPUC has maintained compliance with the requirements of the Bayside NPDES permit to ensure protection of Bay water quality.

If additional conveyance capacity is required in the future under the cumulative scenario beyond the interim facilities improvements, the SFPUC has indicated that it would implement temporary operational changes in order to handle anticipated, cumulative future flows. These changes would occur if the SFPUC determines that future cumulative wastewater flows could exceed the capacity of the Mariposa Pump Station before permanent upgrades can be completed (see Impact C-HY-2 of the SEIR and Response UTIL-6 of this document). These temporary operational changes could include:

- Routing of dry weather flows to existing wet weather transport/storage boxes to temporarily store select peak flows until flows can be pumped to the SEWPCP, as consistent with the Bayside NPDES permit requirements.
- Reducing flows within the Mission Bay basin by modifying sewers/sewer connections to allow temporary redirection of some flows to other basins, as feasible, including potential increased routing of flows from the proposed event center (or other Mission Bay facilities) to Mission Bay Sanitary Pump Station or Channel Pump Station, as appropriate.

Implementation of these temporary operational changes prior to completion of permanent upgrades to the Mariposa Pump Station, if needed, would be reviewed with the RWQCB, which

[3] California Regional Water Quality Control Board, San Francisco Bay Region. City and County of San Francisco, Southeast Water Pollution Control Plant, North Point Wet Weather Facility, Bayside Wet Weather Facilities, and Wastewater Collection System. Order No. R2-2013-0029. NPDES No. CA0037644.

would ensure that there would be no future discharges of untreated sewage that would violate the Bayside NPDES permit or adversely affect Bay water quality. Thus, during the interim period, the SFPUC will continue to comply with the NPDES permit requirements and seek RWQCB review as needed for any temporary operational changes. Implementation of these actions in compliance with the requirements of the NPDES permit would ensure that water quality impacts would be less than significant.

In responses to the commenter's concerns regarding the project's effects on wastewater treatment capacity, the SEWPCP currently has a remaining dry-weather treatment capacity of about 24.5 mgd. The average and peak wastewater flows from the proposed project would be well within the treatment capacity of the SEWPCP on both a project and cumulative basis. The flows would therefore be treated to the effluent standards of the Bayside NPDES permit and would not adversely affect Bay water quality. See SEIR Impacts HY-6 and C-HY-2 for further discussion.

See Section 3.17, Utilities, Response UTIL-6 regarding the interim facilities improvements that the SFPUC has already made to the Mariposa Pump Station to address existing dry weather flows and the temporary operational changes that could be implemented in the event the SFPUC is not able to complete permanent conveyance system upgrades to address cumulative dry weather flows by the time that cumulative dry weather flows could exceed the Mariposa Pump Station current conveyance capacity.

See Section 3.17, Utilities, Response UTIL-7 regarding wastewater flows to the Mariposa Pump Station during the interim period.

See Response HYD-4 regarding effluent discharges from the SEWPCP.

13.21.5 Changes in Effluent Quality (HYD-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-5

- Effluent discharges from SEWPCP: For the analysis of impacts related to changes in the quality of effluent discharges from the SEWPCP, the analysis considers whether discharges of wastewater to the combined sewer system would cause effluent quality to exceed the discharge limitations of the NPDES permit for the SEWPCP. If not, the impact is considered less than significant.

(DSEIR, p. 5.9-30.)

Thus, for purposes of complying with CEQA's requirement that it identify the Project's significant impacts, the DSEIR makes two unsupported assumptions: (1) that City compliance with its NPDES permits will avoid significant impacts, and (2) that the City will in fact comply with its NPDES permits. The DSEIR must support these assumptions with evidence. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-5]*)

Response HYD-4: Changes in Effluent Quality

The comment contends that the assumption that compliance with the City's Bayside NPDES permit would avoid significant impacts is unsupported. Further, the comment contends that there is no support provided for the assumption that the City would comply with the permit. OCII disagrees with this comment.

Water quality impacts associated with effluent discharges from the SEWPCP are addressed in Impact HY-6 of the SEIR (p. 5.9-36). As discussed in that impact analysis, discharges to the combined sewer system are regulated under the San Francisco's Industrial Waste Ordinance (Article 4.1 of the San Francisco Public Works Code), which specifies limitations for discharges to the combined sewer system that ensure that the SEWPCP can meet the effluent and receiving water limitations of the Bayside NPDES permit. However, the 1998 Mission Bay FSEIR concluded that potential uses within the Mission Bay plan area could use unusual chemicals such as radioactive materials and biohazardous materials that are atypical of municipal wastewater. Discharge of these chemicals to the combined sewer system could affect the wastewater treatment process at the SEWPCP and potentially result in violation of the Bayside NPDES permit. Although unlikely, the SEIR determined that the proposed project could also include such uses that could discharge unusual chemicals to the wastewater system. Therefore, both the 1998 Mission Bay FSEIR and the SEIR identified a mitigation measure requiring installation of sampling ports at facilities that handle unusual chemicals to facilitate sampling to monitor discharge quality (FSEIR Mitigation Measure K.2 and SEIR Mitigation Measure M-HY-6). The impact analysis concluded that implementation of this mitigation measure would facilitate compliance with Bayside NPDES permit discharge limitations and would ensure that discharges from facilities that use unusual chemicals do not result in a violation of the Bayside NPDES permit.

It is reasonable to conclude that compliance with the Bayside NPDES permit would not result in adverse water quality effects because the permit specifies discharge prohibitions, dry-weather effluent limitations, wet-weather effluent performance criteria, and receiving water limitations that are protective of the beneficial uses and associated water quality objectives for San Francisco Bay, the receiving water. Monitoring and reporting requirements to demonstrate compliance with water quality objectives are also specified in the permit.

The Bayside NPDES permit is issued pursuant to California Water Code Article 4, Chapter 4, Division 7 (commencing with Section 13260) as well as the federal Clean Water Act Section 402. The effluent limitations of the permit address general water quality parameters such as biochemical oxygen demand, total suspended solids, and pH as well as all specific constituents that have a reasonable potential to exceed water quality objectives in the receiving water. Discharges containing detectable levels of residual chlorine are prohibited. The NPDES permit receiving water limitations prohibit the alteration of temperature, turbidity, or apparent color beyond present natural background levels as well as the discharge of toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or render any of these unfit for human consumption. Specific limitations are also provided for dissolved oxygen, dissolved sulfide, pH, and nutrients.

These limitations are based on and implement the requirements of the following regulatory documents and requirements:

- The *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan;
- The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* which establishes sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries;
- The National Toxics Rule (NTR) and California Toxics Rule (CTR) which contain water quality criteria for priority pollutants;
- The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) which establishes implementation provisions for priority pollutant criteria and objectives as well as provisions for chronic toxicity control;
- State Water Board Resolution 68-16 (California's antidegradation policy) requiring that existing water quality be maintained unless degradation is justified based on specific findings; and
- Anti-backsliding requirements of Clean Water Act Sections 402(o) and 303(d)(4) and 40 C.F.R. Section 122.44(l) which require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

Compliance with these plans, policies, and water quality criteria and objectives as enforced through the Bayside NPDES permit ensures that discharges of treated effluent from the SEWPCP are protective of water quality in San Francisco Bay. Therefore, compliance with the Bayside NPDES permit effluent and receiving water limitations is protective of water quality and it is appropriate to use the requirements of the NPDES permit as a threshold of significance for effluent discharges from the SEWPCP. Using this threshold, the SEIR properly concluded that water quality impacts related to effluent discharges from the SEWPCP are less than significant as described in Impact HY-6 (pp. 5.9-33 to 5.9-41).

It should be noted that the RWQCB may amend, revoke, and reissue the NPDES permit if investigations demonstrate that the discharge could potentially cause or contribute to adverse effects on water quality and/or beneficial uses of the receiving water. The permit may also be amended if water quality objectives change or additional pollutants could exceed water quality objectives, or to incorporate waste load allocations determined during the TMDL process. The RWQCB may also revoke the permit in accordance with federal regulations if the discharger fails to meet the requirements of the permit, or if the RWQCB finds that the permitted discharge endangers human health or the environment. The RWQCB may also issue compliance orders with schedules and fines in order to assure compliance. These permit modification and revocation provisions ensure that discharges will remain in compliance with water quality objectives should the nature of the discharge or applicable water quality criteria and policies change.

CEQA case law endorses the use of existing environmental standards or regulations as thresholds of significance. (See *Tracy First v. City of Tracy* (2009) Cal.App.4th 912 [upholding determination that energy impact of project was less than significant because the project achieved energy efficiencies greater than those required by California Energy Efficiency Standards]; *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 47 [upholding finding that incremental impacts of criteria pollutants on sensitive crops would be less than significant based on National Ambient Air Quality Standards promulgated to protect public health and welfare from adverse effects of a pollutant]; *Protect The Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1107 ["thresholds can be drawn from existing environmental standards, such as other statutes or regulations"]; *Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884 [project's compliance with existing laws and regulations provided substantial evidence that seismic impacts would be less than significant]). In fact, reliance on compliance with the applicable regulatory framework is common and widely accepted practice. (See *ibid*.; see also *City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 411-412 [citing compliance with regulatory standards as adequately addressing hazardous materials at school site].)

The use of existing environmental standards is encouraged under CEQA because it promotes consistency. As explained in *Communities for a Better Environment v. California Resources Agency*, "[a] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and regulation." (103 Cal.App.4th at p. 111.) Moreover, CEQA Guidelines Appendix G specifically recommends that hydrology and water quality impacts should be assessed by analyzing whether a project would violate any water quality standards or waste discharge requirements. (§ IX.) Here, the waste discharge requirements are provided in the City's NPDES permit. It was therefore appropriate to base the thresholds of significance on the NPDES permit requirements. Further, the requirements in the City's NPDES permit are mandatory. It is therefore reasonable to assume that the project will comply with these requirements. (*Oakland Heritage Alliance v. City of Oakland* (2011) 195 Cal.App.4th 884 [holding it was reasonable for agency to expect that environmental regulations would be followed].)

Regarding compliance with the NPDES permit, the City, through the SFPUC, has historically complied and continues to comply with its NPDES permit conditions. The SFPUC is an active participant in the NPDES process and regularly coordinates with the RWQCB. As required by the NPDES permit, the SFPUC conducts regular monitoring and reporting to the RWQCB, implements a pollution prevention program, and performs all conditions of the permit. Any excursions of effluent limitations are reported to the RWQCB and the SFPUC implements corrective actions in accordance with the requirements of the NPDES permit and RWQCB directives. The permit recognizes such events may occur and requires corrective actions, which the SFPUC also routinely implements. Moreover, the SFPUC is continuously investigating and implementing process and monitoring improvements and implementing new procedures and worker training programs to proactively prevent permit excursions.

13.21.6 Wet Weather Discharges (HYD-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-4 O-MBA11L5-6 O-MBA11L5-8 O-MBA11L5-9 O-MBA11L5-36

II. The DSEIR Is Not Sufficient as an Informational Document with Respect to the Project's Contaminated Stormwater Impacts on San Francisco Bay Water Quality or Biological Resources.

In the chapter on the Project's Water Quality impacts, the DSEIR evaluates the impact Combined Sewage Discharges (CSDs or CSOs) to the Bay that exceed treatment capacity of the Mariposa Pump Station due to the combination of increased storm water flows combined with sewage wastewater flows. The DSEIR uses two thresholds of significance based on the City's NPDES permit, stating:

- Wet weather flows to combined sewer system: The impact analysis examines whether project related increases in wastewater flows would contribute to combined sewer discharges during wet weather. The impact is considered less than significant if the increased flows would not increase the frequency of combined sewer discharges above the long-term average specified in the NPDES permit for the SEWPCP, the North Point Wet Weather Facility, and Bayside wet-weather facilities.

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-4]*)

In addition, the first threshold quoted above only looks at "frequency of combined sewer discharges above the long-term average" and ignores increases in quantity and duration of overflows.(See DSEIR, pp. 5.9-34 to 5.9-36.) The DSEIR notes:

> The model analyzed the effects of discharging the average flows from the proposed project in combination with the existing average flows in the drainage area. Under this scenario, the frequency of CSDs would not increase, but the volume of the CSDs would increase from 5.34 to 5.63 million gallons and the duration would increase from 17.2 to 17.3 hours.

(DSEIR, 5.9-35.) The DSEIR finds this impact less than significant because it defines "significance" solely in terms of the number of CSD events and compliance with the City's NPDES permit, regardless of the quantity of sewage discharged, stating:

> Because average and peak wastewater flows from the project site would not increase the frequency of CSD events from the Mariposa sub-basin and would be consistent with the requirements of the NPDES permit, project level water quality impacts related to contributions to an increase in CSD frequency would be *less than significant*.

(DSEIR, 5.9-35, 36.) The DSEIR makes the same finding for the Project's cumulative impact based on the same evidence and the same rationale. (DSEIR, 5.9-35, 36.)

This is a legal error because the DSEIR cannot merely reference a project's compliance with another agency's regulations. Lead agencies must conduct their own fact-based analysis of project impacts, regardless of whether the project complies with other regulatory standards.[1]

The 1998 Mission Bay FSEIR sets the stage for this legal error in its finding that CSO impacts on the Bay are less than significant, stating:

> The same conclusions for the proposed project apply to the cumulative effects of Bayside projects, in that the cumulative increase in pollutant mass load from these projects would have a less-than-

> significant effect on water quality. As shown in Table V.K.8, the project would represent less than 3% of the increased total pollutant load from the Bayside. The cumulative loads for pollutants would generally increase by 4-6%. Thus, the project would cause approximately half of this cumulative increase for the Bayside. To put this in context, City discharges are a very small portion of the region-wide discharges to the Bay. Compared to municipal dischargers in the Bay Area, the load contribution of the Southeast Plant represents about 12 %of all other municipal dischargers, and the Mission Bay project would represent less than 3 % of that 12% (or 0.36% of all municipal wastewater discharged to the Bay). In addition, besides municipal wastewater, other sources of pollutant loading to San Francisco Bay include riverine inputs, nonurban runoff, urban runoff, point sources, dredging/sediment disposal, spills, and atmospheric deposition. Of these sources, point sources, including municipal dischargers and other permitted industrial dischargers, represent about 1-6 % of the total load input to the Bay-Delta estuary. Regarding stormwater discharges, San Francisco Bayside stormwater flows are about 1.8% of the total regional urban storm flow to the Bay. Considering the contribution of the project and of the cumulative Bayside projects in the context of all the other pollutant inputs to the Bay, the cumulative pollutant loading from Bayside projects would be extremely small.

(1998 MB FSEIR, p. V.K.52.)

This logic reflects the "de minimis" and "ratio" rationales rejected in *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120 ("CBE")["[T]he relevant question"... is not how the effect of the project at issue compares to the preexisting cumulative effect, but whether "any additional amount" of effect should be considered significant in the context of the existing cumulative effect. [footnote omitted] In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant. [footnote omitted]"], and *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720-21 ["They contend in assessing significance the EIR focuses upon the ratio between the project's impacts and the overall problem, contrary to the intent of CEQA.... We find the analysis used in the EIR and urged by GWF avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under GWF's 'ratio' theory, the greater the overall problem, the less significance a project has in a cumulative impacts analysis. We conclude the standard for a cumulative impacts analysis is defined by the use of the term 'collectively significant' in Guidelines section 15355 and the analysis must assess the collective or combined effect of energy development"].) Communities and Kings County teach that the significance of a cumulative impact depends on the environmental setting in which it occurs, especially the severity of existing environmental harm.

Therefore, accepting the Hydroconsult numbers at face value, the starting point for assessing whether adding 2.9 million gallons per year[2] of incompletely treated CSD pollution to the existing condition of San Francisco Bay is significant is the existing condition of San Francisco Bay.[3] The DSEIR says very little on the topic. The 1998 Mission Bay FSEIR provides some information, but the DSEIR does not discuss how much of the 1998 Mission Bay FSEIR's information may be outdated as a result of the passage of seventeen years, and is, therefore, unknown.

The 1998 Mission Bay FSEIR characterizes "municipal wastewater" as follows:

> Municipal wastewater is a relatively strong waste stream containing high concentrations of organic matter that will decompose (measured as biochemical oxygen demand because the decomposition requires oxygen), inorganic particulates (measured as total suspended solids), nutrients (measured as total nitrogen and phosphorus), and pathogenic microorganisms. It also contains oil and grease and small quantities of toxic metals, pesticides, solvents, and plasticizers (additives in plastics that maintain softness and pliability). Conventional secondary treatment, as employed by San Francisco at its Southeast Water Pollution Control Plant, greatly reduces the concentrations of most substances in municipal wastewater. On the other hand, dissolved metals and organic substances that are resistant to breakdown by bacteria, may pass through the plant relatively unaltered. This waste stream, after treatment, is referred to as municipal wastewater effluent in this SEIR.

(1998 MB FSEIR, p. V.K.4.)

The 1998 Mission Bay FSEIR characterizes "urban stormwater " as follows:

> Urban stormwater is a large-volume wastewater stream. Pollutants contained in urban runoff include street litter, sediment (mostly inorganic particulates, measured as total suspended solids), oil and

> grease, oxygen-demanding substances, pathogenic microorganisms, toxic metals, and pesticides. The concentrations of oxygen-demanding substances, nutrients, and pathogenic microorganisms are much lower than in untreated municipal wastewater. CSOs exhibit a blend of the untreated characteristics of municipal wastewater and urban stormwater runoff.

(1998 MB FSEIR, p. V.K.4.)

The 1998 Mission Bay FSEIR characterizes the "impairment of Central San Francisco Bay" as follows:

The State Water Resources Control Board (SWRCB) has listed central San Francisco Bay as impaired on the basis of field surveys of the water column, sediments, sediment toxicity, bivalve bioaccumulation, and water toxicity. The determination relates to mercury, copper, selenium, diazinon, and polychlorinated biphenyls (PCBs).

The State Water Resources Control Board (SWRCB) has listed central San Francisco Bay as impaired on the basis of field surveys of the water column, sediments, sediment toxicity, bivalve bioaccumulation, and water toxicity. The determination relates to mercury, copper, selenium, diazinon, and polychlorinated biphenyls (PCBs).

- Mercury. The main source of mercury in the Bay is erosion and drainage from abandoned gold and mercury mines. Other sources include natural sources, atmospheric deposition, and various industrial and municipal sources.
- Copper. Copper enters the Bay through municipal sources, stormwater runoff (primarily through automobile brake pad dust), and other nonpoint sources (such as soils and abandoned mines). These are the three main sources, and they contribute roughly equivalent amounts.
- Selenium. Selenium enters the Bay through industrial point sources (e.g., oil refineries), agriculture, and natural sources. Control programs are in place to address selenium discharges from oil refineries
- Diazinon. Diazinon is a pesticide that enters the Bay as runoff from agriculture and, to a lesser extent, residential land uses. Diazinon is a primary component of insecticides. Homeowner pesticide use peaks in late spring and early summer.
- PCBs. Although PCBs are no longer manufactured in the U.S., PCBs previously released to the environment enter the Bay through stormwater runoff and transport through the food chain. PCB levels in fish have resulted in health advisories for fish consumption.

(1998 MB FSEIR, p. V.K.8-9.)

The above information shows the existing environmental harm (or "preexisting cumulative effect" in the words of *Communities, supra*) is severe, and this Project will make it worse. Therefore, the DSEIR's finding that the Project's cumulative CSD impacts on the Bay are less-than-significant is erroneous as a matter of law. It is based on two legal errors: (1) the exclusion of CSD quantity from its threshold of significance, which reflects the "de minimis" and "ratio" rationales rejected in *Communities, supra* and *Kings County, supra*; and (2) the DSEIR's reliance on another agency's regulatory standards (i.e., the NPDES permit) to determine significance under CEQA.

Footnote:

[1] *See*, 1 e.g., *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 16 (lead agencies must review the site-specific impacts of pesticide applications under their jurisdiction, because "DPR's [Department of Pesticide Regulation] registration does not and cannot account for specific uses of pesticides..., such as the specific chemicals used, their amounts and frequency of use, specific sensitive areas targeted for application, and the like"); *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture (*1986) 187 Cal.App.3d 1575, 1587-1588 (state agency applying pesticides cannot rely on pesticide registration status to avoid further environmental review under CEQA); *Oro Fino Gold Mining Corporation v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881-882 (rejects contention that project noise level would be insignificant simply by being consistent with general plan standards for the zone in question). *See also City of Antioch v. City Council of the City of Pittsburg* (1986) 187 Cal.App.3d 1325, 1331-1332 (EIR required for construction of road and sewer lines even though these were shown on city's general plan); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712-718 (agency erred by "wrongly assum[ing] that, simply because the smokestack emissions would comply with applicable regulations from other agencies regulating air quality, the overall project would not cause significant effects to air quality.").

[2] 5.63 – 5.34 = 0.29 x 10 = 2.9.

[3] "If the rainstorm is a large one, and the capacity of the storage/transport box sewers is exceeded, treated combined sewer overflows (CSOs) occur at outfalls along the City's shoreline. When combined sewage is temporarily stored in transport/storage structures, floating materials are removed from the water surface and some solids settle to the bottom of the structures. The accumulated solids are then flushed to the treatment plant after the storm has subsided. The treatment that occurs within the structures is approximately equivalent to primary treatment." (1998 MB FSEIR, p. V.K.8-9.)

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-6]*)

Further, it is impossible to place the discussion of this entire issue (at DSEIR pages 5.9-34 to 5.9-36) in a meaningful context, because the DSEIR does not inform the reader if the discussion assumes construction or expansion of permanent wastewater treatment facilities by the SFPUC. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-8]*)

Also, the DSEIR says: "the [Hydroconsult] model estimated the annual average frequency, volume, and duration of CSDs that would occur once the Mariposa wet- and dry-weather pump stations reach the combined capacity of 11.2 mgd under existing and project conditions. The model estimates that under existing conditions, CSDs from the Mariposa sub-basin occur approximately 10 times per year with an average volume of 5.34 million gallons and duration of 17.2 hours." (DSEIR, p. 5.9-35.) This text implies that the "Hydroconsult" model includes wet-weather flows and wet-weather CSDs. But the only Hydroconsult memo cited and included in Appendix HYD states:

> Three scenarios were analyzed: base case, project, and cumulative. The base case scenario includes existing conditions plus developments and improvements expected to be substantially complete previous to occupancy of the GSW arena. The project scenario adds the DWF from the arena only and the cumulative scenario adds the project DWF plus DWF from reasonably foreseeable projects in the basin. In all three scenarios, the wet weather flow (stormwater runoff) is assumed to not contribute to the CSS; rather is treated and pumped directly to the Bay. All DWF from the proposed GSW arena is assumed to flow to the Mariposa pump station (MPS), therefore Mariposa is the only basin analyzed.

(DSEIR, Appendix HYD, p.1.) The statement "wet weather flow (stormwater runoff) is assumed to not contribute to the CSS; rather is treated and pumped directly to the Bay" makes sense if it refers only to stormwater from the Mission Bay Redevelopment Area, because all of that stormwater will be separated from wastewater flows when the separate stormwater system for Mission Bay is completed in 2015. (See DSEIR, p. 5.7-4.)[4] But the DSEIR also states that storm water from areas outside Mission Bay will continue to combine with wastewater flows to the Mariposa Pump Station and will contribute to wet weather CSDs. (DSEIR, p. 5.7-7.)[5] If this is correct, then the Hydroconsult dry-weather analysis is beside the point.

Footnote:

[4] "The separate stormwater system for the Mission Bay South Plan area is currently being implemented by the master developer and includes four drainage zones within the geographic boundaries of the reconfigured Central sub-basin that have already been constructed and one drainage zone within the geographic boundaries of the reconfigured Mariposa sub-basin which is currently under construction. Stormwater in each of the drainage zones flows by gravity to one of five stormwater pump stations in the locations shown on **Figure 5.7-2**, including Pump Station SDPS-5 near the east end of 16th Street. When construction of the fifth drainage basin is completed (anticipated in 2015, prior to construction and operation of the proposed project), all stormwater runoff from Mission Bay South will be conveyed through the separate stormwater system and discharged to the Bay and China Basin Channel (Mission Creek)." (DSEIR, p. 5.7-4 (pdf151).)

[5] "The 240-acre reconfigured Mariposa sub-basin of the combined sewer system is divided into two tributary areas that direct flow to the Mariposa Pump Station. Tributary B includes Potrero Hill to the south of Mariposa Street and is outside of the Mission Bay Plan area; this tributary area directs both rainwater and wastewater to the pump station. Tributary A includes areas to the north of Mariposa Street that are located within the Plan area; in this area, stormwater flows are directed to the separate stormwater system constructed for the Mission Bay South development, and only wastewater flows are directed to the Mariposa Pump Station." (DSEIR, p. 5.7-7.)

(*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-9]*)

HAZARDOUS CHEMICALS

Hazardous Chemical effects on Biota

The FSEIR identified that for the purposes of analyzing wastewater impacts from the project, that "Near-Shore Effects-Treated combined sewer overflows currently occur at Bayside discharge facilities, including facilities at China Basin Channel, at the end of Mariposa Street, and in Islais Creek. The proposed project would marginally increase treated combined sewer overflows and direct stormwater discharges to near-shore waters of the Bay, including China Basin Channel and Islais Creek. Near-shore discharges are not subject to the same rapid mixing and dilution as the deep-water discharges from the Southeast Plant." (Pg. II.27) This effect is generally correct and holds for both wastewater, and typically to an even greater degree, most particulate or soluble chemicals that would come off the site through the groundwater, aerial re-deposition or stormwater/surface transport.

However, in the immediately following section, Effects of Stormwater Discharges, it states that "Under the project, the volume of stormwater directly discharged to near-shore waters of the Bay from the Project Area would increase about 2%. The concentrations of pollutants in the stormwater discharge would change, because the project would intensify land use in the Project Area. Neither the increase in stormwater flow, nor the change in pollutant concentrations would constitute a significant effect on aquatic biota." (Pg. II.28) The recent findings of Class 1 and Class 2 hazardous waste is not taken into account for these analyses and comprise significant new information that requires analysis in the 2015 SEIR because of the different and significantly greater biological impacts of these hazardous materials (LTR 2015). (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-36]*)

Response HYD-5: Wet Weather Discharges

The comments question the use of an increase in frequency of combined sewer discharges as a significance threshold for water quality impacts related to combined sewer discharges. The comments also contend that it is improper for the SEIR to base the thresholds of significance for water quality impacts on the City's Bayside NPDES permit. The comments also raise questions about the assumptions used in the analysis of changes in combined sewer discharges as well as the "de minimis" approach used by the 1998 Mission Bay FSEIR.

Threshold of Significance

In accordance with Appendix G of the CEQA guidelines, water quality impacts related to discharges from the City's combined sewer system would be significant if the project were to 1) violate any water quality standards or waste discharge requirements or 2) otherwise substantially degrade water quality. Accordingly, as stated in Section 5.9 of the SEIR, Hydrology and Water Quality (p. 5.9-30), the SEIR examines whether project-related increases in wastewater flows would contribute to combined sewer discharges during wet weather. The impact is considered less than significant if the increased flows would not increase the frequency of combined sewer discharges above the long-term average specified in the NPDES permit for the SEWPCP, the North Point Wet Weather Facility, and Bayside wet-weather facilities.

As discussed on SEIR p. 5.9-24, the City's Bayside NPDES permit was adopted by the RWQCB in August 2013 and covers the SEWPCP, the North Point Wet Weather Facility, and the Bayside wet-weather facilities, including combined sewer discharge structures that discharge to the Bay. In the permit, the RWQCB finds that while wet weather discharges from the combined system are point source discharges subject to NPDES permit requirements, they are not subject to

secondary treatment standards (see p. F-19 of the permit). Rather, the Combined Sewer Overflow Control Policy establishes technology-based and water quality standards-based requirements to meet the water quality requirements of the Clean Water Act. The technology-based requirements are consistent with Title 40 of the Federal Code of Regulations, Section 125.3.

As described in the permit, and on p. 5.9-20 of the SEIR, the SFPUC must implement the following nine minimum controls in accordance with the Combined Sewer Overflow Policy to reduce the frequency of combined sewer discharges and their effect on receiving water quality:

1. Conduct proper operation and regular maintenance programs for the combined sewer system and combined sewer discharge outfalls;
2. Maximize the use of the collection system for storage;
3. Review and modify pretreatment programs to minimize the effect of non-domestic discharges to the collection system;
4. Maximize flow to the SEWPCP and North Point Facility for treatment;
5. Prohibit combined sewer discharges during dry weather;
6. Control solids and floatable materials in combined sewer discharges;
7. Develop and implement a pollution prevention program focused on reducing the effect of combined sewer discharges on receiving waters;
8. Notify the public of combined sewer discharges; and
9. Monitor to effectively characterize combined sewer discharge effects and the efficacy of combined sewer discharge controls.

These controls represent the best conventional and best available technology economically achievable as required under the Clean Water Act. The City is currently implementing these controls as required by the Combined Sewer Overflow Control Policy.

The City has also developed a Long-Term Control Plan to optimize operations of the wastewater collection and treatment system and maximize pollutant removal during wet weather. The Long-Term Control Plan implements the water quality standards-based requirements of the Clean Water Act. Under the Long-Term Control Plan, the City has constructed and optimized operations of the combined sewer system to minimize combined sewer discharge frequency, magnitude, and duration and maximize pollutant removal during wet weather, as determined by criteria developed in the Long-Term Control Plan and approved by the RWQCB. The City must capture and store combined sewage and provide at least the equivalent of primary wet weather treatment of all discharges from the combined sewer system, including combined sewer discharges. The Bayside NPDES permit requires the City to monitor the water quality of all combined sewer discharges and the efficacy of wet weather discharge controls. If the RWQCB determines anytime in the future that the City's system no longer protects beneficial uses of the receiving waters, the City must re-evaluate its Long-Term Control Plan and combined sewer system operation to ensure that beneficial uses continue to be protected.

The Long-Term Control Plan specifies that the City will meet the water quality standards-based requirements of the Clean Water Act by providing minimum levels of treatment. The Combined Sewer Overflow Policy provides that the water quality standards-based requirements will be met if the discharger provides at least primary clarification of at least 85 percent of the wet-weather flow. As noted on p. 5.9-20 of the SEIR and in the NPDES permit, the City captures and treats 100 percent of the combined sewage flow collected in the combined sewer system during precipitation events. Therefore, the Long-Term Control Plan exceeds the specifications of the presumptive approach used in the Combined Sewer Overflow Policy, and there are no discharges of untreated combined sewer overflows from the City's combined sewer system. The addition of project-related wastewater flows would in no way affect the system's capability to capture, store and treat 100 percent of the combined sewage in the City's system.

The NPDES permit does not require instantaneous compliance with the number, volume, duration, or frequency of combined sewer discharges from the combined sewer system, but instead requires that the system be operated in compliance with long-term average annual design criteria for combined sewer discharges from each sub-basin in accordance with the City's Long-Term Control Plan. The long-term annual average design criteria for the Mariposa sub-basin is 10 combined sewer discharge events per year. This criterion, in accordance with the Long-Term Control Plan, requires that the City construct and operate storage and treatment facilities of sufficient capacity to achieve that criterion. This long-term average discharge design requirement is appropriate to use as a threshold of significance under CEQA because implementing the controls and management of the frequency of combined sewer discharges meets the technology and water quality standards-based requirements of the Combined Sewer Overflow Policy. Further, the Bayside NPDES permit states that based on a special study conducted by the SFPUC in 2012, the average concentrations of pollutants in the combined sewer discharges are below acute water quality objectives for metals and other priority pollutants when dilution within the receiving water is considered.

Under CEQA, lead agencies are accorded broad discretion in determining the appropriate threshold of significance to determine the severity of a particular impact. There is abundant CEQA case law endorsing the use of existing environmental standards or regulations as thresholds of significance. (See *Tracy First v. City of Tracy* (2009) Cal.App.4th 912 [upholding determination that energy impact of project was less than significant because the project achieved energy efficiencies greater than those required by California Energy Efficiency Standards]; *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal.App.4th 47 [upholding finding that incremental impacts of criteria pollutants on sensitive crops would be less than significant based on National Ambient Air Quality Standards promulgated to protect public health and welfare from adverse effects of a pollutant]; *Protect The Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1107 ["thresholds can be drawn from existing environmental standards, such as other statutes or regulations"].)

The use of existing environmental standards is encouraged under CEQA because it promotes consistency. As explained in *Communities for a Better Environment v. California Resources Agency*, "[a] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning

and regulation." (103 Cal.App.4th at p. 111.) Moreover, CEQA Guidelines Appendix G specifically recommends that hydrology and water quality impacts should be assessed by analyzing whether a project would violate any water quality standards or waste discharge requirements. (§ IX.) Here, the waste discharge requirements are provided in the City's NPDES permit. It was therefore appropriate to base the thresholds of significance on the NPDES permit requirements.

Assumptions Used in Analysis of Changes in Combined Sewer Discharges

The comments raise questions about the assumptions used in the analysis of changes in combined sewer overflows, including stormwater contributions and the capacity of the pump station. As noted in the Hydroconsult report provided in SEIR Appendix HYD, the modeling of combined sewer overflows conducted for the proposed project assumed that stormwater flows would be routed to the separate storm sewer system. As a point of clarification, this refers only to stormwater from the Mission Bay plan area, as it has a separate storm sewer system. Stormwater from the remainder of the Mariposa sub-basin was assumed to continue discharging to the combined sewer system.

As stated in Impact HY-6 of the SEIR, the modeling conducted to evaluate changes in combined sewer discharges with addition of the project's wastewater flows is based on the existing 11.2 mgd capacity of the Mariposa Pump Station. The effect of the project on combined sewer discharges would likely be less than presented in the SEIR once permanent improvements are made to increase the pumping capacity of the Mariposa Pump Station.

Cumulative Impacts

The comments state that the "de minimis" approach used in the 1998 Mission Bay FSEIR for evaluation of pollutant contributions to the Bay from the Mission Bay plan area was improper and suggest that the same approach was improperly used in the SEIR for the analysis of cumulative combined sewer discharge impacts. The SEIR did not use a "de minimis" approach in the CEQA analysis of cumulative impacts of the proposed project's contribution to water quality impacts of combined sewer discharges. As concluded in Impacts HY-6 and C-HY-2 of the SEIR (pp. 5.9-36 and 5.9-46) and Response HYD-4, compliance with the Bayside NPDES permit for discharges from the Bayside facilities would ensure that water quality in the San Francisco Bay is protected on both a project and cumulative basis.

Regarding combined sewer discharges, the SEIR concluded in Impact HY-6 (pp. 5.9-34 through 5.9-36) that the project would not cause an increase in the long term annual average frequency of 10 combined sewer discharges based on existing wastewater flows to the Mariposa Pump Station. Impact C-HY-2 (pp. 5.9-45 and 5.9-46) considers the cumulative flows from reasonably foreseeable projects also and concluded that the cumulative wastewater flows in the Mariposa sub-basin could cause a slight increase in the frequency of combined sewer discharges when considering worst case conditions, as explained in the Impact C-HY-2. However, the Bayside NPDES permit acknowledges that some years are wetter than others and allows a frequency of greater than 10 combined sewer discharges in a given year as long as the long-term average does not exceed that frequency. The cumulative conditions modeled represent worst case conditions (all project-related peak wastewater flows would discharge to the Mariposa sub-basin and would occur concurrently with each large rainstorm) and this worst case condition would not be expected to occur on a regular

basis, if at all. Because of this, there may be less than 10 combined sewer discharges per year in some years under cumulative conditions. The assumed cumulative conditions would rarely if ever occur. Such rare events would not affect the long term annual average of 10 combined sewer discharges, and would not cause a violation of the NPDES permit conditions. Therefore, cumulative impacts related to contributions to an increase in combined sewer discharge frequency would be less than significant as concluded in Impact HY-6 of the SEIR. The comment regarding "de minimis" approach of the 1998 Mission Bay FSEIR does not apply to the CEQA analysis of the proposed project presented in the SEIR.

Further, the modeling conservatively assumed that all of the 1.074 mgd peak flow from the project would be routed to the Mariposa sub-basin and in fact, additional analysis by the project sponsor has indicated that only 0.892 mgd of the peak flow would be directed to the Mariposa sub-basin. [4] The peak flow estimate also assumes that peak flows would occur from all project-related uses (event center, office, retail, and restaurant) at the same time, which would not likely occur. For example, peak flows from the event center would most likely occur on evenings and weekends, whereas peak flows from office uses would be weekday daytime.

The comments cite two cases: *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120 and *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720-21. These cases are cited for the proposition that a cumulative impacts analysis must consider the existing cumulative effect in determining whether any additional proposed project effect should be considered significant (i.e., cumulatively considerable). Here, the SEIR fulfills this requirement; the analysis properly considers cumulative conditions and whether the project's contribution to that effect would be cumulatively considerable. As explained above, the SEIR describes existing cumulative effects in detail and analyzes whether the project's incremental contribution would be cumulatively considerable using the established NPDES limitations on the frequency of combined sewer discharges as a threshold of significance. (SEIR, pp. 5.9-45 and 5.9-46.) It should be noted, however, that the comments overstate the holdings in the two cases by suggesting that any contribution to a cumulatively significant impact must be found cumulatively considerable. As explained in *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120, "the 'one [additional] molecule rule' is not the law." (See also CEQA Guidelines § 15064, subd. (h)(4) ["[t]he mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable"].)

See Response HYD-4 regarding water quality impacts related to treated effluent discharges from the SEWPCP and further discussion of the use of NPDES permit limitations as thresholds of significance.

See Response HYD-3 regarding the potential for contaminants in stormwater runoff as a result of contamination at the project site.

[4] BkF. Water and Sewer Analyses for Golden State Warriors Arena @ Mission Bay Blocks 29-32. January 9, 2015.

13.21.7 Flooding as a Result of Stormwater Runoff (HYD-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-17 O-MBA7S2-27

IV. The DSEIR Is Not Sufficient as an Informational Document with Respect to the Project's Flooding Risk.

Chapter 5.9 of the DSEIR does not examine the potential for Project induced increases in storm water runoff to "contribute considerably" to cumulative risk of flooding. (See DSEIR p. 5.9-9 to 5.9-18.) Chapter 5.7 does not do so either. Instead, it analyzes whether the Project will require construction of new or additional storm drainage capacity. (See DSEIR, pp. 5.7-18, 19 [Impact C-UT-3].) But the question whether the Project will require construction of new facilities is different than the question whether it will cause the impact such new facilities are intended to avoid. (See e.g., Chapters 5.7 and 5.9 regarding CSD impacts, and the discussion of same in section 1 above.)

The DSEIR's analysis of cumulative stormwater (C-UT-3) states that the impact is less than significant because the capacity of the new, separated stormwater system is adequate. (DSEIR, p. 5.7-18.) This section of the DSEIR cites to "BKF, Mission Bay Blocks 29-32 - Stormwater Memorandum, January 6, 2015." (DSEIR, p. 5.7-18, note 20.) This Stormwater Memorandum, in turn, states:

> G. Major Storm Events
> The storm drain system and pump station are designed to handle runoff from a 5-year storm event. During larger events such as a 100-year storm event, runoff is conveyed through the streets to a controlled overflow to the Bay. The overland flow analysis was studied in the "Revised Summary Drainage Study for the South of Channel Watershed for Mission Bay Project", dated December 1, 2000. Based on December 2000 study, overland flow from drainage basin, where the Project is located (i.e., "Drainage Basin B"), currently enters the Bay via an existing overflow near Mission Bay Boulevard North (North Overflow). Overland flow in Project perimeter streets, except 16th Street, is conveyed to this North Overflow. Overland flow in 16th Street is conveyed to overflow located to the south of Project near park P24. Refer to attached Figure D for the location of the overland flow release.
>
> The Project will be sufficiently flood proofed to prevent 100-year overland flow in perimeter streets from entering below grade structures or inundating utilities and equipment. Flood proofing will include using protective measures to prevent storm runoff from inundating and/or damaging equipment such as furnaces, boilers, air conditioning compressors, air ducts, electrical system components, electrical wiring, dry conduits, electrical and gas meters, utility rooms, septic tanks, control panels, HVAC systems and fuel systems."

(BKF, Mission Bay Blocks 29-32 - Stormwater Memorandum, January 6, 2015, p. 6.)

There are two missing pieces of this analysis. First, the memorandum tells us "The Project will be sufficiently flood proofed to prevent 100-year overland flow in perimeter streets from entering below grade structures or inundating utilities and equipment." This may be good news for the Project itself, but it tells the reader nothing about the extent to which this Project will contribute to increased flood risk to surrounding properties. The DSEIR does not examine the potential for Project induced increases in storm water runoff to "contribute considerably" to cumulative risk of flooding around the Project. (See DSEIR p. 5.9-9 to 5.9-18.) Second, the DSEIR does not describe the "flood proofing" measures that it says will avoid inundating below grade structures of the Project. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-17]*)

Setting aside the internal inconsistency, the DSEIR's ultimate conclusion of less than significant cumulative impact is based on a misleading characterization of the Project's stormwater infrastructure. The DSEIR asserts:

> The project stormwater analysis completed for the project sponsor concluded that the capacity of the separated stormwater system as built is adequate to serve the project as well as other development projects that would be constructed at full buildout of Mission Bay South.

(DSEIR, p. 5.7-18.)

This representation is inaccurate and misleading. A technical report, referenced in a footnote but not actually attached as an Appendix to the DSEIR, describes the stormwater facilities very differently. (DSEIR, p. 5.7-18, fn 20 citing "BKF, Mission Bay Blocks 29-32 – Stormwater Memorandum, January 6, 2015" ("Stormwater Memorandum").) The Stormwater Memorandum provides a more accurate description of the stormwater infrastructure, and provides in relevant part:

> The storm drain system and pump station are designed to handle runoff from a 5-year storm event. During larger events such as a 100-year storm event, runoff is conveyed through the streets to a controlled overflow to the Bay.

(Stormwater Memorandum, p. 6.)

Thus, the Project's stormwater system can in no way handle project-level stormwater runoff, much less the Project's runoff in combination with cumulative projects. This is because the system has the capacity to handle only up to five-year storm events, which is significantly smaller than the 100-year capacity typically required. Any storm larger than a five-year event will result in flooding the streets.[4] In light of this anticipated flooding, the Project, which includes multiple levels below grade, will "be sufficiently flood proofed to prevent 100-year overland flow in perimeter streets from entering below grade structures or inundating utilities and equipment." (Stormwater Memorandum, p. 6.) The necessity to flood proof the Project due to inadequate stormwater facilities was never addressed in the DSEIR. Moreover, to the extent that increasing impervious surfaces on the Project site will result in additional flooding in the public streets that are shared by other structures, the DSEIR fails to address the need for additional flood proofing of other buildings in the area.

The analysis contained in the Stormwater Memorandum is also inconsistent with the DSEIR's analysis of flooding risks, which is based on the NOP/IS's analysis of Impact HY-4. Contrary to the information provided in the NOP/IS, the Project would result in exposing people and structures to a significant risk of loss and injury due to flooding for any event above the five-year event. (CEQA Guidelines, Appendix G, Section IX(i).) This is true for both the Project site as well as offsite. Finally, the strategy of relying on public streets as de facto spillways significantly contributes to substantial additional sources of polluted runoff. (CEQA Guidelines, Appendix G, Section IX(e).) This represents a new significant impact that was never addressed in the DSEIR.

The resulting public safety risk created by this situation cannot be overstated. The Project includes an 18,000-seat arena. In instances where arena events occur during moderate storm events (anything above a five-year event), thousands of visitors to the arena will exit onto streets that are serving as flood channels for stormflow. The combination of flooded streets, thousands of densely-packed pedestrians, at-grade transit cars and automobiles – all at night – presents a very dangerous situation that has never been discussed, analyzed, or mitigated in the DSEIR.

Footnote:

[4] The Stormwater Memorandum asserts that use of public streets to channel storm flows in this manner was analyzed in a *Revised Summary Drainage Study for the South of Channel Watershed for Mission Bay Project*, dated December 1, 2000, yet this document was not posted on the OCII as required for the project to comply with the streamlining requirements of AB 900.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-27]*)

Response HYD-6: Flooding as a Result of Stormwater Runoff

The comments contend that the SEIR did not address flooding as a result of increases in stormwater runoff or flood proofing measures that would be implemented as part of the project to avoid inundating below grade structures of the project. Further, the commenter states that using streets as channels for storm flows in excess of the five-year storm would constitute an additional source of polluted runoff.

As described in Section 13.17, Utilities, Response UTIL-8, the Mission Bay South stormwater infrastructure has been constructed in accordance with the Mission Bay South Infrastructure Plan to accommodate stormwater flows at full build out within the plan area, including increased impervious surfaces. Design of the stormwater infrastructure to accommodate flows from a five-year storm is consistent with both the Mission Bay Subdivision Regulations that apply to the proposed project and the Subdivision Regulations that apply to the remainder of San Francisco (adopted on March 24, 2015). As indicated in the comment and addressed by the Mission Bay South infrastructure plan, flows for the 100-year storm would be directed to the Bay via street areas and other approved corridors that are designed to accommodate 100-year flood flows in excess of the five-year storm in accordance with the subdivision regulations. (See also BKF, Mission Bay Blocks 29-32 – Stormwater Memorandum, January 6, 2015.) Further, the overland flow analysis of the separated storm drain system design for the Mission Bay project concluded that the design meets all requirements of the Mission Bay Subdivision Regulations; stormwater flows generated by the five--year storm event can be conveyed within the underground storm drain system, and excess run-off produced by the 100--year storm event can be contained within the street rights-of-way prior to release into the China Basin Channel or the San Francisco Bay.[5]

Under CEQA, impacts related to flooding would be significant if the project would expose people or structures to a significant risk of loss, injury, or death involving flooding or if structures placed within a 100-year flood zone would impede or redirect flood flows. Because the corridors used to convey stormwater flows in excess of the five-year storm are designed to accommodate 100-year flood flows in accordance with the subdivision regulations, the project would neither impede nor redirect flood flows, nor would the project expose people or structures to substantial flood risks. Therefore, impacts related to flooding would remain less than significant. Further, no flood proofing measures are necessary to protect the structures under existing conditions.

Directing stormwater flows in excess of the five-year storm through the streets and approved corridors would not provide a substantial additional source of polluted runoff because stormwater within the separate storm system catchment area would be managed in accordance with the General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer System (MS4s), which is described on p. 5.9-23 of the SEIR. This permit requires implementation of pollution prevention control and good housekeeping practices to prevent or reduce the amount of stormwater pollution. Further, the concentration of stormwater pollutants would be highest in the initial stormwater runoff, referred to as the first flush. Because the

[5] Santina & Thompson Inc. Overland Flow Analysis for the Mission Bay Project. December 1, 2000.

separate stormwater system is designed to accommodate the five-year storm as discussed above, the earliest stormwater flows would be directed to the storm sewer system and the highest load of stormwater pollutants would be directed to the stormwater system, which provides vortex treatment of the runoff prior to discharge to the Bay as discussed on p. 5.9-7 of the SEIR.

13.21.8 Flooding as a Result of Sea Level Rise (HYD-7)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-18

V. The DSEIR Is Not Sufficient as an Informational Document with Respect to Inundation Impacts of the Project.

The DSEIR concedes the Project will be vulnerable to inundation and flooding as a result of a combination of climate change induced sea level rise and storm surge. (DSEIR, pp. 5.9-10-16.) The DSEIR also describes several government initiatives to plan for and protect against such inundation. (DSEIR, p. 5.9-17-18.)

This discussion makes it clear the Mission Bay area, and the Project site in particular, will need to be protected from inundation in the foreseeable future. Therefore, the construction of protective measures is a reasonably foreseeable consequence of Project approval, and the construction of protective measures will change the nature and extent of the Project's environmental impacts. Therefore, the DSEIR must describe these measures and their environmental effects.(*Laurel Heights I, supra*.) (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-18]*)

Response HYD-7: Flooding as a Result of Sea Level Rise

The comment states that the SEIR concedes that the project will be vulnerable to flooding as a result of sea level rise combined with storm surge, and the SEIR must describe measures to address flooding and their environmental effects. However, as noted below, these features are already described in the SEIR.

As discussed in Impact HY-7 of the SEIR (pp. 5.9-41 through 5.9-44), at its existing grade the project site could be temporarily flooded to depths of up to about 2.5 feet as a result of 36 inches of sea level rise in combination with 100-year storm surge. The flood elevation would be about 1.5 feet SFD (13 feet NAVD88). Although the project is not subject to the San Francisco Floodplain Management Ordinance, the project would be designed and constructed consistent with flood-resistant building standards or, in some cases, to be capable of adapting to meet these standards when needed in the future in recognition of future flood hazards due to sea level rise. These features or strategies that have been incorporated in the project design are described in Impact HY-7 of the SEIR and include:

- Locating the base of the main event center entry at an elevation of 10 feet SFD (21 feet NAVD88), which would be 8.5 feet above the projected flood elevation in 2100. Access to office and retail uses from the main plaza would be provided at this elevation.
- Raising pedestrian access and outdoor areas to an elevation of 10 feet SFD (21 feet NAVD88), which would be 8.5 feet above the projected flood elevation in 2100. These areas include the Third Street Plaza, main pedestrian path around the event center, Bayfront Overlook, and Bayfront Terrace. The project would also provide access to the upper floors of the Food Hall from the elevated pedestrian path.
- Locating the base of the secondary arena entry on the southeast portion of the event center at an elevation of 26 feet SFD (37 feet NAVD88), 24.5 feet above the projected flood elevation in 2100, and making it accessible from the elevated pedestrian path or stairs from the southeast plaza.
- Providing expanded height first floors in the retail uses and lobbies in the South Street and 16th Street buildings, Food Hall, and buildings fronting Terry Francois Boulevard which would provide space to raise the floor level in the future, if necessary, above the projected flood elevation.
- Minimizing to the extent feasible the number of building wall penetrations below an elevation of 3.5 feet SFD (15 feet NAVD88), which is two feet higher than the projected flood elevation in 2100, to preclude inside flooding.
- Waterproofing the below ground features to address fluctuations in groundwater levels that may result from sea level rise.
- Designing the water supply and wastewater facilities to minimize or eliminate infiltration of flood waters as well as discharges from these systems into flood waters.

Three components of the proposed project would be constructed below ground, and would also be below the projected flood elevation in 2100. These include the team practice courts at an elevation of -14 feet SFD (-22.7 feet NAVD88), the below grade parking and loading dock at an elevation of -10.7 feet SFD (00.6 foot NAVD88), and the event level (floor of the basketball court) at an elevation of - 6 feet SFD (5.3 feet NAVD88). To prevent inundation of these areas by flood waters, the garage and loading dock entries would be designed to allow future installation of floodgates and a solid curb could be constructed alongside landscaped areas to prevent flood flows from encroaching onto the site. Sand bags could also be available to provide temporary protection from future flooding. Because these features are included as part of the project, the SEIR addresses the environmental effects of their construction as part of the overall project.

Although it is foreseeable that area-wide flood protection measures may be implemented in the future in response to sea-level rise, no such measures are planned or proposed at this time. As such, it is beyond the scope of the SEIR to address potential environmental effects of such measures. As stated in the SEIR and summarized above, the proposed project would not require the construction of protective measures beyond those proposed as part of the project and described in the SEIR to prevent impacts related to flooding during a 100-year storm in combination with projected sea-level rise at the end of the century. As such, any future area-wide

flood protection measures implemented to protect the Mission Bay area from climate change-induced flooding would not be a reasonably foreseeable outcome of the proposed project.

13.21.9 Tsunami Risks (HYD-8)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-19	O-MBA7S2-22	O-MBA7S2-69	O-MBA7S2-71
O-MBA7S2-73	O-MBA7S2-74	O-MBA7S2-83	O-MBA7S2-85
O-MBA7S2-87	O-MBA7S2-89		

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b. Tsunami Hazards Are Not Addressed.

According to the 1998 FSEIR, the "likelihood of tsunami inundation is very slight." (1998 FSEIR, p. II.20.) The 1975 model used in the 1998 EIR to determine potential tsunami hazards is outdated. (BSK Geotech, Comment A.6.) The current approach for assessing tsunami risk is to perform a Probabilistic Tsunami Hazard Analysis, which has not been done for this site. (BSK Geotech, comment A.6.)

Since 1998, part of the Project site was mapped as a Tsunami Hazard Zone established by the State of California (California Emergency Management Agency, June 15, 2009 Map). (BSK Geotech, comment A.2; see also Figure 1.) This updated map indicates that the tsunami hazard is now considered significant. (BSK Geotech, comment A.2.)

The 1998 FSEIR, NOP/IS and DSEIR do not address the tsunami hazard in the context of extreme high tides or sea level rise. (BSK Geotech, comments A7, B9, C1.) The 1998 FSEIR and the NOP/IS relied on "datum established in the 19th century," which has not been updated to reflect current sea level data. (BSK Geotech, comments A8, B8.) The 1998 FSEIR and NOP/IS minimize the tsunami hazard based on these outdated methodological approaches. Reliant upon these conclusions, the DSEIR discounts the risk of tsunami and provides no analysis of the impact. (BSK Geotech, comment C3.)

Currently, structures designated as Risk Category III are specifically prohibited in a Tsunami Hazard Zone under the California Building Code. (BSK Geotech, comment A9; see also Figure 1.) The NOP/IS and the DSEIR fail to mention this important fact. (BSK Geotech, comment C5.) The DSEIR must be rewritten and recirculated to address tsunami hazards. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-19]*)

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ii No Mitigation is Provided for Tsunami Risk.

While the NOP/IS discusses possible mitigation for tsunami in the text, none of those measures are included in the Mitigation Measures. (BSK Geotech, comment B10.) Additionally, it is unclear why mitigation is being provided at all if the risk is indeed less than significant. (BSK Geotech, comment C1.) Additional mitigation in the form of design parameters that could assist in reducing the risk are not specified or required. (BSK Geotech, comment B11.) And flood improvements are a feasible mitigation measure required for the portion of Mission Bay subject to Addendum 9 to the 1998 FSEIR. (FSEIR, Addendum 9, Mitigation Measure K.06.) It appears that these measures would also be appropriate for the Project.

In conclusion, the United States Geological Survey forecasted a 67% probability that an earthquake of magnitude 7.0 or greater will occur on the San Andreas or Hayward faults by the year 2020. (Karp Geotech, p. 2.) This Project will draw up to 18,500 people into a zone subject to many risks. A full environmental analysis, with a testing program and adequate mitigation must be included in a

recirculated EIR. Risks to the public from earthquakes and tsunamis are too dire to ignore or treat lightly based on decades-old environmental review and outdated models and standards. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-22]*)

A2. Section II.20 states "the likelihood of tsunami inundation is very slight." The fact that portions of the proposed facility are located in a Tsunami Hazard Zone established by the State of California (California Emergency Management Agency, June 15, 2009 Map) indicates that the tsunami hazard is significant. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-69]*)

A6. Section V.H.17 first paragraph utilizes U.S. Army Corp of Engineers (ACOE) 1975 run-up model for 100-year and 500-year events to estimate potential tsunami hazards. The indented use for ACOE 1975 report was for determining 100-year and 500-year flood levels for the purpose of requiring flood insurance. The ACOE report considered the probabilities of tsunami sources from Alaska and the Aleutian trench alone, assuming that the 100-year and 500-year events are not strongly affected by events from other regions of the Pacific. They did not address the possibility of locally generated tsunamis (Borrero. et al, 2006). More recent studies used to develop the 2009 Tsunami Inundation Map uses multiple seismic sources including local faults (Point Reyes Thrust Fault, Rodgers Creek-Hayward Fault and San Gregorio Fault) and other distant sources such as the Cascadia Subduction Zone.

It should be noted that for designing structures against structural collapse the 2013 California Building Code uses a ground motion values from a Risk-Targeted Maximum Considered Earthquake (MCEr). The MCEr is defined as the ground motion from an earthquake at the 1% in 50 years (4975 year return interval) hazard level.

The most technically accurate method for assessing tsunami risk to a site is to perform a Probabilistic Tsunami Hazard Analysis (PTHA). The computational method in PTHA generally follows the Probabilistic Seismic Hazard Analysis (PSHA) method that is widely used in assessing seismic hazards (Geist, 2006). Given that the tsunamis are caused by earthquake events, the analysis should use the same standard hazard level as earthquakes (1% in 50 years), not the flood insurance risk return interval. Using an analysis based on 100-year or 500-year return intervals may not capture the controlling seismic event that may cause the maximum Tsunami run-up.

A7. Section V.H.17 first paragraph references an "extreme high tide crest condition" of an additional 2.95 feet above mean sea level. The reference source for the "extreme high tide crest condition" was not provided. Our review of the nearest tide station (Verba Buena Island Tide Station 914782, NOAA Website) station information data sheet indicates that the Mean High Water (MHW1) level is 2.31 feet above mean sea level (msl) and the Mean Higher-High Water (MHHW2) is 2.91 feet above msl. The proponent assumes that the "extreme high tide" is a rare event with low probability of occurrence. The 2.95 feet above msl that is assigned to the assumed low probability event is not significantly different from the average event, Mean High Water of 2.31 feet above msl. The difference between what the proponent assumes is a low probability event value based on an "extreme high tide" and the Mean High Water value is probably less that the uncertainty in the model that was used. The analysis provided in the DSEIR attempts to minimize the apparent risk from a tsunami that occurs during a high tide through confusing and unsubstantiated statistical analysis.

The tsunami run-up analysis presented in the SEIR also failed to account for future sea level rise due to climatic change. Estimate of future sea level rise in the San Francisco Bay Area range from 3.1 feet to 5.5 feet in next the 90 years (Nation Research Council, 2015). Tsunami run-up elevation analyses should incorporate future sea level rise.

A8. Section V.H.17 utilized the local San Francisco City Datum (SFCD) for the analysis. Page V.H.20 defines the SFCD as "For surveying purposes in San Francisco, a local datum was established, in the 19th century, at 8.66 above mean sea level, approximately higher high tide at the time." It is not clear what national datum the SFCD is related to since there is no citation. The proponent asserts the SCFD

is the 8.66 above MSL in the 19th century, however, they fail to identify how this elevation relates to the current datum, used in other parts of their analysis. Current mean sea level data is referenced to the North American Vertical Datum of 1988 (NAVD88) that was established in 1991. NAVD88 replaced the National Geodetic Vertical Datum of 1929 (NGVD29). Tidal datums such as the Mean Sea Level (MSL), Mean High Water (MHW) and Mean Higher High Water (MHHW) are referenced to Geodetic Datums such as NAVD88 or prior to 1991, NAVD29 (NOAA 2015). To calculate flood levels, data that uses a consistent Geodetic Datum must be used (FEMA 2015). For example, MSL using NAVD88 is not the same as MSL using NAVD29. Using a local datum such as the SFCD, that uses an unknown Geodetic Datum and relating to tidal data that uses a known Geodetic Datum such as NAVD88 would produce erroneous results.

A9. Section V.H.17 last paragraph attempts to minimize the tsunami hazard. As shown on the attached Figure 1, portions of the site are located in a California State Designated Tsunami Hazard Zone. According to Appendix M, Section M101.4 of the 2013 California Building Code (CBC): "Construction within the Tsunami Hazard Zone - Construction of structures designated Risk Category III and IV as specified under 2013 CBC Section 1604.5 shall be prohibited within a Tsunami Hazard Zone."

Category III Risk Category includes: "Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to:

- Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
- Buildings and other structures containing elementary school, secondary school or day care facilities with an occupant load greater than 250.
- Buildings and other structures containing adult education facilities, such as colleges and universities, with an occupant load greater than 500.
- Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities.
- Group I-3 occupancies.
- Any other occupancy with an occupant load greater than 5,000.
- Power-generating stations, water treatment facilities for potable water, waste water treatment facilities and other public utility facilities not included in Risk Category IV.
- Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that: Exceed maximum allowable quantities per control area as given in Table 307.1 (1) or 307.1 (2) or per outdoor control area in accordance with the California Fire Code; and Are sufficient to pose a threat to the public if released."

The proposed structures are probably located in an area that conflicts with the requirements specified in Appendix M, Section M101.4 of the 2013 California Building Code.

Footnotes:

[1] MHW - Mean High Water: The average of all the high water heights observed over the National Tidal Datum Epoch. For stations with shorter series, comparison of simultaneous observations with a control tide station is made in order to derive the equivalent datum of the National Tidal Datum Epoch.

[2] MHHW - Mean Higher High Water: The average of the higher high water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, comparison of simultaneous observations with a control tide station is made in order to derive the equivalent datum of the National Tidal Datum Epoch.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-71]*)

A14. Appendices Section A.49 under Tsunami and Seiche states "Although the Project Area is relatively close to sea level, historical records indicate little likelihood of inundation by tsunami or seiche." In the next sentence it is stated that the portions of the project area would be below the level of

inundation predicted by the U.S. Army Corps of Engineers computer models. It was also stated that techniques for reducing the inundation, tsunami and seiche hazards would be presented in the SEIR. The only mitigation measure against tsunami hazards presented was a vague reference to setbacks from the Bay and Channel made in Section V.H.17. As stated above in A9, the type of proposed structure would not be allowed according to Appendix M, Section M101.4 of the 2013 CBC. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-73]*)

The Mission Bay Subsequent Environmental Impact Report (SEIR), dated September 17, 1998 relied on an inadequate Tsunami hazard analysis, relied on out dated methodology and failed to provide adequate mitigation measures for Tsunami Hazard impacts. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-74]*)

B8. Page 98 under Mission Bay Plan Effects Related to Tsunami and Seiche. As stated in A6 above, the U.S. Army Corp of Engineers model is outdated and has been replaced with other modern methods of analysis.

B9. Page 103 under Inundation by Seiche or Tsunami. This section provides conflicting values. The older values from the FSEIR and newer values from the 2011 Tsunami Response Annex report by the City and County of San Francisco. It should be noted that on page 24 of the 2011 Tsunami Response Annex report states: "The map is intended for use as evacuation planning tools (Attachment B). The Tsunami run-up zone information are approximations due to limitations in modeling and baseline coastal data." The IS provides a tsunami and seiche run-up values of "approximately 6 feet" based on the 2011 Tsunami Response Annex report. Our review of the report indicates that that value is referenced to mean sea level. The 6 foot value does not account for diurnal high tides that may reach approximately 7 feet and sea level rise due to climatic change that may reach approximately 5 feet. To estimate Tsunami run-up elevations, the maximum run-up is calculated as a sum of the Tsunami run-up (6 feet), the tide level at the time of the Tsunami (may be as high as 7 feet) and sea level rise (may reach 5 feet). Not accounting for all the ocean level variables may cause a significant underestimation of Tsunami run-up.

B10. Page 104 under Inundation by Seiche or Tsunami. This section provides mitigation measures such as 1) Set Back, although no distance is given 2) Raise occupied portions, no elevation is given and 3) Tsunami Warning System, for hazards that were determined to be less than significant. If the hazard is less than significant, then mitigation measures would not be required. This presents an improper analysis by providing mitigation measures for an impact that was previously identified to be less than significant.

B11. Page 104 under Structures states: "Although some damage to the structures could occur, the improvements constructed under the proposed project would be resilient to tsunamis or seiches." A reference to the building code that provides design parameters for tsunamis resilient structure needs to be provided.

Summary of Review - 2014 the Notice of Preparation/Initial Study

The Notice of Preparation (NOP) of an Environmental Impact Report/Initial Study (IS), dated June 5, 2015 did not fully analyze the Tsunami hazard, relied on out dated methodology and failed to provide adequate mitigation measures for the area that is located in a State Tsunami Hazard Zone. The mitigation measures for Tsunami impacts provided in the IS were developed without performing a proper Tsunami hazard analysis. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-83]*)

C1. Pages 1-47, Table 1-2 Summary of Impacts and Mitigation Measures, Hydrology and Water Quality list Impact HY-5 "The project would not expose people or structures to a significant risk of

loss, injury or death involving inundation by seiche or tsunami" as LS or Less-Than-Significant Impact (no mitigation required). Portions of the site are located in a State Identified Tsunami Hazard Zone, furthermore as stated in A6 and B9 above, the Tsunami hazard has not been adequately analyzed using current standards. The designation of LS or Less-Than-Significant Impact (no mitigation required) conflicts with the IS listing Tsunami mitigation measures, see B10 above. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-85]*)

C3. Page 5.9-29 states "… and flooding as a result of failure of a levee or dam; and inundation by seiche, tsunami, or mudflow (Impact HY-5). Therefore, no further analysis of these subjects is presented in this section." As stated in A6 above, the Tsunami hazard methodology presented in the 1998 SEIR is dated and requires and updated analysis and evaluation. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-87]*)

C5. Page 6-5 under Section 6.3 Effects Found Not to be Significant in the Hydrology and Water Quality states: "The project would not deplete groundwater supplies; alter drainage patterns, resulting in erosion; place housing and/or structures within a 100- year flood zone; expose people and structures to hazards associated with flooding, failure of a levee or dam, seiche, tsunami, or mudflow; or cause construction-related water quality impacts." The portions of the site are located in a State-Identified Tsunami Hazard Zone and as stated above in Section A6 and B9, the Tsunami hazard was evaluated in the 1998 SEIR and 2014 IS using dated and/or inappropriate methodologies.

Summary of Review - 2015 Draft Subsequent Environmental Impact Report
The Draft Subsequent Environmental Impact Report (SDEIR), dated June 5, 2015 did not fully analyze the Tsunami hazard, relied on out-dated methodology and failed to provide adequate mitigation for portion of the site that are in a State Tsunami Hazard Zone. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-89]*)

Response HYD-8: Tsunami Risks

The comments state that (1) since publication of the 1998 Mission Bay FSEIR, a portion of the project site along the eastern border (closest to the Bay) has been mapped by the State of California as a Tsunami Hazard Zone.[6] (2) Risk Category III structures such as the proposed event center are specifically prohibited in a Tsunami Hazard Zone under the California Building Code, and (3)mitigation should be provided for tsunami hazards. Further, the comments assert that neither the 1998 Mission Bay FSEIR nor Initial Study address tsunami hazards in the context of extreme high tides or sea level rise. The comments also include specific comments on the methodology used in the 1998 Mission Bay FSEIR tsunami impact analysis.

The 1998 Mission Bay FSEIR was published before the State of California tsunami hazard mapping was completed in 2009. The analysis presented in Impact HY-5 of the Initial Study (pp. 103 through 105) relies on the state mapping rather than the 1998 Mission Bay FSEIR analysis. The Initial Study analysis also relies on modeling provided in the 2011 Tsunami Response Annex of the CCSF

[6] California Emergency Management Agency, California Geological Survey, University of Southern California. Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay). June 15, 2009.

Emergency Response Plan, which estimates that the tsunami runup at the site would be approximately 6 feet.[7] Therefore, comments on the Mission Bay FSEIR analysis are not relevant to the adequacy of the Initial Study for the proposed project. Further, the referenced building code that the commenter states prohibits construction of Risk Category III structures in tsunami hazard zones is provided in Appendix M of the building code that has not been adopted by the State of California or City and County of San Francisco. Therefore, no such prohibition applies.

The Initial Study did not specifically identify the expected tsunami inundation elevation at the project site. However, subsequent to publication of the SEIR, a more detailed analysis of tsunami risks at the project site has been conducted to determine the maximum inundation elevation associated with a tsunami runup of 5.9 feet (based on analysis of existing Bay Area tsunami studies).[8] This detailed site-specific analysis indicates that the maximum inundation elevation for the tsunami hazard area in the project vicinity would be -0.3 feet SFD (11.2 feet NAVD88). The finished grade of the project site along the realigned Terry A. Francois Boulevard, the portion of the site closest to the Bay and, therefore, most susceptible to a tsunami risk, would be at approximately -0.2 feet SFD (11.3 feet NAVD88), slightly above the maximum inundation elevation determined by the detailed site-specific analysis.[9] Even if the tsunami elevation slightly exceeded what is projected, only brief shallow flooding would likely occur, and the flood water would have a low velocity based on the distance from the Bay. In addition, as noted in Impact HY-7 of the SEIR (pp. 5.9-41 through 5.9-44), the proposed structures would be constructed to withstand flooding due to a 100-year storm in combination with sea level rise through 2100, which would be expected at an elevation of approximately 1.5 feet SFD (13 feet NAVD88), almost two feet higher than the calculated maximum tsunami inundation elevation. Therefore, no structural damage or flooding damage would occur.

Further, as discussed on p. 104 of the Initial Study, site occupants, visitors, and event attendees would not be exposed to significant tsunami risks. Although areas adjacent to the project site could be inundated in the event of a tsunami, San Francisco would activate its outdoor warning system which would sound an alarm alerting the public to tune into local TV, cable TV, or radio stations. Broadcasts would carry instructions for appropriate actions to be taken as part of the Emergency Alert System. Police would also canvas the neighborhoods sounding sirens and bullhorns, as well as knocking on doors as needed, to provide emergency instructions. Evacuation centers would be set up if required. This advance warning system would allow for evacuation of people prior to a seiche or tsunami and would provide a high level of protection to public safety.

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7 City and County of San Francisco, Emergency Response Plan, an Element of the CCSF Emergency Management Program, Tsunami Response Annex, March 2011, http://www.sfdem.org/ftp/uploadedfiles/DEM/PlansReports/TsunamiAnnex-2008.pdf, accessed on September 10, 2014.

8 Environmental Science Associates. Summary of Existing Tsunami Hazard Mapping in the Vicinity of the Proposed Golden State Warriors Mission Bay Project and Refined Limits of Maximum Anticipated Hazard. August 18, 2015.

9 Manica Architecture, et. al. Site Plan, Golden State Warriors, Mission Bay Arena and Entertainment Complex, San Francisco, CA. September 9, 2015.

Further, as discussed in more detail in Section 13.22, Hazards and Hazardous Materials, Response HAZ-3, San Francisco emergency response procedures and evacuation routes are addressed in Impact HZ-3 of the Initial Study (pp. 119 through 121). As summarized in that impact analysis, the City has a published Emergency Response Plan[10] dated 2010 and prepared by the Department of Emergency Management subsequent to publication of the 1998 Mission Bay FSEIR as part of the City's Emergency Management Program. This Plan addresses hazard mitigation and disaster preparedness and recovery, and identifies hazards to which San Francisco is particularly susceptible such as earthquake, hurricane, tsunami, flood, winter storm, and act of terrorism. Implementation of the San Francisco Emergency Response Plan, prepared in 2010 (subsequent to publication of the 1998 Mission Bay FSEIR) would ensure that adequate City resources and escape routes are available for response in the event of a major tsunami.

Therefore, no project structures at the project site would be at risk of damage from tsunami inundation and people would not be exposed to substantial risks related to tsunami inundation. This impact would be less than significant as concluded in Impact HY-5 of the Initial Study (pp. 103 through 105).

Regarding the consideration of sea level rise and extreme tides in estimates of tsunami risks, the detailed analysis described above determined the maximum inundation elevation by adding the maximum tsunami wave height of 5.9 feet to the mean high water (MHW) tidal datum of 5.29 feet NAVD88. The MHW is calculated as the average of all high water heights observed over the National Tidal Datum Epoch. This is consistent with the state mapping. To calculate tsunami inundation elevations associated with extreme high tides and sea level rise as suggested by the comments would be speculative. However, as noted in Impact HY-7 of the SEIR (pp. 5.9-41 through 5.9-44), the proposed structures would be constructed to withstand flooding due to a 100-year storm in combination with sea level rise through 2100, which would be expected at an elevation of approximately 1.5 feet SFD (13 feet NAVD88), almost two feet higher than the calculated maximum tsunami inundation elevation. This would minimize risks to the proposed structures in the event that sea level rise or extreme tides resulted in a higher tsunami inundation elevation. Note that the project design features and San Francisco outdoor warning system discussed on p. 104 of the Initial Study are physical features incorporated into the design of the proposed project that would protect the proposed structures from risk in the event of a tsunami or are part of an already operating public warning system implemented under the City's Emergency Response Plan (see Response HAZ-8). They are not mitigation measures. As described above, Impact HY-5 of the Initial Study (pp. 103 through 105) concluded that impacts related to tsunami risks would be less than significant, and no mitigation measures are required.

The comment also suggests a different methodology should have been used to analyze tsunami risk. The commenter's disagreement over the methodology used in the SEIR is noted. Under the "substantial evidence" standard, such disagreement does not mean the methodology used in the SEIR is inadequate or that addition analysis is required. As explained by the California Supreme

[10] San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2010. Available at: http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154.

Court, in reviewing for substantial evidence, a court "may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable," for, on factual questions, a reviewing court's task "is not to weigh conflicting evidence and determine who has the better argument." (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 392. 393.) "A project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study . . . might be helpful does not make it necessary." (*Id*. at p. 415; see also CEQA Guidelines, § 15151 ["Disagreement among experts does not make an EIR inadequate"].)

13.22 Hazards and Hazardous Materials

13.22.1 Overview of Comments on Hazards and Hazardous Materials

The comments and corresponding responses in this section cover topics analyzed in the Initial Study, Section E.16, Hazards and Hazardous Materials, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- HAZ-1: Reliance on 1998 FSEIR and Risk Management Plan
- HAZ-2: Contaminants Addressed by Cleanup Order
- HAZ-3: Site Contamination and Transport of Hazardous Wastes
- HAZ-4: Reliance on Regulatory Requirements and Naturally-Occurring Asbestos
- HAZ-5: Reuse of Excavated Soil
- HAZ-6: Disposal of Treated Wood
- HAZ-7: Lead Agency for School Evaluations
- HAZ-8: Emergency Evacuation
- HAZ-9: Bayfront Park

13.22.2 Reliance on 1998 FSEIR Analysis and Risk Management Plan (HAZ-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA11L5-31	O-MBA11L5-37	O-MBA7S2-6	O-MBA7S2-9
O-MBA7S2-10	O-MBA7S2-42	O-MBA7S2-44	O-MBA7S2-45
O-MBA7S2-46	O-MBA7S2-50	O-MBA7S2-51	O-MBA7S2-67
O-Sierra-12	O-BCTA-2		

SITE ABANDONMENT AND NEW EXPOSURES

The Site's Failure to Fill the Excavation Has Led to Wetland Formation and New and Unanalyzed Exposures

The site petroleum-related remedial activities exposed the local water table and allowed for the expression of wetland characteristics and the site which have become naturalized over time (ESA 2014; Pg. 2). These activities have resulted in the creation of stockpiles of material adjacent or near to these wetland features that in some cases: "…contains contaminants that exceed hazardous waste threshold concentrations and will require special handling and disposal," (LTR 2015; Pg. 1). These activities took place over several years culminating in a Phase II remedial action that left the excavated area open and abandoned in 2005 (LTR 2015; Pg. 6). The Revised Risk Management Plan (RRMP, BBS; Pg. 2-3 and 2-3) infers that the excavation was backfilled, however, it was not.

The RRMP further identifies that: "1. Because North Terminal, Parcel X4, OAS and 16th Street East OUs are currently under development, interim risk management measures (IRMMs) designed for undeveloped parcels are not relevant to the protection of human health on those OUs. If development ceases or areas are

created with uncovered native soils, IRMMs may again be necessary." (BBS 2006; Table 1) The development of the site still has not occurred, and there is no evidence that the IRMMs have been applied.

The site's open water and wetland features are thus a direct result of the abandonment of a site cleanup allowed to revert back to a 'natural state' for approximately a decade. Not only did natural features evolve in response to this abandonment, but the very abandonment created conditions that may have exposed wildlife to a variety of hazardous chemicals through their use of that habitat (LTR 2015). (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-31]*)

The FSEIR identifies an analysis of potential adverse ecological effect associated with the current conditions at the site in 1998 (Pg. I.54). It states: "As noted by ENVIRON, no criteria have been developed for the assessment of risk to ecological receptors in the aquatic environment based on comparisons to groundwater chemical concentrations. However, ambient water quality criteria for the protection of marine (saltwater) organisms are used as a conservative means of evaluating the potential risk to surface water organisms." (Pg. I.57) However, since 1998, the San Francisco Regional Water quality Control Board has developed these very criteria as described below.

The 1998 analysis relied on Preliminary Remediation Goals (PRGs) for its analysis, however the San Francisco Regional Water Quality Board (SFRWQB) states in its current guidance document that: "The U.S. EPA Regional Screening Levels or RSLs (formerly PRGs; U.S. EPA, 2013d) address human health concerns associated with direct exposure to chemicals in soil, but do not address ecological concerns. Exposure routes and receptors not addressed by the RSLs, but included in the ESLs [Environmental Screening Levels] are listed below: …groundwater screening levels for the protection of aquatic…habitats/surface water quality…soil screening levels for urban area ecological concerns; (SFRWQB 2013; Pg. 1-3). These exposure routes which apply and are specific to the site are identified in the current Environmental Screening Levels (ESLs). This is new and substantial information that affects the potential environmental impacts to biological resources which was not used in the DSEIR.

Further, the ESLs (the PRGs for that matter) are not legal limits, but they are intended to inform decision-making. However, they may not be protective enough in particular for "…sediment or sensitive ecological habitats (such as wetlands or endangered-species habitats). The need for a detailed human health or ecological risk assessment should be evaluated on a site-by-site basis for areas where significant concerns may exist (SFRWQB 2013; Pg. ES-1 and 2).

The prior FEIR analysis identifies that in their opinion there were no significant species or habitats at the site, and therefore the analysis was specifically intended not to be protective of terrestrial habitat or interior wetlands, and therefore does not apply to the current conditions: "As previously described, chemicals present in the soils could potentially impact the health of the ecological environment if terrestrial or nesting avian species come into direct contact with soils which contain elevated levels of chemicals, or if the chemicals in exposed soil were to be released into China Basin Channel or San Francisco Bay through surface water runoff. Additionally, chemicals present in the soil and groundwater could potentially impact the aquatic environment if the chemicals leach from the soil into the groundwater and subsequently migrate to China Basin Channel or San Francisco Bay. As discussed in the Mission Bay Final Environmental Impact Report (FEIR), the current and future conditions within the Project Area do not provide a habitat capable of supporting a significant terrestrial or nesting avian wildlife community. Accordingly, potential exposures that terrestrial species could have with soils would not represent a significant effect on the terrestrial wildlife community." FEIR 1998; Pg. I.54) The current conditions are significantly different and specifically excluded from the prior 1998 analysis and the current ESL methods do apply to these conditions.

The 1998 "risk analysis" applies the PRG criteria for impacts on biological resources in the Bay as a result of offsite groundwater movement only. It also uses average values and only for selected contaminants.

This is an artificial narrowing of chemicals that can have biological impacts, and likely a major reduction of the risk by not using the maximum observed concentration and the biologically relevant risk drivers. For example, species are exposed to actual concentrations, not site averages. By using the observed peak

concentrations, it establishes the appropriate worst case scenario and sets the upper limits for the purposes of developing mitigation.

However, groundwater is but one of several potential routes by which contaminants can leave the site. Wind can blow contaminated dust and stormwater (containing both fine sediment and dissolved contaminants) can also run off the site. The RMP and RRMP also do not apply and cannot be relied upon because they specifically rely on the previous risk analysis, which does not look at terrestrial or interior wetlands.

Additional Mechanisms of Impacts to Biological Resources

Some of the mechanisms for biological impacts from the project's contribution to contaminants are through bio-accumulation, as well as the unanalyzed bio-concentration: "These contaminants could be directly lethal to smaller organisms, and could accumulate in the food chain and become successively more concentrated in a process known as bio-accumulation. Through bio-accumulation, the toxic concentrations could reach levels in which they are lethal to larger organisms, such as birds or marine mammals. Turbidity and toxicity from re-suspended sediments could also interfere with beneficial uses of the channel, such as spawning of Pacific herring." (1998 FSEIR Pg. II.31) The FSEIR analysis describes just one of the potential mechanisms for biological impacts from the project-associated hazardous chemicals, then identifies that it is significant and mitigatable, but then simply ignores that potential mechanism for other species that would potentially come in contact with the same material. The analysis should instead examine the various chemical of concern, their individual and joint biological impacts (chemicals can have additive (or counteracting) or multiplicative effects) and their routes of exposure (wind, groundwater or stormwater) and asses the risk drivers for each species (or trophic surrogate).

There are newly identified Class 1 and 2 hazardous waste materials at the site, the newly identified use of the site by diverse biota, the designated Critical Habitat, and similar release pathways off of the site. These changed conditions require analysis of both onsite impacts and offsite impacts. The lines of reasoning, based on high contaminant concentrations at/close to the site, poor mixing in the shallows, and bio-concentration/bio-accumulation should also be applied to the current physical conditions and the elevated contaminant concentrations.

Mitigation for Hazardous Materials

The analysis provided above in the 1998 FSEIR relied on the dilution effect of the Bay, despite its own earlier analysis that there would be significant impacts which required mitigation, but cumulatively there would be no impact (1998 FSEIR Pg. II.27). General stormwater impacts are not the same as impacts from solid phase and dissolved phase hazardous materials. Specific analysis must be developed to identify which capture or treatment systems are required for which hazardous constituent in which phase. For example, large particles traveling in the stormwater system could be trapped through a conventional filtration system, however, overflow of that system (and/or poor maintenance) by design flow above a 5-year rain event could cause that material to be flushed directly into the Bay. Very fine size and dissolved phase chemicals typically require specific treatment technologies to stop their direct movement to the Bay during mobilizing rain events. The mitigation does not appear to be sufficient to protect biota from hazardous materials identified at the site in the LTR 2015 report.

Cumulative Hazardous Issues

The same failure to identify, and therefore analyze cumulative impacts, as a result of newly identified hazardous materials also applies to cumulative impacts from these chemicals: "To put this in context, City discharges are a very small portion of the region-wide discharges to the Bay. Considering the contribution of the project and of the cumulative Bayside projects in the context of all the other pollutant inputs to the Bay, the cumulative pollutant loading from the Bayside projects would be extremely small." (1998 FSEIR Pg. II.29) The cumulative impacts of hazardous materials (not just generalized pollutants) would be specific to certain species in the Bayside proximate to the site, not generically in the context of the entirety of the Bay. It is inappropriate to consider the entirety of the Bay in the cumulative impacts specifically because of the mechanics of chemical redistribution identified in another section in the FSEIR (1998 FSEIR Pg. II.27, and see above). The analysis provided in the FSEIR does not cover the hazardous materials and fails to look at the appropriate biological context, including resident and locally foraging

migrants, and must be reanalyzed in light of the new cumulative impact information. In our opinion, because of the new analysis methods and standards, and the lack of mitigation for soluble or stormwater transportable hazardous materials, the project's impacts on aquatic biological resources is cumulatively significant after mitigation. Mitigation measures are readily available for these potential impacts, but they require a careful analysis of the specific hazardous constituents and what levels of contamination are acceptable to develop. (*Mission Bay Alliance, Lippe, letter, July 24, 2015 [O-MBA11L5-37]*)

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2. <u>The DSEIR Was Required under CEQA to Analyze Impacts Related to Hazardous Materials – 1998 FSEIR Chapter 5.J.</u>

The NOP/IS correctly identified hazards and hazardous materials as an impact area generally requiring analysis under CEQA. (NOP/IS, pp. 106-122.) However, the DSEIR did not address hazardous materials at all (DSEIR, p. 1-9) because the NOP/IS concluded that there were no new or more severe impacts within this category than addressed in the 1998 FSEIR (NOP/IS, pp. 106-107.) This approach fails under any standard of review because the currently-proposed Project is different than the project described in the 1998 FSEIR, the 1998 FSEIR relies on outdated data and methodology to analyze impacts, and conditions have changed such that the 1998 FSEIR does not even describe the present contamination at the site. The recirculated DSEIR will need to include a full analysis of this issue that includes a thorough review of the extensive history of contamination of this site, and the resulting potentially significant impacts and mitigation required in the context of this Project.

These comments are supported by expert analysis from the firm BSK Associates. BSK reviewed several documents, including the DSEIR, NOP/IS, 2006 Revised Remedial Action Plan ("2006 RRMP"), and 1998 SEIR, and prepared a report addressing the adequacy of these documents and the potentially significant impacts associated with existing contamination by hazardous materials within the Project site. The BSK HazMat Report is attached as Exhibit B.

a. The 1998 SEIR Cannot be Relied Upon to Analyze Impacts Associated with Hazardous Materials.

The BSK HazMat Report explains that the 1998 SEIR cannot serve as a basis for any analysis of impacts associated with hazardous materials because that document relies upon long-outdated methodology for analyzing such impacts. (BSK HazMat Report, comment A1.) For example, the 1998 SEIR's analysis of risk to human health relied upon preliminary remediation goals developed by the EPA, and yet this methodology has been replaced by Environmental Screening Levels developed in 2013. Further, the 1998 SEIR relied upon averaged concentrations of chemical contaminants even though the total number of samples was too low to use such average values. (BSK HazMat Report, comment A2.) The BSK HazMat Report identifies further technical deficiencies that render the methodology followed in the 1998 SEIR inadequate for present use. (BSK HazMat Report, pp. 1-4.) It is telling that the NOP/IS never mentions the outdated methodology utilized in the 1998 SEIR, much less attempts to explain how applying current methodologies would achieve the same result. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-6]*)

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d. The DSEIR's Treatment of Hazardous Materials Fails under Any Applicable Standard.

As established above, the City's strategy of relying on the 1998 SEIR as supplemented with updated information from the NOP/IS violates CEQA.

First, this strategy fails to provide an adequate project-level informational document because the 1998 SEIR does not describe current conditions, and the supplemental information provided in the NOP/IS misleads the public by ignoring all hazardous constituents other than hydrocarbon contamination.

Second, the DSEIR is inadequate because substantial evidence supports a fair argument that constructing the Project on the existing contaminated soil will result in potentially significant impacts. The information contained in the DSEIR, together with the BSK Hazmat Report and the 2015 Phase II Report, demonstrate that the present contamination poses potentially significant hazards due to proposed construction in soil containing hazardous waste, and transport and disposal of the same hazardous waste.

Third, even if the City were to rely on Public Resources Code section 21166, the subsequent remediation activities that increased the presence of certain hazardous waste constituents following the 1998 SEIR represents a change in circumstances that requires preparation of a supplemental EIR. The proposed site plan with several acres of landscaped open space also constitutes a change to the project that was described in 1998 (simply a land use plan for 303 acres) and significantly increases the potential public hazard by exposing people to hazardous waste in the soil even if the RMP is followed. A recirculated DSEIR must include a thorough analysis of hazardous materials using current methodologies. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-9]*)

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e. The City Cannot Rely on Mitigation Measures for Hazardous Materials without Analyzing the Impacts.

Seemingly in furtherance of an implicit goal to avoid substantive public disclosure of hazardous materials impacts in the DSEIR, the City takes the remarkable position in the NOP/IS that it can adopt mitigation measures without analyzing and disclosing impacts. This approach is employed with respect to risks associated with naturally occurring asbestos (NOP/IS, pp. 113-115) as well as risks associated with exposed contaminated soil prior to site development as regulated in the City by the Maher Ordinance (NOP/IS, p. 116). This approach is fundamentally flawed, however, because CEQA does not permit an agency to adopt mitigation measures in lieu of fully assessing a project's potentially significant environmental impacts. A mere acknowledgment that an impact would be significant is inadequate; the EIR must include a detailed analysis of "how adverse" the impact would be. (*Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1123; *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831.)

The flaw in this approach is easily seen in both contexts. With respect to compliance with the Maher Ordinance, for example, section 2(b) of this letter explains that the NOP/IS fails to describe the existing heavy metals and other hazardous waste contained in the soil.[1] The DSEIR's failure to mention this contamination prevents public disclosure of its scope, its implications for future construction work onsite, and potential exposure to the public during occupancy of the Project. As a document of public information, the DSEIR cannot avoid meaningful disclosure of this information by announcing that compliance with the Maher Ordinance will fix everything. That strategy is the opposite of informed decision-making and public participation.

The same analysis applies to the acknowledged asbestos-containing backfill material located onsite. First, it is not at all clear that California Air Resources Control Board's ("CARB") Asbestos Airborne Toxic Control Measure ("ATCM") even applies because this is not an instance where construction is occurring in an area of naturally occurring asbestos material. (Cal. Code Regs., tit. 17, § 93105, subd. (b).) As acknowledged in the NOP/IS, the material is processed (i.e., crushed) asbestos containing rock that was imported onto the site and used as backfill material. Accordingly, CARB's Asbestos ATCM does not apply here. Consistent with this misapplication of the Asbestos ATCM in the NOP/IS, the "no visible emission at property boundary" standard (NOP/IS, p. 114) does not apply because it is inadequate for both public and worker safety. Rather, the Project must comply with BAAQMD Regulation 11, Rule 2.

Second, even if the NOP/IS had identified the proper regulatory standard, the underlying strategy of relying on promises to comply with regulatory standards does not satisfy CEQA's informational disclosure mandates. The City has the duty under CEQA to investigate and disclose the extent of the potentially significant impact prior to setting forth potential mitigation measures. (*Galante, supra*, (1997) 60 Cal.App.4th at 1123.) Considering that many other flaws will require preparation of a Recirculated DSEIR, there will be ample opportunity to include the results of further study of contamination in that forthcoming document.

Footnote:

[1] It is noted that the NOP/IS does not attempt to make compliance with the Maher Ordinance an enforceable mitigation measure.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-10]*)

A1. Section V.J.42, Under Existing Human Health Risks, states " ENVIRON compared the maximum concentration of chemicals detected in the soil anywhere in the Project Area to the risk-based preliminary remediation goals (PRGs) developed by U.S. EPA Region IX for the protection of industrial land uses (Region IX Industrial PRGs)." EPA PRGs are currently not considered appropriate for use in the San Francisco Bay Area as site screening levels. PRGs have been replaced by Environmental Screening Levels (ESLs) developed by the San Francisco Bay Regional Water Quality Control Board in 2013 (SFBRWQCB, 2013). The ESL user guide (SFBRWQCB, 2013) identified significant differences between EPA PRGs and SFBRWQCB ESLs, listed below:

"The U.S. EPA Regional Screening Levels or RSLs (formerly PRGs; U.S. EPA, 2013d) address human health concerns associated with direct exposure to chemicals in soil, but do not address ecological concerns. Exposure routes and receptors not addressed by the RSLs, but included in the ESLs are listed below:

- direct-exposure screening levels for construction and trench workers' exposure to subsurface soils;
- groundwater screening levels for vapor intrusion;
- groundwater screening levels for the protection of aquatic habitats/surface water quality
- soil screening levels for urban area ecological concerns;
- soil and groundwater ceiling levels to address potential presence of Non-Aqueous Phase Liquids (NAPL) and nuisance odor concerns
- soil and groundwater screening levels for Total Petroleum Hydrocarbons (TPH)."

Using PRGs would lead to significant gaps in determining the risks from impacts with respect to vapor intrusion, of aquatic habitats/surface water quality and urban area ecological concerns.

A2. Section V.J.43 first paragraph states: "The upper numerical limit of a calculated statistical average of the concentration of each COPIC in the exposed soils was compared with Region IX Industrial PRGs to determine if any PRGs were exceeded." The appropriate use of an averaged concentration typically involves a robust statistical analysis based on a statistically sufficient number of samples with respect to the area size and requires normally distributed values. The number of samples utilized in the analysis appears to be insufficient considering the large area of the project. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-42]*)

A4. Section V.J.83 under Human Health Risk Assessment states: "The SSTLs were developed using methods consistent with the Risk-Based Corrective Action (RBCA) methodology, as developed by the American Society for Testing and Materials (ASTM) and described in ASTM E-1739, 'Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites, 1995'."

Use of the RBCA methodology may be valid for areas impacted with petroleum hydrocarbon related releases. In other non-petroleum release areas, chemicals-of-concern, such as metals and PAHs not related to petroleum hydrocarbons were detected in soil or groundwater. Use of SSTLs developed for petroleum site based RBCA for non-petroleum related constituents may not be a valid approach. Furthermore, 1995 ASTM E 1739-95 standard under Section 1.1 Scope states: "Ecological risk assessment, as discussed in this guide, is a qualitative evaluation of the actual or potential impacts to environmental (nonhuman) receptors." (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-44]*)

Summary of Review 1998 - Mission Bay Subsequent Environmental Impact Report
The Mission Bay Subsequent Environmental Impact Report (SEIR), dated September 17, 1998 utilized screening level methods (EPA PRGs) that would not be adequate for current site clean-up standards and would not be appropriate for use on non-petroleum related constituents. The number of samples utilized

in the analysis appears to be insufficient considering the large area of the project. Risk Management Plan (RMP) or implementation of the RMP, was ineffective and did not comply with the DTSC determination. Furthermore, the methodology used to develop site risk screening values did not properly incorporate ecological receptors. Given these changes and deficiencies, with consideration of current site conditions, a re-evaluation using current methods and standards of the environmental impacts and risks is required. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-45]*)

The following section (B1 to B7) presents our comments based on a review of the Risk Management Plan (RMP), Dated May 11, 1999 and Revised RMP dated August 2006.

B1. Page 2-1, there was no discussion of the semivolatile organic chemicals that were detected in soil and groundwater at the site. Summary tables presented in Appendix A of the RMP indicate that polycyclic aromatic hydrocarbons (PAHs) were detected in the soil at various locations and in groundwater collected from MW-11. A possible source and significance of the PAHs was not presented in the RMP.

B2. Page 2-2, the RMP states "No chemicals were detected at concentrations that would pose a threat to human health or the aquatic ecosystem following the completion of the planned development, with the potential exception of the Free Product Area." Based on our review of the receptors presented in Appendix E, Tables E-1, E-2. E-3 and E-4, it appears that ecologic receptors were not included in the risk assessment.

B3. Page 3-2, Section 3.2 states: "In addition, mean chemical concentrations in surface soil (estimated by calculating the 95 percent upper confidence limit (UCL) of the arithmetic mean) were below the ITLs developed under assumptions of long-term (i.e., 25 to 30 years) direct contact pathways (i.e., soil ingestion and dermal contact)." The use of mean concentrations typically involves a robust statistical analysis based on a statistically sufficient number of samples with respect to the area size. The number of samples utilized in the analysis appears to be insufficient considering the large area of the project. Furthermore, the depth of soil sampling was limited to samples collected at less than five feet below the ground surface (bgs). Proposed developments may require excavating soil to depths significantly deeper than 5 feet bgs. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-46]*)

B7. Page 4-22 states "If the levels are below the relevant health-based Site Specific Target Levels (SSTLs), and the RWQCB concludes that the potential for ecological impacts is insignificant and does not require mitigation, then soil removal activities will not be required and the soil may be temporarily stored elsewhere pending reuse in the RMP Area." Based on our review of the receptors presented in Appendix E, Tables E-1, E-2. E-3 and E-4, it appears that ecologic receptors were not included in the risk assessment. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-50]*)

Summary of Review 1999 - Risk Management Plan
The Risk Management Plan (RMP), dated May 11, 1999 and Revised RMP dated August 2006 failed to properly identify possible sources and significance of the PAHs and did not have disposal protocols for PAH containing wastes. The site specific target levels developed for the site did not include ecological receptors. The RMP utilized an insufficient number of samples and questionable statistical analysis techniques considering the large area of the project. The RMP did not have developed protocols for addressing off-site disposal of large volumes of soil that is currently classified as California Class I Hazardous Waste. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-51]*)

Contamination

Although it is understood that others will discuss contamination, the subject is a very important environmental and geotechnical engineering concern for reasons that include intended subgrade excavation and construction. Mission Bay was used for many years as a dump and then a railroad yard. Bayward of the site there were fuel terminals that included tanks and pipelines which are known contributors to contamination. The Pier 64 area has received past attention under the auspices of developers (Langan Treadwell Rollo 2014b) but the extent and sufficiency of actual clean-up is not really known from second hand information. The report of geotechnical investigation produced for salesforce.com (Langan Treadwell Rollo 2011), 327 pages, contains no contaminant sampling, testing, or even recognition of the potential problem.

Contamination seems to have been dismissed as a thing of the past, but contaminants in groundwater do not simply go away without complete ground remediation. The 1998 environmental document is vague so "change" from then to now cannot be quantified. For instance, the "2001 Phase I Remedial Excavation" resulted in a record that "Soil containing residual oil below the target zone was left in place." (Langan Treadwell Rollo 2014b, pg 9). The observance of living birds congregating where water has ponded is not a reliable yardstick for declaring a site free of contamination. Hands-on testing by an independent laboratory would be appropriate measures that should be undertaken before a public assembly project at this site is approved. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-67]*)

The SC also notes many inadequacies in the 1999 and 2006 testing for hazard substances in the soil at the site, including the fact that the methodology used in 1999 and 2006 is outdated. (*Sierra Club, Susan Elizabeth Vaughan, letter, July 27, 2015 [O-Sierra-12]*)

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1. We found no mention in the EIR documents about the geology or toxic contamination at the proposed site. Our group of truckers hauled more than 100,000 tons of toxic soils from the Shorenstein office buildings site (formerly Union Oil tank farm owned by Chevron-Texaco) immediately adjacent to the south side of the proposed arena site. Our understanding is that the arena site has similar contamination, which should be discussed in the EIR. (*Bayview Community Truckers Association, letter, July 24, 2015 [O-BCTA-2]*)

Response HAZ-1: Reliance on 1998 FSEIR Analysis and Risk Management Plan

The comments state that the 1999 Mission Bay Risk Management Plan (RMP) is outdated because it relies on outdated Preliminary Remediation Goals (PRGs) of the US Environmental Protection Agency (US EPA) that address only human health concerns associated with direct exposure to chemicals in the soil, and does not adequately address ecological concerns. Updated PRGs and Environmental Screening Levels (ESLs) have been developed for human health and ecological concerns; the comments state that this is new and substantial information which affects the potential environmental impacts related to chemicals in the soil and groundwater. The comments state that the lack of site-specific information fails to disclose potential impacts and reliance on regulatory compliance and outdated information violates CEQA.

Under CEQA, construction activities and locating new uses on a site that is included on a list of hazardous materials sites (such as the propose project site) could result in a significant impact if these actions create a significant hazard to the public or the environment. As discussed in

Impact HZ-2 of the Initial Study (pp. 115 through 119), a comprehensive site investigation was conducted in 1997 to evaluate soil and groundwater quality throughout the Mission Bay Plan area. The 1999 Mission Bay RMP, prepared in accordance with Mitigation Measures J.1a through J.1k of the 1998 Mission Bay FSEIR, specifies risk management measures to be implemented prior to development, during construction, and after development that are deemed to be protective of human health and the environment under the conditions specific to each phase of development. As discussed on p. 118 of the Initial Study, the Regional Water Quality Control Board (RWQCB) has determined that the 1999 Mission Bay RMP adequately addresses human health and environmental risks during and after construction of individual projects within the Mission Bay plan area. Further, the Covenant and Environmental Restriction for the entire Mission Bay Plan Area requires that sites within the Mission Bay Plan area are developed in accordance with the 1999 Mission Bay RMP and states that no further investigation or response will be required within Mission Bay other than the requirements of the RMP, and Covenant and Environmental Restriction. The Covenant and Environmental Restriction, which incorporates the RMP requirements, is recorded in the deeds of all property in Mission Bay, so all of the requirements run with the land and bind all future property owners. The Covenant and Environmental Restriction is enforceable by the RWQCB.

Among the requirements in the RMP are risk management measures specific to construction. These include dust control measures, soil management protocols, stormwater pollution plan requirements, worker health and safety planning requirements, contingency requirements in the event that previously unidentified underground structures or contamination are identified, protocols for dewatering activities, and a framework for complying with the requirements of Article 22A of the San Francisco Health Code, which requires development of further site specific hazardous materials sampling and analysis and development of a site specific soil and groundwater mitigation plan. Implementation of the measures specified in the RMP, including compliance with Article 22A would ensure that the public is not exposed to unacceptable levels of site contaminants during construction as concluded on p. 118 of the Initial Study.

In addition, the RMP requires implementation of risk management measures specific to post-development conditions. These measures are intended to manage risks to site occupants and ensure that they would have no contact with site soils and groundwater as well as risks to maintenance and utility workers that may contact soil left in place during their normal work activities. They include covering of exposed areas; limiting future residential development within the Mission Bay Plan area to preclude single family homes with private front or back yards; restricting the future use of groundwater for domestic, industrial, or irrigation purposes; providing protocols for future subsurface activities; and implementing a long-term groundwater monitoring program. Implementation of these measures would ensure that site occupants and the public are not exposed to unacceptable levels of site contaminants once the project is constructed as concluded on p. 118 of the Initial Study.

The SEIR and Initial Study do not present mere conclusory statements as to why impacts would not occur. Instead, the SEIR and Initial Study present detailed information related to site conditions, including information from previous investigations, and explain that specified enforceable measures would ensure that the public is not exposed to contaminants as a result of

construction and reuse activities. These measures would control site contaminants so they do not migrate offsite and restrict future exposure to any soil left in place. The comments provide no evidence that these measures will be inadequate to address contaminants that may be in the soil or groundwater even if the prior investigations did not identify the precise quantity of every chemical present with the same level of precision that current testing practices might reveal.

In any event, as discussed in Response HAZ-3, below, and in compliance with the RMP, including its incorporated Article 22A requirements, the project sponsor has completed sampling to more specifically characterize soil and groundwater quality at the project site. The project sponsor has also prepared a Site Mitigation Plan and Dust Monitoring Plan for the proposed project that incorporate and supplement the requirements of the 1999 Mission Bay RMP. These reports do not represent significant new information, but have been completed in the context of the RMP and compliance with Article 22A of the Public Health Code to identify project-specific requirements for addressing site contamination during and following development of the site. These reports thus provide evidence that the project would comply with the requirements of the RMP and Article 22A and will not pose a risk to the environment or the public from exposure to contaminants in soil or groundwater. These reports are discussed in more detail in Response HAZ-3.

Comments assert that the methodology of the ecological risk assessment conducted for the 1999 Mission Bay RMP was inadequate to identify ecological exposures to hazardous materials at the project. Any ecological risk exposures occurring prior to implementation of the proposed project are an existing condition that is not a result of the proposed project. That is, to the extent avian and terrestrial wildlife species are currently exposed to hazardous substances at the site, the project is not the cause of that exposure. There would be no potential for exposure of avian and terrestrial wildlife species to chemicals in the soil once the project is constructed because contaminated soil would be excavated to a minimum depth of 12 feet and clean engineered backfill would be used where needed. The site would be occupied by buildings or paved. None of the existing soil on the site would be exposed at grade and all landscaped areas on the site would be above structures; clean soil would be brought in for all landscaped areas on the project site.

Excavated soil would be disposed of off-site. Further, the project site is currently unpaved and removal of contaminated soil would substantially remove the source of chemicals potentially leached to the groundwater, which is encountered at a depth of about 6 ½ to 7 feet as described on p. 89 of the Initial Study. Therefore, to the extent there is a current risk of exposure to ecological receptors, the project would result in a reduction of that risk. The comments also state that ecological exposures may be occurring at the depression located on the site as a result of previous soil excavation activities. If the project is approved, this depression would no longer exist, and any ecological exposure that is occurring at this location would be eliminated. For these reasons, an updated ecological risk assessment is not required.

Removal of soil to a minimum depth of 12 feet would also eliminate human exposures to chemicals in the soil, and the project would not include residential or any other uses that could include backyard gardens or other activities that could involve growing of food crops. There would be no substantial risk related to vapor intrusion because, as discussed in Response HAZ-3,

only low levels of volatile organics have been identified in the soil and groundwater, based on recent testing in 2015. Therefore, an updated human health risk assessment is not necessary. Comments related to the methodology of the human health risk assessment conducted for the 1999 Mission Bay RMP are not applicable to the proposed project.

Refer to Section 13.19 for a discussion of biological resources issues related to the existing water filled depressions from prior excavations on the site, which would be removed under the proposed project.

Comments related to the 1998 Mission Bay FSEIR cumulative analysis are not relevant to the proposed project because the project would not contribute contaminants to stormwater or groundwater, and would not result in windblown transport of contaminated soil. Therefore, the proposed project would not contribute to cumulative impacts related to degradation of Bay water quality or terrestrial and aquatic biological receptors.

As described in Impact HZ-2 of the Initial Study (pp. 115 through 119), and explained above, implementation of the RMP adequately addresses risks at the project site. The RMP requires implementation of specific measures to prevent public exposure to hazardous materials during construction and reuse of the project site. The RMP also requires compliance with applicable laws for addressing site contamination, including Article 22A of the San Francisco Health Code which was most recently updated in July 2013. These regulatory requirements apply to the project as noted on p. 116 of the Initial Study. Regulatory requirements associated with the presence of hazardous substances in soil and groundwater have not changed meaningfully since that date.

The project is being carried out in a manner that is consistent with Article 22A as discussed in detail in Response HAZ-3. As required by this article, the project sponsor submitted to the San Francisco Department of Public Health (DPH) a work plan to perform sampling of soil and groundwater at the project site, based on current sampling and analysis protocols. The DPH approved the work plan. Langan Treadwell Rollo, the project sponsor's consultant, then carried out a Phase II investigation to characterize soil and groundwater conditions at the site, and submitted a report to the DPH summarizing the findings of the investigation. The DPH approved the Phase II report and subsequent Site Mitigation Plan and Dust Monitoring Plan prepared by Langan Treadwell Rollo. The measures set forth in the approved Site Mitigation Plan and Dust Monitoring Plan are consistent with both those set forth in the RMP and those found in updated regulatory requirements; they thus reflect an application of the general requirements of the RMP to site-specific conditions, based on the findings of the Phase II investigation.

Impacts related to construction on a hazardous materials site are appropriately discussed in the Initial Study and do not warrant discussion in the SEIR.

See Response HAZ-2 related to contaminants other than hydrocarbons analyzed in the Initial Study.

See Response HAZ-3 for information regarding site-specific sampling conducted to evaluate site conditions and planning efforts related to soil management and dust control during construction.

See Response HAZ-4 regarding impacts associated with fill materials containing naturally-occurring asbestos and compliance with the Asbestos Air Toxics Control Measure.

See Section 13.21, Hydrology and Water Quality, Response HYD-2 regarding how implementation of a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the State Water Resources Control Board's Construction General Permit (and 1999 Mission Bay RMP, which requires submittal of a site-specific SWPPP to the RWQCB for each construction project) would ensure that silt-laden stormwater runoff from the site would be minimized or eliminated such that there would be no contaminated site runoff once the project is constructed.

13.22.3 Contaminants Addressed by Cleanup Order (HAZ-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-7

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b. Petroleum Hydrocarbon Contamination Has Always Been Just One Component of the Site's Overall Contamination.

Setting aside the issue of outdated methodology, the 1998 SEIR cannot serve as the basis for CEQA review because it does not adequately disclose current contamination at the Project site. Implicitly acknowledging that the 1998 EIR fails to disclose and analyze all contamination at the site in light of the characterization/ remediation efforts following certification of the 1998 EIR, the NOP/IS purports to correct this admitted gap by providing a discussion entitled, "Actions Completed Since Publication of the Mission Bay FSEIR." (NOP/IS, p. 116.) However, this discussion misleads the public by suggesting that petroleum hydrocarbons are presently the only contaminant of concern onsite. The NOP/IS fails to adequately supplement the 1998 SEIR because it ignores contaminants other than petroleum hydrocarbons.

The NOP/IS asserts that there is no remaining soil and groundwater contamination at issue because, following the 1998 SEIR, remediation occurred in compliance with the San Francisco Bay Regional Water Quality Control Board ("RWQCB") Order R2-2005- 028, which was ultimately rescinded in 2014. (NOP/IS, pp. 117-118.) What the NOP/IS fails to mention, however, is that Order R2-2005-028 and the subsequent remediation effort **solely addressed petroleum contamination, and no other contaminants onsite**. This limited scope is demonstrated with clarity in, for example, the RWQCB's subsequent Order R2-2014-0022 rescinding the prior order RS-2005-0028. Order R2- 2014-0022 explained that the prior order only "address[ed] the existence of separate phase petroleum hydrocarbons products." Further, Order R2-2014-0022 explained that rescission of that prior order was appropriate because, "Post-remediation groundwater monitoring has shown that the residual petroleum products have very limited impact on the groundwater beneath the site." (Order R2-2014-0022.)

The limited nature of this remediation effort is further demonstrated in the subsequently-prepared Revised Risk Management Plan dated August 2006 ("2006 RRMP"). As the BSK HazMat Report explained:

> [T]here was no discussion of the semivolatile organic chemicals that were detected in soil and groundwater at the site. Summary tables presented in Appendix A of the RMP indicate that polycyclic aromatic hydrocarbons (PAHs) were detected in the soil at various locations and in groundwater collected from MW-11. A possible source and significance of the PAHs was not presented in the RMP.

(BSK HazMat Report, comment B2.)

In other words, even though other contaminants were identified in the 1998 SEIR, the subsequent RRMP focused only on petroleum hydrocarbon remediation. While both the City and the applicant clearly understood this limited scope of the remediation efforts following the 1998 SEIR (NOP/IS, p. 118 [explaining that remediation "has effectively removed free petroleum products in the Pier 64 area . . ."]), this understanding was in no way communicated to the public in the NOP/IS. To the contrary, the NOP/IS, misrepresents the current status of contamination at the site by asserting in relevant part:

> While the completion of remedial actions described above would be considered substantial changes that have occurred at the project site, implementation of these actions has effectively removed free petroleum products in the Pier 64 area and reduced risks to human health and the environment in this area compared to conditions described in the FSEIR.

(NOP/IS, p. 118.)

These statements mischaracterize the status of the Project site by ignoring the presence of other contaminants. As acknowledged in the NOP/IS, the site was previously used for "bulk fuel storage and distribution; railroad operations; a machine shop; boiler house; steel mill; well casing manufacturer; warehousing, shipping and receiving operations for a variety of products; fruit cannery, junk yards vehicle parking and maintenance facilities and a ready-mix concrete facility." (NOP/IS, p. 115.) Even the 1998 SEIR acknowledged that the Project site could contain other contaminants and that insufficient surveys at that time had been performed to characterize the contamination and resulting risk. (1998 SEIR, pp. V.J.1 – 110.) With respect to metals, for example, the 1998 SEIR stated, "All 17 metals that were included in the list of analytes tested . . . were detected in varying concentrations in soil throughout Mission Bay South." (1998 SEIR, p. V.J.36.) The same was true for asbestos and creosote as well. (1998 SEIR, pp. V.J.15 – 16.)

Thus, contaminants other than hydrocarbon were identified as early as 1998, which is not surprising based on the various historical uses of the Project site. Notwithstanding this, the only remediation identified in the NOP/IS relates to hydrocarbon contamination. The NOP/IS fails as an informational document because other contaminants that are contained in the soil have not been publicly disclosed. As discussed more fully below, these other contaminants create potentially significant impacts that must be addressed. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-7]*)

Response HAZ-2: Contaminants Addressed by Cleanup Order

The comment states that the Initial Study does not disclose and analyze all contamination at the site and implies that the petroleum hydrocarbons are the only contaminants of concern at the project site. This is incorrect. Impacts associated with exposure to all contaminants at the site are addressed in Impact HZ-2 of the Initial Study (pp. 115 through 118) as discussed below.

As noted in the comment, the comprehensive site investigation conducted in 1997 identified chemicals in the soil and groundwater throughout the Mission Bay Plan area. This information is summarized in Chapter V.J of the 1998 Mission Bay FSEIR. The information provided in Chapter V.J includes: (1) a summary of historic uses of the plan area, (2) a summary of site investigations and their findings, including the soil and groundwater investigation performed in 1997, (3) a discussion of health and ecological risks associated with the presence of hazardous substances in soil and groundwater in the plan area, and (4) a discussion of regulatory oversight of these conditions. This information is not limited to the presence of petroleum hydrocarbons; other substances that are addressed include metals, volatile organic compounds, and asbestos. The results are also summarized in the 1999 Mission Bay RMP (See 1999 RMP, pp. 2-1 – 2-2, Appendix A).

As described on pp. 108 to 110 of the Initial Study, the 1998 Mission Bay FSEIR concluded that, with the exception of the identified petroleum free product area at and in the vicinity of the project site, the concentrations of contaminants in soil or groundwater in the Mission Bay Plan area did not present a human health or ecological risk under 1998 conditions. However, the 1998 Mission Bay FSEIR concluded that impacts related to exposure to contaminants in the soil and groundwater would be significant during both construction of individual development projects proposed under the Mission Bay Plan, and once the developments were constructed.

The 1998 Mission Bay FSEIR required implementation of a Risk Management Plan for all developments in the Plan area, including the project site, in accordance with Mitigation Measures J.1.a through J.1.o. The 1998 Mission Bay FSEIR concluded that implementation of the Risk Management Plan would ensure that site occupants and the public would not be exposed to unacceptable levels of contaminants during construction or operation. As described on p. 108 of the Initial Study, the 1998 Mission Bay FSEIR noted that in 1998, the free product at the project site and vicinity (called the Pier 64 Area) was being investigated and would be remediated by the oil companies responsible for the contamination, if necessary.

Impact HZ-2 of the Initial Study (pp. 115 to 118) describes the 1999 Mission Bay RMP that was prepared subsequent to the 1998 Mission Bay FSEIR in accordance with Mitigation Measures J.1.a through J.1.o. As summarized, the 1999 Mission Bay RMP addressed all Plan area contaminants and included risk management measures to be implemented prior to development, during development (during construction), and after development of specific parcels within the Mission Bay Plan area. The 1999 Mission Bay RMP also included measures applicable to the Pier 64 Area and was approved by the RWQCB in 1999.

On May 25, 1999, in accordance with Health and Safety Code Section 25264, and RWQCB Resolution 98-004, the RWQCB approved issuance of a certificate of completion for the Mission Bay site with the exception of the petroleum free product related to the Pier 64 area. The certificate of completion was issued upon approval of the RMP and the recording of the Covenant and Environmental Restriction on site property. As provided in Section 25264, the certificate of completion documents that site investigation and remedial action has been satisfactorily completed and a permanent remedy has been accomplished (Health and Safety Code Section 25264(b)).

The Initial Study text also described actions completed by the oil companies responsible for remediation of the free product at the Pier 64 Area under RWQCB Order No. 2005-0028. As summarized, the RWQCB issued a no further action letter stating that no further soil remediation was required regarding the free product because of the remedial activities conducted. In 2006, the Risk Management Plan was revised to remove measures pertaining only to the Pier 64 area. Subsequently, the RWQCB issued order R2-2014-022 in 2014 that rescinded Order R2-2005-2008. Order R2-2014-022 states that any residual contamination in the Pier 64 Area poses acceptable risks to human health and the environment and can be effectively managed using the existing 1999 Mission Bay RMP. Therefore, the analysis presented in Impact HZ-2 of the Initial Study acknowledges the presence of contaminants other than petroleum hydrocarbons and identifies

measures in place to ensure that the public and site occupants would not be exposed to these hazardous materials during construction or operation of the proposed project.

Volume 3 of the SEIR includes "Appendix MIT." This appendix provides an inventory of the measures adopted in connection with approval of the Mission Bay Plan. The appendix lists measures adopted to address impacts associated with the presence of hazardous substances in soil and groundwater in the plan area. (Appendix MIT, pp. MIT-23 – MIT-27.) The appendix indicates the status of the measure, and shows that, as required by Mitigation Measure J.1, "The Mission Bay RMP was completed for the Mission Bay Plan Area in 1999, in accordance with Mission Bay FSEIR Mitigation Measure J.1. In addition, a Revised RMP was completed for Pier 64 vicinity, including Blocks 29-32, in 2006. Consequently, Mission Bay FSEIR Mitigation Measure J.1 has been fulfilled by the preparation of these plans." (Appendix MIT, p. MIT-23.)

The 1999 Mission Bay RMP and the 2006 Revised Mission Bay RMP are both referenced in the Initial Study. The 2006 Revised RMP was developed to address any changes to the 1999 Mission Bay RMP resulting from the completed remedial work and any residual contamination at the site. It also discusses the delegation of responsibility for long-term management of residual contamination. The fact that the 2006 Revised RMP was prepared, and was cited in the Initial Study, does not imply that no other hazardous substances are present at the site. The Initial Study also cited the 1999 RMP, which addresses substances other than petroleum hydrocarbons (including, among others, metals and naturally occurring asbestos). Under Article 22A of the San Francisco Health Code, the project sponsor is still required to perform a site-specific investigation, and that investigation is not limited to determining whether petroleum hydrocarbons are present. For this reason, the Initial Study does not state, and should not be interpreted to imply, that the only hazardous substance of concern at the site is petroleum hydrocarbons.

See Response HAZ-3 regarding the Phase II Environmental Site Assessment, Site Mitigation Plan, and Dust Monitoring Plan completed for the proposed project in accordance with the 1999 Mission Bay RMP and Article 22A of the San Francisco Health Code.

13.22.4 Site Contamination and Transport of Hazardous Wastes (HAZ-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-8	O-MBA7S2-9	O-MBA7S2-47	O-MBA7S2-49
O-MBA7S2-52	O-MBA7S2-55	O-MBA7S2-57	O-MBA7S2-58
O-MBA7S2-59	O-BCTA-1	O-BCTA-3	O-BCTA-4

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c. Activities Following the 1998 SEIR Have Increased the Project Site's Contamination.

The 1998 SEIR cannot be relied upon for environmental analysis of hazardous materials impacts of the Project because subsequent activities at the site have significantly altered the nature and scope of

contamination. As explained in the BSK HazMat Report, a Phase II Environmental Site Assessment prepared by Langan Treadwell Rollo, dated June 2015 ("2015 Phase II Report"), identifies additional contamination following the 1998 SEIR that has been ignored in the present NOP/IS and DSEIR. (BSK HazMat Report, comments A3, A4, B3, B4.)

Based upon review of the 2015 Phase II Report, the BSK HazMat Report explains that additional hazardous waste materials were actually imported onto the Project site during petroleum hydrocarbon remediation activities in 2005. Specifically, contaminated construction debris and other hazardous waste were used as backfill in 2005 in violation of the Mission Bay remedial action plan ("RMP"). (BSK HazMat Report, comments A3, B5.) While the prior Mission Bay RMP may have allowed the movement and reuse of certain levels of contaminated soils, "DTSC's determination does not apply to building debris or waste soils or other waste materials for any necessary remediation activities." (BSK HazMat Report, comments A3.) In other words, while the occurrence of petroleum hydrocarbon contamination may have been reduced as a result of subsequent remediation activities, the occurrence and associated risk posed by other forms of contamination actually increased following the 1998 SEIR. While the 1998 SEIR could not have addressed this new contamination because it occurred in 2005, this does not excuse the omission of this critical information from the NOP/IS and DSEIR.

The BSK HazMat Report also finds, based in the 2015 Phase II, that significant amounts of both previously-existing and subsequently-imported hazardous waste remain on the site today. The presence of this existing hazardous waste raises many unaddressed issues. First, it appears that this hazardous waste will need to be excavated and removed in order to construct the proposed Project. The BSK HazMat Report explains,

"Significant volumes of soil classified as hazardous waste will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase." (BSK Hazmat Report, comment C1.) According to the NOP/IS, "[T]he maximum depth of excavation on-site would be approximately 30 feet below San Francisco City Datum; this would require approximately 350,000 cubic yards of soils on-site to be excavated and removed from the site" (NOP/IS, p. 17.) It is not clear how this estimate was derived or how it relates to the actual excavation needed for purposes of removing contaminated soils. The excavation, removal, transport, and disposal of this massive volume of contaminated soil creates potentially significant impacts that have not been disclosed. (CEQA Guidelines, Appendix G, section VIII (a), (b), (c).)

Other serious questions arise if all or even some portion of the hazardous waste is not ultimately removed from the Project site. If not removed, what is the remediation plan to reduce risk of exposure to the public? How will workers be protected during construction of the Project? Does the 350,000 cubic yards include excavation associated with stormwater and other infrastructure remediation work, or will that construction occur in the contaminated soil that remains? Will any of this contaminated soil be used to create the 3.2 acres of open space, or the additional open space located across the street at the Bayfront Park? Will an impermeable cap be used to separate contaminated soil from at-grade landscaped open space? Since much of the landscaped open space appears to be elevated, is this a design feature intended to quietly address the human health risk associated with the contaminated soil? The DSEIR fails to address these important questions.

The presence of contaminated soil within the Project site cannot be swept under the rug. The contamination must be quantified along with its appropriate exposure risks. These risks and adequate mitigation measures must be disclosed to the public in a revised and recirculated DSEIR that complies with CEQA. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-8]*)

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d. The DSEIR's Treatment of Hazardous Materials Fails under Any Applicable Standard.

As established above, the City's strategy of relying on the 1998 SEIR as supplemented with updated information from the NOP/IS violates CEQA.

First, this strategy fails to provide an adequate project-level informational document because the 1998 SEIR does not describe current conditions, and the supplemental information provided in the NOP/IS misleads the public by ignoring all hazardous constituents other than hydrocarbon contamination.

Second, the DSEIR is inadequate because substantial evidence supports a fair argument that constructing the Project on the existing contaminated soil will result in potentially significant impacts. The information contained in the DSEIR, together with the BSK Hazmat Report and the 2015 Phase II Report, demonstrate that the present contamination poses potentially significant hazards due to proposed construction in soil containing hazardous waste, and transport and disposal of the same hazardous waste.

Third, even if the City were to rely on Public Resources Code section 21166, the subsequent remediation activities that increased the presence of certain hazardous waste constituents following the 1998 SEIR represents a change in circumstances that requires preparation of a supplemental EIR. The proposed site plan with several acres of landscaped open space also constitutes a change to the project that was described in 1998 (simply a land use plan for 303 acres) and significantly increases the potential public hazard by exposing people to hazardous waste in the soil even if the RMP is followed. A recirculated DSEIR must include a thorough analysis of hazardous materials using current methodologies. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-9]*)

B3. This may expose receptors to soils that have not been adequately characterized. The recent Phase II Environmental Site Assessment (Langan, 2015) performed additional soil sampling at Blocks 29 to 32 and found "The fill unit was characterized as either a State of California Class I hazardous material based on soluble chromium, lead, and nickel concentrations or a Class II non-hazardous material, likely related to debris from the 1906 earthquake and resulting fire." Designation of the site soils as California Class I hazardous waste is a significant change from what was presented in the 1998 RMP. Additional impacts that would result from excavating and transportation of a large volume of soil for off-site disposal at a Class I disposal site were not evaluated in the 1998 Subsequent Environmental Impact Report (SEIR).

B4. Page 4-1, Section 4.1 states: "As described below in Section 4.3.11, additional sampling may be required on individual development parcels in order to comply with the Ordinance Requirements for Analyzing the Soil for Hazardous Wastes in Appendix F. Depending on the results obtained during any additional sampling, supplemental management measures, in addition to the management measures identified below, may be required on a parcel-by-parcel basis." The RMP specified a deferred sample and analysis protocol to a later date and as stated in section A4 above, deferred analysis may produce dramatically different results. Significant volumes of soil classified as hazardous waste will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-47]*)

B.6 Section 4.3.5.3 allows for re-use of soils that may potentially be hazardous waste as fill inside the RMP. Based on our review of the recent Phase II Environmental Site Assessment (Langan, 2015), it appears that soil with elevated lead levels were used as fill during the 2005 remediation effort for the Pier 64 clean-up. Shallow soil samples collected from Langan Treadwell Rollo borings LB-12, LB-13, LB-26, LB-27, LB-28, LB-29 and LB-30 had results of soluble lead (California Waste Extraction Test) above the California Soluble Threshold Limit Concentration (STLC) that would classify the soil as hazardous waste. These soil samples were collected in the Pier 64 clean-up fill area (See Figure 2 of Langan 2015 report) at depths of less than 9 feet below the ground surface (bgs). The Pier 64 clean-up reportedly removed petroleum impacted soil to a depth of 9 feet and filled in the area (Langan 2015). The re-use of soil that is classified as hazard waste resulted in a significant volume of soil that, if excavated and removed from the RMP area will need to be transported off-site and disposed at an appropriate facility. These are new and additional impacts not previously incorporated into the impact analysis. These additional impacts must be incorporated into additional risks to receptors

outside the RMP as well as additional traffic, noise, and air contaminants. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-49]*)

The following section (C1 to C2) presents our comments based on a review of Notice of Preparation of an Environmental Impact Report/Initial Study (NOP/IS), Dated November 19, 2014.

C1. Page 106 under Topics: 16. Hazards and Hazardous Material – Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Is listed as "No New or More Severe Significant Effects." As stated in A4 above this is in direct conflict with the findings of the recent Phase II Environmental Site Assessment (Langan 2015). Significant volumes of soil classified as hazardous waste will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase. The transportation of hazardous waste off- site will increase the potential for items b) and c) on page 106. Excavation and transportation of soil to a Class I hazardous waste disposal site would significantly increase the potential for release of hazardous materials during the loading, excavation and transportation process. The additional trucking will cause additional exposures to exhaust fumes, traffic and noise. The additional impacts related to off-site transportation of hazardous waste will require further evaluation. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-52]*)

D1. Page 1-61 under Hazards and Hazardous Materials, Initial Study Section E16, does not include the findings in the recent Phase II Environmental Site Assessment (Langan, 2015) with respect to significant volumes of soil classified as hazardous waste that will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase. These additional impacts were not previously included in the impact analysis. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-55]*)

D3. Page 5.1-1 under 5.1.1 Scope of Analysis, Issues Scoped Out in the Initial Study, states "The Initial Study determined that the following topics were adequately analyzed in the Mission Bay FSEIR such that the proposed project would have no new significant impacts or no substantially more severe significant impacts than those previously found significant on these resources:. Hazards and Hazardous Materials;." As stated in C1 above significant volumes of soil classified as hazardous waste will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase. These additional impacts were not previously included in the impact analysis. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-57]*)

D4. Page 6-5 under Section 6.3 Effects Found Not to be Significant under Hazards and Hazardous Materials states “The project would not cause risk of upset and accident conditions involving release of hazardous materials; emit hazardous materials within 0.25 miles of a school; be located on a site listed on a hazardous materials database; be located on airport or air strip land use areas; impair implementation of emergency response or evacuation plan; expose people or structures to fire risk; or create construction related hazards and hazardous materials impacts. As stated in C1 above significant volumes of soil classified as hazardous waste will need to be transported off-site and disposed at an appropriate facility causing significant additional impacts during the construction phase. These additional impacts were not previously included in the impact analysis. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-58]*)

The Draft Subsequent Environmental Impact Report (DSEIR), dated June 5, 2015 failed to identify new or more severe significant effects with respect to the large volume of soil classified as Class I hazardous waste that will require off-site disposal at a Class I Hazardous Waste Disposal Facility. The DEIR is inadequate by not accounting for additional impacts that from additional transportation of soil off-site that will cause additional exposure to exhaust fumes, traffic and noise. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-59]*)

The undersigned small business owner/operators of trucks locally based in Bayview-Hunters Point want to thank you and OCII for giving us the opportunity to comment on the Draft SEIR for the proposed Golden State Warriors Arena at Mission Bay. Our group of highly qualified hazardouscertified truckers are made up of local minority truck owners who reside in and/or hire our drivers and other employees from the local community. We park our vehicles at the Port of San Francisco railyard off Third Street, which also hires exclusively from the local community. Our member truckers transport contaminated and hazardous waste to the railyard from remediation projects all over San Francisco and the Bay Area. The local truck-to-rail system offers the following benefits to projects like the Warriors Arena project:

- Railyard is just a few blocks from arena site compared to 250 miles one-way for long-haul truck trip to Southern California landfills;
- Excavation phase impacts can be reduced months by using truck-to-rail option;
- Reduced fuel consumption by hundreds of thousands of gallons and reduced toxic air emissions (C02) by millions of pounds per project;
- Reduced liability of hazardous waste at high speeds down public highways;
- Economic development dollars stay in our neighborhood.

(*Bayview Community Truckers Association, letter, July 24, 2015 [O-BCTA-1]*)

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2. The project plans show the arena building being sunken down into the site, which means the soils currently there will need to be excavated and removed. Since the arena site is at least as big as the adjacent Shorenstein site, and since the fill material is likely similar, in excess of 100,000 tons of soils will likely need to be removed. The traffic, air and other impacts from this soil removal activity during the construction period should be discussed in the EIR. We believe using the same very successful approach as used on the Shorenstein project, mass excavation and I-mile haul down Illinois Street to the rail yard - would result in the least environmental impacts of all options. (*Bayview Community Truckers Association, letter, July 24, 2015 [O-BCTA-3]*)

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3. We would like to see the direct excavation of all Class 1 toxic soils and use of our local truck-to-rail as the preferred remediation option because:

   (a) any *on-site treatment* of toxic soils means double or triple-handling of the waste and airborne toxics spread into nearby neighborhoods and the Bay;

   (b) *long-haul trucking* has the ability to remove from the site only 500 tons daily maximum, and due to a shortage of hazardous trucks in the State, possibly far less. This means the excavation phase of the site preparation could take months more than the local rail option; would generate many times the amount of C02 and other toxic air emissions as the rail option; and would have far greater risk of impacts on the driving public due to millions of high speed truck miles with toxic waste from the project.

   (c) *local truck-to-rail* option can remove 3,000 tons daily and reduce the period of construction (and impacts from construction) by months; offers a 1-mile one-way truck haul versus a 250-mile one-

> way truck haul to Southern California; offers significantly reduced fuel use and toxic emissions; offers the ability to use 100% local-based minority and women-owned truckers.
>
> Other projects that our team of local truckers have successfully hauled hazardous and contaminated soils to the railyard at the Port, in addition to the adjacent Shorenstein project, include: UCSF Medial Center at Mission Bay; Kaiser Medical Center @ Mission Bay; Transbay Terminal; Pac Bell Park; The Gap Headquarters; SFMTA Third Street Light Rail; Hunters Point Naval Shipyard; Equity Potrero -16th Street; Embarcadero Waterfront Improvement; Avalon Bay Communities; SFMTA Central Subway; and hundreds more that have chosen the local truck-to-rail option as the best option. (*Bayview Community Truckers Association, letter, July 24, 2015 [O-BCTA-4]*)

Response HAZ-3: Site Contamination and Transport of Hazardous Wastes

The comments contend that activities at the site subsequent to publication of the 1998 Mission Bay FSEIR have altered the nature of contamination at the site, and that impacts related to construction on a contaminated site and transportation of soil characterized as a hazardous waste are not adequately addressed in the Initial Study. OCII disagrees with the assertion that impacts related to construction on a contaminated site and transportation of hazardous wastes are not adequately addressed.

As noted in the comments, subsequent to publication of the Draft SEIR, the project sponsor completed a Phase II Environmental Site Assessment (Phase II ESA) of the project site in 2015 and prepared a Site Mitigation Plan and Dust Monitoring Plan in accordance with 1999 Mission Bay RMP and Article 22A of the San Francisco Health Code, commonly referred to as the Maher Ordinance. The discussion below summarizes the results of the Phase II ESA and requirements of the Site Mitigation Plan and Dust Monitoring Plan followed by a response to the comments related to this topic.

Summary of Phase II Site Assessment, Site Mitigation Plan, and Dust Monitoring Plan

Soil Quality and Hazardous Waste Soil Management, Transport and Disposal Requirements

The proposed project would include excavation of soil to a depth of 12 feet within the event center footprint, 18.5 feet within the practice facility footprint, 24.5 feet beneath the parking facilities, and 14 feet beneath the plaza and other areas. The open space areas of the site are all underlain by below ground parking. Based on the installation of 32 soil borings during the Phase II ESA for the proposed project as well as previous investigations at the property, the soil units encountered within the depth of excavation include approximately 7 to 25 feet of artificial fill overlaying Bay Mud.[1] The fill consists of gravel, sand, and clay mixtures, with brick, rock (including cobble- and boulder-sized pieces of serpentinite that were apparent from the drilling but could not be recovered from the samplers), and other rubble. No treated wood was noted on any of the boring logs.

[1] Langan Treadwell Rollo, Phase II Environmental Site Assessment, Golden State Warriors Arena, Blocks 29-32, Mission Bay, San Francisco, California. June 2015.

The fill unit is characterized as either a California Class I hazardous material based on soluble chromium, lead, or nickel concentrations or a Class II non-hazardous waste, likely related to debris from the 1906 earthquake and resulting fire. Generally, the Class I California hazardous material extends from the surface to a depth of 24.5 feet (the deepest layer is observed in the northeast corner of the site adjacent to Terry A. Francois Boulevard). In some boring locations within the former remedial excavation footprints, total petroleum hydrocarbons as motor oil (TPHmo) and total petroleum hydrocarbons as diesel (TPHd) were detected at concentrations ranging between 800 milligrams per kilogram (mg/kg) and 1,800 mg/kg in soil sample from deeper than 6 feet. The TPH concentrations are likely associated with the historical fuel bulk storage and distribution terminal. A few volatile and semi-volatile organic compounds were detected at low concentrations; the Phase II ESA determined that these concentrations are not considered a health concern to construction workers, and do not require soil vapor barriers or other measures to protect the buildings from vapor intrusion once they are constructed.

The project sponsor prepared a Site Mitigation Plan as required by the recorded Covenant and Environmental Restriction, the incorporated approved Risk Management Plan, and its incorporated requirement to comply with S.F. Health Code Article 22A. The Site Mitigation Plan, which incorporates the requirements of the Mission Bay RMP, specifies the following: site-specific health and safety measures to be implemented during construction; procedures for soil management and disposition, dust control, and odor control; contingency measures to be implemented in the event that previously unidentified contamination or underground features are encountered; and closure requirements once excavation has been completed at the site.[2] Under the Site Mitigation Plan and in accordance with the RMP, the contractor would be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to site contaminants during construction, and these procedures would be specified in a comprehensive health and safety plan to be prepared by the construction contractor in consideration of final engineering plans for the proposed project.

Regarding disposition of soil, the soil management requirements of the Site Mitigation Plan require segregating excavated material on the basis of the estimated waste classification (Class I hazardous waste, Class II waste, or unrestricted waste) and additional testing of the excavated soil to confirm the waste classification and compliance with waste acceptance criteria for the designated landfill or recycler, as needed. Soil that meets the criteria of a Class I California hazardous waste would be treated on-site, as described in Chapter 12, Project Refinements and New Variant, of this Reponses to Comments document. On-site treatment would involve use of a pug mill that would mix the affected soil with a concrete additive to stabilize soluble metals in the soil, thereby reducing the solubility of the metals such that the soil could be reclassified as a Class II waste. The treatment unit would be operated under a temporary treatment unit permit approved by the California Department of Toxic Substances Control (DTSC) in accordance with Permit by Rule regulations provided in Title 22 of the California Code of Regulations, Chapter 4.5, Article 1. Once treated, the

[2] Langan Treadwell Rollo, Site Mitigation Plan, Golden State Warriors Arena, Blocks 29-32, Mission Bay, San Francisco, California. June 2015.

soil would be sampled to determine the effectiveness of the treatment and the waste would be transported off-site for disposal at a Class II non-hazardous regulated landfill or recycler.

Excavated fill materials that are classified as Class II non-hazardous waste would be disposed of off-site at a permitted Class II disposal facility. Native material beneath the fill layer would typically be disposed of as Class-III waste and/or unrestricted material. Non-hazardous soil would be profiled using the guidelines established by the DTSC Information Advisory *Clean Imported Fill Material*[3] if it is planned for off-site reuse.

All excavated material would be transported to the appropriate disposal facility using a permitted, licensed, and insured transportation company. Transporters of hazardous waste must meet the requirements of 40 CFR 263 and 22 CCR 66263 and be listed in the DTSC Hazardous Waste Haulers database. The project sponsor would obtain a U.S. Environmental Protection Agency (US EPA) Generator Identification Number for the generation of soil characterized as a hazardous waste and the disposition of the waste would be tracked using the Hazardous Waste Manifest System. The hazardous waste transporter, disposal facility, and U.S. Department of Transportation (DOT) waste description required for each manifest would be determined on a case-by-case basis. Non-hazardous wastes would be tracked using non-hazardous bills of lading. A description of the number of containers being shipped, the type of container, and the total quantity of waste being shipped would also be included on each manifest or bill of lading. All trucks transporting bulk hazardous waste would be properly covered with compatible materials.

As stated in the Site Mitigation Plan, the contractor, on behalf of the project sponsor, would be responsible for accurate completion of the hazardous waste manifests and non-hazardous bills of lading, tracking final soil disposition, and maintaining accurate records of all wastes shipped. The final destination of wastes transported off-site would be documented in a Closure Report (described below). In sum, the treatment, transport and disposal of excavated site soil would be subject to the numerous identified regulatory requirements, all of which have been in place for many decades and would assure that any soil classified as hazardous waste is handled in a safe and appropriate fashion and would not result in any significant environmental impacts.

In addition, as also discussed in the 1999 Mission Bay RMP, the Initial Study, and in Section 13.21, Hydrology and Water Quality, Response HYD-2, the site would be subject to the State Water Resources Control Board Construction General Stormwater Permit, which would minimize or prevent silt-laden stormwater runoff from the site.

Dust Control

Dust control measures are more specifically addressed in the Dust Monitoring Plan for construction activities which was conditionally approved by the DPH on September 15, 2015[4]

[3] California Department of Toxic Substances Control, Information Advisor, Clean Imported Fill. October 2001.
[4] City and County of San Francisco, Department of Public Health, Environmental Health. Dust Monitoring Plan Conditional Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158, September 15, 2015.

and a revised plan was submitted on October 2, 2015.[5] The revised plan addresses all of the conditions specified in the DPH conditional approval.

The Dust Monitoring Plan requires monitoring to determine baseline dust conditions at the project site; dust levels during each new phase of dust generation activities; and dust monitoring to be conducted if dust levels exceed an action level or a dust complaint is received.

Action levels specified in the Dust Monitoring Plan, as approved by the DPH, are as follows:

- PM_{10} concentration of 50 microgram per cubic meter ($\mu g/m^3$) averaged over a 30-minute period, or baseline dust levels, whichever is greater. The DPH may also approve an alternate action level.[6]
- Neighbor complaints
- Visible dust crossing the project boundaries

During construction, dust suppression measures would be implemented by the contractor in accordance with Article 22B of the San Francisco Public Health Code and San Francisco Building Code Section 106A.3.2.6.3. If the above action levels are exceeded or a dust complaint is received, additional dust suppression measures may need to be implemented. Dust suppression methods could include, but are not limited to, the following:

- Wetting down soil improvement operations, visibly dry disturbed soil surface areas, and visibly dry disturbed unpaved driveways, parking areas, and staging areas to minimize or prevent dust from becoming airborne.
- Watering construction areas and roads will receive every two hours and at a minimum three times per eight hour shift during active operations or sufficiently often to keep the area adequately moisture conditioned. Moisture conditioning may be increased during above average temperatures, when dust generating activities intensify, or wind speeds increase.
- Covering stockpiles of excavated materials, backfill material, import material, gravel, sand, road base, and soil with polyethylene plastic sheeting, tarp, or other equivalent cover. Active stockpiles will be thoroughly wetted and excess material will be removed and/or consolidated regularly to limit the size and extent of the stockpile. The frequency of such activity will be adjusted based on weather and site conditions.
- If necessary, applying non-toxic chemical dust suppressants consistent with manufacturer's directions and facilitating reapplication for non-active stockpiles.
- Using dust enclosures, dust curtains, plastic tarps, windbreaks, and dust collectors as necessary to control dust.

[5] Langan Treadwell Rollo. Revised Dust Monitoring Plan, Golden State Warriors Arena, Blocks 29 through 32, Mission Bay, California. October 2, 2015.

[6] The 1999 Mission Bay RMP determined that exposure to respirable dust would not adversely affect the health of off-site receptors if the dust concentration remains below an annual average of 250 micrograms per cubic meter. This action level will ensure that annual exposures to respirable dust are far below the level specified in the 1999 Mission Bay RMP.

- Utilizing alternate work methods.
- Adhering to a maximum vehicle speed limit of ten (10) miles per hour (mph) for construction traffic on paved and unpaved roads, parking lots and staging areas will adhere to.
- Maintaining a gravel or asphalt cover with a silt content that is less than five percent to a depth of three inches on the surfaces being used for travel.
- Sweeping paved roads within the construction site twice daily with a wet street sweeper during dust-generating activities.
- Sweeping at least the first 500 feet of any public roadway exiting from the construction site twice daily during dust generating activities.
- Implementing erosion control best management activities (BMPs) to control dust emissions from public roadways, parking areas, and any above grade unpaved staging areas or roadways.
- Requiring that construction workers will park on paved or graveled areas to reduce dust emissions.
- Leaving heavy equipment on the construction site and not staging it outside the construction site to minimize potential for tracking soil off-site to the extent feasible.
- Reducing vehicle trips via efficient trucking and equipment usage. Whenever possible, minimizing equipment mobilization and demobilization.
- Utilizing a rumble strip at all exits around the project area.
- Minimizing drop heights while loading transportation vehicles.
- Using tarpaulins or other effective covers for trucks transporting soils.
- Wet sweeping or vacuuming paved streets, sidewalks, paths, and intersections where work is in progress.
- Wet sweeping the surrounding streets and sidewalks at least once per day during demolition, excavation, and construction so that dust is not allowed to leave the construction area.
- Installing wheel washers to clean all trucks and equipment leaving the site. In the case where wheel washers cannot be installed, brushing tires or tracks and spoil trucks off before they re-enter City streets to minimize deposition of dust-causing materials.
- Additional wetting will be required for weekends and end of workdays, should dust issues and complaints arise.
- Using reclaimed water for dust control where applicable per San Francisco Health Code, Article 22B, Section 1242 (c)(11) and (14). Because construction dewatering discharge is anticipated to be authorized under the San Francisco Regional Water Quality Control's (Water Board) Order Number R2-2012-0012: Volatile Organic Compounds (VOCs) and Fuel General Permit.

- Reducing dust, dirt, or concrete fines from causing eye injuries during high winds; employees and onsite visitors will have proper eye protection and access to eye wash stations. The Cal/OSHA requirements for personal protection and safety will be established throughout the site.

Groundwater

Construction activities will require dewatering and as summarized in the Phase II ESA, the groundwater contains detectable concentrations of TPHd and TPHmo; low concentrations of benzene, naphthalene, metals, cyanide, and phenolics; and elevated chloride and sulfide concentrations. The maximum pH measured was 11.8. Only the detected concentrations of sulfide and maximum measured pH exceed regulatory limits for batch wastewater discharges to the combined sewer system. As discussed in Impact HY-1a of the SEIR (pp. 5.9-31 through 5.9-33) and Section 13.21, Hydrology and Water Quality, Response HYD-1, potential options for discharge of groundwater during construction dewatering include discharge to the combined sewer system in accordance with Article 4.1 of the San Francisco Public Works Code, direct discharge to the Bay in accordance with a National Pollutant Discharge Elimination System (NPDES) permit, or a combination of the two. Under any of these options, the groundwater discharges would be required to comply with the appropriate discharge limitations. The project sponsor is currently discussing the groundwater quality and anticipated discharge rates and volumes with the San Francisco Public Utilities Commission (SFPUC), Port of San Francisco, and RWQCB to determine the appropriate discharge authorization, oversight agency and required treatment prior to discharge.

Odor Control

Section 4.5 of the Site Mitigation Plan requires the contractor to implement odor suppression measures as needed to minimize odors during excavation activities. Potential odor control measures include (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; (c) use of foams to cover exposed odorous soil and rock material; (d) use of chemical odorants in spray or misting systems; and, (e) use of staff to monitor odors in the surrounding area.

Contingency Procedures

Section 4.6 of the Site Mitigation Plan includes the following contingency procedures should excavation activities encounter unanticipated hazardous materials such as underground storage tanks, sumps and/or vaults, or soil with petroleum hydrocarbon odors and/or stains:

- Stop work in the area where the suspect material was encountered and cover it with plastic sheets;
- Notify the site superintendent, and owner's representatives for inspection and appropriate action in the suspect area; and
- Review the existing health and safety plan and make revisions, if necessary; and have appropriately trained personnel to work with the affected materials, once directed by the contractor.

The contingency procedures require disposal of previously unidentified underground storage tanks in accordance with Article 21 of the San Francisco Health Code, disposal of contaminated soil consistent with the procedures described above, and appropriate disposition of any sumps and/or vaults encountered.

Closure Report

Section 4.7 of the Site Mitigation Plan requires submittal of a closure report to the DPH that presents a chronology of the construction events; a summary of analytical data; bills of lading, waste manifests, weight tickets, and certificates for treatment/disposal of all excavated soil; and a description of all corrective actions taken in accordance with the Site Mitigation Plan. As specified in Section 5.4 of the Dust Monitoring Plan, the closure report will also include a summary of dust generating activities, dust suppression measures implemented, monitoring activities, and any exceedance of dust action levels.

Regulatory Approvals

The provisions of the 1999 Mission Bay RMP, approved by the RWQCB in 1999 as discussed on p. 116 of the Initial Study, apply to developments within the entire Mission Bay Plan area, including the proposed project site, and are enforceable by the RWQCB through the Covenant and Environmental Restriction, recorded in February 2000 by the then three property owners (the City, UCSF, and Catellus). This covenant, the provisions of which run with the land and bind all future property owners, including the project sponsor, requires that sites within the Mission Bay Plan area are developed in accordance with the 1999 Mission Bay RMP. The letter stated that no further investigation or response action will be required within the Mission Bay Plan area other than the requirements of the RMP, and Covenant and Environmental Restriction.

Further, as discussed in Response HAZ-1, RWQCB issued Resolution 98-004 on May 25, 1999, in accordance with Health and Safety Code Section 25264. In this resolution, the RWQCB approved issuance a certificate of completion for the Mission Bay site with the exception of the petroleum free product related to the Pier 64 area (which has now been remediated as discussed above). The certificate of completion was issued upon approval of the RMP and the recording of the Covenant and Environmental Restriction on site property. As provided in Section 25264, the certificate of completion documents that site investigation and remedial action has been satisfactorily completed and a permanent remedy has been accomplished (Health and Safety Code Section 25264(b)).

The Phase II ESA was approved by the DPH on June 8, 2015 as part of its oversight responsibilities under the RMP through its implementation of Health Code Article 22A.[7] The Site Mitigation Plan and Dust Monitoring Plan prepared for the proposed project incorporate and supplement the requirements of the Mission Bay RMP. The Site Mitigation Plan was approved by the DPH on

[7] City and County of San Francisco, Department of Public Health, Environmental Health. Phase 2 Subsurface Investigation Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158, June 8, 2015.

June 17, 2015[8] and the Dust Monitoring Plan was conditionally approved on September 15, 2015.[9] The conditional approval requires the project sponsor to provide the appropriate permits for operation of the soil treatment unit to the DPH. In addition, an addendum to the Dust Monitoring Plan is required and must include specific provisions addressing actions that would be implemented should visible dust be observed on-site, consistent with information that will be requested for all future construction projects in San Francisco. These actions address sampling frequency, sampling locations, action levels, general dust control measures, wind monitoring, and signage. The project sponsor submitted a revised Dust Monitoring Plan on October 2, 2015 that addresses all of these conditions.[10] Implementation of these provisions would provide further assurance that visible dust will not cross the property boundaries during construction.

Consistency with Initial Study

Impact HZ-2 of the Initial Study (pp. 115 through 119) addresses exposure to hazardous materials in soil and groundwater and potential releases to the environment. As stated on p. 118 of the Initial Study, compliance with the 1999 Mission Bay RMP as required by the Covenant and Environmental Restriction (deed restriction) applicable to the entire Mission Bay Plan area would ensure that human health and environmental risks during and after development of the proposed project would be within acceptable levels and no new or different mitigation would be required. The Phase II ESA, as required by the RMP and Article 22A of the San Francisco Health Code, was conducted to more specifically characterize soil and groundwater quality at the project site as required by the RMP and provide information necessary to plan appropriate site specific soil and groundwater management and disposal requirements during construction. The prepared and approved Site Mitigation Plan and Dust Monitoring Plan fulfill requirements of the Mission Bay RMP. Therefore, this new information is consistent with the analysis presented in the Initial Study and does not change the conclusions of the Initial Study or SEIR. Impacts related to exposure to hazardous materials in the soil and groundwater and the potential for a release of hazardous materials during construction would remain less than significant as concluded in Impact HZ-2 of the Initial Study.

Response to Comments

This section addresses comments stating that activities at the site subsequent to publication of the 1998 Mission Bay FSEIR have altered the nature of contamination at the site, and that impacts related to construction on a contaminated site and transportation of soil characterized as a hazardous waste are not adequately addressed in the Initial Study. The presence today of any contaminants in the soil and groundwater as a result of activities that occurred after publication of the 1998 Mission Bay FSEIR is not an impact of the proposed project. Neither CEQA nor other regulatory requirements dictate the removal of all soil that may qualify as hazardous waste.

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8 City and County of San Francisco, Department of Public Health, Environmental Health. Site Mitigation Plan Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158, June 17, 2015.

9 City and County of San Francisco, Department of Public Health, Environmental Health. Dust Monitoring Plan Conditional Approval, Golden State Warriors Arena, Blocks 29-32, San Francisco, CA 94158, September 15, 2015.

10 Langan Treadwell Rollo. Revised Dust Monitoring Plan, Golden State Warriors Arena, Blocks 29 through 32, Mission Bay, California. October 2, 2015.

However, the Phase II ESA conducted in 2015 characterizes the contaminants existing at the site in its current condition. The requirements of the Site Mitigation Plan and Dust Monitoring Plan described above address the management of existing contaminants present at the site to control exposure during project construction activities and project operation. Compliance with the RMP, Article 22A, and the approved Site Mitigation Plan and Dust Monitoring Plan would adequately address any potential impacts that could result from disturbance of soil or groundwater during site construction activities and project operation. In the long term, the removal of a minimum of 12 feet of contaminated soil from throughout the project site as a part of project development, and construction of new structures on the project site would preclude future contact with contaminated soils, thereby reducing site risks. The open space areas of the site would all be underlain by subgrade parking which would preclude contact with contaminated soil in these areas even if some contaminated soils are present below a depth of 12 feet.

Regarding transport of hazardous soil, Section 4.3.5.4 of the 1998 Mission Bay FSEIR notes that "any soil disposed of off-site is subject to all applicable federal and state laws and regulations." Section 4.2.2 of the Site Mitigation Plan prepared for the proposed project supplements this requirement and specifies the legal requirements pertaining to the transport of hazardous wastes. In addition, the Site Mitigation Plan specifies that the contractor, on behalf of the project sponsor, would be responsible for the accurate completion of the hazardous waste manifests and non-hazardous bills of lading, tracking final soil disposition, and maintaining accurate records of all wastes shipped. The final destination of wastes transported off-site would be documented in a Closure Report submitted to the DPH. With compliance with these mandatory regulatory requirements, as enforced through the 1999 Mission Bay RMP and the Site Mitigation Plan for the proposed project, impacts related to the transport and disposal of hazardous waste would be less than significant. As such, the proposed project would not result in new or substantially more severe significant impacts related to the treatment, handling or disposal of hazardous materials than previously analyzed in the 1998 Mission Bay FSEIR because it was understood at that time that detailed regulatory schemes existed that would dictate the manner of transport and disposal to ensure it is done in a safe manner.

The hazardous nature of the excavated soil would not affect the number of truck trips or equipment required for loading and transportation of the soil that was assumed in the SEIR impact analysis. In fact, truck trips could be shorter than what was assumed in the SEIR because with the proposed on-site soil treatment, there would be a reduced volume of Class I hazardous waste, and non-hazardous waste disposal facilities are generally located closer to the project site than Class I hazardous waste disposal facilities. Traffic, noise, and air quality impacts associated with transport of excavated soil from the project site are adequately addressed in the Initial Study and SEIR. See Chapter 12, Project Refinements and New Variant, of this Response to Comments document regarding on-site soil treatment that would be conducted to render excavated soil non-hazardous.

The comments suggest considering use of the local truck-to-rail system for the transport of hazardous waste. Use of this system would not be warranted because soil would be treated on-site to non-hazardous levels as discussed above and in Section 12.3.2, Other Construction Refinements. While the truck-to-rail system could provide benefits for long distance transport of hazardous wastes, the use of the onsite treatment system would preclude this need.

See Response HAZ-1 regarding risks associated with exposure to contaminated soil and the adequacy of information provided in the Initial Study.

See Response HAZ-2 regarding contaminants other than petroleum hydrocarbons addressed by the 1999 Mission Bay Risk Management Plan.

See Response HAZ-5 regarding reuse of soil at the site.

13.22.5 Reliance on Regulatory Requirements and Naturally-Occurring Asbestos (HAZ-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-10 O-MBA7S2-53 O-MBA7S2-54

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e. The City Cannot Rely on Mitigation Measures for Hazardous Materials without Analyzing the Impacts.

Seemingly in furtherance of an implicit goal to avoid substantive public disclosure of hazardous materials impacts in the DSEIR, the City takes the remarkable position in the NOP/IS that it can adopt mitigation measures without analyzing and disclosing impacts. This approach is employed with respect to risks associated with naturally occurring asbestos (NOP/IS, pp. 113-115) as well as risks associated with exposed contaminated soil prior to site development as regulated in the City by the Maher Ordinance (NOP/IS, p. 116). This approach is fundamentally flawed, however, because CEQA does not permit an agency to adopt mitigation measures in lieu of fully assessing a project's potentially significant environmental impacts. A mere acknowledgment that an impact would be significant is inadequate; the EIR must include a detailed analysis of "how adverse" the impact would be. (*Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1123; *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831.)

The flaw in this approach is easily seen in both contexts. With respect to compliance with the Maher Ordinance, for example, section 2(b) of this letter explains that the NOP/IS fails to describe the existing heavy metals and other hazardous waste contained in the soil.[1] The DSEIR's failure to mention this contamination prevents public disclosure of its scope, its implications for future construction work onsite, and potential exposure to the public during occupancy of the Project. As a document of public information, the DSEIR cannot avoid meaningful disclosure of this information by announcing that compliance with the Maher Ordinance will fix everything. That strategy is the opposite of informed decision-making and public participation.

The same analysis applies to the acknowledged asbestos-containing backfill material located onsite. First, it is not at all clear that California Air Resources Control Board's ("CARB") Asbestos Airborne Toxic Control Measure ("ATCM") even applies because this is not an instance where construction is occurring in an area of naturally occurring asbestos material. (Cal. Code Regs., tit. 17, § 93105, subd. (b).) As acknowledged in the NOP/IS, the material is processed (i.e., crushed) asbestos containing rock that was imported onto the site and used as backfill material. Accordingly, CARB's Asbestos ATCM does not apply here. Consistent with this misapplication of the Asbestos ATCM in the NOP/IS, the "no visible emission at property boundary" standard (NOP/IS, p. 114) does not apply because it is inadequate for both public and worker safety. Rather, the Project must comply with BAAQMD Regulation 11, Rule 2.

Second, even if the NOP/IS had identified the proper regulatory standard, the underlying strategy of relying on promises to comply with regulatory standards does not satisfy CEQA's informational disclosure

mandates. The City has the duty under CEQA to investigate and disclose the extent of the potentially significant impact prior to setting forth potential mitigation measures. (*Galante, supra*, (1997) 60 Cal.App.4th at 1123.) Considering that many other flaws will require preparation of a Recirculated DSEIR, there will be ample opportunity to include the results of further study of contamination in that forthcoming document.

Footnote:

[1] It is noted that the NOP/IS does not attempt to make compliance with the Maher Ordinance an enforceable mitigation measure.

(*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-10]*)

C2. Page 114 introduces Mitigation Measure M-HZ-1b: "Geologic Investigation and Dust Mitigation Plan for Naturally Occurring Asbestos." M-HZ-1b is a new mitigation measure for an impact that was not addressed in the 1998 SEIR. The new hazards associated with Naturally Occurring Asbestos (NOA) conflicts with the designation of "No New or More Severe Significant Effects" on items 16 a), 16 b) and 16 c) listed on page 106 of the NOP. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-53]*)

The Notice of Preparation (NOP), dated November 19, 2014 failed to identify new or more severe significant effects with respect to the large volume of soil classified as Class I hazardous waste that will require off-site disposal at a Class I Hazardous Waste Disposal Facility. New mitigation measures for naturally occurring asbestos were not properly identified as new or more severe significant effects. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-54]*)

Response HAZ-4: Reliance on Regulatory Requirements and Naturally-Occurring Asbestos

The comment states that the SEIR fails to fully disclose the impacts of exposure to naturally occurring asbestos, and instead relies on compliance with the Asbestos Airborne Toxic Control Measure, which may not be directly applicable to the project; the impact assessment must include a detailed analysis of how adverse an impact would be and the commenter contends that this is a new or more significant effect than analyzed in the 1998 Mission Bay FSEIR. OCII disagrees.

As discussed in Impact HZ-1 of the Initial Study (pp. 113 through 115), the site specific geotechnical evaluation of the project site identified serpentinite, an asbestos-containing mineral, in the fill materials at the project site. The Initial Study concluded that impacts related to a potential release of naturally-occurring asbestos are significant because at the time of the Initial Study publication an investigation had not been conducted to determine the asbestos content of the fill material. The Phase II ESA conducted since publication of the Initial Study identified sporadic detections of chrysotile asbestos at concentrations up to 2 percent (see Response HAZ-3, above, for further discussion of the result of this investigation).

The Initial Study determined that implementation of the requirements of the Asbestos Airborne Toxic Control Measure (17 CCR, Division 3, Chapter 1, Subchapter 7.5 Section 93105) in accordance with Mitigation Measure M-HZ-1b would reduce this impact to a less-than-significant-level. Title 17 CCR Section 93105(b)(3) specifies that the Asbestos Air Toxic Control

Measure applies to any construction, grading, quarrying, or surface mining operation where any portion of the area to be disturbed has naturally-occurring asbestos, serpentinite, or ultramafic rock. Section 93105 (h)(9) also defines asbestos containing material as any material that has an asbestos content of 0.25 percent or greater. Therefore, the Asbestos Air Toxic Control Measure applies to the project, and the project sponsor would submit the appropriate notification forms to the BAAQMD and prepare an asbestos dust mitigation plan in accordance with the Asbestos ATCM as required by Mitigation Measure M-HZ-1b and described on p. 114 of the Initial Study. Implementation of this measure would ensure that no visible dust crosses the project boundaries during construction, and could also require air monitoring to demonstrate compliance with this criterion if deemed necessary by the BAAQMD.

Therefore, compliance with this regulatory requirement as specified by Mitigation Measure M-HZ-1b would reduce impacts associated with potential exposure to naturally-occurring asbestos to a less-than-significant level as concluded on p. 114 of the Initial Study. As such, the proposed project would not result in a new significant impact related to potential exposure to naturally-occurring asbestos.

Subsequent to publication of the SEIR, the project sponsor has completed an Asbestos Air Monitoring Plan in accordance with the Mitigation Measure M-HZ-1b of the Initial Study and the Asbestos Airborne Toxic Control Measure.[11] It specifies that during dust generating activities, daily air samples would be collected from an upwind and a downwind location at the perimeter of the site for the analysis of airborne asbestos. In the event that any sample result is greater than 16,000 structures per cubic meter of air, the construction contractor would be required to stop all earth-disturbing activities until the dust is abated and asbestos concentrations are within acceptable levels. The project sponsor, or its designee, would also notify the RWQCB (the lead agency). After one month of monitoring, the project sponsor would submit the monitoring data to the RWQCB for discussion of whether continued monitoring is necessary. Dust control measures to be implemented during construction are those specified in the Revised Dust Monitoring Plan and described above in Response HAZ-3. In addition, specific measures would be employed in accordance with the Asbestos Airborne Toxic Control Measure, including those for track-out prevention and control and controlling dust from active storage piles; inactive surface areas and storage piles; unpaved roads, parking lots, and staging areas; paved public roads; earth moving activities; off-site soil transport; and post construction activities. The results of all monitoring would be made available to the RWQCB and BAAQMD upon request and information regarding the asbestos monitoring and dust monitoring activities, any exceedances, and corrective actions taken would be included in the Closure Report prepared under the Site Mitigation Plan described above in Response HAZ-3.

The comment also states that the project must comply with BAAQMD Regulation 11 - Hazardous Pollutants, Rule 2- Asbestos Demolition, Renovation, and Manufacturing. However, as stated in Section 11-2-101 of this regulation, "The purpose of this Rule is to control emissions of asbestos to

[11] Langan Treadwell Rollo. Asbestos Dust Monitoring Plan, Golden State Warriors Arena, Blocks 29 through 32, Mission Bay, San Francisco, California. October 9, 2015.

the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures." Because the proposed project includes none of these activities as defined in BAAQMD Regulation 11 - Hazardous Pollutants, Rule 2, the Rule is not applicable to the project.

The potential presence of naturally-occurring asbestos in soil at the site, and in the Mission Bay Plan area generally, is not new information. The 1999 Mission Bay RMP noted that asbestos was detected in soil in the area, and "appears to be primarily associated with serpentinite rock which was imported to fill Mission Bay. . . ." (1999 Mission Bay RMP, p. 2-2.) The 1999 Mission Bay RMP was prepared to implement Mitigation Measures J.1a through J.1k adopted in connection with the 1998 Mission Bay Plan.

See Responses HAZ-1 and HAZ-3 regarding risks associated with exposure to contaminated soil and the Site Mitigation Plan and Dust Monitoring Plan prepared by project sponsor and approved by the San Francisco Department of Public Health in compliance with San Francisco Health Code Article 22A and San Francisco Building Code Section 106.3.2.4.

13.22.6 Reuse of Excavated Soil (HAZ-5)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-43

A3. Section V.J.53 last paragraphs states: As discussed in more detail in "General Soil Movement and Transport During Construction," below, DTSC has determined that soils excavated during construction in the Mission Bay Project Area can be moved around and reused in the Project Area without triggering hazardous waste management requirements, provided the soils are managed in accordance with RMP measures. However, DTSC's determination does not apply to building demolition debris or waste soils or other waste materials from any necessary remediation activities. In the event these wastes contain levels of constituents that would result in their classification as hazardous waste, the hazardous waste regulations described above would apply to those materials."

Based on our review of the boring logs recent Phase II Environmental Site Assessment (Langan, 2015), it appears that soil with construction debris was used as fill during the 2005 remediation effort for the Pier 64 clean-up. Our review of the Langan 2015 report boring log soil descriptions indicates that near surface soils at boring locations LB-8, LB-12, LB-26 and LB-29 contain brick fragments. These borings were completed in the area of the Pier 64 clean-up that reportedly removed petroleum impacted soil to a depth of 9 feet and filled in the area (Langan 2015). Furthermore, as stated in B7 below, the area of fill from the Pier 64 clean-up may contain soil impacted with soluble lead that would classify it as a California Hazardous Waste.

The presence of brick, that is probably demotion debris, and soluble lead in the fill material placed during the Pier 64 clean-up effort, indicates that the Risk Management Plan (RMP) or implementation of the RMP, was ineffective and did not comply with the DTSC determination listed above. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-43]*)

Response HAZ-5: Reuse of Excavated Soil

The comment notes that under the 1998 Mission Bay FSEIR, the DTSC determined that excavated soil from the Mission Bay Plan area can be reused on site under some conditions provided that the soils are managed in accordance with the requirements of an RMP for soil management. However, the DTSC determination does not apply to building debris or waste soil from remedial activities which may be present at the site. Further, the comment contends that the presence of building debris and soluble lead in the fill materials indicate that the 1999 Mission Bay RMP was not effectively implemented during previous remediation activities at the site.

The 1999 Mission Bay RMP applies to owners of the property and allows them to reuse soil under certain conditions (see Reuse of Native Soil within the RMP Area, p. 4-19). Under the proposed project, however, the project sponsor would not reuse excavated soil at the project site. As discussed above in Response HAZ-3, soil that is classified as a hazardous waste would be treated to non-hazardous levels, and all of the excavated soil would be disposed of off-site.

As discussed in Response HAZ-3, the presence of contaminants in the soil and groundwater as a result of activities that occurred after publication of the 1998 Mission Bay FSEIR, including potential building debris, are not an impact of the proposed project. However, the Phase II ESA conducted in 2015 characterizes the contaminants existing at the site in its current condition. The requirements of the Site Mitigation Plan and Dust Monitoring Plan described above address the management of existing contaminants present at the site to control exposure during project construction activities.

13.22.7 Disposal of Treated Wood (HAZ-6)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-48

B5. Section 4.3.5.3 indicates that excavated soil may be re-used as fill on-site. There is no contingency for the handling of excavated wooden piles or railroad ties that may be treated with wood preservatives (creosote) that may be classified as a RCRA hazardous waste. Creosote often contains polycyclic aromatic hydrocarbons (PAHs), some of which are listed RCRA hazardous waste constituents. (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-48]*)

Response HAZ-6: Disposal of Treated Wood

The comment states that the Initial Study does not address handling of excavated wooden piles or railroad ties that may be treated with wood preservatives, and may be classified as a Resource Conservation and Recovery Act hazardous waste.

Because substantial amounts of soil have already been excavated from the project site as part of the remedial activities conducted to remove free product, the potential to encounter substantial amounts of treated wood is low. None of the 32 locations sampled for site-specific Phase II ESA conducted in June 2015 detected treated wood. However, in the unlikely event that treated wood is encountered during project construction, there is a well-established regulatory framework that would ensure that impacts related to handling and disposal of this wood would be less than significant.

The DTSC has developed alternative management standards that allow for disposal of treated wood as a nonhazardous waste. These standards, contained in Title 22 of the CCR, Division 4.5, Chapter 34, simplify and facilitate the safe and economical disposal of treated wood waste. They provide for less stringent storage requirements, extended accumulation periods, shipment by a nonhazardous waste hauler without a hazardous waste manifest, and disposal at specific nonhazardous waste landfills. In accordance with these standards, employees who handle the treated wood waste or would otherwise be expected to come into contact with the waste must be trained in the applicable regulations related to the handling of treated wood waste. In addition, the standards require that treated wood waste is segregated from other wastes, appropriately stored and labeled, and transported to an authorized treated wood waste disposal facility. The alternative management standards specify that treated wood waste should not be burned, scavenged, or stored in contact with the ground, and allow for disposal of the treated wood waste at a Class III landfill. Possible disposal sites for the piles and structures include the Altamont Landfill and Resource Recovery Facility, Vasco Road Sanitary Landfill, Keller Canyon Landfill, Ox Mountain Landfill, Santa Cruz Class III Landfill, Buena Vista Drive Sanitary Landfill, Newby Island Landfill, Guadalupe Rubbish Disposal Company, and the Kirby Canyon Recycling and Disposal Facility. Reuse of creosote-treated pilings and structures is not allowed unless they are reused onsite, or if the use is consistent with allowable reuses for creosote-treated wood.

Compliance with these standards and implementation of the required procedures would ensure that potential hazardous materials-related impacts of removal of creosote-treated wood, if encountered, would be less than significant.

13.22.8 Lead Agency for School Evaluations (HAZ-7)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-56

D2. Page 1-61 Impact HZ-2, under Mission Bay FSEIR Mitigation Measure J.2, the RWQCB is listed as the agency responsible for reviewing risk evaluations for a public school or child care facility. The Department of Toxics Substances Control (DTSC) School Property Evaluation and Cleanup Division is the responsible agency for assessing, investigating and cleaning up proposed school sites (DTSC, 2015). (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-56]*)

Response HAZ-7: Lead Agency for School Evaluations

The comment notes that the lead agency for school evaluations is the DTSC and that Mitigation Measure J.2 of the 1998 MB FSEIR identifies the RWQCB as the lead agency. Note that the DTSC's school evaluation program applies to public schools that receive state funding. As no public schools are planned as part of the project, the DTSC would not be the lead agency. In accordance with Mitigation Measure M-HZ-2 of the Initial Study (p. 119), the RWQCB would be notified if a child care facility is proposed. Mitigation Measure M-HZ-2 provides for RWQCB notification because of its designation as the administering agency with oversight of hazardous materials issues at the proposed project site in accordance with the California Health and Safety Code, Section 25260 *et seq*.

13.22.9 Emergency Evacuation (HAZ-8)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-21

In addition to proper design of the Project, mitigation must address public safety concerns regarding evacuation from an earthquake or tsunami. Even if overexcavation and fill and other measures could be effective to address liquefaction at the site, surrounding utility roads and emergency support systems would not be protected by the proposed supporting piles discussed in the 1998 DSEIR and the IS/NOP. (BSK Geotech, comments A1, A10.) Additionally, adequate escape routes from the area must be available in the event of an earthquake or a tsunami. A collapse of the Third Street Bridge was previously identified as subject to damage in a major earthquake and limiting escape routes out of Mission Bay. (1988 DEIR, Vol. II, Chapter VI.D.3, 9 and 44.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-21]*)

Response HAZ-8: Emergency Evacuation

The comment states that the pile supported foundation system of the proposed buildings would not protect surrounding roads and emergency support systems against liquefaction-related damage and that adequate escape routes must be available in the event of an earthquake or tsunami.

San Francisco emergency response procedures and evacuation routes are addressed in Impact HZ-3 of the Initial Study (pp. 119 through 121). As summarized in that impact analysis, the City has a published Emergency Response Plan[12] dated 2010 and prepared by the Department of Emergency Management subsequent to publication of the 1998 Mission Bay FSEIR as part of the City's Emergency Management Program. This Plan addresses hazard mitigation and disaster preparedness and recovery, and identifies hazards to which San Francisco is particularly susceptible such as earthquake, hurricane, tsunami, flood, winter storm, and act of terrorism. The

[12] San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2010. Available at: http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154.

Emergency Response Plan complies with several relevant state and federal directives for emergency planning, including the California Standardized Emergency Management System and the Incident Command System. The Plan includes sections on operations, including management and procedures; staffing, operations, and logistics regarding the City's emergency operations center; and mutual aid involving other agencies. The Emergency Response Plan assigns responsibilities for disaster planning, operations (including fire and rescue, law enforcement, human services, infrastructure, transportation, communications, and community support), and logistics, as well as finance and administration, to City agencies and departments. The Emergency Response Plan also identifies volunteer agencies, such as the American Red Cross, that are integral to disaster response efforts.

The Emergency Response Plan contains 16 "annexes" (similar to appendices), consistent with a federally established framework, that cover topics including firefighting, public works and engineering, mass casualty care, and earthquakes, among numerous others. The Earthquake Annex, in particular, sets forth planning assumptions for a series of earthquakes of varying magnitudes on different faults, and sets forth procedures for assessment of damage and injuries, and operational response and strategies in the event of a major earthquake. The Tsunami Response Annex addresses planning for a tsunami, emergency operations, and recovery operations.

The project site is located adjacent to Third Street, a primary evacuation route identified in the Emergency Response Plan. In addition, Terry A. Francois Boulevard is a designated Tsunami Evacuation Route.

Implementation of the San Francisco Emergency Response Plan, prepared in 2010 (subsequent to publication of the 1998 Mission Bay FSEIR) would ensure that adequate City resources and escape routes are available for response.

See Section 13.20, Geology and Soils, Response GEO-3 regarding the effects of liquefaction and related phenomena.

13.22.10 Bayfront Park (HAZ-9)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-30

A fair argument exists that the Project's recreation-related construction at Bayfront Park will result in significant environmental impacts through possible exposure to hazardous materials.

b. The Project Will Require Construction of Bayfront Park That May Have an Adverse Impact on the Environment.

"The DSEIR acknowledges the development of the Project triggers development of Bayfront Park and must be completed prior to occupancy. (DSEIR, p. 3-37-38.) In other words, development of the Project requires

construction of Bayfront Park. (See, e.g., CEQA Guidelines, Appendix G, section XV(b).) Accordingly, construction of Bayfront Park is a "reasonably foreseeable consequence of the initial project," and requires analysis in the DSEIR. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 396.) It may not, as occurred here, be dismissed as a separate project for purposes of CEQA. (DSEIR, p. 3-37.) Serious questions exist about whether construction of Bayfront Park will result in adverse physical effects on the environment due to the presence of hazardous materials on that site. (*Ibid*.)

"As set forth above, the NOP/IS failed to disclose the present existence of hazardous waste in the soil within the Project site. The soil underlying the future Bayfront Park is similarly contaminated. (2006 RRMP, p. 2-5.) This contamination has not been disclosed in the NOP/IS or the DSEIR. Since it appears that Bayfront Park will be constructed along with the Project, the same questions are raised about hazardous materials impacts as discussed in sections 2(b) and (c) of this letter.

"The potentially significant impacts regarding hazardous materials are exacerbated because Bayfront Park will be a ground-level landscaped park. Having failed to disclose that the soil underlying Bayfront Park is contaminated, the NOP/IS also fails to explain whether such contaminated soil will be left in place and thereby expose visitors to hazardous materials. There is no discussion of whether an impermeable cap will be used to protect future park visitors from the existing contaminated soil.

"The failure to address these critical issues supports a fair argument that the Project will require construction of a recreational facility (i.e., Bayfront Park) that will have an adverse effect on the environment by facilitating the exposure of contaminated soils to humans and the environment. (CEQA Guidelines, Appendix G, section XV(b)). The City may not dismiss this potentially significant impact based on its own failure to conduct a reasonable analysis of the issue. (Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296, 311 ("[t]he agency should not be allowed to hide behind its own failure to gather relevant data . . . . If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record").) The recirculated DSEIR will need to analyze this potential significant impact." (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-30]*)

Response HAZ-9: Bayfront Park

The comment contends that the project's recreation-related construction at Bayfront Park will result in significant environmental impacts through possible exposure to hazardous materials. As discussed in SEIR Chapter 3, Project Description (pp. 3-37 to 3-38), development of the Bayfront Park public access improvements would be triggered by construction of the proposed project.

The Bayfront Park is located in the Other Areas of the Site Operable Unit of the Pier 64 site, which has been identified to include soil containing separate phase hydrocarbons.[13] However, park users would not be exposed to hazardous materials in soil at the park because the requirements of the 1999 Mission Bay RMP must be implemented when the park is constructed. The applicable sections of the RMP address requirements for notification of the RWQCB; handling and reuse of soil; air monitoring; design of utilities; use of backfill; and storage, treatment, and disposal of excavated soil. Section 4.3.5.5 of the 1999 Mission Bay RMP requires that soil used in landscaped areas accessible for human use must meet the prevailing standards for clean fill used in commercial development or meet specific requirements specified in the RMP. The fill must be between 1 and 1 ½ feet deep and must be underlain with water permeable synthetic fabric which

[13] BBL Environmental Services, Revised Risk Management Plan, Former Petroleum Terminals and Related Pipelines Located at Pier 64 and the Vicinity, City and County of San Francisco, California. August, 2006.

would restrict contact with contaminated soil by park users. Soil containing visible or free-flowing hydrocarbons may not be reused on site.

Further, as specified in the 1999 Mission Bay RMP, construction activities at Bayfront Park would be subject to Article 22A of the San Francisco Health Code (the Maher Ordinance), which requires site specific analysis of soil and groundwater and preparation of a Site Mitigation Plan. In addition, the work will require preparation of a Dust Mitigation Plan under San Francisco Building Code Section 106.3.2.4. While the measures specified in the 1999 Mission Bay RMP are deemed appropriate for the protection of human health and the environment during and after construction, in the event any special site conditions are found at the site during the implementation of the requirement specified above, Section 4.3.11 of the RMP requires the Master Developer to prepare a site-specific RMP supplement if it is determined that the 1999 Mission Bay RMP does not adequately address site risks. Upon completion of construction, the Master Developer would be required to submit a closure report to the DPH documenting compliance with the RMP, site-specific RMP supplement, and Article 22A of the San Francisco Health Code.

With implementation of the requirements described above, park users would not be exposed to unacceptable levels of hazardous materials, and use of the park would not result in significant environmental impacts related to exposure to hazardous materials.

See Response REC-1 for additional information on Bayfront Park and why it is not part of the proposed project.

13.23 Energy Resources

13.23.1 Overview of Comments on Energy Resources

The comments and corresponding responses in this section cover topics analyzed in the Initial Study, Section E.17, Mineral and Energy Resources, which is included in Appendix NOP-IS of the SEIR. These include topics related to:

- EN-1: Approach to Impact Analysis

13.23.2 Approach to Impact Analysis (EN-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA7S2-31

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6. <u>The DSEIR Failed to Disclose Energy Impacts.</u>

The DSEIR is fatally defective because it fails to provide information about the Project's energy requirements as mandated by Appendix F of the CEQA Guidelines ("Appendix F"). A California appellate decision recently reaffirmed the need for a detailed analysis of energy consumption and mitigation in EIRs, stating in relevant part:

> Under CEQA, an EIR is "fatally defective" when it fails "to include a detailed statement setting forth the mitigation measures proposed to reduce wasteful, inefficient, and unnecessary consumption of energy." (*People v. County of Kern* (1976) 62 Cal.App.3d 761, 774.) The requirement to adopt energy impact mitigation measures "is substantive and not procedural in nature and was enacted for the purpose of requiring the lead agencies to focus upon the energy problem in the preparation of the final EIR." (*Ibid*.)

(*California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 209 (CCEC).)

The City failed to comply with this mandate to prepare a detailed statement in the DSEIR. In fact, the DSEIR fails altogether to address the issue of energy consumption because the NOP/IS inaccurately determined that the issue was sufficiently addressed in the 1998 SEIR. (DSEIR, 1-9; NOP/IS, pp. 122-125.) This did not happen.

As explained in CCEC, Appendix F lists the information that satisfies CEQA's mandate to "assure that energy implications are considered in project decisions." (CEQA Guidelines, Appendix F; *CCEC*, *supra*, 225 Cal.App.4th at 209.) As just one example, the list includes "total energy requirements of the project by fuel type and end use." (CEQA Guidelines, Appendix F, Section II(A)(2). The 1998 SEIR failed to prove this information. With respect to construction energy requirements, the NOP/IS concedes: "The FSEIR did not estimate energy consumption specific to the development of proposed on Blocks 29-32 or the amount of water that would be used during construction.") (NOP/IS, p. 123.) With respect to operational energy requirements, the NOP/IS concedes, "The amount of fuel use attributable to development on Blocks 29-32 was not specifically calculated in the FSEIR." (NOP/IS, p. 123.) Finally, with respect to transportation energy requirements, the NOP/IS concedes: "The amount of fuel use attributable to development on Blocks 29-32 was not specifically calculated in the FSEIR." (NOP/IS, p. 123.)

The 1998 SEIR thus failed to address the issue of energy demand and mitigation for the project proposed in 1998, much less for the very different Project now proposed. Contrary to the conclusion in the NOP/IS, the 1998 SEIR cannot be relied upon to avoid providing the analysis in the DSEIR.

The NOP/IS and DSEIR make much of the proposed LEED certification for the Project. While LEED certification may be relevant to a lead agency's duties under Appendix F, referencing LEED certification alone is inadequate. The CCEC decision addressed this point in the context of Title 24 building energy code standards:

> Although the Building Code addresses energy savings for components of new commercial construction, it does not address many of the considerations required under appendix F of the CEQA Guidelines. These considerations include whether a building should be constructed at all, how large it should be, where it should be located, whether it should incorporate renewable energy resources, or anything else external to the building's envelope.

CCEC, supra, 225 Cal.App.4th at 211.)

The same analysis applies to LEED certification. While relevant, LEED certification does not end the discussion or obviate the lead agency's duty to comply with Appendix F. What is more, as explained in the context of GHG emissions a lead agency may not avoid its duty to disclose project impacts and mitigation measures by incorporating mitigation measures into the project description. To the extent that the City intends to incorporate the purchase of offsets as a "design feature" or otherwise incorporate it into the project description, recent case law clarifies that this strategy violates CEQA's mandate to separately disclose project impacts and feasible mitigation measures. (*Lotus, supra*, 223 Cal.App.4th 645, 655-56 (incorporating mitigation measures for redwood trees into the project description violated CEQA "[b]y compressing the analysis of impacts and mitigation measures into a single issue").) To the extent that LEED certification reduces the Project's energy demand, the DSEIR must disclose the Project's unmitigated energy consumption and show how LEED certification reduces that consumption.

In summary, the City's failure to address the Project's energy demands as required by Appendix F renders the DSEIR "fatally defective." (*CCEC, supra*, 225 Cal.App.4th at 209.) (*Mission Bay Alliance, Soluri Meserve, letter, July 26, 2015 [O-MBA7S2-31]*)

Response EN-1: Approach to Impact Analysis

The comment states the Draft SEIR does not include information required by CEQA Guidelines, Appendix F. Under CEQA, the project would result in significant impacts related to energy resources if it would result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner (see Initial Study p. 122). Appendix F of the CEQA Guidelines is an advisory document that assists EIR preparers in determining whether a project would result in any of these conditions. As described below, the SEIR energy analysis (as provided in the Initial Study) complies with CEQA.

Appendix F provides that avoiding or reducing inefficient, wasteful and unnecessary consumption of energy should be the focus of an EIR's energy analysis. (CEQA Guidelines, Appendix F, § I, citing Pub. Resources Code, § 21100, subd. (b)(3).) Appendix F also indicates that such analysis shall consider the "potentially significant energy implications of a project . . . to the extent applicable to the project." (CEQA Guidelines, Appendix F, § II.) Appendix F does not require an EIR to analyze any and all potential energy impact possibilities and potential conservation measures listed in Appendix F. (*Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912 ["neither Appendix F itself, nor any other authority requires that an EIR discuss every possible energy impact or conservation measure listed in Appendix F."].) Rather, Appendix F is designed to assist in the preparation of an EIR's energy analysis and lists examples of information an EIR "may include" to consider the energy implications of a project. (CEQA Guidelines, Appendix F, §§ II.A., II.B., II.C., II.D.) "'May' identifies a permissive element which is left fully to the discretion of the public agencies involved."

(CEQA Guidelines, § 15005, subd. (c).) The SEIR's discussion of energy impacts complies with CEQA Guidelines Appendix F. The information required by Appendix F is provided in the 1998 Mission Bay FSEIR and the Initial Study. (See Initial Study, pp. 122 to 126.)

The City has also prepared the following more detailed analysis regarding the goals of Appendix F, available energy supplies, and the project's energy use to further demonstrate that the project would not result in significant impacts related to energy resources. This information is also provided in order to address the Court of Appeal's recent decision in *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173.

Appendix F Goals

Appendix F states that the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

(1) decreasing overall per capita energy consumption,
(2) decreasing reliance on fossil fuels such as coal, natural gas and oil, and
(3) increasing reliance on renewable energy sources.

Therefore, the CEQA analysis of a project's energy implications should place a particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. The analysis should consider total energy requirements of the project by fuel type and end use, and should address all energy consuming equipment and processes which will be used during construction, operation and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.

Energy Supplies in San Francisco

San Francisco uses approximately 6 billion kilowatt hours (kWh) of electricity per year. This use is forecast by the Rocky Mountain Institute to grow at the rate of 1.3 percent per year to approximately 8 billion kWh per year by 2030.[1] San Francisco obtains its energy from three sources: the San Francisco Public Utilities Commission (SFPUC) Power Enterprise, Pacific Gas and Electric (PG&E), and direct access providers.

Electricity

SFPUC Power Enterprise. The SFPUC provides 17 percent of San Francisco's electricity from the Hetch Hetchy Power system or local renewable sources operated by the SFPUC Power Enterprise. The Hetch Hetchy Power system is composed of three hydroelectric powerhouses with a combined total hydroelectric output of over 400 megawatts.[2] This clean energy is transmitted to San Francisco along City-owned transmission lines that transverse the State of California from east to west. Within San Francisco, the SFPUC also generates over 10 megawatts of clean, renewable energy

1 San Francisco Public Utilities Commission, *San Francisco's 2011 Updated Electricity Resource Plan.* March, 2011.
2 San Francisco Water Power Sewer, *About the Power Enterprise*, available online at http://www.sfwater.org/index.aspx?page=391, accessed on September 15, 2015.

from 19 solar arrays and 2 biogas cogeneration facilities. The Hetch Hetchy Power comprises 98.8 percent of the power supply from the SFPUC Power Enterprise, while the in-City renewable resources comprise 1.2 percent. Overall, the San Francisco energy portfolio has a zero greenhouse gas emissions profile.

The SFPUC Power Enterprise provides electricity to some of the Hetch Hetchy water system components as well as to all City and County of San Francisco (CCSF) municipal facilities, services and customers, including the San Francisco International Airport, San Francisco General Hospital, the San Francisco Municipal Railway (Muni), police stations, fire stations, and retail City tenants. Treasure Island and residents and businesses in the redeveloped Hunters Point Shipyard also use power from the SFPUC Power Enterprise. In addition, outside of San Francisco, the SFPUC Power Enterprise serves the Modesto and Turlock Irrigation Districts. When there is excess power left after meeting customer needs, the SFPUC Power Enterprise sells the surplus energy on the open market. Power generation is reduced during the summer and fall months so that water can be stored in the Hetch Hetchy system for water supply purposes. When the power production falls below the SFPUC's contractual obligations, San Francisco must supplement its power sources.

Pacific Gas and Electric Company. San Francisco receives 75 percent of its electricity from PG&E,[3] which also provides natural gas and electricity to most of Northern California. In 2013, San Francisco customers purchased 5.87 billion kWh of electricity.[4] In total, the 2012 PG&E power mix consisted of natural gas (27 percent), nuclear (21 percent), eligible renewable resources (19 percent), large hydroelectric plants (11 percent), and unspecified sources (21 percent).[5] PG&E provides the SFPUC Power Enterprise with transmission and distribution services west of Newark, pursuant to an Interconnection Agreement regulated by the Federal Energy Regulatory Commission. In 2015, the projected peak electricity demand in the PG&E Planning Area is 24,060 megawatts (MW).[6]

Direct Access Providers. Direct access to electricity providers was created as a result of California restructuring its electricity industry in 1998 through Assembly Bill 1890, which allowed individual customers to purchase their electric energy directly from generators or other suppliers, while PG&E would continue to be responsible for the energy's transmission and distribution. Although the State Legislature suspended direct access during the energy crisis in 2001, existing direct access customers were grandfathered and allowed to remain in the program. Fewer than 800 customers in San Francisco use direct access, but they constitute about 8 percent of the total energy usage in San Francisco.[7]

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3 San Francisco Public Utilities Commission, *San Francisco's 2011 Updated Electricity Resource Plan.* March, 2011.
4 California Energy Commission, *Energy Consumption Data Management System, Electricity Consumption by County*, available online at http://ecdms.energy.ca.gov/elecbycounty.aspx, accessed September 15, 2015.
5 Pacific Gas and Electric Company (PG&E), PG&E's 2012 Electric Power Mix, available online at http://www.pge.com/myhome/edusafety/systemworks/electric/energymix/, accessed on September 15, 2015.
6 California Energy Commission. Form 1.4 – PGE Planning Area, California Energy Demand 2012-2022 Staff Final Forecast – Mid Demand Case, Peak Demand (MW). November 6, 2012. Accessed at http://www.energy.ca.gov/2012_energypolicy/documents/demand-forecast/mid_case/ on September 15, 2015.
7 San Francisco Public Utilities Commission, *San Francisco's 2011 Updated Electricity Resource Plan.* March, 2011.

Natural Gas

Natural gas is the cleanest of the fossil fuels used in the state. In 2014, natural gas power plants provided 44.5 percent of the state's electricity.[8] Historically, the demand for natural gas in California has only increased slightly because of the success of energy efficiency and conservation together with renewable energy policies. However, the demand for natural gas in California has also grown because of the increasing trend of using natural gas as a transportation fuel in response to greenhouse gas emission reduction targets, volatile oil prices, air quality standards, the state's low Carbon Fuel Standard, and the federal Renewable Fuels Standard (see Section 5.7, Air Quality, for a discussion of these air quality standards). In 2013, San Francisco customers purchased 257 million therms of natural gas.[9]

Transportation Fuels

California's transportation sector uses nearly 40 percent of the energy consumed in the state.[10] In 2007, the California Energy Commission—in partnership with the California Air Resources Board and other state, federal, and local agencies—prepared the State Alternative Fuels Plan in accordance with Assembly Bill 1007. The plan identifies strategies to increase the use of alternative fuels to meet California's goals for reducing petroleum consumption, improving energy security, and increasing in-state production of biofuels. Subsequently, California has implemented the Alternative and Renewable Fuel and Vehicle Technology Program (Assembly Bill 118). This program provides financial incentives for businesses, vehicle and technology manufacturers, workforce training partners, fleet owners, consumers, and academic institutions to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policy objectives. Statewide, Californians used approximately 2.8 billion gallons of diesel and 14.7 billion gallons of gasoline in 2014.[11,12]

Energy Requirements of the Project

The proposed project would use energy in both the short-term (during construction) and in the long-term over the life of the project (during operation), both of which are a discussed below. The discussion presents an evaluation of short-term and long-term energy use prepared for the proposed project that is based on the construction equipment list and project operational characteristics stated in Chapter 5.4, Air Quality, and Appendix AQ of the SEIR; the project refinements discussed in Chapter 12, Project Refinements (see Sections 12.3.1, Revised Construction Crane Plan and 12.3.2, Other Construction Refinements); and Chapter 14, Draft SEIR Revisions.[13]

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8 California Energy Commission, *Energy Almanac, Total System Power for 2012: Changes from 2011*, available online at http://energyalmanac.ca.gov/electricity/total_system_power.html, accessed September 15, 2015.
9 California Energy Commission, *Energy Consumption Data Management System, Gas Consumption by County*, available online at http://www.ecdms.energy.ca.gov/gasbycounty.aspx, accessed September 15, 2015.
10 California Energy Commission, *2013 Integrated Energy Policy Report*, CEC-100-2013-001-CMF.
11 California State Board of Equalization. Taxable Diesel Gallons 10 Year Report, Net of Refunds.
12 California State Board of Equalization. Net Taxable Gasoline Gallons, Including Aviation Gasoline.
13 Ramboll Environ. Analysis of Energy Use Associated with the Proposed Golden State Warriors Project, San Francisco, California. October 19, 2015.

Short-Term Construction

Project construction would require the use of diesel for the operation of off road construction equipment and on-road trucks for the off-site transport of soil and other wastes; electricity for electrical construction equipment and the use of dust control water; and gasoline for worker commute trips.

Diesel. Diesel usage associated with the off-road construction equipment is calculated based on the total equipment horsepower-hour and associated usage rate from the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook. As summarized in **Table 13.23-1**, the total diesel consumption associated with off-road construction equipment would be approximately 522,900 gallons over the duration of construction. This estimate assumes compliance with the approved California Air Resources Board (CARB) five minute limit on idling, discussed on p. 5.4-19 of the SEIR.

TABLE 13.23-1
SUMMARY OF ENERGY USE DURING CONSTRUCTION

Source	Resource Use
Electricity	
Water Consumption[1]	5,100 kWh
Construction Electric Equipment[2]	499,100 kWh
Electricity Total	**504,300 kWh**
Diesel	
On-Road Construction Trips[3]	248,900 Gallons
Off-Road Construction Equipment[4]	522,900 Gallons
Diesel Total	**771,800 Gallons**
Gasoline	
On-Road Construction Trips[3]	314,900 Gallons
Off-Road Construction Equipment	- Gallons
Gasoline Total	**314,900 Gallons**

NOTES: The totals may not sum precisely due to rounding.

1 Construction water use estimated based on acres disturbed per day per construction phase, construction days per phase, and estimated water use per acre.

2 The power input of the electric equipment was not provided. This analysis assumes that the handheld tools are 1 kw and other electric tools are 5 kw.

3 On-road mobile source fuel use based on vehicle miles traveled (VMT) from the California Emission Estimation Model (CalEEMod®) for all years of construction and fleet-average fuel consumption in gallons per mile from the California Air Resources Board EMission FACtor model (EMFAC2011) for 2015 in San Francisco County.

4 Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (hp)-hour, based on South Coast Air Quality Management District CEQA Air Quality Handbook, Table A9-3E.

ABBREVIATIONS: kWh: kilowatt-hour

SOURCE: Ramboll Environ, 2015.

Diesel usage associated with on-road construction mobile trips is calculated based on vehicle miles travelled (VMT) from hauling and vendor trips and vehicle fuel efficiency in miles per gallon for worker commute trips. The VMT are from the SEIR Air Quality analysis. The vehicle

fuel efficiency is calculated based on the CARB's EMFAC2011 model output.[14] As summarized in Table 13.23-1, the total diesel consumption associated with on-road construction trips would be approximately 248,900 gallons over the duration of construction. This estimate incorporates fuel efficiency improvements associated with implementation of the Pavley Clean Car Standards[15] and the Low Carbon Fuel Standard[16] which promote the use of vehicles utilizing alternative fuel sources such as electricity and hydrogen.

Total estimated diesel usage over the 26-month construction period would be 771,800 gallons, or a maximum of 576,900 gallons in one year. The project's annual construction-related diesel consumption would be consistent with all fuel efficiency requirements, representing approximately 0.02 percent of the statewide annual totals.

Gasoline. Gasoline usage associated with worker commute trips is calculated based on the total vehicle miles traveled and vehicle fuel efficiency in miles per gallon. Based on EMFAC2011 model output and as summarized in Table 13.23-1, the total gasoline consumption associated with worker commute trips would be approximately 314,900 gallons over the duration of construction, or a maximum of 254,200 gallons annually. This estimate incorporates fuel efficiency improvements associated with implementation of the Pavley Clean Car Standards[17] and the Low Carbon Fuel Standard[18] which promote the use of vehicles utilizing alternative fuel sources such as electricity and hydrogen. Annual gasoline usage would be consistent with all state and federal fuel efficiency requirements, and represents less than 0.002 percent of the statewide totals.

Electricity. The electricity usage associated with electric construction equipment is calculated based on the size of the equipment and total hours of usage. Conservatively assuming that all of the electric equipment would operate continuously at full power during the construction period, the electric construction equipment would consume approximately 499,100 kWh of electricity over the 26-month construction period as summarized in Table 13.23-1.

The electricity usage required to produce water for construction dust control is calculated based on total water consumption and the energy intensity for supply, distribution, and treatment of water. The total gallons of water usage is calculated based on acreage disturbed during grading and site preparation and the daily water consumption rate per acre disturbed. As summarized in Table 13.23-1, the total electricity consumption associated with water use for construction dust control is approximately 5,100 kWh.

[14] EMFAC is the California Air Resources Board model that estimates emissions from on-road vehicles operating in California. EMFAC2011 is the latest update to the model.
[15] California Air Resources Board. Clean Car Standards – Pavley, Assembly Bill 1493. Accessed at http://www.arb.ca.gov/cc/ccms/ccms.htm on September 15, 2015.
[16] California Air Resources Board. Low Carbon Fuel Standard Program. Accessed at http://www.arb.ca.gov/fuels/lcfs/lcfs.htm on September 15, 2015.
[17] California Air Resources Board. Clean Car Standards – Pavley, Assembly Bill 1493. Accessed at http://www.arb.ca.gov/cc/ccms/ccms.htm on September 15, 2015.
[18] California Air Resources Board. Low Carbon Fuel Standard Program. Accessed at http://www.arb.ca.gov/fuels/lcfs/lcfs.htm on September 15, 2015.

The project would use a total of 504,300 kWh of electricity over the 26-month construction period, or a maximum of 292,400 kWh annually. The project's annual construction-related electricity consumption would represent approximately 0.005 percent of the electricity purchased in San Francisco.

Water. The proposed project would use approximately 0.95 million gallons of water over the entire 26-month construction period. However, San Francisco's Dust Control Ordinance described on p. 5.4-22 of the SEIR requires a minimum amount of watering to keep dust from becoming airborne, and reclaimed water must be used for dust control. Therefore, the use of water is necessary for regulatory compliance and the project would not result in wasteful, inefficient or unnecessary use of potable water during construction.

Impact Conclusion. There would be no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Further, Mitigation Measure M-AQ-1, Construction Emissions Minimization, would require the use of late-model generators (Tier 2 through 4 with Verified Diesel Emissions Control Strategies) that would generally be more fuel efficient. Therefore, construction activities would not require the use of unusually large amounts of fuels, electricity, or water as demonstrated above and would not result in the inefficient, wasteful, or unnecessary use of these resources. As concluded in the 1998 Mission Bay FSEIR Initial Study Energy/Natural Resources section and in Impact ME-1 of the IS (p. 123), impacts related the use of energy resources during construction would be less than significant.

Long-Term Operation

The proposed project would result in a change in the use of transportation fuels by introducing new event attendees, employees, and site visitors. The event center would also require the use of natural gas and electricity during operation. The office towers would require electricity for operation, but would not use natural gas.

Transportation Energy. The gasoline and diesel usage by event attendees, employees, and site visitors is calculated based on total VMT from the SEIR Air Quality analysis and average fuel efficiency from the EMFAC2011 model for the first operational year of 2017. As summarized in **Table 13.23-2**, the total gasoline and diesel consumption associated with these trips would be approximately 2,714,500 and 438,400 gallons per year, respectively. The project's annual transportation-related gasoline and diesel consumption would represent approximately 0.02 percent of the statewide totals. This estimate incorporates fuel efficiency improvements associated with implementation of the Pavley Clean Car Standards[19] and the Low Carbon Fuel Standard,[20] which promote the use of vehicles utilizing alternative fuel sources such as electricity and hydrogen.

[19] California Air Resources Board. Clean Car Standards – Pavley, Assembly Bill 1493. Accessed at http://www.arb.ca.gov/cc/ccms/ccms.htm on September 15, 2015.

[20] California Air Resources Board. Low Carbon Fuel Standard Program. Accessed at http://www.arb.ca.gov/fuels/lcfs/lcfs.htm on September 15, 2015.

TABLE 13.23-2
SUMMARY OF OPERATIONAL ANNUAL ENERGY RESOURCE USE

Source	Resource Use
Mobile[1]	
Gasoline	2,714,500 gallons/year
Diesel	438,400 gallons/year
Building Electricity	
Building[1]	16,178,200 kWh/year
Water[1]	198,000 kWh/year
Total Electricity	**16,376,200** kWh/year
Building Natural Gas	
Building[2]	155,800 therms/year
Building Diesel	
Backup Generators	16,800 gallons/year

NOTES: The totals may not sum precisely due to rounding.

1 Calculated based on the mobile source fuel use based on vehicle miles traveled (VMT) from the CalEEMod® for air quality and Greenhouse Gas (GHG)analyses and the fleet-average fuel consumption (in gallons per mile) from the California Air Resources Board EMission FACtor model (EMFAC2011) for operational year 2017 within the Bay Area Air Quality Management District (BAAQMD).

2 The electricity, natural gas, water, and diesel usage are based on project-specific estimates and California Emission Estimation Model (CalEEMod®).

ABBREVIATIONS: kWh: kilowatt-hour

SOURCE: Ramboll Environ, 2015

The project would also promote the use of carpooling and fuel efficient vehicles by providing a total of 21 fuel efficient vehicle (FEV) parking spaces, 30 spaces with vehicle charging stations (VCS), and 51 spaces for carpool vehicles as discussed in the Project Description on p. 3-19 of the SEIR. In the event that installation of 30 VCS parking spaces is not commercially reasonable, the project would provide 51 FEV and 51 carpool spaces. This represents 10.6% percent of the 950 total parking, exceeding the 8% requirement of the San Francisco and California Green Building Codes.

Further, as described on pp. 5.2-129 and 5.2-130 of the SEIR, several strategies would be implemented to enhance non-auto modes of transportation and to increase transit access. These measures include numerous project transportation improvements (SEIR pp. 5.2-46 to 5.2-68), and may include improvements to the Mission Bay Transportation Management Association Shuttle Program, the Muni Special Event Transit Service Plan, and transportation demand management strategies incorporated in the Transportation Management Plan. Further, the SEIR identifies Mitigation Measure M-TR-2b, Additional Strategies to Reduce Transportation Impacts; Mitigation Measure M-TR-5a, Additional Caltrain Service; and Mitigation Measure M-TR-5b, Additional North Bay Ferry and/or Bus Service; and Mitigation Measure MTR-14, Additional Bay Area Rapid Transit (BART) Service to the East Bay during Overlapping Events. These measures would maximize the use of local and regional transit service providers. Implementation of these

strategies would reduce reliance on personal automobiles and associated fuel uses. Therefore, the project would not result in the use of unusually large amounts of fuel during operation, nor would it result in the inefficient, wasteful, or unnecessary use of fuel for transportation purposes.

Electricity. The proposed event center and office towers would require the use of electricity for many purposes including lighting, cooling, ventilation, food storage and preparation, and equipment operation. The office towers would use electricity for heating as well. The design of the buildings would need to meet or exceed the energy efficiency requirements of the 2013 San Francisco Green Building Code which, at a minimum, would require compliance with the 2013 California Building Energy Efficiency Standards. In accordance with the San Francisco Green Building Code, the project would also be designed to Leadership in Energy and Environmental Design (LEED) Gold standards, including the purchase of Renewable Energy Credits equal to 70 percent of the total electricity use in the buildings 25,000 square feet or greater in size for at least two years.[21] This renewable energy requirement exceeds the 35 percent requirement of San Francisco's Green Building Code.

Adopted in May 2014, California's 2013 Building Energy Efficiency Standards require 25 percent more energy efficiency than previous standards for residential construction and 30 percent more energy efficiency for nonresidential construction. As stated in the standards, implementation of the 2013 Building Energy Efficiency Standards for newly constructed buildings and alterations to existing buildings is expected to reduce the growth in annual statewide electricity use by 613 gigawatt hours (GWh) and to reduce the peak electrical demand by 195 MW each year. In addition, natural gas use is expected to be reduced by 10 million therms annually.

As summarized in Table 13.23-2, the project buildings would consume approximately 16,178,200 kWh of electricity per year. Based on water usage estimates provided for the proposed project,[22] the electricity required for water consumption would be 198,000 kWh per year. The total annual 16,376,200 kWh of electricity usage represents less than 0.3 percent of the electricity purchased in San Francisco. The electricity usage associated with the event center and the Golden State Warriors offices is from the sustainability narrative for the project submitted as part of the Application for Environmental Leadership Development Project.[23] The electricity usage associated with the office towers is based on CalEEMod® defaults.[24]

[21] San Francisco Planning Department. Compliance Checklist, Greenhouse Gas Analysis, Golden State Warriors Event Center & Mixed Use Development. May 26, 2015.

[22] BKF Engineers, 2014. Mission Bay Blocks 29-32—Water Demand Memorandum. Technical Memorandum to Clarke Miller, Strada Investment Group from Sravan Paladugu, P.E. and Jacob Nguyen, P.E. BKF No. 20136004-20, November 14, 2014.

[23] Smith, Seckman, Reid, Inc. 100% Reconciled SD. Sustainability Narrative. May 8, 2015.

[24] CalEEMod® is the California Emissions Estimator Model that calculates both criteria pollutant and greenhouse gas emissions from land development projects.

Further, the energy use intensity of the office towers would be 39.4 kBTU[25] per year per square foot of building space.[26] This is 35 percent less than the 60.7 kBTU per year per square foot energy use intensity of a standard office building constructed to meet the 2013 California Building Energy Standards. The US Environmental Protection Agency's ENERGY STAR performance rating system compares a building's energy performance to similar buildings nationwide on a scale of 1-100. A score of 50 represents median energy performance, while a score of 75 means that the building performs better than 75 percent of all similar buildings nationwide – and may be eligible for ENERGY STAR certification. The energy use intensity of the proposed building design is equivalent to an ENERGY STAR score of 88.[27] Therefore, the project would be far more energy efficient than a standard code-compliant building. In addition, in accordance with the San Francisco Green Building Code, the project sponsor would be required to commission the building's energy systems and components to verify that they meet the energy efficiency goals of the project.

Some examples of energy conservation features of the project include:[28]

- Increased wall insulation and use of energy efficient windows
- A white, high-albedo "cool" roof on the office towers
- Advance design heating, ventilation, and heating systems (e.g. indirect-direct evaporative cooling; use of carbon dioxide based demand controlled ventilation that adjust the ventilation system when the buildings are only partially occupied; use of a central heat rejection loop for heat recovery; use of high-efficiency water source heat pumps; high efficiency condensing boilers)

Energy efficiency requirements and features such as those described above generally seek to reduce energy use on a permanent and consistent basis through the installation of energy efficient technologies. However, it is also important to manage peak energy usage through load management, which focuses on either curtailing or shifting electrical demands away from peak demand periods when the power grid is under the most strain. This is important in maintaining a reliable electricity source and in avoiding the need to construct additional electricity, generation, or distribution facilities to meet peak demands that typically occur on the order of hours per year. The peak daily electricity demand of the project (e.g., during a game day) would reach approximately 9,850 kilowatts (kW).[29] The project's contribution to peak energy demands would represent less than 0.05 percent of the peak load in PG&E's planning area.

[25] BTU = British Thermal Unit, the amount of heat energy needed to raise the temperature of one pound of water by one degree Fahrenheit. kBTU = 1,000 BTU's. The energy use intensity is reported in kBTU to account for both electricity and natural gas usage in a code compliant building.
[26] The energy use intensity is the total amount of energy consumed by a facility in a year divided by the square footage of the building. A building with a lower energy use intensity is more energy efficient.
[27] Smith, Seckman, Reid, Inc. 100% Reconciled SD, Sustainability Narrative. May 8, 2015.
[28] Ibid.
[29] Provided by SSR Inc., on behalf of the Project Sponsor. The peak daily electricity demand includes 6,500 kW from the event center, 1,300 kW from the north office tower, 1,220 kW from the south office tower, 480 kW from the market hall, and 350 kW from the parking garage.

Appliances used under the proposed project would also be required to comply with the appliance efficiency standards provided in Title 20 of the California Code of Regulations which have saved California consumers nearly $37 billion since 1975.[30]

Compliance with Title 24 regulations and the San Francisco Green Building Code for the building design and with Title 20 regulations relating to appliance energy efficiency standards would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of electricity during operation. Therefore, the project's operational impact on electricity resources would be less than significant as concluded in the 1998 Mission Bay FSEIR Initial Study Energy/Natural Resources section and in Impact ME-1 of the IS (p. 124).

Natural Gas. The event center and the Golden State Warriors office would use natural gas for heating. The estimated natural gas use is based on the sustainability narrative for the project submitted as part of the Application for Environmental Leadership Development Project.[31] As summarized in Table 13.23-2, this component of the project would consume 155,800 therms of natural gas per year. This represents less than 0.07 percent of the natural gas purchased in San Francisco. As for the use of electricity, the design of the buildings would need to meet or exceed the energy efficiency requirements of the 2013 San Francisco Green Building Code, which, at a minimum, would require compliance with the 2013 California Building Energy Efficiency Standards. Compliance with Title 24 regulations and the San Francisco Green Building Code would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of natural gas during operation. Therefore, the project's operational impact on natural gas resources would be less than significant. The office towers would use electrical heating, and would not use any natural gas.

Diesel. The project would also utilize backup generators to provide electricity in the event of a power outage and the generators would be run intermittently for scheduled maintenance. The estimated annual diesel usage by the backup generators would be 16,800 gallons as summarized in Table 13.23-2. This represents less than 0.001 percent of the statewide totals. Combined with diesel use for automobile trips, the total annual diesel use would be 455,200 gallons, or less than 0.02 percent of statewide totals. Therefore, the project would not result in the use of unusually large amounts of diesel during operation, nor would it result in the inefficient, wasteful, or unnecessary use of diesel.

Water. As discussed on pp. 66 and 67 of the Initial Study, the water demand memorandum prepared by the sponsor for the proposed project indicates that estimated water demand for the proposed development at Blocks 29-32 would be 0.100 mgd as adjusted for water conservation measures required under the green building requirements in the 2013 San Francisco Green

[30] California Energy Commission. 2012 Accomplishments. Accessed at http://www.energy.ca.gov/releases/2013_releases/2012_Accomplishments.pdf on September 15, 2015

[31] Smith, Seckman, Reid, Inc. 100% Schematic Design, Sustainability Narrative.

Building Code.[32] For outdoor water use, the project would be required to comply with further water conservation measures under the San Francisco Water Efficient Irrigation Ordinance. These requirements specify water efficiency and conservation measures for indoor and outdoor use, including establishing standards for low flow plumbing fixtures and water efficiency standards for landscape irrigation.

The project's estimated demand of 0.100 mgd is conservatively estimated to be entirely for potable water demand. However, the project would be subject to San Francisco's Non-potable Water Ordinance which applies to projects located within San Francisco's designated recycled water use area as of November 1, 2015. In accordance with this ordinance, all new buildings with a gross square footage of at least 250,000 square feet must be constructed, operated, and maintained using available alternative water supply sources for urinal and toilet flushing, as well as for irrigation. Use of an alternative water supply for these purposes would reduce the project's potable water demand to less than 0.100 mgd.

Compliance with the 2013 San Francisco Green Building Code r requirements would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of water during operation. Therefore, the project's operational impact on water resources would be less than significant as concluded in Impact ME-1 of the Initial Study (p. 124).

Comparison to Mission Bay FSEIR and IS Conclusions

The above discussion does not reveal any new or substantially more severe significant impacts than what was previously disclosed in the Initial Study and 1998 Mission Bay FSEIR. Unlike in *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173, 212-213, OCII has considered and assessed potential construction and operational energy impacts of the proposed project, including use of renewable energy. Moreover, the facts in *California Clean Energy Committee* are further distinguishable because the case concerned a 234-acre retail and commercial project located on farmland at "the edge of the City [of Woodland,]" whereas the proposed project is an infill development project within the City of San Francisco that, as stated in Plan Bay Area, has inherent energy resource benefits based on its location. (See, e.g., Plan Bay Area, p. 15.) For all the above reasons and as discussed further in the Initial Study and 1998 Mission Bay FSEIR, OCII concludes that the project would not result in inefficient, wasteful or unnecessary consumption of energy during construction or operation. (Pub. Resources Code, § 21100, subd. (b)(3).) Energy impacts associated with the proposed project are less than significant. For this reason, recirculation of the Draft SEIR is not required. (See CEQA Guidelines, § 15088.5.)

[32] BKF Engineers, 2014. *Mission Bay Blocks 29-32—Water Demand Memorandum*. Technical Memorandum to Clarke Miller, Strada Investment Group from Sravan Paladugu, P.E. and Jacob Nguyen, P.E. BKF No. 20136004-20, November 14, 2014.

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13.24 Alternatives

13.24.1 Overview of Comments on Alternatives

The comments and corresponding responses in this section cover topics described and analyzed in SEIR Chapter 7, Alternatives. These include topics related to:

- ALT-1: Alternatives Selection
- ALT-2: No Project Alternative
- ALT-3: Off-site Alternative at Piers 30-32 and Seawall Lot 330
- ALT-4: Other Alternative Sites

13.24.2 Alternatives Selection (ALT-1)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA6B1-11 O-MM-6 O-MM-15

"**3. The DSEIR's Analysis of Alternatives is Inadequate**

"Because the Event Center has significant impacts, it cannot be approved if feasible alternatives could reduce impacts and still accomplish most project objectives. (Pub. Resources Code, §§ 21002, 21081.) Our Supreme Court reiterated this substantive mandate of CEQA in Mountain Lion Foundation v. Fish and Game Commission (1997) 16 Cal.4th 105, pp. 123---134. The Court held that "[u]nder CEQA, a public agency must also consider measures that might mitigate a project's adverse environmental impact, and adopt them if feasible," due to "CEQA's substantive mandate that public agencies refrain from approving projects for which there are feasible alternatives or mitigation measures …"

"Appropriately, EIRs explore ways for a project to meet as many applicant goals as possible while protecting the environment to the extent feasible. EIRs must evaluate project alternatives that accomplish most basic project objectives. (Guidelines, § 15126.6 (a).) The courts and the Guidelines require that EIRs analyze a "range of reasonable alternatives to the project, or to the location of the project" sufficient "to permit a reasoned choice" of alternatives "that would avoid or substantially lessen" any of the project's environmental impacts. (Guidelines, § 15126.6 (a), (c), (f), italics added.)

"The Event Center EIR primarily focuses on three alternatives:

Alternative A: No Project

Alternate B: Reduced Intensity

Alternate C: Off---site at Piers 30---32 and Seawall 330

"The EIR identifies significant project impacts relating to "traffic; wastewater treatment capacity impacts; crowd and amplified noise; UCSF hospital helipad safety; wind hazards; construction; water quality and hazardous materials; and bird collisions." (EIR, pp. 7-9). As already noted and as will be discussed further, there are other likely areas of significant impact as well." (*Mission Bay Alliance, Susan Brandt-Hawley, letter, July 26, 2015 [O-MBA6B1-11]*)

"The DSEIR also fails comply with CEQA's mandate to mitigate the Project's impacts by proposing in a separate section of the EIR feasible, effective, and enforceable mitigation measures for each impact identified, and to present a full range of alternatives, including off-site alternatives, to the Project to eliminate or reduce the Project's impacts." (*Mary Miles, Attorney at Law, email, July 27, 2015 [O-MM-6]*)

"**7. The DSEIR Fails To Adequately Evaluate Alternatives To The Project, Including Offsite Alternatives.**

"The DSEIR fails to evaluate a "range of reasonable alternatives to the project, or the location of the project, which…would avoid or substantially lessen any of the significant effects." (Guidelines, §15126.6(a).) The DSEIR proposes instead analyzes only three alleged "alternatives": "Alternative A: No Project Alternative," "Alternative B: Reduced Intensity Alternative," and "Alternative C: Off-Site Alternative at Piers 30-32 and Seawall Lot 330."

"The "No-Project Alternative" may not be counted as an "alternative," because it will be rejected as not satisfying the "Project-Sponsor's Objectives." The other two alternatives do not substantially lessen any of the significant impacts, and could even make them worse. (SDEIR 7-48, 7-73 – 109). Indeed, "Alternative C" met with such intense public outcry that it resulted in the land deal that moved the proposed Project to the present location. The only proposed alternative that should be considered is the No Project alternative, which is also the environmentally superior alternative." (*Mary Miles, Attorney at Law, email, July 27, 2015 [O-MM-15]*)

Response ALT-1: Alternatives Selection

This group of comment questions the adequacy of the SEIR to present a reasonable range of alternatives. OCII disagrees with these issues raised by the commenters. As described below, in compliance with CEQA Guidelines Section 15126.6, the SEIR provides a robust discussion and analysis of the alternatives selection process that was used to identify the range of alternatives analyzed in detail in the SEIR.

SEIR Chapter 7, Section 7.2 (pp. 7-3 to 7-19), describes the alternatives selection process used in the SEIR. The first step in the process (see Section 7.2.1) re-iterates the project objectives as they are presented in SEIR Chapter 3, Project Description. The second step (see Section 7.2.2) presents all of the significant impacts that were identified in SEIR Chapter 5 and in the Initial Study, including impacts determined to be significant and unavoidable and those that can be mitigated to less than significant with identified mitigation measures. The third step (see Section 7.2.3) identifies possible strategies that could avoid or lessen the significant impacts, including a detailed breakdown of different strategies to address all of the identified significant impacts. In the fourth step (Section 7.2.3), these strategies are evaluated and screened for their feasibility and ability to meet most of the project's objectives. Finally, the resultant strategies were used to develop a reasonable range of alternatives, including one representative off-site alternative selected from 13 off-site alternative locations considered. Through this systematic process, the SEIR identified three alternatives for detailed analysis: the No Project Alternative, Reduced Intensity Alternative, and Off-site Alternative at Piers 30-32 and Seawall Lot 330.

The range of alternatives includes two alternatives at the project site—the No Project Alternative as required by CEQA Guidelines Section 15126.6(e), and the Reduced Intensity Alternative—and one

off-site alternative at Piers 30-32 and Seawall Lot 330. Together, OCII determined that the three identified alternatives present a reasonable range of alternatives adequate to inform decision makers.

OCII believes the SEIR presents and analyzes a reasonable range of alternatives, consistent with CEQA Guidelines Section 15126.6(a), which states:

> An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible.

CEQA does not require analysis of "every imaginable alternative" but rather it gives agencies the flexibility to eliminate certain alternatives that either do not reduce environmental impacts or do not further the project's main objectives. (*Rio Vista Farm Bureau Center v. County of Solana* (1992) 5 Cal.App.4th 351, 376)

A lead agency may eliminate an alternative from detailed consideration in the EIR either because of its "inability to avoid significant environmental impacts" (CEQA Guidelines, § 15126.6, subd. (c)) or because it would not achieve primary project objectives. (See *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1507-1508 [upholding the County's conclusion that the reduced density alternative was infeasible since it met some but not all of the project objectives].) In addition, the alternatives analyzed in an EIR need only relate to the proposed project as a whole, not to each or all of its various parts. (See *Big Rock Mesas Property Owners Assn. v. Bd. of Supervisors* (1977) 73 Cal.App.3d 218, 227 [holding the EIR was not deficient for failing to describe alternatives to the amount of grading proposed or to the location and character of the proposed access road, which was just part of the whole proposed project].)

A number of commenters question the feasibility of the off-site alternative due to its history of public controversy when the event center was previously proposed to be constructed at this site. However, as described in the SEIR (pp. 7-14 to 7-15), for the purposes of this SEIR, Piers 30-32 and Seawall Lot 330 is considered to be a potentially feasible location for an off-site alternative due to its site suitability (based on the existing studies that have been conducted for this site), proximity to the downtown and local/regional transit services, its previous history of potential economic viability, the potential ability of the project sponsor to reasonably acquire, control, or otherwise have access to this site (based on previous negotiations and discussions with the Port of San Francisco), and the potential for this alternative to avoid or substantially lessen the project's significant environmental effects. Furthermore, as explained in the SEIR (p. 7-1) and CEQA Guidelines, Section 15126.6(a), the purpose of the alternative analysis is to "evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project's basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project." As explained in the SEIR, the off-site alternative

would meet basic project objectives (p. 7-19 [Table 7-2]) and would avoid or lessen several of the site-specific significant and unavoidable impacts of the proposed project. See SEIR, pp. 7-67 to 7-99, for a detailed discussion of the off-site alternative and its potential impacts. Please also see Response ALT-3, below for further discussion on the feasibility of the Off-site Alternative at Piers 30-32 and Seawall Lot 330.

The comment regarding the substantive mandate of CEQA in *Mountain Lion Foundation v. Fish and Game Commission* is noted. As described above, the SEIR presents a reasonable range of potentially feasible alternatives for decision makers to consider as part of the project approval process.

Please see Section 13.7, Response IO-2, regarding mitigation measures (Comment O-MM-6).

13.24.3 No Project Alternative (ALT-2)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA6B1-12

"a. The No-Project Alternative Must Comply with Land Use Plans. The point of an EIR's analysis of a No Project alternative is "to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." (Guidelines, § 15126.6 (e)(1).) The DSEIR presents Alternative A as its No Project alternative, positing that the Warriors will temporarily remain at Oracle Arena in Oakland and will then likely rebuild or find another site. The EIR fairly assumes that Development at Blocks 29-32 would then occur according to the Mission Bay South Redevelopment Plan and the related Design for Development, without an arena.

"However, the DSEIR's depiction of the No Project alternative assumes that without the Event Center the City would allocate most of the remaining development potential anticipated by the Mission Beach South Redevelopment Plan and Design for Development to this site at Blocks 29-32, thus prioritizing its development over other undeveloped sites in the same zone. The unsupported assumption that the site will host a second tower, among other things, overstates the No Project's environmental impacts.

"The Design for Development dictates that three 160-foot towers can be permitted in Height Zone 5, where blocks 29 and 31 are located. (D4D, p. 23.) The No Project alternative assumes that construction of the final tower will be on Block 29. However, UCSF-owned Block 33 is also eligible. Even if the tower is appropriately-assumed to be sited on Block 29, the Design for Development requires that it not exceed 7% of developed area; to wit, 65,954 square feet. The No Project alternative assumes a tower of 208,000 square feet. Overstating impacts does not provide an adequate basis for comparing alternatives.

"The No Project size is also inconsistent with other Design for Development requirements. Height Zone 5 permits a total developable area of 942,200 square feet. (D4D, p. 23.) The DSEIR assumes that the no project alternative would encompass 1,087,700 square feet. The DSEIR concedes in a footnote that its estimate of parking stalls exceeds the minimum required; another overstatement:

> Based on the requirements of the South Plan and the Design for Development, a minimum of 1,061 and maximum of 1,081 spaces would be needed for a proposed development of this size. With the inclusion of the 132 spaces at the South Street garage, the requirements for on-site parking would range from 929 to 949 spaces. Thus, the parking estimates used for the No Project Alternative exceed the requirements, though would likely be adjusted should an actual development proposal be submitted.

(DSEIR, p. 7---21 n.2.)

"By overstating its size and scope, the No Project alternative defeats the purpose of providing the public and decisionmakers with comparisons to the proposed project and other alternatives. The DSEIR must be revised to analyze a No Project alternative that complies with adopted land use plans and does not overstate the scope of development: a low-rise development using vara blocks and that does not include a new tower, does not block the views of UCSF patients, and complies with Mission Bay's development plans." (*Mission Bay Alliance, Susan Brandt-Hawley, letter, July 26, 2015 [O-MBA6B1-12]*)

Response ALT-2: No Project Alternative

The commenter questions the assumptions used for the No Project Alternative and asserts that it overstates the environmental impacts. OCII disagrees for the reasons set forth below.

The comment states that the UCSF-owned Block 33 is eligible for a tower. This is not relevant for assessing the No Project Alternative, which addresses the reasonably foreseeable development on Blocks 29-32 should the proposed project not be developed.

The comment states the Design for Development requires that the developable area of the tower not exceed 7 percent of developed area, which amounts to 65,954 square feet (sf). The commenter then claims the SEIR overstates impacts because the No Project Alternative assumes a 208,000 sf office tower. However, the commenter confuses developable area allowed for towers within all of Height Zone 5 with the gross square footage of the on-site tower. The Design for Development defines developable area as the net area of land excluding dedicated streets, public open space and view corridors. In Height Zone 5, only 7 percent of this land (65,954 square feet) may be occupied by towers. This is not a direct restriction, however, on the gross square footage of office tower uses. In contrast, the 208,000 figure in the SEIR represents the combined square footage of all 13 floors of the tower building, not just the portion of the land occupied by the tower. Consequently, these two different metrics do not provide a meaningful direct comparison. In any case, the No Project Alternative office tower as assumed in the No Project Alternative was identified in consideration of, and could be developed well within, the applicable Design for Development design standards, including for developable area.

The commenter similarly confuses total developable area allowed within all of Height Zone 5 (942,000 sf) with total building gross square footage assumed on the project site under the No Project Alternative (1,087,700 gsf). Again, as indicated above, developable area is defined as the net area of land aside from dedicated streets, public open space and view corridors. The total building square footage of No Project Alternative includes the combined square footage of all floors of all buildings on the project site. As was the case, above, these two different metrics do not provide a meaningful direct comparison. In any case, the No Project Alternative building scenario was identified in consideration of, and could be developed well within, the applicable Design for Development design standards, including for developable area.

The commenter references the SEIR discussion of parking for the No Project Alternative, including that the estimate of parking stalls (on-site plus off-site) assumed under this alternative

would exceed the requirements of the South Plan and the Design for Development. OCII has re-calculated the parking requirements for the No Project Alternative (see text revision below) and has determined that the estimate used in the SEIR is reasonable and within the minimum and maximum range of allowable parking under the Design for Development. In addition, it is important to note that the estimates of traffic generated by the No Project Alternative were not based on the number of assumed parking spaces, but rather based on a travel demand analysis of the proposed gross square footage of uses. Consequently, the No Project Alternative does not overestimate resultant traffic impacts, or associated traffic related air quality and noise effects. In response to this comment, footnote 2 on page 7-21 was revised as follows to clarify the parking assumptions used for the No Project Alternative:

> [2] Based on the requirements of the South Plan and the Design for Development, a minimum of ~~1,061~~ 1,057 spaces would be needed for the commercial uses, and there is no minimum requirement for retail uses. However, it is reasonable to assume that a developer would provide some level of parking for the retail uses, and the maximum retail parking allowed under the Design for Development would range from 64 to 160 spaces, depending on the gross square footage of those retail uses. Therefore, assuming the minimum parking for commercial uses plus a range of parking for retail uses, a minimum of 1,121 spaces and maximum of ~~1,081~~ 1,217 spaces would be needed for a proposed development of this size. ~~With the inclusion of the 132 spaces at the South Street garage, the requirements for on-site parking would range from 929 to 949 spaces.~~ Thus, the parking estimate~~s~~ of 1,182 spaces used for the No Project Alternative is within this range ~~exceed the requirements, though would likely be adjusted should an actual development proposal be submitted~~.

The commenter asserts that a No Project alternative should be revised such that it complies with adopted Mission Bay land use and development plans, and specifically, that it should consist of low-rise development using vara blocks and not include a new tower. However, contrary to the commenters claim, and as discussed in the SEIR Alternatives section (pp. 7-21 to 7-22), consistent with CEQA Guidelines Section 15126.6(e)(2), the No Project Alternative represents what is reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans, available infrastructure, and community services. As such, assumptions used in the hypothetical development scenario in the No Project Alternative are consistent with the restrictions and controls established in the Mission Bay South Redevelopment Plan (South Plan) and the South Design for Development.

The commenter further asserts that the No Project Alternative may block views of UCSF patients. This comment is noted. With respect to aesthetic effects, including potential view blockage of the No Project Alternative, the commenter is referred to SEIR Chapter 2 and Section 13.3, Response ERP-8, in the SEIR. Pursuant to CEQA Public Resources Code Section 21099 (Senate Bill 743), aesthetics are not considered in the SEIR in determining the significant environmental impacts of the project; and consequently potential project impacts on aesthetics are not analyzed in this SEIR, although any project would still be subject to design review approvals.

For the reasons given above, the No Project Alternative does not overstate either the size or scope of the reasonable development at the project site, should the proposed project not be approved. Rather, this alternative meets all applicable requirements for a no project alternative as defined in CEQA Guidelines Section 15126.6(e).The SEIR adequately addressed all associated environmental effects associated with the alternative, and allows decision-makers to understand the

environmental effects of approving the proposed project with the effects of not approving the project. See also Response ALT-1 above for additional detail on alternatives selection.

13.24.4 Off-site Alternative at Piers 30-32 and Seawall Lot 330 (ALT-3)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-MBA6B1-13

"**b. The DSEIR Must Analyze a Potentially-Feasible Alternate Site.** In considering whether an EIR's range of project alternatives complies with the "rule of reason," CEQA anticipates consideration of an off-site alternative:

> The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

"(Guidelines, § 15126.6 (f)(2)(A).) In light of the admitted and wide-ranging significant impacts of the proposed Event Center, it is particularly critical that the DSEIR consider a potentially-feasible alternate site or sites "… capable of avoiding or substantially lessening significant impacts of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. …" (Guidelines, § 15126.6 (b).) Indeed considering an alternate location is one of the most important tasks for this DSEIR.

"Instead, the DSEIR proposes just one off-site alternative, Alternative C, at Piers 30-32 and Seawall Lot 330 — a site already proven infeasible. The Warriors pursued and after considerable investment abandoned a plan to site the Event Center at this very location. The reason no doubt related to major City-wide public opposition based on significant traffic impacts, environmental harm to the San Francisco Bay during construction, blocked views of the Bay Bridge, and inappropriate use of publicly-owned waterfront property. The required vote of the San Francisco electorate that would be required for the project's excessive height was also problematic as increased heights on the northeast waterfront have been decidedly disfavored by City voters in multiple recent elections.

"The project site also triggered extensive regulatory approvals from state and federal agencies, including the State Lands Commission, the San Francisco Bay Conservation and Development Commission, the Army Corp of Engineers, the U.S. Fish and Wildlife Service, and others. (DSEIR, pp. 7-17-18). And the project costs were substantially more than initially-projected, by many many millions of dollars, due to the need to replace crumbling piers and other unanticipated costs.

"CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." (Pub. Resources Code, § 21061.1.) The City knows that Piers 30-32 do not provide a feasible site and its selection as the sole off-site alternative fails to meet the rule of reason required for EIR alternatives. CEQA is not a game; the DSEIR must select and study another location for the Event Center to fulfill its mandate to provide good-faith analysis of a range of potentially-feasible alternatives, including an alternate location." (*Mission Bay Alliance, Susan Brandt-Hawley, letter, July 26, 2015 [O-MBA6B1-13]*)

Response ALT-3: Off-site Alternative at Piers 30-32 and Seawall Lot 330

The commenter states that the Off-site Alternative at Piers 30-32 and Seawall Lot 330 is not a feasible alternative. As described above in Response ALT-1 and on SEIR pp. 7-14 to 7-15, for the purposes of this SEIR, Piers 30-32 and Seawall Lot 330 is considered to be a potentially feasible location for an off-site alternative due to its site suitability (based on the existing studies that have been conducted for this site), proximity to the downtown and local/regional transit services, its previous history of potential economic viability, and the potential ability of the project sponsor to reasonably acquire, control, or otherwise have access to this site (based on previous negotiations and discussions with the Port of San Francisco).

The SEIR acknowledges that project approvals that would be required for the Off-site Alternative at Piers 30-32 and Seawall Lot 330 (see Table 7-1, pp. 7-16 to 7-18) would include voter approval under Proposition B for any increase in existing zoning heights along the waterfront. The outcome of any such vote is inherently uncertain. Recent voter approval of Proposition F to allow height increase for a development project at Pier 70 indicates that public support could occur for an event center project at Piers 30-32. Furthermore, the San Francisco voters have historically approved certain aspects of a professional sports franchise at the ballot; there have been successful prior ballot measures involving projects related to facilities for professional sports franchises: "Ballpark" (Proposition B) in March 1996 and "Candlestick Point Stadium Land Use" (Proposition F) in June 1997. Consequently, relocating the proposed project to its previously proposed location with many of the project elements as originally proposed constitutes a potentially feasible off-site alternative despite the acknowledged hurdles necessary for project approval. The comment's opinion that the voters would not approve the project, or that other agencies would not grant the permits necessary for the project to proceed, is noted. Such opinions necessarily involve speculation about events that have not yet occurred. Such speculation is not an appropriate basis for determining that an alternative site is or is not potentially feasible. Further, the CEQA Guidelines directs the lead agency to consider alternative locations if *potentially* feasible (CEQA Guidelines Section 15126.6[f][2]). The Off-site Alternative at Piers 30-32 and Seawall Lot 330 meets that standard.

The comment states the Off-site Alternative at Piers 30-32 and Seawall Lot 330 is infeasible due to higher cost. The SEIR acknowledges that this alternative would require in-water construction activities, particularly removing and replacing existing piers. It is reasonable to assume that these activities would result in higher construction costs. The comment does not provide any information indicating that these additional costs would be so high that this alternative would be economically infeasible. Moreover, as noted above, this alternative is carried forward for detailed analysis because it is considered *potentially* feasible.

Whether the alternative is feasible is a determination made by the lead agency after the environmental review process has been completed; this determination is based on the entire record before the lead agency, including (but not limited to) the information in the SEIR. (*Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1499-1508.) Thus, in this case, OCII may or may not find that the Off-site Alternative at Piers 30-32 and Seawall Lot 330 is feasible. The commenter's opinion that this alternative is infeasible will be forwarded to decision-makers for their consideration.

The SEIR analysis (SEIR pp. 7-67 to 7-99) determined that the Off-site Alternative at Piers 30-32 and Seawall Lot 330 would meet most of the basic project objectives, and that it would avoid or lessen some of the impacts of the proposed project identified in this SEIR. This alternative was demonstrated to avoid or substantially lessen several significant and unavoidable impacts of the proposed project related to the following: vehicular traffic noise during weekday late night period and Saturday evening periods; operational criteria air pollutant impacts and the alternative's contribution to cumulative regional criteria air pollutant impacts; utilities impacts requiring the construction or expansion of wastewater treatment facilities; and potential cumulative impacts related to future upgrades to the Mariposa Pump Station to serve the project's wastewater transmission demand in combination of other past, present and reasonably foreseeable future projects under build out of the Mission Bay Redevelopment Plan and the UCSF Long-Range Development Plan. Thus, given the potential feasibility of this alternative as described above, its ability to meet the project objectives, and its ability to avoid or lessen some of the impacts of the proposed project, the Off-site Alternative at Piers 30-32 and Seawall Lot 330 meets the CEQA criteria for a alternative (CEQA Guidelines Section 15126.6(c), (f)(2).)

The comment states the discussion of each alternative is subject to a "rule of reason." The comment is correct. The discussion of alternatives is subject to a "rule of reason." (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 406-407; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 565-566.) The "rule of reason" refers to CEQA Guidelines Section 15126.6(f), which states: "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the Lead Agency determines could feasibly attain most of the basic objectives of the project." The discussion of each alternative, and of alternatives as a whole, is subject to the "substantial evidence" standard of review. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 984-985; see *Concerned Citizens of South Central L.A. v. Los Angeles Unified School Dist.* (1994) 24 Cal.App.4th 826, 841 [discussion of mitigation measures is subject to the "rule of reason" and does not require consideration of every "imaginable" mitigation measure].)

"'There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.' (CEQA Guidelines Section 15126.6(a).) 'The agency's discretion to choose alternatives for study will be upheld as long as there is a reasonable basis for the choices it has made.' (1 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont.Ed.Bar 2d ed. 2012) Project Alternatives, § 15:11, p. 743 (rev. 3/12).)" (*City of Maywood v. Los Angeles Unified School Dist.* (2012) 208 Cal.App.4th 362, 420-421.) " The rule of reason 'requires the EIR to set forth only those alternatives necessary to permit a reasoned choice' and to 'examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.' (CEQA Guidelines Section 15126.6(f).)

An EIR does not have to consider alternatives "whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (CEQA Guidelines Section 15126.6(f)(3).)"

(*In re Bay-Delta Programmatic Environmental Impact Report* (2008) 43 Cal.4th 1143, 1163-1164.) OCII believes the discussion of alternatives in the SEIR is consistent with the "rule of reason."

Please see Response ALT-4 below regarding the SEIR discussion of other off-site alternative locations.

13.24.5 Other Alternative Sites (ALT-4)

Issues Raised by Commenters

This response addresses all or part of the following comments, which are quoted below:

O-Sierra-13	I-Beals-3	I-Dickey-4	I-Finkle-1
I-Heath-11	I-Hutson-5	I-Hyde-6	I-Kornberg-3
I-Stryker-9	I-Tan-11	PH-Doniach-4	PH-Granowski-2
PH-Taliaferro-1			

_____

"The Sierra Club believes that the project sponsors should design a project that remains at the current site in Oakland but proposes conversion of the parking lot for the Oracle Arena into workforce housing – and then compare GHG emissions to current operations." (*Sierra Club, Susan E. Vaughan, letter, July 27, 2015 [O-Sierra-13]*)

_____

"Has their been any consideration of putting them in the Candlestick site?" (*Sharon Beals, email, July 27, 2015 [I-Beals-3]*)

_____

"Surely there is a more suitable piece of land available." (*Helen Dickey, email, July 13, 2015 [I-Dickey-4]*)

_____

"The traffic concerns that the nurses have raised are valid. Put the arena in the Bayview, they need it more than the residents of Mission Bay." (*Dan Finkle, email, July 23, 2015 [I-Finkle-1]*)

_____

"The City should consider alternative sites, other than Mission Bay, for this environmentally damaging project and conduct a new and complete environmental review process before any decisions are made." (*Alison Heath, email, June 30, 2015 [I-Heath-11]*)

_____

"The City should consider alternative sites, other than Mission Bay, for this environmentally damaging project and conduct a new and complete environmental review process before any decisions are made." (*Richard Hutson, email, July 29, 2015 [I-Hutson-5]*)

_____

"If for some reason you are not able to keep the Warriors in Oakland, I encourage to build the stadium at the former Candlestick Park site. That neighborhood is growing and changing, they need jobs, activities,

more businesses and the T - Line trains can be increased. The Warriors would receive recognition for improving the schools, sports activities in the area, and they could add museums and local light manufacturing businesses near the site." (*Kathryn Hyde, email, July 15, 2015 [I-Hyde-6]*)

"The prudent course would be for the City to consider alternative sites other than Mission Bay for this quality of life damaging project, and conduct a new and complete review process before any decisions are made." (*Thomas Kornberg, email, July 17, 2015 [I-Kornberg-3]*)

"The City should consider alternative sites, other than Mission Bay, for this environmentally damaging project and conduct a new and complete environmental review process before any decisions are made." (*Michael Stryker, email, July 26, 2015 [I-Stryker-9]*)

"The City should consider alternative sites, other than Mission Bay, for this environmentally damaging project and conduct a new and complete environmental review process before any decisions are made." (*Judy Tan, email, July 27, 2015 [I-Tan-11]*)

"…letters that ask the City of San Francisco to consider alternative sites other than Mission Bay for this environmentally-damaging project." (*Alex Doniach, public hearing transcript, June 30, 2015 [PH-Doniach-4]*)

""I understand there's an alternative site available for consideration which has comparable transportation infrastructure support and is removed by some distance from the Medical Center and the ballpark." (*Alexander Granowski, public hearing transcript, June 30, 2015 [PH-Granowski-2]*)

"They're welcome to come here, but you know, if there's an issue about planning, put them out at Candlestick." (*Jac Taliaferro, public hearing transcript, June 30, 2015 [PH-Taliaferro-1]*)

Response ALT-4: Other Alternative Sites

This group of comments raise the issue of considering an alternative location to the proposed project site in Mission Bay. As described in SEIR Chapter 7, the SEIR alternatives considered numerous alternative sites to the proposed project. In addition to the No Project Alternative and Off-site Alternative at Piers 30-32 and Seawall Lot 330, discussed in Responses ALT-2 and ALT-3, respectively, above, the SEIR provides a robust discussion of 13 potential locations for an event center that were considered as part of the alternatives analysis but rejected (see SEIR, Chapter 7, pp. 7-110 to 7-116, including Table 7-28). All of the 13 alternative locations presented in SEIR Table 7-28 are located outside of the Mission Bay area. The reasons for rejecting these sites from further analysis include: the site would not meet the basic project objectives; the site would not reduce or avoid any of the significant environmental impacts of the project, would result in the same or more severe environmental impacts than the proposed site, or would result in different

significant environmental impacts; the technical feasibility and site suitability of the alternative location is unknown; and/or the project sponsor would not reasonably be able to acquire, control, or otherwise have access to the site for the purpose of pursuing such alternative.

Candlestick Point is among the 13 alternative locations discussed in Table 7-28. Located in the Bayview District, Candlestick Point is approved for redevelopment with a major mixed-use project including open space, housing, commercial (office, regional retail, and neighborhood retail) uses, research and development, artist space, a marina, new infrastructure, community uses, and entertainment venues. Compared to the proposed site at Mission Bay Blocks 29-32, Candlestick Point is less well served by Muni and regional transit. Due to its remote location, Candlestick Point would not meet the project objectives to locate the event center within walking distance to local and regional transit hubs. Moreover, the Candlestick Point site is actively being developed, and is not available; this site has a Vesting Tentative Map for development (No. 7878, dated June 30, 2014). The project sponsor would not reasonably be able to acquire, control, or otherwise have access to this site for the purpose of pursuing such alternative location.

The SEIR does not analyze the development of an event center at the site of the Oracle Arena in Oakland because this would not meet the basic objectives of the project sponsor. In particular, an Oakland alternative would be inconsistent with the basic objective to develop a "state-of-the-art multi-purpose event center in San Francisco." (SEIR, p. 1-3.) It is appropriate for a lead agency to focus the off-site alternatives analysis on potential locations that are consistent with basic project objectives. (See *Save San Francisco Bay Assn. v. San Francisco Bay Conservation and Development Com.* (1992) 10 Cal.App.4th 908, 929 [holding waterfront aquarium project EIR was not required to consider upland alternatives].) Moreover, as indicated on SEIR p. 7-23, in March 2015, the City of Oakland certified a Final EIR on the Coliseum Area Specific Plan,[1] which discloses the environmental impacts of a new sports venue at the current location of Oracle Arena and the surrounding area. With regard to comparing the greenhouse gas (GHG) emissions of such an alternative to current operations (Comment O-Sierra-13), the SEIR analysis of impacts associated with GHG emissions is based on a determination of the project's consistency with the San Francisco's Greenhouse Gas Reduction Strategy, and not on a quantitative calculation of GHG emissions; please see Section 13.14, Response GHG-2 for further discussion on the approach to analysis of GHG emissions impacts.

[1] City of Oakland, 2015. Coliseum Area Specific Plan, Final Environmental Impact Report. State Clearing House #2013042066, City Case #ER13-0004, published February 20, 2015. Certified March 31, 2015.

CHAPTER 14
Draft SEIR Revisions

14.1 Introduction

This chapter presents revisions to the text, tables, and figures of the Event Center and Mixed-use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR (SEIR), published on June 5, 2015. These changes include both (1) revisions made in response to comments on the Draft SEIR which are presented in Chapter 13, as well as (2) staff-initiated text changes to correct minor inconsistencies, to add minor information or clarification related to the project, and to provide updated information where applicable. None of the revisions or corrections in this chapter substantially change the analysis and conclusions presented in the Draft SEIR.

The chapter includes all revisions to the Draft SEIR, in the sequential order by volume — chapter — section — page that they appear in the document. Multiple text changes to the same SEIR paragraphs, tables, or figures are compiled and shown together. Preceding each revision is a brief explanation for the text change, either identifying the corresponding response topic codes, such as Response TR-2 where the issue is discussed in Chapter 13 or indicating the reason for a staff-initiated change. Deletions in text and tables are shown in strikethrough (~~strikethrough~~) and new text is shown in underline (<u>underline</u>). Figures and tables are noted as "(Revised)" next to the figure or table number.

As indicated in Chapter 12, this chapter includes text changes associated with project refinements applicable to the proposed project as they were described in the Draft SEIR. The Draft SEIR revisions in this chapter do not reflect the descriptions and impact analyses of the Muni UCSF/Mission Bay Platform Variant; that information is wholly contained in Chapter 12.

14.2 Changes to the Draft SEIR

14.2.1 Chapter 1: Summary

As discussed in Response PD-2, Chapter 1, Summary, **page 1-3**, second full paragraph was revised to be more consistent with the description of the project in the SEIR, Chapter 3, Project Description:

> The Golden State Warriors currently play their home games at Oracle Arena, located at 7000 Coliseum Way in Oakland, California and lease their management offices and practice facility at the Oakland Convention Center at 1011 Broadway in downtown Oakland. ~~The proposed project would consolidate these facilities in one location.~~ Under the project, the event center at Blocks 29-32 would serve as the new venue for the Golden State Warriors home games, and provide a year-round venue for a variety of other uses, including concerts, family shows, other sporting events, cultural events, conferences and conventions. All existing Golden State Warriors operations, including management offices and practice facility, would relocate from their existing facilities in Oakland to the new event center.

Chapter 1, Summary, **page 1-9**, last paragraph was revised as follows to reflect 1) the sponsor's selection of an on-site design modification to reduce the significant project wind hazard impact to less than significant; and 2) to reflect that the significant and unavoidable impact related to utilities is a cumulative impact (discussed in Response UTIL-3):

> As indicated on Table 1-2, the SEIR determined that the proposed project would result in significant and unavoidable impacts in the areas of transportation and circulation (traffic impacts at multiple intersections and freeway ramps, and transit demand on regional transit providers exceeding capacity); noise (substantial permanent increase in roadway noise and crowd noise affecting sensitive receptors); air quality (construction and operational emissions of ozone precursors exceeding thresholds)~~, wind (substantial increase in wind hazard hours at off-site public areas)~~; and utilities (construction of new or upgraded wastewater facilities, and determination by the San Francisco Public Utilities Commission that it currently has inadequate capacity to serve the project's wastewater demand in combination with other reasonably foreseeable future projects).

Table 1-2, **pages 1-14 to 1-63**, was revised as follows to reflect project refinements, provide clarification, respond to various comments, and correct minor errors. The revisions shown in this table are also included and discussed individually below under the appropriate resource area. The table is shown in full for completeness, even though many measures remain unchanged.

TABLE 1-2, REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2		
Construction		
Impact TR-1: The proposed project would not result in construction-related ground transportation impacts because of their temporary and limited duration.	LS	No mitigation required. **Improvement Measure I-TR-1: Construction Management Plan and Public Updates** ***Construction Coordination*** – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the project sponsor shall require that the contractor prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Plan, the project sponsor/construction contractor(s) shall meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review ~~should~~ shall consider other ongoing construction in the project vicinity, such as construction of the nearby UCSF LRDP projects and construction on Blocks 26 and 27. ***Carpool, Bicycle, Walk and Transit Access for Construction Workers*** – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor ~~could~~ shall include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers. ***Construction Worker Parking Plan*** – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking ~~could~~ shall be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking ~~could~~ shall be discouraged. All construction bid documents ~~could~~ shall include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site ~~could~~ should be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between off-site facility and project site ~~could~~ should be required. ***Project Construction Updates for Adjacent Businesses and Residents*** – To minimize construction impacts on access to nearby institutions and businesses, the project sponsor ~~could~~ shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice ~~could~~ shall be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Significance Determinations:
NI = No Impact
LS = Less-Than-Significant Impact (no mitigation required)
LSM = Less-Than-Significant Impact with Mitigation (less than significant or potentially significant impact, but can be reduced to less than significant with mitigation)
SUM = Significant and Unavoidable Impact with Mitigation (significant or potentially significant unavoidable impact, even with feasible mitigation)
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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10)		
Impact TR-2: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park.	SUM	**Mitigation Measure M-TR-2a: Additional PCOs during Events** As a mitigation measure to manage traffic flows and minimize congestion associated with events at the project site, the proposed project's TMP shall be modified to include four additional PCOs (i.e., in addition to the 17 PCOs included in the project TMP) that shall be deployed to intersections where the proposed project would result in significant impacts, as conditions warrant during events. These could include the intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event. **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** The project sponsor shall work with the City to pursue and implement commercially reasonable~~, if feasible,~~ additional strategies (i.e., in addition to those included in the project TMP) to reduce transportation impacts. In addition, the City shall pursue and implement~~, if feasible,~~ additional strategies to ~~that could~~ be implemented by the City or other public agency (e.g., Caltrans). These strategies ~~could~~ shall include one or more of the following: ***Strategies to Reduce Traffic Congestion*** • The City to request that ~~to work with~~ Caltrans ~~to~~ install changeable message signs on I-280 upstream of key entry points onto the local street network~~, such as on I-280 northbound~~. • The City to provide coordinated outreach efforts to surrounding neighborhoods to explore the need/desire for new on-street parking management strategies, which could include implementation of time limits and Residential Parking Permit program areas. • The project sponsor to offer for pre-purchase substantially all available on-site parking spaces not otherwise committed to office tenants, retail customers or season ticket holders, and to cooperate with neighboring private garage operators to pre-sell parking spaces, as well as notify patrons in advance that nearby parking resources are limited and travel by non-auto modes is encouraged. • The project sponsor to create a smart phone application, or integrate into an existing smart phone application, transportation information that promotes transit first, allows for pre-purchase of parking and designates suggested paths of travel that best avoid congested areas or residential streets such as Bridgeview north of Mission Bay Boulevard and Fourth Street. • The City and the project sponsor to work to identify off-site parking lot(s) in the vicinity of the event center, if available, where livery and TNC vehicles could stage prior to the end of an event.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-2 (cont.)		• The City to include on-street parking spaces within Mission Bay in the expansion and permanent implementation of SF*park*, including ~~installation of sensors,~~ dynamic pricing, and smart phone application providing real-time parking availability and cost. • The City shall work to include the publicly accessible off-street facilities into the permanent implementation of SF*park*, and incorporate data into a smart phone application and permanent dynamic message signs. • If necessary to support achievement of non-auto mode shares for the project, the project sponsor shall cooperate with future City efforts ~~for active interventions to effectively~~ to manage and price the off-site parking supply in the project vicinity to reduce travel by automobile, thus improving traffic conditions. • The project sponsor to seek partnerships with car-sharing services. ***Strategy to Enhance Non-auto Modes*** • The project sponsor to provide a promotional incentive (e.g., show Clipper card or bike valet ticket for concession savings, chance to win merchandise or experience, etc.) for public transit use and/or bicycle valet use at the event center. ***Strategies to Enhance Transportation Conditions in Mission Bay and Nearby Neighborhoods*** • The project sponsor to participate as a member of the Ballpark/Mission Bay ~~Ballpark~~ Transportation Coordination Committee (B/MB~~B~~TCC) and to notify at least one month prior to the start of any non-GSW event with at least 12,500 expected attendees. If commercially reasonable circumstances prevent such advance notification, the GSW shall notify the B/MB~~B~~TCC within 72 hours of booking. • The City and the project sponsor to meet to discuss transportation and scheduling logistics following signing any marquee events (national tournaments or championships, political conventions, or tenants interested in additional season runs: ~~NHL,~~ NCAA, etc.). ***Strategies to Increase Transit Access*** • The City to ~~coordinate~~ consult with regional providers to encourage increased special event service, particularly longer BART and Caltrain trains, and increased ferry and bus service. • The City to work in good faith with the Water Emergency Transportation Agency, the project sponsor, UCSF, and other interested parties to explore the possibility of construction of a ferry landing at the terminus of 16th Street, and provision of ferry service during events.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-2 (cont.)		**Mission Bay FSEIR Mitigation Measure E.47: Transportation System Management Plan** Prepare a TSM Plan, which could include the following: *FSEIR Mitigation Measure E.47.a*: Shuttle Bus - Operate shuttle bus service between Mission Bay and regional transit stops in San Francisco (e.g., BART, Caltrain, Ferry Terminal, Transbay Transit Terminal), and specific gathering points in major San Francisco neighborhoods (e.g., Richmond and Mission Districts). *FSEIR Mitigation Measure E.47.b*: Transit Pass Sales - Sell transit passes in neighborhood retail stores and commercial buildings in the Project Area. *FSEIR Mitigation Measure E.47.c*: Employee Transit Subsidies - Provide a system of employee transportation subsidies for major employers. *FSEIR Mitigation Measure E.47.e*: Secure Bicycle Parking - Provide secure bicycle parking area in parking garages of residential buildings, office buildings, and research and development facilities. Provide secure bicycle parking areas by 1) constructing secure bicycle parking at a ratio of 1 bicycle parking space for each 20 automobile parking spaces, and 2) carry out an annual survey program during project development to establish trends in bicycle use and to estimate actual demand for secure bicycle parking and for sidewalk bicycle racks, increasing the number of secure bicycle parking spaces or racks either in new buildings or in existing automobile parking facilities to meet the estimated demand. Provide secure bicycle racks throughout Mission Bay for the use of visitors. *FSEIR Mitigation Measure E.47.f*: Appropriate Street Lighting - Ensure that streets and sidewalks in Mission Bay are sufficiently lit to provide pedestrians and bicyclists with a greater sense of safety, and thereby encourage Mission Bay employees, visitors and residents to walk and bicycle to and from Mission Bay. *FSEIR Mitigation Measure E.47.g*: Transit and Pedestrian and Bicycle Route Information - Provide maps of the local and citywide pedestrian and bicycle routes with transit maps and information on kiosks throughout the Project Area to promote multi-modal travel. *FSEIR Mitigation Measure E.47.h*: Parking Management Strategies - Establish parking management guidelines for the private operators of parking facilities in the Project Area. *FSEIR Mitigation Measure E.47i*: Flexible Work Hours/Telecommuting - Where feasible, offer employees in the Project Area the opportunity to work on flexible schedules and/or telecommute so they could avoid peak hour traffic conditions.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-2 (cont.)		*FSEIR Mitigation Measure E.49*: Ferry Service - Make a good faith effort to assist the Port of San Francisco and others in ongoing studies of the feasibility of expanding regional ferry service. Make good faith efforts to assist in implementing feasible study recommendations.
Impact TR-3: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions without a SF Giants game at AT&T Park.	SUM	**Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** (see Impact TR-2, above)
Impact TR-4: The proposed project would not result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park.	LS	No mitigation required. **Improvement Measure I-TR-4: Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station** As an improvement measure to enhance T Third operations at the UCSF/Mission Bay station for pre-event arrivals, the project sponsor shall fund a study of the effects of pedestrian flows on Muni's safety and operations prior to an event as well as the feasibility and efficacy of enlarging the southbound platform by extending it south towards 16th Street. The study shall include an assessment of exiting pedestrian flows from a fully occupied two-car light rail train on the platform and ramp to the crosswalk at South Street across Third Street, also taking into consideration the presence of non-event transit riders waiting to board the train, service frequency, and current traffic signal operations. The study shall be performed by a qualified transportation professional approved by SFMTA.
Impact TR-5: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions without a SF Giants game at AT&T Park.	SUM	**Mitigation Measure M-TR-5a: Additional Caltrain Service** As a mitigation measure to accommodate transit demand to and from the South Bay for weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~ consult with Caltrain to provide additional Caltrain service to and from San Francisco on weekdays and weekends. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-5 (cont.)		**Mitigation Measure M-TR-5b: Additional North Bay Ferry and/or Bus Service** As a mitigation measure to accommodate transit demand to the North Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~ consult with Golden Gate Transit and WETA to provide additional ferry and/or bus service from San Francisco following weekday and weekend evening events. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.
Impact TR-6: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park.	LSM	**Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South** As a mitigation measure to accommodate pedestrians traveling to and from the event center through the intersection of Third/South, PCOs stationed at this location shall implement strategies to allow pedestrians to cross the street safely. The strategies and level of active management shall be tailored to the event size, and could include extending the green time for pedestrians crossing the street, manually overriding the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, shielding passengers waiting to board light rail from adjacent pedestrian traffic, and deploying additional PCOs to this intersection.
Impact TR-7: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions without a SF Giants game at AT&T Park.	LS	No mitigation required.
Impact TR-8: The proposed project's loading demand would be accommodated within the proposed on-site loading facilities or proposed adjacent on-street commercial loading spaces, and would not create potentially hazardous conditions or significant delays for traffic, transit, bicyclists, or pedestrians under Existing plus Project conditions.	LS	No mitigation required. **Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan** As an improvement measure to reduce potential conflicts between driveway operations, including loading activities, and pedestrians, bicycles and vehicles on South Street, Terry A. Francois Boulevard, and 16th Street, the project sponsor shall prepare a Loading Operations Plan, and submit the plan for review and approval by the OCII, or its designee, and the SFMTA. As appropriate, the Loading Operations Plan shall be periodically reviewed by the sponsor, the OCII or its designee, and SFMTA and revised if ~~feasible~~ required to more appropriately respond to changes in street or circulation conditions.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-8 (cont.)		The Loading Operations Plan shall include a set of guideline related to the operation of the on-site and on-street loading facilities, as well as large truck curbside access guidelines; it shall also specify driveway attendant responsibilities to minimize truck queuing and/or substantial conflicts between project-generated loading/unloading activities and pedestrians, bicyclists, transit and autos. Elements of the Loading Operations Plan shall include: • Commercial loading activities within on-street commercial loading spaces on South Street, Terry A. Francois Boulevard, and 16th Street shall ~~should~~ comply with all posted time limits and all other posted restrictions. • Double parking or any form of illegal parking or truck loading/unloading shall ~~should~~ not be permitted on any streets adjacent to the project site, and particularly on 16th Street which would include a bicycle lane. Working with the SFMTA Parking Control Officers, building management shall ~~should~~ ensure that no truck loading/unloading activities occur within the bicycle lanes on 16th Street. • All move-in and move-out activities for commercial office uses shall ~~should~~ be coordinated by building management, and, in the event that moving trucks cannot be accommodated within the below-grade loading area, building management shall ~~should~~ obtain a reserved curbside permit from the SFMTA in advance of move-in or move-out activities.
Impact TR-9a: Construction of the proposed project could temporarily obstruct UCSF helipad airspace surfaces.	LSM	**Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction** Prior to construction, the project construction contractor shall develop a crane safety plan for the project construction cranes that would be implemented during the construction period. The crane safety plan shall identify appropriate measures to ~~reduce, and where possible,~~ avoid~~,~~ potential conflicts that may be associated with the operation of the project construction cranes in the vicinity of the UCSF Benioff Children's Hospital helipad airspace. These safety protocols shall be developed in consultation ~~and coordination~~ with OCII (or its designated representative) and UCSF, and the crane safety plan shall be subject to approval by OCII or its designated representative. The crane safety plan shall include, but ~~may~~ is not ~~be~~ limited to, the following measures: • Convey project crane activity schedule to UCSF and OCII. • If other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the project sponsor shall participate in joint ~~coordination~~ consultation with those project sponsors and OCII or its designated representative to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized. • ~~u~~Use appropriate markings, flags, and/or obstruction lighting on all project construction cranes working in proximity to the helipad's airspace surfaces • ~~l~~Light all construction crane structures at night (e.g., towers, arms, and suspension rods) to enhance a pilot's ability to discern the location and height of the cranes.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-9a (cont.)		• ~~i~~Inform crane operators of the location and elevation of the hospital helipad's Part 77 airspace surfaces and the need to ~~minimize~~avoid penetrations to the surfaces. • ~~use construction methods that minimize the duration of Part 77 airspace surface penetrations that may occur~~ • ~~to the extent possible, rotate crane arms away from the UCSF helipad's Part 77 airspace surfaces at night and when not in use~~ • Issue a Notice to Airmen (NOTAM) to advise pilots in the area of the presence of construction cranes at the project site.
Impact TR-9b: Project construction lighting would not adversely affect UCSF helipad flight operations.	LS	No mitigation required.
Impact TR-9c: Development of the proposed project would not obstruct UCSF helipad airspace surfaces.	LS	No mitigation required.
Impact TR-9d: Certain project specialized exterior lighting could adversely affect UCSF helipad flight operations.	LSM	**Mitigation Measure M-TR-9d: Event Center Exterior Lighting Plan** The project sponsor shall develop an exterior lighting plan that incorporates measures to ensure specialized exterior lighting systems would not ~~have an undue impact on~~ result in a substantial air safety risk and/or create a safety hazard relating to helipad operations. Feasible measures shall be developed in consultation ~~and coordination~~ with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation, and OCII (or its designated representative), and the exterior lighting plan shall be subject to approval by OCII or its designated representative. Measures may include, but are not ~~be~~ limited to, the following: • ~~p~~Prohibit the use of high-intensity lights that are directed towards the UCSF helipad • ~~p~~Prohibit the use of high-intensity outdoor flashing lights or strobe lights in proximity to the hospital helipad's three approaches • ~~p~~Prohibit the use of outdoor lasers directed upward, and laser light shows that have not been subject to prior review by OCII in consultation with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation and, if necessary the FAA • Avoid outdoor fireworks proximate to flight paths unless (1) the SFFD approves the proposed use of fireworks, and (2) notice of the event is provided to UCSF • Avoid the use of light configurations similar to those associated with the UCSF helipad landing area, and locate primary outdoor lighted displays and television/lighted screens away from the project property line at 16th Street, South Street, or Third Street, where feasible • ~~locate primary outdoor lighted displays and television/lighted screens away from the project property line at 16th Street, South Street, or Third Street, where feasible~~

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions Without a SF Giants Game at AT&T Park (Impacts TR-2 through TR-10) (cont.)		
Impact TR-9d (cont.)		• ~~advance notification and coordination of planned special event lighting~~Notify in advance and consult with OCII and UCSF representatives regarding planned special event lighting • ~~d~~Develop exterior specialized lighting guidelines and ensure event organizers are informed of the hospital helipad, its approaches, and safety concerns related to outdoor nuisance lighting • Identify appropriate management policies and procedures to respond to the use of handheld laser pointers by the public on the project site which may pose a hazard to pilots • Identify appropriate management policies regarding the use of drones on the project site and procedures to respond to aerial drone activity that may pose a hazard to pilots
Impact TR-10: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions without a SF Giants game at AT&T Park.	LS	No mitigation required. **Improvement Measure I-TR-10a**: **UCSF Emergency Vehicle Access and Garage Signage Plan** As an improvement measure to enhance access for emergency vehicles and other visitors to the UCSF Children's Hospital emergency room and parking facilities at the UCSF Medical Center, the project sponsor shall work with UCSF, SFMTA, Caltrans, and DPW to develop and implement a UCSF emergency vehicle access and garage signage plan for I-280 and Mariposa, Owens, and 16th Streets to reflect desirable access routes for UCSF and event center access. **Improvement Measure I-TR-10b: Mariposa Street Restriping Study** In connection with the Mission Bay Plan improvements to the I-280 on- and off-ramps at Mariposa Street and the Owens Street extension, the SFMTA will be reevaluating the travel lane striping plan for Mariposa Street between Pennsylvania Avenue and Fourth Street. As part of this evaluation, the SFMTA will assess the feasibility of lengthening the dedicated left turn lane from eastbound Mariposa Street onto northbound Fourth Street. The evaluation is anticipated to take place in 2016, two years prior to the opening of the proposed event center. A re-evaluation may be needed following the opening of the event center. Therefore, ~~A~~as an improvement measure to enhance access to the UCSF Medical Center Children's Hospital, subsequent to the opening of the event center, the project sponsor shall retain a qualified transportation professional approved by SFMTA to conduct a traffic engineering study to evaluate potential changes to the travel lane configuration and related signage on Mariposa Street between the I-280 ramps and Fourth Street. The study, to be conducted in ~~coordination~~consultation with UCSF and SFMTA, would be used to determine if the dedicated eastbound left turn lane into Fourth Street/UCSF passenger loading/unloading and emergency vehicle entrance to the UCSF Children's Hospital should ~~could~~ be extended west from its existing length of about 150 feet to provide for a longer additional queuing area separated from event–related traffic flow. If the study recommends restriping, the project sponsor shall fund SFMTA's cost of the design and implementation of the restriping.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17)		
Impact TR-11: The proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	SUM	**Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-11a: Additional PCOs during Overlapping Events** As a mitigation measure to manage traffic flows and minimize congestion associated with overlapping events, the proposed project's TMP shall be expanded to include two additional PCOs that shall be deployed to the following intersections where the proposed project would result in significant traffic impacts, as conditions warrant during events: King/Fifth/I-280 ramps, ~~Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive,~~ and Fourth/16th, ~~and Seventh/Mississippi/16th~~ where PCOs would not be located as part of the project TMP or Mitigation Measure M-TR-2a: Additional PCOs during Events. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event. This measure shall be implemented in coordination with Mitigation Measure M-TR-2a: Additional PCOs during Events, and these two additional PCOs during overlapping events shall be in addition to the four additional PCOs that shall be provided as part of Mitigation Measure M-TR-2a: Additional PCOs during Events. **Mitigation Measure M-TR-11b: Participation in the Ballpark/Mission Bay Transportation Coordinating Committee** As a mitigation measure to optimize effectiveness of the transportation management strategies for day-to-day operations and events in the Mission Bay area, at AT&T Park, UCSF Mission Bay campus, and the proposed project, the project sponsor shall actively participate as a member of the Ballpark/Mission Bay Transportation Coordinating Committee in order to evaluate and plan for operations of all three facilities (i.e., AT&T Park, UCSF Mission Bay Campus, and the proposed event center). This committee would, among other roles, serve as a single point for coordination of transportation management strategies. The Transportation Coordinating Committee shall consult on changes to and expansion of transit services, and for developing and implementing strategies within their purview that address transportation issues and conflicts as they arise. In addition, the committee shall serve as a liaison for operation of the facilities, monitoring conditions, and addressing community issues related to events and the project sponsor shall make good faith efforts to notify the committee regarding events. **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** The project sponsor shall work with the City to pursue and implement~~, if feasible,~~ additional strategies to reduce transportation impacts associated with overlapping events at AT&T Park and the proposed event center. These strategies ~~could~~shall include one or more of the following: • The project sponsor shall exercise commercially reasonable efforts to avoid scheduling non-Golden State Warriors events of 12,500 or more event center attendees that start within 60 minutes of the start ~~(respectively)~~ of events at AT&T Park. • When overlapping non-Golden State Warriors events of 12,500 or more event center attendees and evening SF Giants games cannot be avoided ~~through commercially reasonable efforts~~, the project sponsor shall exercise commercially reasonable efforts to negotiate with the event promoter ~~as feasible~~ to stagger start times such that the event headliner starts no earlier than 8:30 p.m.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)		
Impact TR-11 (cont.)		• The City ~~shall identify one or more~~has identified two off-site parking lot~~(s)~~ on Port of San Francisco ~~or other~~ lands to the south of the event center (19th Street and Western Pacific sites) that can accommodate ~~to provide~~ approximately 250 additional parking spaces for all events and up to approximately ~~750~~800 additional parking spaces for use during dual events of 12,500 or more event center attendees (for a total of approximately ~~1,000~~1 050 additional off-site parking spaces). As long as the Port of San Francisco takes all necessary actions to make the land available for public parking, ~~T~~the project sponsor shall: (1) make commercially reasonable efforts to negotiate with the Port of San Francisco or its designee to acquire sufficient rights for the use of such parking lot(s) through lease, purchase, or other means as necessary; and (2) ~~pay its fare share contribution towards any improvements required for the use of such parking lot(s), including but not limited to grading, paving, striping, fencing, lighting, drainage, stormwater pollution prevention measures, curb cuts, and ramps; and (3)~~ (if such negotiations are successful) provide free shuttles to the event center from such off-site parking lot(s) that are more than ~~¼~~½-mile from the event center on a maximum 10-minute headway before and after events. • In the event that the off-site parking lots at 19th Street and the Western Pacific site are implemented, the SFMTA shall consult with Caltrans in assessing the feasibility of signalizing the intersection of Pennsylvania/I-280 southbound off-ramp. If determined feasible by the SFMTA and Caltrans, the SFMTA and Caltrans shall establish the level of traffic volumes that would trigger the need for a signal, and the project sponsor shall fund its fair share cost of the design and implementation of the new signal, based on project contributions to annual average weekday traffic volumes at this intersection. In addition, as part of monitoring of traffic conditions during overlapping events, the SFMTA shall consult with Caltrans regarding the need to deploy an SFMTA PCO or CHP officer to expedite traffic exiting I-280 southbound (i.e., waving vehicles exiting I-280 southbound and turning left onto southbound Pennsylvania Street through the existing stop sign) during overlapping events when the Western Pacific parking lot is used for project event parking. The PCO or CHP officer could be deployed during those events prior to installation of a traffic signal or if signalization of this intersection is determined not to be feasible. • To manage traffic flows and minimize congestion associated with non-Golden State Warriors events overlapping with events at AT&T Park, and to incentivize event attendees and UCSF employees to use alternatives to the private automobile, the City and the project sponsor shall pursue and implement additional transportation management actions during the pre-event period during overlapping events. This measure shall be implemented in coordination with and in addition to Mitigation Measure M-TR-11a: Additional PCOs during Events and Mitigation Measure M-TR-11b: Additional Strategies to Reduce Transportation Impacts. Strategies shall include one or more of the following: ***Strategies to Increase Use of Non-auto Modes*** - Encouraging coordinated parking pricing strategies among nearby facilities designed to discourage driving for event attendees and employees. - Marketing "No drive" events. - Installing Clipper Card add-value machines on-site at the event center to facilitate purchase and value-adding, and to minimize impacts on transit "dwell times" of paying cash fares.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)		
Impact TR-11 (cont.)		- Exploring implementation of congestion pricing tools to charge event-related fees for driving and parking in the immediate area. - Establishing event-sponsored promotions to encourage additional use of transit, such as event-branded Clipper Cards, bundled discounts and subsidies for transit ticket purchases, or automatic prize/raffle entries/merchandise discounts for event attendees taking transit. - Exploring implementation of priority access or fast-track security clearance to the event center for attendees arriving by transit or bicycling to the event center. - Promoting the above strategies through event tickets and ticketholder emails, website transit information, and real-time updates. - Consulting with local TMAs targeting employees who might drive during the peak pre-event period to provide increased shuttle service, alternative travel mode promotions, and advertising the use of real-time information and technology applications. - Sponsoring use of taxis, TNCs, or pedicabs by event sponsor to facilitate the connection between the regional transit hubs and the event center, as well as between the regional transit hubs and AT&T Park. ***Strategies to Increase Transit, Capacity of Alternative Modes, and Enhance Pedestrian Safety*** - Providing additional PCOs to manage and direct local traffic, and to favor circulation of pedestrians, cyclists, and persons arriving or departing by transit. - Expanding the network of PCO-controlled intersections during the peak pre-event period beyond those identified in the Local/Hospital Access Plan. - Exploring implementation of a program to require employees driving in the vicinity during the peak pre-event period to produce vehicle badges (e.g., rearview hanger, sticker) by employer for access to local employment sites, and coordinating with SFMTA and SFPD to honor said badges. - Using the Western Pacific site for off-site parking for all events, not only large overlapping events. - Increasing transit or High Occupancy Vehicle (HOV) capacity by operating additional SFMTA buses and/or additional private shuttle buses. - Supporting WETA analysis of the feasibility and operational benefits of a ferry/water taxi landing near 16th Street. - Increasing capacity and use of alternative modes, such as secure or valet bicycle parking, bicycle sharing, or bicycle infrastructure along the east-west corridors. - Expanding the SFMTA's Vision Zero treatments to nearby intersections to improve the physical pedestrian environment to enhance pedestrian safety.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)		
Impact TR-12: The proposed project would result in significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	SUM	**Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Impact TR-11, above)
Impact TR-13: The proposed project could result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LSM	**Mitigation Measure M-TR-13: ~~Additional~~ Enhanced Muni Transit Service during Overlapping Events** As a mitigation measure to accommodate Muni transit demand to and from the project site and AT&T Park on the T Third light rail line during overlapping evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee ~~to coordinate with the~~ and SFMTA to provide ~~additional~~ enhanced Muni light rail service and/or shuttle buses between key Market Street locations and the project. Examples of the ~~additional~~ enhanced service include Muni bus shuttles between Union Square and/or Powell Street ~~Montgomery~~ BART/Muni station and the project site. The need for ~~additional~~ enhanced Muni service shall be based on characteristics of the overlapping events (e.g., projected attendance levels, and anticipated start and end times).
Impact TR-14: The proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	SUM	**Mitigation Measure M-TR-5a: Additional Caltrain Service during Events** (see Impact TR-5, above) **Mitigation Measure M-TR-5b: Additional North Bay Bus and Ferry Service during Events** (see Impact TR-5, above) **Mitigation Measure M-TR-14: Additional BART Service to the East Bay during Overlapping Events** As a mitigation measure to accommodate transit demand to the East Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~consult with BART to provide additional service from San Francisco following weekday and weekend evening events. The additional East Bay BART service could be provided by operating longer trains. The need for additional BART service shall be based on characteristics of the overlapping events (e.g., event type, projected attendance levels, and anticipated start and end times).
Impact TR-15: The proposed project could result in a substantial overcrowding on public sidewalks, or create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LSM	**Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South** (See Impact TR-6, above)

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions With a SF Giants Evening Game at AT&T Park (Impacts TR-11 to TR-17) (cont.)		
Impact TR-16: The proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LS	No mitigation required.
Impact TR-17: The proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions with an overlapping SF Giants evening game at AT&T Park.	LS	No mitigation required. **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** (see Impact TR-10, above) **Improvement Measure I-TR-10b: Mariposa Street Restriping** (see Impact TR-10, above)
Conditions Without Implementation of the Muni Special Events Transit Service Plan		
Impact TR-18: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at intersections that would operate at LOS E or LOS F under Existing plus Project conditions.	SUM	**Mitigation Measure M-TR-2a: Additional PCOs during Events** (see Impact TR-2, above) **Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring** ***Performance Standards and Strategies for Achieving Them*** The project sponsor shall be responsible for implementing TDM measures intended to reach an auto mode share performance standard for different types of events. Specifically, the project sponsor shall work to achieve the following performance standards: 1. For weekday events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 53 percent. 2. For weekend events that have 12,500 or more attendees, the project shall not exceed an arrival auto mode share of 59 percent. The performance standards shall be achieved by the middle of the Golden State Warriors' third season at the event center, and for every Golden State Warriors season thereafter. The project sponsor may implement any combination of TDM strategies, including those identified in the proposed project's TMP, to achieve the above performance standards. Potential strategies include, but are not limited to: • Providing shuttle bus service between major transportation hubs such as Transbay Transit Terminal, BART stations, Caltrain stations and the event center.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-18 (cont.)		• Providing bus shuttles between park & ride lots, remote parking facilities, or other facilities or locations within San Francisco, and the event center. • Facilitating charter bus packages through the event sales department to encourage large groups to travel to and from the event center on charter buses. • Reducing the project parking demand through a variety of mechanisms, including pricing. • Offering high occupancy vehicle parking at more convenient locations than parking for the general public and/or at reduced rates. • Undertaking media campaigns, including in social media, that promote walking and/or bicycling to the event center. • Conducting cross-marketing strategies with event center businesses (e.g., ~~10 percent off~~ discount on merchandise/food if patrons arrive by transit and/or bike or on foot). • Carrying out public education campaigns. • Offering special event ferry service to the closest ferry station to the project site (similar to the existing service provided between AT&T Park and Alameda and Marin Counties by Golden Gate Transit, Alameda/Oakland and Vallejo ferry service). • Providing incentive for arrivals by bike. • Providing transit fare incentives to event ticket holders. ***Monitoring and Reporting*** The project sponsor shall retain a qualified transportation professional[1] to conduct travel surveys, as outlined below, and to document the results in a *Transportation Demand Management Report*. Prior to beginning the travel survey, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative, such as the Planning Department's Environmental Review Officer (ERO)) and in consultation with SFMTA. It is anticipated that data collection would occur at least during four days for two different types of events, for a total of eight days annually. Specifically, data collection shall be conducted during at least two weekday and two weekend NBA basketball games with 12,500 or more attendees, and two weekday and two weekend non-basketball events with attendance of 12,500 or more attendees.

[1] The Transportation Demand Management Report shall be performed by a qualified transportation professional from the Planning Department's *Transportation Consultant Pool.*

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-18 (cont.)		The schedule of the travel surveys shall be as follows: – Comprehensive travel surveys of basketball game attendees shall be conducted between December and April of every season. – Comprehensive travel surveys of non-basketball event attendees (conventions events, concerts, family shows, etc.) could be collected any time during the year. The following data of event attendees shall be collected as part of the travel surveys: – Origin/destination of the trip (city, zip code, home/work/other) – Mode of travel to/from event center – If by transit, list mode and name of transit operator (AC Transit, BART, Caltrain, Muni, etc.) – If by rail or ferry, name of station trip started and ended – If by auto, number of people in the vehicle – If by auto, parking location and approximate walking time to event center – If by auto, ask if following trips would continue as auto, or if anticipate a mode shift. – If by bicycle or walking, name the origin of the trip. If a transfer from regional transit, name the origin and operator. – If by bike share, name the origin (i.e., the pick up location) of the trip. Note if trip is a "last mile" connection from regional transit, and include the origin and operator. – Arrival and departure times at the event center The travel survey shall employ whatever methodology necessary, as approved by the OCII (or the ERO) in consultation with SFMTA, to collect the above described data including but not limited to: manual or automatic (e.g., video or tubes) traffic volume counts, intercept surveys, smart phone application-based surveys, and on-line surveys. The *Transportation Demand Management Report(s)* shall be submitted to OCII, or its designee, for review within 30 days of completion of the data collection. If ~~the City~~OCII, or its designee, finds that the project exceeds the stated mode share performance standard, the project sponsor shall revise the proposed project's Transportation Management Plan (TMP) to incorporate a set of measures that would lower the auto mode share. OCII, or its designee, shall review and approve the revised TMP. For basketball events, the TMP shall be revised by no later than August 15th of the calendar year to ensure adequate lead time to implement TDM measures prior to the start of the following basketball season. For non-basketball events, the proposed project's TMP shall be revised within 90 days of submittal of the *Transportation Demand Management Report* to incorporate a set of measure that would lower the auto mode share.

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-18 (cont.)		If the project does not meet the stated performance standard, the project sponsor shall implement TDM measures and collect data on a semi-annual basis (i.e., twice during a calendar year) to assess their effectiveness for basketball games and other events. The implementation of TDM measures shall be intensified until the auto mode split performance standard is achieved. Upon achievement of the performance standard, the project sponsor may resume travel survey data collection for basketball and non-basketball events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the auto mode share performance standard, the comprehensive data collection effort may occur every two years. The data collection plan described above may be modified by OCII, or its designee, ~~(or the ERO)~~ in ~~coordination~~ consultation with SFMTA if field observations and/or other circumstances require data collection at different times and/or for different events than specified above. The modification of the data collection plan, however, shall not change the performance standards set forth in this mitigation measure.
Impact TR-19: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in additional significant traffic impacts at freeway ramps that would operate at LOS E or LOS F under Existing plus Project conditions.	SUM	**Mitigation Measure M-TR-2b: Additional Measures to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring** (see Impact TR-18, above)
Impact TR-20: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by adjacent Muni transit capacity such that significant adverse impacts to Muni transit service would occur under Existing plus Project conditions.	SUM	**Mitigation Measure M-TR-18: Auto Mode Share Performance Standard and Monitoring** (see Impact TR-18, above)
Impact TR-21: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would result in a substantial increase in transit demand that could not be accommodated by regional transit capacity such that significant adverse impacts to regional transit service would occur under Existing plus Project conditions.	SUM	**Mitigation Measure M-TR-5a: Additional Caltrain Service** (see Impact TR-5, above) **Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service** (see Impact TR-5, above)

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Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-22: Without implementation of the Muni Special Event Transit Service Plan, the proposed project could result in a substantial overcrowding on public sidewalks, ~~nor~~ create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions.	LSM	**Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities and Monitoring** During events with 3,000 or more attendees, the project sponsor shall be responsible for providing trained personnel (e.g., off-duty SFPD staff) to control pedestrian, bicycle and vehicular flows to and from the event center at the intersections immediately adjacent to the project site and to ensure that Muni platforms serving the site are not over capacity. The trained personnel shall be provided during pre- and post-event periods. The project sponsor shall ensure that conflicts between various modes are reduced to the maximum extent possible through adequate staffing of trained personnel as well as other measures, as appropriate. Other pedestrian management measures that could be implemented include but are not limited to: installation of barricades, proper signage and announcements to disperse patrons to other streets around the project site, such as to Terry A. Francois Boulevard, and cross-marketing incentives such as ~~20 percent~~ discount<u>s</u> at the restaurant and retail establishments to extend the peak departure period. Through the implementation of various strategies, the project sponsor shall ensure that pedestrian conflicts with other modes are minimized by separating vehicles, bicycles, transit and pedestrian flows to the greatest extent possible, including ensuring that various modes are adequately instructed about when it is their turn to proceed. The project sponsor shall also ensure that Muni platforms are not overcrowded by staging event attendees on the adjacent sidewalks until there is sufficient space on the Muni platforms, which are proposed to be expanded as part of the project. At the intersection of Third/South, the trained personnel shall implement strategies to allow pedestrians to cross the street safely. The strategies could include <u>allowing authorized personnel to</u> manually overrid<u>e</u>~~ing~~ the traffic signal and direct~~ing~~ pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, and shielding passengers waiting to board light rail from adjacent pedestrian traffic. ***Monitoring and Reporting*** The project sponsor shall retain a qualified transportation professional[2] to conduct field observations of pedestrian hazards and safety conditions along Third Street adjacent to the project site, as outlined below, and to document the results in a *Pedestrian Access Report*. City staff shall verify the field data collection results. Prior to beginning field observations, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII<u>,</u> ~~(~~or its <u>designee,</u>~~designated representative such as the ERO)~~ in coordination with SFMTA. The data collection methodology shall be reviewed and revised annually, if appropriate. Field observations shall be conducted during the following event types and attendance levels:

[2] The Transportation Demand Management Report shall be performed by a qualified transportation professional from the San Francisco Planning Department's *Transportation Consultant Pool.* Available online at *http://www.sf-planning.org/index.aspx?page=1886.* Accessed May 28, 2015.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-22 (cont.)		• at least two weekday NBA basketball games with 12,500 or more attendees; • at least two weekend NBA basketball games with 12,500 or more attendees; • at least two weekday non-basketball game events with 12,500 or more attendees; • at least two weekend non-basketball game events with 12,500 or more attendees; • at least two weekday non-basketball game events with 3,000 to 9,000 attendees; and, • at least two weekend non-basketball game events with 3,000 to 9,000 attendees; and • at least two weekday convention events of 9,000 or more attendees. The pedestrian hazard and safety conditions field observations shall occur on an annual basis. The *Pedestrian Access Report* shall be submitted to SFMTA, OCII and Planning Department for review within 30 days of completion of the data collection. If ~~the City~~OCII finds that the project does not meet the performance standard outlined below, the Transportation Management Plan (TMP) shall be revised to incorporate techniques to minimize conflicts between pedestrians and other modes. The TMP shall be revised within 90 days of submittal of the *Pedestrian Access Report*. When the project is not meeting the stated performance standard, the project sponsor shall collect data on a semi-annual basis (i.e., twice during a calendar year) to assess the effectiveness of various measures incorporated into the revised TMP. The implementation of various measures shall be intensified until pedestrian access to and from the site occurs in a safe manner, as determined by OCII, or its designee ~~(or the ERO)~~. The performance standard for safe pedestrian operations consists of the following: substantial numbers of pedestrians are not spilling onto the Muni right-of-way area, are not illegally crossing Third Street midblock, are not overcrowding the Muni platforms, and are not crossing intersections against the signal. Upon achievement of the performance standard, the project sponsor may resume field observations for basketball, non-basketball and convention events on an annual basis. If the sponsor demonstrates three consecutive years of meeting the performance standard, the comprehensive data collection effort may occur every two years. Further, in reviewing the *Pedestrian Access Report*, OCII, or its designee, ~~(or the ERO)~~ may adjust the size of the events for which this measure is applicable. For example, if small scale events (e.g., those with 5,000 attendees) do not result in crosswalk and/or Muni platform overcrowding or other similar pedestrian safety conditions OCII, or its designee, ~~(or the ERO)~~ may revise this mitigation measure to apply to events of 5,001 or more attendees.
Impact TR-23: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in potentially hazardous conditions for bicyclists, or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas under Existing plus Project conditions.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Conditions without Implementation of the Muni Special Event Transit Service Plan (cont.)		
Impact TR-24: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on loading under Existing plus Project conditions.	LS	No mitigation required. **Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan** (see Impact TR-8, above)
Impact TR-25: Without implementation of the Muni Special Event Transit Service Plan, the proposed project would not result in significant impacts on emergency vehicle access under Existing plus Project conditions.	LS	No mitigation required. **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** (see Impact TR-10, above) **Improvement Measure I-TR-10b: Mariposa Street Restriping** (see Impact TR-10, above)
Cumulative Impacts		
Impact C-TR-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative construction-related ground transportation impacts.	LS	No mitigation required.
Impact C-TR-2: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple intersections in the project vicinity under 2040 Cumulative conditions.	SUM	**Mitigation Measure M-TR-2a: Additional PCOs during Events** (see Impact TR-2, above) **Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events** (see Impact TR-11, above) **Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee** (see Impact TR-11, above) **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Impact TR-11, above)
Impact C-TR-3: The project, in combination with other past, present, and reasonably foreseeable future projects, would result in significant cumulative traffic impacts at multiple freeway ramps in the project vicinity under 2040 Cumulative conditions.	SUM	**Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts** (see Impact TR-2, above) **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Impact TR-11, above)

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Cumulative Impacts (cont.)		
Impact C-TR-5: The project, in combination with other past, present, and reasonably foreseeable future projects, would have significant transit impacts on regional transit under 2040 Cumulative conditions.	SUM	**Mitigation Measure M-TR-5a: Additional Caltrain Service** (see Impact TR-5, above) **Mitigation Measure M-TR-5b: Additional North Bay Ferry and Bus Service** (see Impact TR-5, above) **Mitigation Measure M-TR-14: Additional BART Service to the East Bay During Overlapping Events** (see Impact TR-14, above)
Impact C-TR-4: The project, in combination with other past, present, and reasonably foreseeable future projects, could have significant transit impacts on Muni service under 2040 Cumulative conditions, and could contribute to significant cumulative transit impacts at Muni screenlines.	LSM	**Mitigation Measure M-TR-13: ~~Additional~~ Enhanced Muni Transit Service During Overlapping Events** (see Impact TR-13, above)
Impact C-TR-6: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative pedestrian impacts.	LSM	**Mitigation Measure M-TR-6: Active Management of Pedestrian Flows at the Intersection of Third/South** (see Impact TR-6, above)
Impact C-TR-7: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative bicycle impacts.	LS	No mitigation required.
Impact C-TR-8: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative loading impacts.	LS	No mitigation required. **Improvement Measure I-TR-8: Truck and Service Vehicle Operations Plan** (see Impact TR-8, above)
Impact C-TR-9: The project, in combination with other past, present, and reasonably foreseeable future projects, could result in significant adverse cumulative impacts to the UCSF helipad.	LSM	**Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction** (see Impact TR-9a)

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Transportation and Circulation, SEIR Section 5.2 (cont.)		
Cumulative Impacts (cont.)		
Impact C-TR-10: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative emergency vehicle access impacts.	LS	No mitigation required. **Improvement Measure I-TR-10a: UCSF Emergency Vehicle Access and Garage Signage Plan** (see Impact TR-10, above) **Improvement Measure I-TR-10b: Mariposa Street Restriping** (see Impact TR-10, above)
Noise, SEIR Section 5.3		
Impact NO-1: Construction of the proposed project would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	LS	No mitigation required. **Improvement Measure I-NO-1: Mission Bay Good Neighbor Construction Noise Policy** The project sponsor shall comply with the Mission Bay Good Neighbor Policy and limit all extreme noise-generating construction activities to 8:00 a.m. to 5:00 p.m., Monday through Friday. No pile driving or other extreme noise generating activity is permitted on Saturdays, Sundays, and holidays.
Impact NO-2: Construction of the proposed project would not expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.	LS	No mitigation required.
Impact NO-3: Construction of the proposed project would not expose people and structures to or generate excessive groundborne vibration levels.	LS	No mitigation required. ~~**Improvement Measure I-NO-3: Neighbor Notification of Vibration-Inducing Construction Activities**~~ ~~At least one week prior to the start of rapid impact compaction activities, the project sponsor shall notify owners and occupants within 500 feet of the project site of the dates, hours, and expected duration of such activities.~~
Impact NO-4: Operation of the proposed project could result in exposure of persons to or generation of noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance.	LSM	**Mitigation Measure M-NO-4a: Noise Control Plan for Outdoor Amplified Sound** The project sponsor shall develop and implement a Noise Control Plan for operations at the proposed entertainment venues to reduce the potential for noise impacts from public address and/or amplified music. This Noise Control Plan shall contain the following elements: • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements for outdoor concerts.

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TABLE 1-2 (Continued), REVISED
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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Noise, SEIR Section 5.3 (cont.)		
Impact NO-4 (cont.)		• Speaker systems shall be directed away from the nearest sensitive receptors to the degree feasible. • Outdoor speaker systems shall be operated consistent with the restrictions of Section 2909 of the San Francisco Police Code, and conform to a performance standard of 8 dBA and dBC over existing ambient L90 noise levels at the nearest residential use. **Mitigation Measure M-NO-4b: Noise Control Plan for Place of Entertainment Permit** As part of the Place of Entertainment Permit process, the project sponsor shall develop and implement a Noise Control Plan for operations at the proposed entertainment venue to reduce the potential for noise impacts from interior event noise. This Noise Control Plan shall, at a minimum, contain the following elements: • The project sponsor shall comply with noise controls and restrictions in applicable entertainment permit requirements. • The establishment shall provide adequate ventilation within the structures such that doors and/or windows are not left open for such purposes resulting in noise emission from the premises. • There shall be no noise audible outside the establishment during the daytime or nighttime hours that violates the San Francisco Municipal Code Section 49 or 2900 et. seq. Further, ~~absolutely~~ no sound from the establishment shall be audible inside any surrounding residences or businesses that violates San Francisco Police Code section 2900 et.seq. • Permit holder shall take all reasonable measures to ~~i~~ensure the sidewalks adjacent to the premises are not blocked or unnecessarily affected by patrons or employees due to the operations of the premises and shall provide security whenever patrons gather outdoors. • Permit holder shall provide a cell phone number to all interested neighbors that will be answered at all times by a manager or other responsible person who has the authority to adjust volume and respond to other complaints whenever entertainment is provided.
Impact NO-5: Operation of the proposed project would cause a substantial permanent increase in ambient noise levels in the project vicinity.	SUM	**Mitigation Measure M-TR-2~~a~~b: Additional Strategies to Reduce Transportation Impacts** (see Section 5.2, Transportation and Circulation, Impact TR-2) **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Section 5.2, Transportation and Circulation, Impact TR-2)
Impact C-NO-1: Construction activities of the proposed project combined with cumulative construction noise in the project area could cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	LSM	**Mitigation Measure M-C-NO-1: Construction Noise Control Measures** Contractors shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the OCII or its designated representative to ensure that construction noise is reduced to the degree feasible. Measures specified in the Noise Control Plan and implemented during project construction shall include, at a minimum, the following noise control strategies: • Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Noise, SEIR Section 5.3 (cont.)		
Impact C-NO-1 (cont.)		• Construction equipment with lower noise emission ratings shall be used whenever possible, particularly for air compressors. • Sound-control devices no less effective than those provided by the manufacturer shall be provided on all construction equipment. • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used where feasible. • Stationary noise sources such as material stockpiles and vehicle staging areas shall be located as far from adjacent receptors as possible. • Enclosures and mufflers for stationary equipment shall be provided, impact tools shall be shrouded or shielded, and barriers shall be installed around particularly noisy activities at the construction sites so that the line of sight between the construction activities and nearby sensitive receptor locations is blocked to the extent feasible. • Unnecessary idling of internal combustion engines shall be prohibited. • Construction-related vehicles and equipment shall be required to use designated truck routes to travel to and from the project sites as determined ~~with~~in consultation with the SFMTA as part of the permit process prior to construction (see **Improvement Measure I-TR-1**: **Construction Management Plan and Public Updates)**. • The project sponsor shall designate a point of contact to respond to noise complaints. The point of contact must have the authority to modify construction noise-generating activities to ensure compliance with the measures above and with the San Francisco Noise Ordinance.
Impact C-NO-2: Operation of the proposed project when considered with other cumulative development would cause a substantial permanent increase in ambient noise levels in the project vicinity.	SUM	**Mitigation Measure M-TR-2~~c~~b: Additional Strategies to Reduce Transportation Impacts** (see Section 5.2, Transportation and Circulation, Impact TR-2) **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Section 5.2, Transportation and Circulation, Impact TR-~~2~~11)
Impact C-NO-3: Occupants of the proposed project would not be substantially affected by noise from future operations of the helipad at the adjacent UCSF Hospital.	LS	No mitigation required.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4		
Impact AQ-1: Construction of the proposed project would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.	SUM	**Mitigation Measure M-AQ-1: Construction Emissions Minimization** A. *Construction Emissions Minimization Plan.* Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the OCII or its designated representative for review and approval by an Air Quality Specialist. The Plan shall detail project compliance with the following requirements: 1. All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: a) Where access to alternative sources of power are reasonably available, portable diesel engines shall be prohibited. Where portable diesel engines are required because alternative sources of power are not reasonably available, the diesel engine shall meet the equipment compliance step-down schedule in **Table M-AQ-1-1**.

TABLE M-AQ-1-1
OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 4 Interim	ARB NOx VDECS (40%)[3]
2	Tier 3	ARB NOx VDECS (40%)
3	Tier 2	ARB NOx VDECS (40%)

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.

b) All off-road equipment shall have engines that meet either U.S. Environmental Protection Agency (USEPA) or California Air Resources Board (CARB) Tier 4 off-road emission standards. If engines that comply with Tier 4 off-road emission standards are not commercially available, then the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedules in Table M-AQ-1-1.

[3] http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-1 (cont.)		i. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 equipment taking into consideration factors such as: (i) critical path timing of construction; (ii) geographic proximity to the Project site of equipment; and (iii) geographic proximity of access to off haul deposit sites. ii. The project sponsor shall maintain records concerning its efforts to comply with this requirement. 2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, and Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit. 3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications. 4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but are not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used. Renewable diesel shall be considered as an alternative fuel if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. The plan shall also include estimates of ROG and NOx emissions. 5. The project sponsor shall keep the Plan available for public review on site during working hours. The project sponsor shall post at the perimeter of the project site a legible and visible sign summarizing the requirements of the Plan. The sign shall also state that the public may ask to inspect the Plan at any time during working hours, and shall explain how to request inspection of the Plan. Signs shall be posted on all sides of the construction site that face a public right-of-way. The project sponsor shall provide copies of the Plan to members of the public as requested. B. *Reporting.* Quarterly reports shall be submitted to the OCII or its designated representative indicating the construction phase and off-road equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used. Within six months of the completion of construction activities, the project sponsor shall submit to the OCII or its designated representative a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-1 (cont.)		C. *Certification Statement and On-site Requirements.* Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.
Impact AQ-2: During project operations, the proposed project would result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.	SUM	**Mitigation Measure M-AQ-2a: Reduce Operational Emissions** The project sponsor shall implement the following measures ~~as feasible~~: • Provision of outlets for electrically powered landscape equipment • Use of renewable diesel to power back-up diesel generators if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. • **Mitigation Measure M-TR-2~~a~~b: Additional Strategies to Reduce Transportation Impacts** (see Section 5.2, Transportation and Circulation, Impact TR-2) • **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Section 5.2, Transportation and Circulation, Impact TR-11) **Mitigation Measure M-AQ-2b: Emission Offsets** Upon completion of construction, and prior to issuance of certificate of occupancy, the project sponsor, with the oversight of OCII or its designated representative, shall either: 1. ~~p~~Pay a mitigation offset fee to the Bay Area Air Quality Management District's (BAAQMD) Strategic Incentives Division in an amount not to exceed $18,030 per weighted ton of ozone precursors per year requiring emissions offsets plus a 5 percent administrative fee to fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin (SFBAAB). This fee is intended to fund emissions reduction projects to achieve reductions of 17.~~0~~ tons ~~per year~~ of ozone precursors per year, the estimated tonnage of operational and construction-related emissions offsets required. Documentation of payment shall be provided to OCII or its designated representative. The project sponsor shall provide calculations to the satisfaction of OCII or its designated representative of the final amount ~~calculate the amount~~ of emissions ~~offset required~~ from construction activities based on the reporting requirements of Mitigation Measure M-AQ-1, which shall consider the final destination of off-hauled soil and construction waste materials by on-road trucks, contributions from Electrical Power Distribution System Expansion, and the degree of compliance with off-road equipment types that were ~~determined to be~~ commercially available. If the calculated construction emissions of ozone precursors ~~requires~~require offsets in excess of 17.~~0~~ tons per year, then the applicant shall provide the additional offset amount commensurate with the calculated ozone precursor emissions exceeding 17.~~0~~ tons per year.

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Impact AQ-2 (cont.)		Acceptance of this fee by the BAAQMD shall serve as an acknowledgment and commitment by the BAAQMD to: (1) implement an emissions reduction project(s) within one year of receipt of the mitigation fee to achieve the emission reduction objectives specified above; and (2) provide documentation to OCII or its designated representative and to the project sponsor describing the project(s) funded by the mitigation fee, including the amount of emissions of ROG and NOx reduced (tons per year) within the SFBAAB from the emissions reduction project(s). If there is any remaining unspent portion of the mitigation offset fee following implementation of the emission reduction project(s), the project sponsor shall be entitled to a refund in that amount from the BAAQMD. To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements, or. 2. Directly implement a specific offset project to achieve reductions of 17 tons per year of ozone precursors (or greater as described in item 1 above). To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements. Prior to implementation of the offset project, the project sponsor must obtain OCII's approval of the proposed offset project by providing documentation of the estimated amount of emissions of ROG and NOx to be reduced (tons per year) within the SFBAAB from the emissions reduction project(s). The project sponsor shall notify OCII within six months of completion of the offset project for OCII verification.
Impact AQ-3: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, ~~and could~~ but would not expose sensitive receptors to substantial air pollutant concentrations.	LS~~M~~	No mitigation required. ~~**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1, above)~~
Impact AQ-4: The proposed project could conflict with, or obstruct implementation of, the *2010 Clean Air Plan*.	LSM	**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1, above) **Mitigation Measure M-AQ-2a: Reduce Operational Emissions** (see Impact AQ-2, above) **Mitigation Measure M-AQ-2b: Emissions Offsets** (see Impact AQ-2, above)
Cumulative Impacts		
Impact C-AQ-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would contribute to cumulative regional air quality impacts.	SUM	**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1) **Mitigation Measure M-AQ-2a: Reduce Operational Emissions** (see Impact AQ-2) **Mitigation Measure M-AQ-2b: Emission Offsets** (see Impacts AQ-1 and AQ-2)

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Air Quality, SEIR Section 5.4 (cont.)		
Cumulative Impacts (cont.)		
Impact C-AQ-2: The project, in combination with other past, present, and reasonably foreseeable future projects, ~~could~~ would generate toxic air contaminants, including diesel particulate matter, ~~and could~~ but would not expose sensitive receptors to substantial air pollutant concentrations.	LS~~M~~	No mitigation required. ~~**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1, above)~~
Greenhouse Gas Emissions, SEIR Section 5.5		
Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	LS	No mitigation required. **Improvement Measure I-C-GG-1: Purchase Voluntary Carbon Credits** ***Construction Emissions*:** No later than six (6) months after the issuance of a Temporary Certificate of Occupancy for the project, the project sponsor shall provide to the Office of Community Investment and Infrastructure (OCII), a calculation of the net additional emissions resulting from the construction of the project, to be calculated in accordance with the methodology agreed upon by the California Air Resources Board (CARB) in connection with the AB 900 certification of the project. The project sponsor shall provide courtesy copies of the calculations to CARB and the Governor's office promptly following transmittal of the calculations to OCII. The project sponsor shall enter into one or more contracts to purchase voluntary carbon credits from a qualified greenhouse gas emissions broker in an amount sufficient to offset the construction emissions. The project sponsor shall provide courtesy copies of any such contracts to the ARB and the Governor's office promptly following the execution of such contracts. ***Operational Emissions*:** No later than six (6) months after project stabilization, to be defined as the date following project completion when the project is 90 percent leased and occupied (and with respect to the arena component, 90 percent of the available booking dates are utilized), the project sponsor shall submit to OCII a projection of operational emissions arising from the project, based on data accumulated to that date and reasonable projections of operational emissions for the useful life of the project (30 years), to be calculated in accordance with the methodology agreed upon by CARB in connection with the AB 900 certification of the project. The project sponsor shall provide courtesy copies of the calculations to CARB and the Governor's office promptly following transmittal of the calculations to OCII. The project sponsor shall enter into one or more contracts to purchase voluntary carbon credits from a qualified greenhouse gas emissions broker in an amount sufficient to offset the operational emissions, on a net present value basis in light of the fact that the project sponsor is proposing to acquire such credits in advance of any creation of the emissions subject to the offset. The project sponsor shall provide courtesy copies of any such contracts to CARB and the Governor's office promptly following the execution of such contracts.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Wind and Shadow, SEIR Section 5.6		
Wind		
Impact WS-1: The project would alter wind in a manner that would substantially affect off-site public areas.	~~SUM~~LSM	**Mitigation Measure M-WS-1: Develop and Implement Design Measures to Reduce Project Off-site Wind Hazards** The project sponsor shall develop and implement design measures to reduce the identified project off-site wind hazards ~~to the extent feasible~~. The project sponsor has selected a specific on-site design modification (installation of a solid canopy with a porous vertical standoff at the ground level of the southwest corner of the proposed 16th Street office building) that is demonstrated to be effective in reducing the project wind hazard impact to a less-than-significant level. ~~This~~ Other measures may include additional on-site project design modifications or additions, additional on-site landscaping; and the implementation of potential additional off-site streetscape landscaping or other off-site wind-reducing features. Potential on- and/or off-site project site wind-reduction design measures developed by the sponsor would be coordinated with, and subject to review and approval, by OCII.
Impact C-WS-1: The project, in combination with cumulative development, would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.
Shadow		
Impact C-WS-2: The project, in combination with cumulative development, would create new shadow but not in a manner that would substantially affect the use of publicly accessible open space or outdoor recreational facilities or other public areas within the Mission Bay South plan area.	LS	No mitigation required.
Impact C-WS-3: The project, in combination with cumulative development, would create new shadow but not in a manner that would substantially affect the use of publicly accessible open space or outdoor recreational facilities or other public areas outside the Mission Bay South plan area.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Utilities and Service Systems, Initial Study Section E11 and SEIR Section 5.7		
Impact UT-1: The City's water service provider would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements.	LS	No mitigation required.
Impact UT-2: The proposed project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact UT-3: The proposed project would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	LS	No mitigation required.
Impact UT-4: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.	LS	No mitigation required.
Impact UT-5: The proposed project in itself would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact C-UT-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative utilities and service systems impacts (water supply and solid waste).	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Utilities and Service Systems, Initial Study Section E11 and SEIR Section 5.7 (cont.)		
Impact C-UT-2: The proposed project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	SU	No feasible mitigation available that could be implemented by the project sponsor.
Impact C-UT-3: The proposed project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS	No mitigation required.
Impact C-UT-4: The project, in combination with past, present, and foreseeable future development in the Mission Bay South area, would result in a determination by the SFPUC that it has inadequate capacity to serve the project's projected wastewater demand in addition to its existing commitments.	SUM	**Mitigation Measure M-C-UT-4: Fair Share Contribution for Mariposa Pump Station Upgrades** Upon a determination by the SFPUC of the nature and cost of needed improvements, ~~T~~the project sponsor shall pay its fair share for improvements to the Mariposa Pump Station and associated wastewater facilities required to provide adequate sewer capacity within the project area and serve the project as determined by the SFPUC. The contribution shall be in proportion to the wastewater flows from the proposed project relative to the total design capacity of the upgraded pump station(s). The project sponsor shall not be responsible for any share of costs to address pre-existing pump station deficiencies.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Public Services, Initial Study Section E12 and SEIR Section 5.8		
Impact PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools or other services.	LS	No mitigation required.
Impact PS-2: Construction of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, emergency medical services, or law enforcement.	LS	No mitigation required.
Impact PS-3: Operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection or emergency medical services.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Public Services, Initial Study Section E12 and SEIR Section 5.8 (cont.)		
Impact PS-4: Operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for law enforcement services.	LS	No mitigation required.
Impact C-PS-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on schools or other services.	LS	No mitigation required.
Impact C-PS-2: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on fire protection, emergency medical, and law enforcement services.	LS	No mitigation required.
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9		
Impacts HY-1: The project would not violate water quality standards or otherwise substantially degrade water quality with respect to construction activities, including construction dewatering.	LS	No mitigation required.
Impact HY-1a: The project would not violate water quality standards or otherwise substantially degrade water quality with respect to construction-related dewatering.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9 (cont.)		
Impact HY-2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LS	No mitigation required.
Impact HY-3: The project would not alter the existing drainage pattern of the area in a manner that would result in substantial erosion, siltation, or flooding on- or off-site, and the project would not substantially increase the rate or amount of surface runoff that would result in flooding on- or off-site.	LS	No mitigation required.
Impact HY-4: The project would not expose people, housing, or structures, to substantial risk of loss due to existing flooding risks and would not redirect or impede flood flows.	LS	No mitigation required.
Impact HY-5: The project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche or tsunami.	LS	No mitigation required.
Impact HY-6: Operation of the proposed project could exceed the wastewater treatment requirements of the NPDES permit for the SEWPCP, violate water quality standards or waste discharge requirements, otherwise substantially degrade water quality as a result of changes in wastewater and stormwater discharges to	LSM	**Mitigation Measure M-HY-6. Wastewater Sampling Ports** ***Mission Bay FSEIR Mitigation Measures K.2.*** Participate in the City's existing Water Pollution Prevention Program. Facilitate implementation of the City's Water Pollution Prevention Program by providing and installing wastewater sampling ports in any building anticipated to have a potentially significant discharge of pollutants to the sanitary sewer, as determined by the Water Pollution Prevention Program of the San Francisco Public Utilities Commission's Bureau of Environmental Regulation and Management, and in locations as determined by the Water Pollution Prevention Program.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9 (cont.)		
the Bay, or exceed the capacity of the separate stormwater system constructed in Mission Bay, or provide a substantial source of polluted runoff. Operation of the proposed project would not contribute to a substantial increase in combined sewer discharges.		
Impact HY-7: Operation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding.	LS	No mitigation required.
Impact C-HY-1: The project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts on hydrology and water quality with respect to construction activities, dewatering, groundwater supplies, drainage pattern, flooding, seiche or tsunami.	LS	No mitigation required.
Impact C-HY-2: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not exceed the wastewater treatment requirements of the NPDES permit for the SEWPCP; violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality as a result of changes in wastewater and stormwater discharges to the Bay; or exceed the capacity of the separate stormwater system constructed in	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hydrology and Water Quality, Initial Study Section E15 and SEIR Section 5.9 (cont.)		
Mission Bay, or provide a substantial source of polluted runoff. Cumulative wet weather flows would not contribute to an increase in combined sewer discharges.		
Impact C-HY-3: The proposed project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a significant impact related to exposing people or structures to a significant risk of loss, injury, or death involving flooding.	LS	No mitigation required.
Land Use, Initial Study Section E1		
Impact LU-1: The proposed project would not physically divide an established community.	LS	No mitigation required.
Impact LU-2: The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, adopted for the purpose of avoiding or mitigating an environmental effect.	LS	No mitigation required.
Impact LU-3: The proposed project would not have a substantial impact upon the existing character of the vicinity.	LS	No mitigation required.
Impact C-LU-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Aesthetics, Initial Study Section E2		
Aesthetic impact analysis not applicable to the proposed project based on CEQA Public Resources Code Section 21099.		
Population and Housing, Initial Study Section E3		
Impact PH-1: Construction of the proposed project would not induce substantial growth in the area, either directly (for example, by constructing new homes or businesses)) or indirectly (for example, through extension of roads or other infrastructure).	LS	No mitigation required.
Impact PH-2: Construction of the proposed project not displace existing housing units or create substantial demand for additional housing.	LS	No mitigation required.
Impact PH-3: Construction of the proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LS	No mitigation required.
Impact PH-4: Operation of the proposed project would not induce substantial population growth in the area, either directly (for example, by constructing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure).	LS	No mitigation required.
Impact PH-5: Operation of the proposed project would not displace existing housing units or create demand for additional housing.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Population and Housing, Initial Study Section E3 (cont.)		
Impact PH-6: Operation of the proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	NI	No mitigation required.
Impact C-PH-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on population and housing.	LS	No mitigation required.
Cultural and Paleontological Resources, Initial Study Section E4		
Impact CP-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code.	LS	No mitigation required.
Impact CP-2: The project could cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5.	LSM	**Mitigation Measure M-CP-2a: Archaeological Testing, Monitoring and/or Data Recovery Program** Based on a reasonable presumption that archaeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant approved by OCII or its designated representative such as those from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archaeological consultants on the QACL. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the consultant shall be available to **conduct an archaeological monitoring and/or data recovery program if** required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure at the direction of OCII or its designated representative. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to OCII or its designated representative for review and comment, and shall be considered draft reports subject to revision until final approval by OCII or its designated representative. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		up to a maximum of four weeks. At the direction of the OCII or its designated representative, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archaeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c). ***Consultation with Descendant Communities*:** On discovery of an archaeological site[4] associated with descendant Native Americans, the Overseas Chinese, or other descendant group an appropriate representative[5] of the descendant group and OCII or its designated representative shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archaeological field investigations of the site and to consult with OCII or its designated representative regarding appropriate archaeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archaeological Resources Report shall be provided to the representative of the descendant group. ***Archaeological Testing Program*.** The archaeological consultant shall prepare and submit to OCII or its designated representative for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA. At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to OCII or its designated representative. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, OCII or its designated representative in consultation with the archaeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. No archaeological data recovery shall be undertaken without the prior approval of OCII or its designated representative. If OCII or its designated representative determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either: A. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or

[4] By the term "archaeological site" is intended here to minimally include any archaeological deposit, feature, burial, or evidence of burial.

[5] An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archaeologist.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		B. A data recovery program shall be implemented, unless OCII or its designated representative determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible. ***Archaeological Monitoring Program.*** If OCII or its designated representative in consultation with the archaeological consultant determines that an archaeological monitoring program shall be implemented the archaeological monitoring program shall minimally include the following provisions: • The archaeological consultant, project sponsor, and OCII or its designated representative shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. OCII or its designated representative in consultation with the archaeological consultant shall determine what project activities shall be archaeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context; • The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource; • The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and OCII or its designated representative until OCII or its designated representative has, in consultation with project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits; • The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; • If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/ construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with OCII or its designated representative. The archaeological consultant shall immediately notify the OCII or its designated representative of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to OCII or its designated representative.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the OCII or its designated representative. ***Archaeological Data Recovery Program.*** The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, project sponsor, and OCII or its designated representative shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to OCII or its designated representative. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. The scope of the ADRP shall include the following elements: • *Field Methods and Procedures*. Descriptions of proposed field strategies, procedures, and operations. • *Cataloguing and Laboratory Analysis*. Description of selected cataloguing system and artifact analysis procedures. • *Discard and Deaccession Policy*. Description of and rationale for field and post-field discard and deaccession policies. • *Interpretive Program*. Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program. • *Security Measures*. Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities. • *Final Report*. Description of proposed report format and distribution of results. • *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. ***Human Remains and Associated or Unassociated Funerary Objects.*** The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archaeological consultant, project sponsor, OCII or its designated representative, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. ***Final Archaeological Resources Report.*** The archeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to OCII or its designated representative that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Once approved by OCII or its designated representative, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and OCII or its designated representative shall receive a copy of the transmittal of the FARR to the NWIC. As requested by OCII, the Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, OCII or its designated representative may require a different final report content, format, and distribution than that presented above. **Mitigation Measure M-CP-2b: Accidental Discovery of Archaeological Resources** The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in *CEQA Guidelines* Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide OCII officer or its designated representative with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the Alert Sheet.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-2 (cont.)		Should any indication of an archaeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify OCII officer or its designated representative and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until OCII officer or its designated representative has determined what additional measures should be undertaken. If OCII officer or its designated representative determines that an archaeological resource may be present within the project site, the project sponsor shall retain the services of an archaeological consultant from the pool of qualified archaeological consultants maintained by the Planning Department archaeologist. The archaeological consultant shall advise OCII officer or its designated representative as to whether the discovery is an archaeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, OCII officer or its designated representative may require, if warranted, specific additional measures to be implemented by the project sponsor. Measures might include: preservation in situ of the archaeological resource; an archaeological monitoring program; or an archaeological testing program. If an archaeological monitoring program or archaeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. OCII officer or its designated representative may also require that the project sponsor immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions. The project archaeological consultant shall submit a Final Archaeological Resources Report (FARR) to OCII officer or its designated representative that evaluates the historical significance of any discovered archaeological resource and describing the archaeological and historical research methods employed in the archaeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Copies of the Draft FARR shall be sent to OCII officer or its designated representative for review and approval. Once approved by OCII officer or its designated representative, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and OCII officer or its designated representative shall receive a copy of the transmittal of the FARR to the NWIC. OCII and the Environmental Planning division of the Planning Department shall each receive one bound copy, one unbound copy and one unlocked, searchable PDF copy on CD three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, OCII officer or its designated representative may require a different final report content, format, and distribution than that presented above.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Cultural and Paleontological Resources, Initial Study Section E4 (cont.)		
Impact CP-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	LS	No mitigation required.
Impact CP-4: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.	LS	No mitigation required.
Impact C-CP-1: The proposed project, in combination with other past, present and foreseeable future projects, could result in significant impacts to cultural resources.	LSM	**Mitigation Measure M-CP-2a: Archaeological Testing, Monitoring and/or Data Recovery Program** (see Impact CP-2 above) **Mitigation Measure M-CP-2b: Accidental Discovery of Archaeological Resources** (see Impact CP-2 above)
Recreation, Initial Study Section E10		
Impact RE-1: The proposed project would not increase the use of parks and recreational facilities such that substantial physical deterioration of the facilities could occur or otherwise result in physical degradation of existing recreational resources.	LS	No mitigation required.
Impact RE-2: The proposed project would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	LS	No mitigation required.
Impact C-RE-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative recreation impacts.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Biological Resources, Initial Study Section E13		
Impact BI-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modification, on any special status species.	LS	No mitigation required.
Impact BI-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations.	NI	No mitigation required.
Impact BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or navigable waters as defined in Section 10 of the Rivers and Harbors Act through direct removal, filling, hydrological interruption, or other means.	LS	No mitigation required.
Impact BI-4: The proposed project could interfere substantially with the movement of native resident or migratory wildlife species resident or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LSM	**Mitigation Measure M-BI-4a: Preconstruction Surveys for Nesting Birds** To the extent practicable, vegetation removal and grading of the site in advance of new site construction shall be performed between September 1 and January 31 in order to avoid breeding and nesting season for birds. If these activities cannot be performed during this period, a preconstruction survey of onsite vegetation for nesting birds shall be conducted by a qualified biologist. In coordination with the OCII or its designated representative, pre-construction surveys of onsite vegetation shall be performed during bird breeding season (February 1 – August 31) no more than 14 days prior to vegetation removal, grading, or initiation of construction in order to locate any active passerine nests within 250 feet of the project site and any active raptor nests within 500 feet of the project site. Surveys shall be performed in accessible areas within 500 feet of the project site and include suitable habitat within line of sight as access is available. If active nests are found on either the project site or within the 500-foot survey buffer surrounding the project site, no-work buffer zones shall be established around the nests. Buffer distances will consider physical and visual barriers between the active nest and project activities, existing noise sources and disturbance, as well as sensitivity of the bird species to disturbance. Modification of standard buffer distances, 250 feet for active passerine nests and 500 feet for active raptor nests, will

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Biological Resources, Initial Study Section E13 (cont.)		
Impact BI-4 (cont.)		be determined by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW). No vegetation removal or ground-disturbing activities including grading or new construction shall occur within a buffer zone until young have fledged or the nest is otherwise abandoned as determined by the qualified biologist. If construction work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area **Mitigation Measure M-BI-4b: Bird Safe Building Practices** The project sponsor shall design and implement the project consistent with the San Francisco *Standards for Bird-Safe Buildings* and Planning Code Section 139, as approved by OCII. OCII shall consult with the Planning Department and the Zoning Administrator concerning project consistency with Planning Code Section 139.
Impact C-BI-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on biological resources.	LS	No mitigation required.
Geology and Soils, Initial Study Section E14		
Impact GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic groundshaking, seismically-induced ground failure, or landslides.	LS	No mitigation required.
Impact GE-2: The project would not result in substantial erosion or loss of top soil.	LS	No mitigation required.
Impact GE-3: The project would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LS	No mitigation required.

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TABLE 1-2 (Continued), REVISED
SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Geology and Soils, Initial Study Section E14 (cont.)		
Impact GE-4: The project would not create substantial risks to life or property as a result of location on expansive soils or other problematic soils**.**	LS	No mitigation required.
Impact GE-5: The project would not substantially change the topography or any unique geologic or physical feature of the project site**.**	LS	No mitigation required.
Impact C-GE-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts related to geologic hazards.	LS	No mitigation required.
Hazards and Hazardous Materials, Initial Study Section E16		
Impact HZ-1: The project could create a significant hazard through routine transport, use, or disposal of hazardous materials or result in a substantial risk of upset involving the release of hazardous materials.	LSM	**Mitigation Measure M-HZ-1a: Guidelines for Handling Biohazardous Materials** ***Mission Bay FSEIR Mitigation Measure I.1***. Require businesses that handle biohazardous materials and do not receive federal funding to certify that they follow the guidelines published by the National Research Council and the United States Department of Health and Human Services Public Health Service, National Institutes of Health, and Centers for Disease Control, as set forth in Biosafety in Microbiological and Biomedical Laboratories, Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines), and Guide for the Care and Use of Laboratory Animals, or their successors, as applicable. ***Mission Bay FSEIR Mitigation Measure I.2.*** Require businesses handling biohazardous materials to certify that they use high efficiency particulate air (HEPA) filters or substantially equivalent devices on all exhaust from Biosafety Level 3 laboratories unless they demonstrate that exhaust from their Biosafety Level 3 laboratories would not pose substantial health or safety hazards to the public or the environment. Require such businesses to certify that they inspect or monitor the filters regularly to ensure proper functioning. ***Mission Bay FSEIR Mitigation Measure I.3.*** Require businesses handling biohazardous materials to certify that they do not handle or use biohazardous materials requiring Biosafety Level 4 containment (i.e., dangerous or exotic materials that pose high risks of life-threatening diseases or aerosol-transmitted infections, or unknown risks of transmission) in the Project Area.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hazards and Hazardous Materials, Initial Study Section E16 (cont.)		
Impact HZ-1 (cont.)		**Mitigation Measure M-HZ-1b: Geologic Investigation and Dust Mitigation Plan for Naturally Occurring Asbestos** The project sponsor shall conduct a geologic investigation in accordance with the guidelines of the California Geologic Survey to determine the naturally occurring asbestos content of fill materials to be excavated at the project site. If the investigation determines that the naturally occurring asbestos content of the fill materials is 0.25 percent or greater, the project sponsor or its construction contractor shall submit the appropriate notification forms and prepare an asbestos dust mitigation plan in accordance with the Asbestos ATCM. The plan shall specify measures that will be taken to ensure that no visible dust crosses the property boundary during construction. The plan must specify the following measures: • Prevent and control visible track-out from the property • Ensure adequate wetting or covering of active storage piles • Control disturbed surface areas and storage piles that would remain inactive for 7 days Control traffic on on-site unpaved roads, parking lots, and staging areas, including a maximum vehicle speed of 15 miles per hour • Control earthmoving activities • Control offsite transport of dust emissions that contain naturally-occurring asbestos-containing materials • Stabilize disturbed areas following construction The asbestos dust mitigation plan shall be submitted to and approved by the Bay Area Air Quality Management District (BAAQMD) prior to the beginning of construction, and the site operator must ensure the implementation of all specified dust mitigation measures throughout the construction project. In addition, if required by the BAAQMD, the project sponsor or a qualified third party consultant shall conduct air monitoring for offsite migration of asbestos dust during construction activities and shall modify the dust mitigation plan on the basis of the air monitoring results if necessary.
Impact HZ-2: The project would be located on a site identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Excavation could also require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release into the environment during construction.	LSM	**Mitigation Measure M-HZ-2: RMP Provisions for Child Care Facilities** ***Mission Bay FSEIR Mitigation Measure J.2***. Carry out a site-specific risk evaluation for each site in a non-residential area proposed to be used for a public school or child care facility; submit to RWQCB for review and approval. If cancer risks exceed 1×10^{-5} and/or noncancer risk exceeds a Hazard Index of 1, carry out remediation designed to reduce risks to meet these standards or select another site that is shown to meet these standards.

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IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Hazards and Hazardous Materials, Initial Study Section E16 (cont.)		
Impact HZ-3: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan or expose people or structures to a significant risk of loss, injury or death involving fires.	LS	No mitigation required.
Impact C-HZ-1: The project, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts related to hazardous materials.	LS	No mitigation required.
Minerals and Energy Resources, Initial Study Section E17		
Impact ME-1: The project would not result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LS	No mitigation required.
Impact C-ME-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on energy resources.	LS	No mitigation required.
Agriculture and Forest Resources, Initial Study Section E18		
Agricultural and forest resources are not applicable to the proposed project.	NI	No mitigation required.

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

IMPACT	Significance Determination	Mitigation Measure or Improvement Measure
Third Street Plaza Variant, SEIR Chapter 8		
All impacts, significance determinations, mitigation measures, and improvement measures the same as listed above for the proposed project, except for Impact WS-1 and Impact C-WS-1, which are replaced with the impacts shown below.		
Wind		
Impact V-WS-1: The variant would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.
Impact V-C-WS-1: The variant, in combination with cumulative development, would not alter wind in a manner that would substantially affect off-site public areas.	LS	No mitigation required.
Muni UCSF/Mission Bay Station Variant, Responses to Comments document, Chapter 12, Section 12.4		
All impacts, significance determinations, mitigation measures, and improvement measures the same as listed above for the proposed project, except that Improvement Measure I-TR-4, Operational Study of the Southbound Platform at the T Third UCSF/Mission Bay Station, would not apply to this variant.		

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14.2.2 Chapter 2: Introduction

No text changes were made to this chapter.

14.2.3 Chapter 3: Project Description

Chapter 3, **page 3-35**, third full paragraph was revised to reflect the sponsor's proposed relocation of on-site emergency standby generators (footnote referenced in this paragraph not shown because no changes made to the footnote). This paragraph was also clarified to acknowledge the sponsor's proposed use of Tier 4 emergency backup generators.

> The project also anticipates installing two 1.5 megawatt (MW) on-site generators capable of providing up to 3 ~~three megawatts (~~MW~~)~~ of emergency, standby and optional power to the event center in the case of temporary loss of normal utility power.[15] The two event center generators would be equipped with critical grade exhaust silencers and low pressure loss silencers at the intake and exhaust vents and would be enclosed within the event center's AHU (Air Handling Unit) Mezzanine Level. In addition, each office and retail building would have an on-site generator capable of approximately 0.75 MW, and the proposed food hall would have a generator capable of approximately 0.5 MW, to provide fire and life safety emergency power in the case of temporary loss of normal utility power in those uses. The proposed generator for the 16th Street office and retail building would be enclosed within the at-grade Ground Level/Upper Parking Level of this building. The proposed generator for the food hall would be enclosed within the at-grade Ground Level/Upper Parking Level on the northeast side of the project site. The generator for the South Street office and retail building would be enclosed within the Plaza Level of this building. All proposed emergency/standby generators would be meet applicable Tier 4 standards. ~~All emergency generators would be located within the parking structure on Lower Parking Level 1.~~

Chapter 3, **page 3-35**, the following text was added to the end of last paragraph to provide more information regarding the sustainability features of the project:

> Some specific energy conservation features of the project design include:
>
> - Increased wall insulation and use of energy efficient windows
> - A white, high-albedo "cool" roof on the office towers
> - Advance design heating, ventilation, and heating systems (e.g., indirect-direct evaporative cooling; use of carbon dioxide based demand controlled ventilation that adjust the ventilation system when the buildings are only partially occupied; use of a central heat rejection loop for heat recovery; use of high-efficiency water source heat pumps; high efficiency condensing boilers)

Chapter 3, **page 3-35**, following the third full paragraph was augmented to provide more detailed information describing the proposed foundation design of, and flood controls for, the project:

Foundation Design and Flood Control Features

The project design would include a "bathtub" foundation system consisting of a watertight and fully waterproof basement structure. Floor slabs and below-grade walls would be waterproofed and designed for hydrostatic pressure. Overall stability under hydrostatic loads would be resisted by a combination of the weight of the structure and the uplift capacity of the foundation piles. This design would negate the need for permanent dewatering, as any groundwater to the sides of or below the structure would be unable to seep into structure.

Several project design features would also protect the structures from damage in the event of flooding associated with future sea level rise. Most of the building entrances and the pedestrian access and outdoor areas would be elevated above the expected future flood level; the first floors of many of the buildings would have expanded height first floors; wall penetrations below the flood level would be minimized; and water supply and waste water infrastructure would be designed to minimize or eliminate the infiltration of flood waters. In addition, below grade features, including the team practice courts, below grade parking, and loading dock, would be designed to allow future installation of flood gates and a solid curb to prevent the encroachment of flood waters (see Section 5.9, Hydrology and Water Quality for additional detail).

Chapter 3, **page 3-36**, first bulleted paragraph under *Roadway Network Improvements and Curb Regulations*, the description of improvements to South Street was revised as follows:

- South Street currently has two travel lanes in each direction, with no on-street parking. Under the proposed project, ~~South Street would have one lane in each direction, turn lane improvements, and on-street parking on portions of both sides of the street.~~South Street would be re-striped to maintain the two eastbound lanes currently present between Bridgeview Way and Terry A. Francois Boulevard. One westbound lane in the same section would remain. The previously-proposed parking lane and associated metered parking spaces at the northern side of the street are no longer part of the proposal for South Street. The purpose of this refinement is to better accommodate vehicles exiting the event center.

Chapter 3, **page 3-36**, first bulleted paragraph under *Transit Network Improvements*, the description of improvements to South Street was revised as follows:

- The elevated northbound passenger platform at the Muni UCSF/Mission Bay light rail stop on Third Street would be extended from 160 feet in length to 320 feet in length to allow for two two-car light rail trains to simultaneously board or alight passengers along the platform. In addition, crossover tracks would be constructed on Third Street near South Street within the light rail median to enable light rail vehicles to move from one set of tracks to another to reverse travel direction. To the extent feasible, construction of these improvements would be scheduled during

periods of lower passenger demand, such as on weekends, when impacts on light rail service would be less than during the weekdays. Also, the existing power equipment for light rail service would be expanded to add two circuits at the King Substation, and the electrical power distribution system to the light rail segment in the vicinity of AT&T Park would be increased in the segment between the King Substation and Fourth Street.

Chapter 3, **page 3-37**, first bulleted paragraph under *Pedestrian Network Improvements*, the description of improvements for the sidewalk along the realigned Terry A. Francois Boulevard was revised as follows :

- New sidewalks would be constructed along the perimeter of the project site on South Street (12.5-feet wide), on Terry A. Francois Boulevard (22~~12.5~~-feet wide), on 16th Street (15 feet wide), and widening of the existing sidewalk on Third Street from 12 to 16 feet.

Chapter 3, **page 3-46**, last paragraph was revised to clarify the construction excavation requirements; and reflect the sponsor's proposed refinement of construction methods to no longer use rapid soil compaction, and to conduct on-site soil treatment, as follows (footnote no. 21 referenced in this paragraph not shown because no changes made to the footnote):

The sponsor estimates that ~~the maximum depth of~~ excavation depths on-site ~~(excluding perimeter cut-off wall, described below)~~ would be between 12 and 25 ~~approximately 30~~ feet below grade; this would require ~~approximately~~less than 350,000 cubic yards of on-site soils to be excavated and removed from the site. ~~Soil on the site would be compacted using rapid soil compaction over approximately 30 work days.~~

The project sponsor proposes to conduct on-site treatment of project site soils that exceed State hazardous waste criteria prior to off-site hauling to an appropriately regulated landfill. The on-site treatment of soils would be achieved by the installation and operation of a mobile "pug mill" at the project site.[20a] Once this treatment process is completed, the treated soil would be loaded into trucks and hauled to a Class II non-hazardous regulated landfill. The treatment plant would be on the project site for approximately 3 months, operating 8 to 10 hours per day. The total estimated volume of on-site soil to be treated is approximately 98,000 cubic yards, and up to 3,100 cubic yards of soil would be treated per day. The mobile pug mill would be moved within the interior of the project site as required to accommodate the proposed site excavation process. The proposed pug mill would be a Tier 4 emission unit. The pug mill would be enclosed within a large canvas tent to control dust and noise generated by the plant.

The sponsor proposes to install augercast piles[21] using drilling, as opposed to impact pile driving, for the deep foundation. It is estimated that approximately 1,400 2-foot diameter piles, at a depth of 110 feet, would be installed at the project site. Augercast pile installation would occur over approximately 60 work days.

[20a] The pug mill is a self-contained treatment system, consisting of a 75Kw motor, a screen unit (to remove cobbles and rocks), a conveyor belt, mixing tower, and bins to hold the treated soil. The pug

> mill would mix lime or cement material with the excavated soils requiring treatment. The additive used in the treatment process would reduce the solubility of the metals in the soil, thereby treating the soil to convert it from a Class I California hazardous waste to a Class II non-hazardous waste. This process would include post treatment soil sampling to confirm the treatment effectiveness.

Chapter 3, **page 3-48**, following the first full paragraph, the following text was added to reflect the sponsor's proposed construction method refinement to use generators to provide power for the pug mill and for temporary construction dewatering should electrical power be limited during the construction period, as follows:

> Should the availability of temporary electrical power be limited during the construction period, generators would be used to power the pug mill and for temporary construction dewatering.

Chapter 3, **page 3-48**, last paragraph, the proposed soil-cement cut-off wall installation technique was augmented; and references to proposed foundation design and flood control features were moved to page 3-35, above, and expanded (footnote referenced in this paragraph not shown because no changes made to the footnote):

> ~~The sponsor is also considering multiple approaches to address potential groundwater infiltration to proposed below-grade facilities and potential localized flooding, including a permanent waterproofing design and implementation of adaptive management strategies (see Section 5.9, Hydrology and Water Quality for additional detail).~~ The project design includes a soil-cement cut-off walls as part of the perimeter shoring and construction dewatering system for the site, which would support the excavation during construction and allow for excavation to occur.[22] The walls would be about 30 to 36 inches thick and would be installed using Cement Deep Soil Mixing techniques, which uses mixing and jet grouting and not excavation. Estimated average depths of the walls around the perimeter of the project site would be 35, 37, 54, and 37 feet along South Street, Terry A. Francois Boulevard, 16th Street, and Third Street, respectively. ~~The sponsor indicates the proposed design would preclude the need to conduct any long-term dewatering of the project site during project operation~~

14.2.4 Chapter 4: Plans and Policies

To clarify how the Design for Development for the Mission Bay South Project Area applies to the proposed project, Chapter 4, **pages 4-7 to 4-8,** starting with the third full paragraph on page 4-7 was revised as follows:

> The proposed project would include amendments to the Design for Development that would create a definition for Event Center and Event Center Project and would amend certain ~~define Arena, Arena Building, Arena Project, and the Blocks 29–32 Arena Overlay Zone (Overlay Zone), with associated~~ design standards and guidelines associated with the proposed project. The discussion below describes the primary existing Design for Development standards and guidelines, and where applicable, proposed amendment to

the standards and guidelines ~~to create the Blocks 29–32 Arena Overlay Zone~~ that would be required to bring the proposed project into compliance with the Design for Development.

Height

Height Zone 5 has a maximum base height of 90 feet and a maximum tower height of 160 feet, and commercial/industrial uses must be one of those two heights. Further, towers (buildings taller than 90 feet) are not permitted on Blocks 30 and 32. The proposed event center would exceed 90 feet in height, and therefore would not meet this requirement. The proposed amendment would allow an Event Center ~~Arena Building~~ not to exceed 135 feet in height to be constructed on Blocks 29-32 ~~within the Overlay Zone~~. The existing limitations on base height, midrise height, and tower height would not apply to the Event Center ~~Arena Building~~.

Towers

A maximum of three towers are permitted with a maximum height and bulk within Height Zone 5; towers must be separated by at least 100 feet when located on the same block, and tower widths on Third Street cannot exceed 160 feet. In addition, no intersection can have more than two towers within 50 feet of the corner.

To accommodate the proposed project, the Design for Development would be amended to reallocate an unused tower from Height Zone 2 to Height Zone 5 ~~to allow an Arena Building in the Overlay Zone~~. The proposed amendment would allow an additional tower on Blocks 29 or 31 (for a maximum of four towers plus the Event Center~~Arena Building~~ within Height Zone 5). The Design for Development authorization for total number of towers thus remains the same. The amendment would also clarify the tower separation requirements to accommodate the proposed distances between the towers and the Event Center~~Arena Building~~. The amendment would increase to four~~three~~ the number of towers allowed within 50 feet of the intersection of South Street and Third Street.

Bulk

Commercial/industrial buildings have a permitted maximum floor plate of 20,000 square feet, and a maximum length of 200 feet, for all floors above 90 feet. The proposed amendment would create a bulk allowance for the Event Center~~Arena Building~~.

Streetwalls and Setbacks

In Height Zone 5, a minimum of 70 percent of the block length frontage is required along Third and 16th Streets. A 5-foot setback is required along Third Street, and a 20-foot setback is required on 16th Street. Streetwalls must be at least 15 feet tall, and no more than 90 feet tall. The amendment would indicate that the minimum length, minimum height and maximum height streetwall standards shall not apply to the Event Center ~~Arena~~ Project. ~~, subject to findings by the OCII Commission that the Arena Project is, on~~

~~balance, consistent with Overlay Zone Design Guidelines. The amendments would further state that the 5-foot setback requirement on the east side of Third Street would not be applied to the office tower at the northwest corner of Block 29, and t~~The Event Center~~Arena Building, including minor landscape features,~~ would be permitted to occupy a portion of the 20-foot required setback on the north side of 16th Street so long as a minimum average of 20 feet is provided along that frontage.

Other Amendment Provisions

Other proposed amendments to the South Design for Development may be required to accommodate final project design. Such amendments may include the following:

i. Allowing parking within 300~~600~~ feet of the Event Center~~Arena~~ Project entrance to qualify as off-site parking for an Event Center Project~~Arena~~ Project;

ii. Allowing shared parking among Arena Project uses (for example, parking spaces provided for daytime office use may be used by the Event Center~~Arena Building~~ on nights and weekends);

iii. Basing parking calculations ~~within the Overlay Zone~~ upon the total aggregate square footage by applicable structure (and in the case of the Event Center~~Arena~~, total number of seats) rather than applied to any single tenant;[8]

iv. The minimum and maximum number of parking spaces for the Event Center~~Arena Building~~ will be established based on number of seats; and

v. Modifying the required loading requirements to accommodate the number and configuration of off-street loading spaces proposed by the project.

vi. Permit the view corridor on Blocks 29-32 to terminate in an Event Center that provides an important architectural statement as recommended in the Commercial Industrial Guidelines.

vii. Requiring the submission of a comprehensive signage program for an Event Center Project for Agency discretionary approval through an amendment to the Mission Bay South Signage Master Plan, which may include flashing signs, moving signs, and roof signs, and business signs above ½ of the base height of the building.

[8] Note that this is consistent with the existing Design for Development, but the amendment includes the reference to the calculation of Event Center ~~Arena Building~~ requirements based on number of Event Center~~Arena~~ seats.

14.2.5 Chapter 5: Environmental Setting Impacts, and Mitigation Measures

Section 5.1 Impact Overview

Subsequent to publication of the Draft SEIR, the San Francisco Department of Public Works announced a planned future project that would have potential to contribute to cumulative construction impacts in the project vicinity, and the following text revision on SEIR **page 5.1-11** was made to reflect this new information:

- **Third Street Bridge Rehabilitation Project**. In August 2015, the San Francisco Department of Public Works (DPW) initiated contracting for design, environmental and construction support services related to the Third Street Bridge Rehabilitation Project. The Third Street Bridge is located on Third Street crossing over Mission Creek between Berry Street and Terry A. Francois Boulevard, immediately adjacent to AT&T Park. It is approximately 300 feet long by 80 feet wide and provides five lanes of traffic (three northbound and two southbound), plus pedestrian walkways on each side. The Third Street Bridge is now more than 80 years old and is in poor condition, and requires a substantial amount of deferred repair and upgrade to comply with current bridge standards. The Third Street Bridge Rehabilitation Project would include corrosion mitigation and recoating, concrete counterweight and curb repairs, some in-kind replacement and repair of damaged steel members, and possibly some deck replacement work and accessibility upgrades. The rehabilitation would maintain continued use of the bridge, enhance its operational reliability, and ensure user's safety. DPW indicates that the bridge rehabilitation work would be scheduled to limit interruption of traffic flow on Third Street. Measures would be taken to keep community members abreast of project updates and detours prior to and during construction to minimize potential traffic, transit, pedestrian, and bicycle impacts. The estimated 14-month construction period would occur from May 2017 through June 2018. DPW estimates that the bridge rehabilitation work would be completed and fully operational by July 2018.

Section 5.2 Transportation and Circulation

As discussed in Response TR-1, in response to the comment regarding inaccurate description of cycle tracks as a Class II facility, the text and footnote on SEIR **page 5.2-3** was clarified as follows:

> **Terry A. Francois Boulevard** is a two-way, north-south roadway to the east of Third Street, extending between Third Street and Mariposa Street (at Illinois Street). The roadway generally has two travel lanes each way, with on-street parking on both sides of the street. As part of the Mission Bay Plan, Terry A. Francois Boulevard will be realigned to the west to be adjacent to the east side of Blocks 30 and 32, and a buffered two-way cycle track ~~(Class II)~~[3] will be provided as part of the San Francisco Bay Trail on the east side of the street. A bicycle lane (Class II facility) currently runs on each side of Terry A. Francois Boulevard between Illinois Street and Third Street.
>
> [3] Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles. Class III bikeways are signed bike routes that allow bicycles to share the travel lane with vehicles. A cycle track ~~is a Class II bikeway, and~~ is an exclusive bicycle facility that is separated from vehicle traffic and parked cars by a buffer zone. Cycle tracks offer safer and calmer cycling conditions for a much wider range of cyclists and cycling purposes, especially on street with greater traffic volumes traveling at relatively high speeds. Assembly Bill 1193 (Assembly Member Ting; Chapter 495 Statures of 2014) categorizes cycle tracks, or separated bikeways, as Class IV bikeways and requires Caltrans to establish and publish minimum safety design criteria for Class IV bikeways by January 1, 2016. Information on AB 1193 available online at: http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140AB1193. Accessed August 24, 2015.

As discussed in Response TR-1, in response to the comment that the Bay Trail alignment of the Bay Trail on Fourth Street is incorrect, the text on SEIR **page 5.2-4** was corrected as follows:

Fourth Street is a principal north-south arterial between Market and Mariposa Streets. Between Market and King Streets, Fourth Street runs southbound and has four southbound travel lanes. From King Street to Berry Street, Fourth Street has two lanes each way. Between Berry and 16th Streets, Fourth Street is two-way and has one travel lanes each way. South of 16th Street, Fourth Street provides local access to the UCSF Medical Center; there is no through motor-vehicle access between 16th and Mariposa Streets. Fourth Street is classified as a Congestion Management Network Major Arterial and a part of the Metropolitan Transportation System. Fourth Street is designated as a Primary Transit Important Preferential Street; is a part of the Citywide Pedestrian Network from Market Street to Folsom Street; ~~is part of the Bay Trail between King and Mission Streets;~~ and is designated as a Neighborhood Commercial Pedestrian Street. The T Third Street light rail line runs northbound on Fourth Street within mixed-flow lanes between Channel and Berry Streets, and in a semi-exclusive center median right-of-way between Berry and King Streets. Fourth Street has bicycle lanes (Class II) both ways between Channel and 16th Streets.

As discussed in Response TR-1, in response to the comment of the description of the Bay Trail a footnote was added on SEIR **page 5.2-28** to the clarify the vision and goal of the Bay Trail, as follows:

Figure 5.2-7 also presents the San Francisco Bay Trail. The San Francisco Bay Trail is designed to create recreational pathway links to the various commercial, industrial and residential neighborhoods that surround the San Francisco Bay. In addition, the trail connects points of historic, natural and cultural interest; recreational areas such as beaches, marinas, fishing piers, boat launches, and numerous parks and wildlife preserves. At various locations, the Bay Trail consists of paved multi-use paths, dirt trails, bike lanes, sidewalks or city streets signed as bicycle routes.[1] In the project vicinity, an improved Bay Trail path follows the shoreline of San Francisco Bay, east of Terry A. Francois Boulevard within the area that will be developed as part of the Mission Bay Plan as the Bayfront Park.

[1] The vision and goal of the Bay Trail is a Class I, multi-use pathway for cyclists and pedestrians, separated from traffic, as close to the shoreline as possible. While in certain locations, on a case-by-case basis, the Bay Trail can consist of Class II bicycle lanes and sidewalks, where there is no possibility for a multi-use path, city streets signed as bicycle routes are never proposed or accepted as complete segments of the Bay Trail.

As discussed in Response TR-1, in response to the comment that the description of the Bay Trail's total length and miles completed is incorrect, the text on SEIR **page 5.2-43** was corrected as follows:

San Francisco Bay Trail Plan

The Association of Bay Area Governments (ABAG) administers the San Francisco Bay Trail Plan (Bay Trail Plan). The Bay Trail is a multi-purpose recreational trail that, when complete, would encircle San Francisco Bay and San Pablo Bay with a continuous 500~~400~~-mile network of bicycling and hiking trails; to date, 341~~338~~ miles of the alignment have been completed. The 2005 Gap Analysis Study, prepared by ABAG for the entire Bay

Trail area, attempted to identify the remaining gaps in the Bay Trail system; classify the gaps by phase, county, and benefit ranking; develop cost estimates for individual gap completion; identify strategies and actions to overcome gaps; and present an overall cost and timeframe for completion of the Bay Trail system.

In response to proposed refined transportation improvements to South Street, **Figure 5.2-9** was revised as shown on the following page.

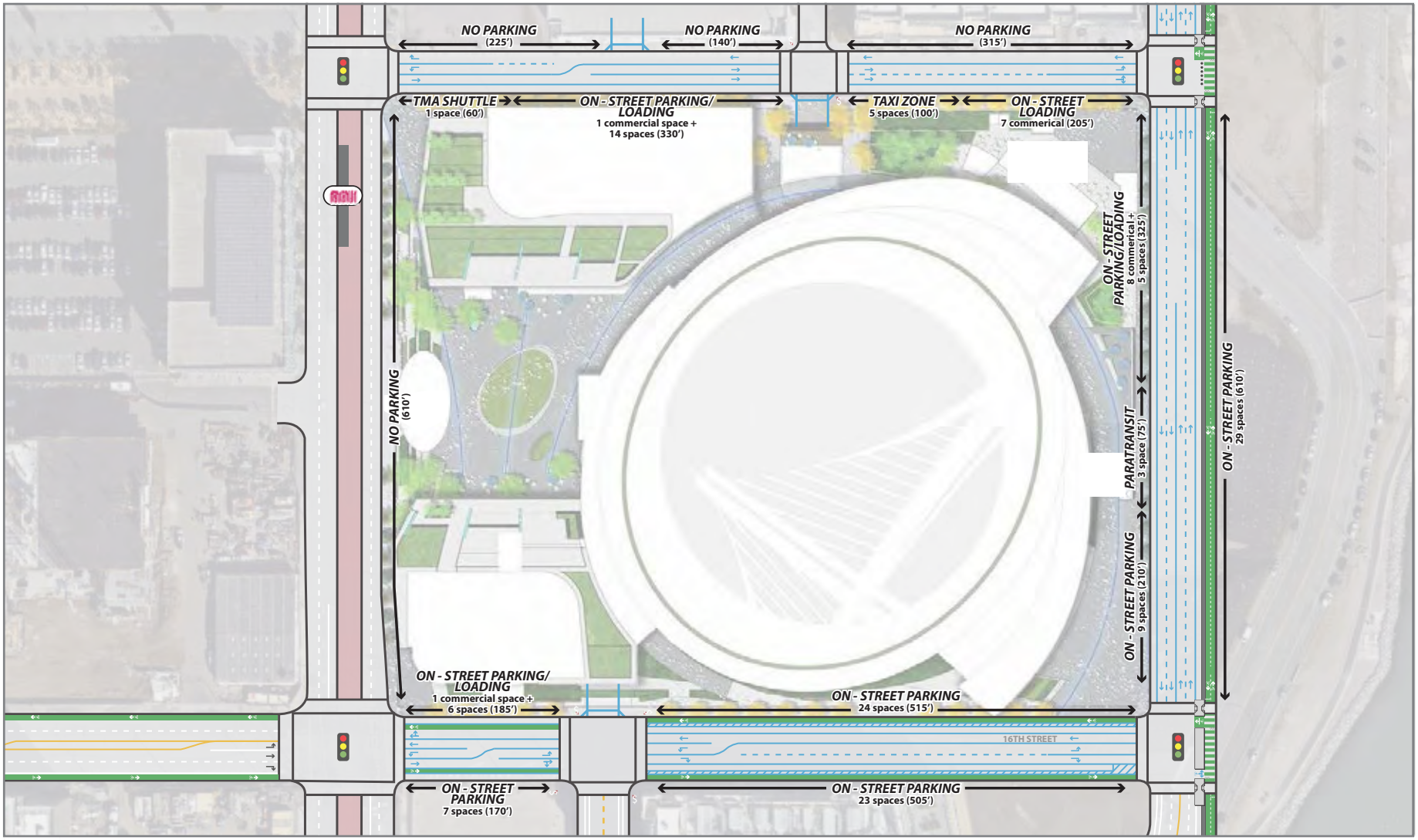
The proposed project's transit network improvements described on SEIR **page 5.2-50**, first full paragraph, were clarified as follows to include the expansion of the electrical power distribution system at the King Substation required to support the Muni Special Event Transit Service Plan:

As part of the platform improvements ~~In addition~~, crossover tracks would be constructed on Third Street near South Street within the light rail median to enable light rail vehicles to move from one set of tracks to another to reverse travel. The exact location (i.e., north and/or south of the UCSF/Mission Bay station) and the configuration of the crossover tracks (i.e., a single crossover, a double crossover, or a diamond crossover) have not been identified. In addition, the existing power equipment for light rail service would be expanded to add two circuits at the King Substation (located south of King Street at Second Street adjacent to the South Beach Harbor Yacht Club parking lot) in order to provide the additional traction power demanded by future growth and large events along the T Third/Central Subway corridor.[24a] The electrical power distribution system to the light rail segment in the vicinity of AT&T Park would be increased in the segment between the King Substation and Fourth Street so that additional electrical power is available during peak demand periods to light rail vehicles operating along King and Fourth Streets.

[24a] The need for expansion to the electrical power distribution system for light rail operations within and to the south of Mission Bay to accommodate increased frequencies and additional trains related demands of Central Subway, future growth along the southeastern part of the city, and existing and new special event operations had previously been identified by the SFMTA as a long-term improvement.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-52**, third bullet, as follows:

- One Event Express route (the Fourth/King Caltrain route) with limited stops, would be provided prior to and following a peak event (i.e., events with more than ~~14,000~~ 12,500 attendees).



Not to Scale

SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Revised Figure 5.2-9

Proposed Roadway Configuration and Curb Management

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-57**, footnote b to Table 5.2-16, as follows:

> [b] Refers to an evening concert with more than ~~14,000~~ 12,500 attendees.

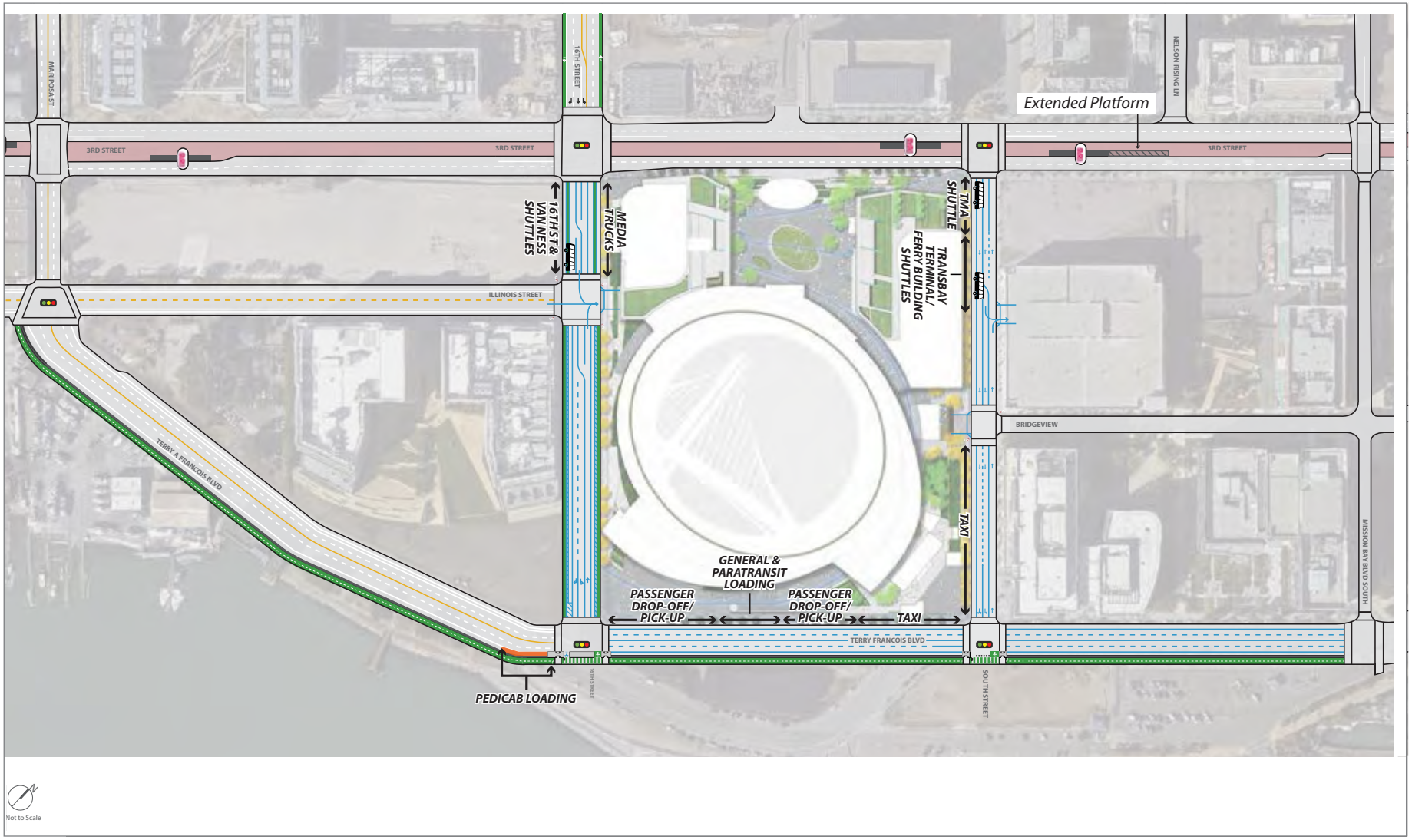
In response to proposed refined transportation improvements to South Street, **Figures 5.2-12** and **5.2-13** were revised as shown on the following page.

As discussed in Response TR-3a, SEIR **page 5.2-64**, after the first two lines and before the first full paragraph, was revised to include the addition of the Local/Hospital Access Plan in the Transportation Management Plan (TMP):

> **Local/Hospital Access Plan.** A Local/Hospital Access Plan (L/HAP) to facilitate movements in and out to residents and employees in the UCSF and Mission Bay Area would be implemented by SFMTA for the pre-event period for all large weekday evening events at the event center (i.e., those events with more than 12,500 attendees that start between 6:00 and 8:00 p.m., on average, approximately 50 times per year). The L/HAP would be configured to discourage event attendees arriving by car from using portions of Fourth Street, Owens Street, UCSF campus internal roads such as Nelson Rising Lane, Campus Lane, Fifth Street, and local residential streets. As part of the L/HAP, special temporary and permanent signage would be positioned at appropriate locations to direct event traffic towards designated routes in order to access off-street parking facilities serving the event center and away from streets within the Local/Hospital Access Plan network. In addition, three PCOs would be stationed at key intersections (i.e., Fourth/16th, Owens/Mission Bay Traffic Circle, and Fourth/Nelson Rising Lane) before the start of an event to facilitate local driver access to their destinations. These three additional PCOs would also be available after the event to be positioned at the most effective locations to direct outbound pedestrians, bicyclists, and vehicles, as determined by the PCO Supervisor.

As discussed in Response TR-3a, in response to comments, SEIR **page 5.2-67** was revised to include the addition of the UCSF patient surveys, as well as additional clarifications regarding SFMTA review and approval of the surveying and reporting program, as follows:

> **Monitoring, Refinement, and Performance Standards**
>
> The TMP outlines the process to monitor and refine the strategies within the TMP in conjunction with the City throughout the life of the project. Monitoring methods include field monitoring of operations during the first four years and an annual surveying and reporting program to be approved by the SFMTA, thereafter. Surveys of event attendees and event center employees would be conducted annually, and visitor surveys of Mission Bay neighbors and UCSF patients and staff, and emergency providers would be conducted in the initial years of operation. Survey methodology and implementation would be approved by the SFMTA.

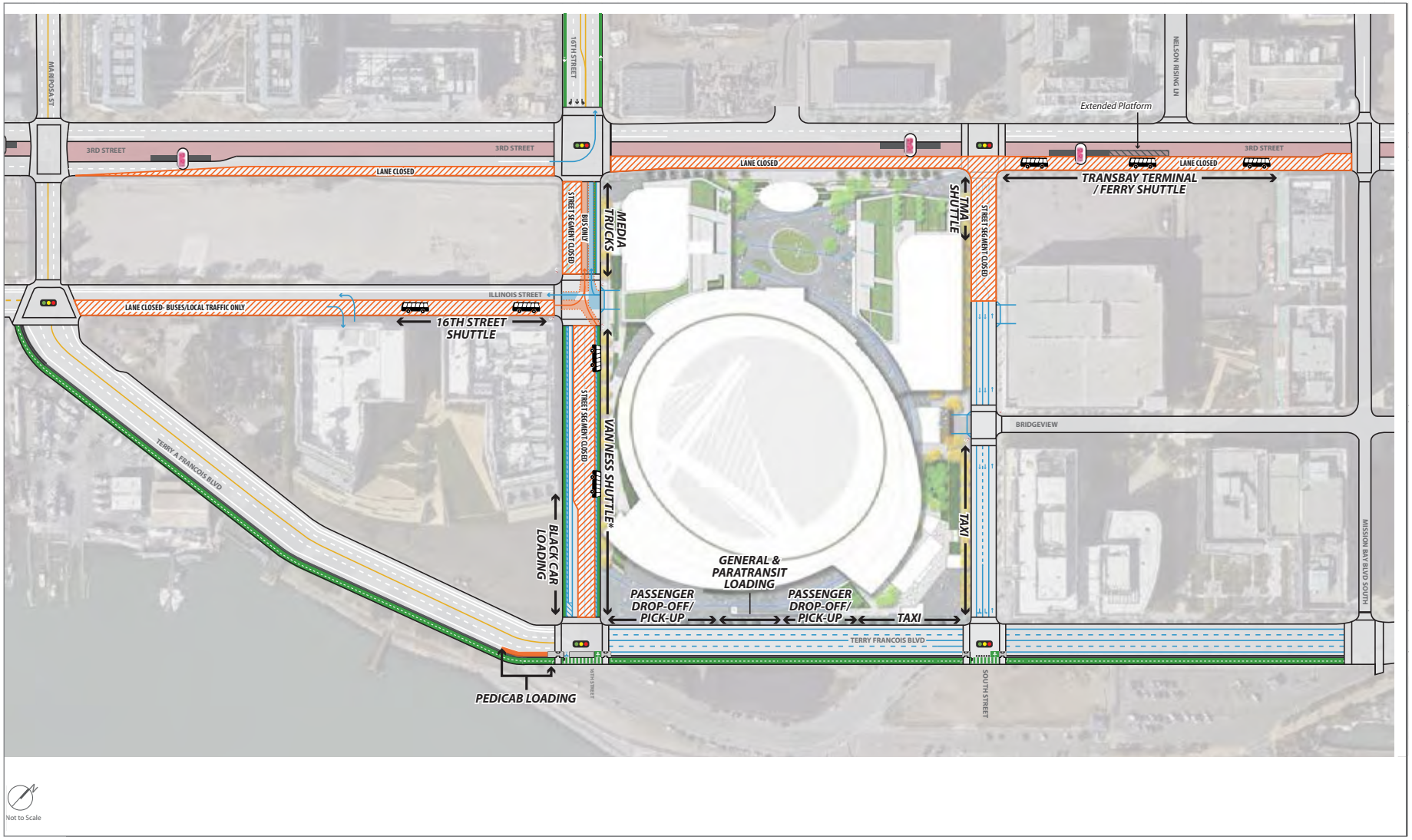


SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Revised Figure 5.2-12

Pre-Event Controls for Large Events



SOURCE: Final Transportation Management Plan for the Warriors San Francisco Event Center, April 2015

OCII Case No. ER 2014-919-97; Planning Department Case No. 2014.1441E:
Event Center and Mixed-Use Development at Mission Bay Blocks 29-32

Revised Figure 5.2-13

Post-Event Controls for Large Events

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **pages 5.2-79 to 5.2-80**, last bullet on page 5.2-79, as follows (footnote referenced in this paragraph not shown because no changes made to the footnote):

- Conditions *without* implementation of the Muni Special Event Transit Service Plan, **Impact TR-18** to **Impact TR-~~24~~ 25**. The two overarching scenarios above assume implementation of the Muni Special Event Transit Service Plan, as described above in Section 5.2.5.2 and on Table 5.2-15, which indicate that the SFMTA intends to provide additional transit service to accommodate peak evening events, including basketball games and concerts with more than ~~14,000~~ 12,500 attendees. The City and County of San Francisco fully anticipates implementation of this plan and has identified sufficient funding to implement this plan.[35] However, in order to provide a conservative CEQA analysis as well as information to the public and decision-makers, this group of impacts discloses the impacts of the proposed project if for some unknown reasons in the future, the City is unable to implement the Muni Special Event Transit Service Plan. This group of impacts analyzes only the Basketball Game scenario as the representative worst-case scenario.

As discussed in Response TR-2d, in response to a comment, SEIR **page 5.2-82** was revised as follows to clarify the meaning of the data presented in Table 5.2-21:

> **Table 5.2-21** presents the expected temporal distribution of arrival and departure patterns for basketball game attendees of the proposed project, representing the percentages and time period when attendees would be expected to be on the transportation network in the study area. The data are based on information provided by the Golden State Warriors for their current facility, which was then adjusted to provide for earlier arrival patterns based on comparable information collected at similar NBA facilities to account for the increased availability of retail and restaurant uses at the proposed project site compared to Oracle Arena in Oakland.

As described in Response TR-2a, in response to a comment, the following clarifications were provided on SEIR **page 5.2-87** (deleted text is shown as ~~strikethrough~~ and new text is underlined):

> The mode split assumptions for the daytime convention/corporate event did not assume implementation of the Muni Special Event Transit Service Plan. Mode split assumptions for convention/corporate events attendees were based on data provided by the Moscone Center Operator and documented in the Moscone Center Expansion EIR…

Impact TR-1 was revised on SEIR **page 5.2-115** to insert a new paragraph after the first full paragraph, as follows to reflect the construction activities associated with the expansion of the electrical power distribution system:

> The proposed project also includes extension of the existing northbound Muni light rail platform and associated track work within the median of Third Street north and south of South Street. The extension of the light rail platform would occur over a 14-month period,

although construction activities would not be continuous for the entire period. Construction of the track crossovers would occur over a three-day period. Construction activities would require temporary travel lane closure of one of the two northbound lanes on Third Street, depending on the phase of construction activity. On Third Street, the temporary lane closures would reduce the roadway capacity and require all vehicles to use the remaining lane. Temporary lane closures would result in additional vehicle delay, and some drivers might shift to Terry A. Francois Boulevard to access their destinations. Construction activities that involve track work or staging within the track area would require motor coach substitution. To the extent feasible, this work would be scheduled on weekends when impacts on light rail service would be less than during the weekdays.

The traction power expansion within the King Substation would provide two new circuits from exiting King Substation for the inbound and outbound circuits of the new Central Subway. Construction would occur over a 12-month period. Provision of duct banks for the new electrical connection between the King Substation and the Central Subway line would involve construction of new duct banks on King Street, between Second and Fourth Streets, requiring trenching within the eastbound or westbound travel lanes of King Street for a six-month period, although construction activities would not be continuous for the entire period. These construction activities would require temporary travel lane closure of one of the two through lanes on King Street, reducing the existing roadway capacity and requiring all vehicles to use the remaining lane. The SFMTA identifies King Street in the Blue Book as a Street of Major Importance, and no construction work is permitted on King Street Monday through Friday between 7:00 and 9:00 a.m. and between 3:00 and 7:00 p.m. During these hours, a contractor working within King Street would not permitted to leave any debris, or any material or equipment in any of the travel lanes. During the a.m. and p.m. peak commute periods the trench for the new duct banks would be plated over, and all travel lanes would be open to traffic. To the extent feasible, this work would be scheduled on weekends when traffic volumes on King Street are lower than during the weekdays. In addition, the existing variable message system installed in the vicinity of King Street (i.e., on The Embarcadero, Third Street, and on the I-280 freeway) as part of AT&T Park event TMP could be used during construction to further inform motorists of congested traffic conditions in the area.

As discussed in Response TR-10, in response to the comments, the summary paragraph (second full paragraph) on SEIR **page 5.2-116** was revised as follows to clarify the basis for the impact conclusion:

Overall, because construction activities would be temporary and limited in duration, they would not substantially affect traffic, transit, pedestrians or bicycle conditions or circulation in the area, and are required to be conducted in accordance with City requirements, construction-related ground transportation impacts of the proposed project would be *less than significant.*

Improvement Measure I-TR-1, Construction Plan and Public Updates, on **pages 5.2-116** to **5.2-117** was revised as follows for clarification:

Improvement Measure I-TR-1: Construction Management Plan and Public Updates

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and vehicles at the project site, the project sponsor shall require that the contractor prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Plan, the project sponsor/construction contractor(s) shall meet with DPW, SFMTA, the Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review shall ~~should~~ consider other ongoing construction in the project vicinity, such as construction of the nearby UCSF LRDP projects and construction on Blocks 26 and 27.

Carpool, Bicycle, Walk and Transit Access for Construction Workers – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor shall ~~could~~ include as part of the Construction Management Plan methods to encourage carpooling, bicycle, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers.

Construction Worker Parking Plan – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking shall ~~could~~ be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking shall ~~could~~ be discouraged. All construction bid documents shall ~~could~~ include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site should ~~could~~ be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between off-site facility and project site should ~~could~~ be required.

Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access to nearby institutions and businesses, the project sponsor shall ~~could~~ provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and parking lane and sidewalk closures. A regular email notice shall ~~could~~ be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-126**, at the end of the first full paragraph, as follows:

> …Specifically, the TMP specifies that for all events with more than ~~14,000~~ 12,500 attendees, up to 17 PCOs would be stationed in the project vicinity to manage vehicular, transit, bicycle and pedestrian flows (see **Figure 5.2-11**), including at the intersections of Fourth/Channel, Third/Channel, Third/South, Bridgeview/South, Terry A. Francois/South, Third/16th, Illinois/16th, Terry A. Francois/16th, I-280 northbound ramps/Owens/Mariposa, Fourth/Mariposa, Third/Mariposa, and Illinois/Mariposa.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-128**, at the end of the first full paragraph, as follows:

> …TMP measures, such as street closures for events with more than ~~14,000~~ 12,500 attendees, would not be required for many of the other events. See **Table 5.2-16** for the TMP measures associated with various events at the proposed event center.

Mitigation Measure M-TR-2a on **page 5.2-128** was revised as follows for clarification:

> As a mitigation measure to manage traffic flows and minimize congestion associated with events at the project site, the proposed project's TMP shall be modified to include four additional PCOs (i.e., in addition to the 17 PCOs included in the project TMP) that shall be deployed to intersections where the proposed project would result in significant impacts, as conditions warrant during events. These could include the intersections of King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive, and Seventh/Mississippi/16th. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event.

Mitigation Measure M-TR-2b on **pages 5.2-129** to **5.2-130** was revised as follows for clarification (only portions of measure with changes are shown):

> The project sponsor shall work with the City to pursue and implement commercially reasonable, ~~if feasible,~~ additional strategies (i.e., in addition to those included in the project TMP) to reduce transportation impacts. In addition, the City shall pursue and implement~~, if feasible,~~ additional strategies to ~~that could~~ be implemented by the City or other public agency (e.g., Caltrans). These strategies shall ~~could~~ include one or more of the following:
>
> - The City to request that ~~to work with~~ Caltrans ~~to~~ install changeable message signs on I-280 upstream of key entry points onto the local street network~~, such as on I-280 northbound~~.

- The City to include on-street parking spaces within Mission Bay in the expansion and permanent implementation of SF*park*, including ~~installation of sensors,~~ dynamic pricing, and smart phone application providing real-time parking availability and cost.

- If necessary to support achievement of non-auto mode shares for the project, the project sponsor shall cooperate with future City efforts ~~for active interventions~~ to ~~effectively~~ manage and price the off-site parking supply in the project vicinity to reduce travel by automobile, thus improving traffic conditions.

- The project sponsor to participate as a member of the Ballpark/Mission Bay ~~Ballpark~~ Transportation Coordination Committee (B/MB~~B~~TCC) and to notify at least one month prior to the start of any non-GSW event with at least 12,500 expected attendees. If commercially reasonable circumstances prevent such advance notification, the GSW shall notify the B/MB~~B~~TCC within 72 hours of booking.

- The City to ~~coordinate~~ consult with regional providers to encourage increased special event service, particularly longer BART and Caltrain trains, and increased ferry and bus service.

As discussed in Response TR-3a, the following edit was made on SEIR **page 5.2-130** to Mitigation Measure M-TR-2b in response to a comment requesting clarification whether or not National Hockey League games would be held at the event center (and the project sponsor has confirmed that they would not):

- The City and the project sponsor to meet to discuss transportation and scheduling logistics following signing any marquee events (national tournaments or championships, political conventions, or tenants interested in additional season runs: ~~NHL,~~ NCAA, etc.).

The following footnote was added to Mission Bay FSEIR Mitigation Measure E.47: Transportation System Management Plan on SEIR **page 5.2-131** for clarification.

Mission Bay FSEIR Mitigation Measure E.47: Transportation System Management Plan[46a]

[46a] The Mission Bay South Transportation Management Plan incorporates the Mission Bay FSEIR Mitigation Measures 47a – 47c, and 47e – 47i, and it is part of the Mission Bay South Owners Participation Agreement for development within Mission Bay. Because the project sponsor would be subject to the Owner Participation Agreement, these mitigation measures are part of the proposed project, and are summarized here for informational purposes.

The following correction was made on **page 5.2-135** last paragraph to correct the reference to Table 5.2-43:

Capacity Utilization. Table 5.2-40 presents the Muni route analysis and regional screenline analysis for the existing plus project conditions for weekday p.m. peak hour conditions for the No Event, Convention Event, and Basketball Game scenarios. **Table 5.2-41** presents the transit analysis for the weekday evening and weekday late evening peak hours for the Basketball Game scenario, while **Table 5.2-42** presents the transit analysis for the Saturday evening peak hour for the No Event and Basketball

Game scenario. It should be noted that depending on the origin and destination of the transit trip, the majority of the transit trips arriving from outside of San Francisco would also be required to take a Muni line to their destination, and these trips were included in the transit analysis. **Table 5.2-43** presents the weekday p.m. peak hour downtown screenlines for the No Event and Convention ~~Basketball~~ Event scenarios.

As discussed in Response TRc, in response to a comment, Table 5.2-43, **page 5.2-139**, was modified, to show the Muni downtown screenline analysis was updated to reflect the data that was made available in May 2015:

TABLE 5.2-43
UPDATED USING DATA IN SAN FRANCISCO PLANNING DEPARTMENT MAY 2015 MEMO
DOWNTOWN TRANSIT SCREENLINES - EXISTING PLUS PROJECT - NO EVENT AND CONVENTION EVENT SCENARIOS - WEEKDAY P.M. PEAK HOUR

Scenario/Screenline/Corridor[a]		Existing Ridership	Project Trips	Existing plus Project Ridership	Existing Capacity	Capacity Utilization
No Event						
Northeast	Kearny/Stockton Corridor	2,260	34	2,294	3,327	69.0%
	All Other Lines	683	10	693	1,078	64.3%
	Subtotal	*2,943*	*45*	*2,988*	*4,405*	*67.8%*
Northwest	Geary Corridor	1,971	27	1,998	2,623	76.2%
	California	1,327	18	1,346	1,752	76.8%
	Sutter/Clement	427	6	433	630	68.7%
	Fulton/Hayes	1,188	16	1,204	1,323	91.0%
	Balboa	628	9	636	974	65.3%
	Subtotal	*5,541*	*76*	*5,617*	*7,302*	*76.9%*
Southeast	Third Street	785	30	815	793	102.8%
	Mission Street	1,417	53	1,470	2,601	56.5%
	San Bruno/Bayshore	1,544	58	1,602	2,134	75.1%
	All Other Lines	1,090	41	1,131	1,675	67.5%
	Subtotal	*4,837*	*182*	*5,018*	*7,203*	*69.7%*
Southwest	Subway Lines	4,923	40	4,963	6,164	80.5%
	Haight/Noriega	981	8	989	1,554	63.7%
	All Other Lines	556	5	561	700	80.1%
	Subtotal	*6,460*	*52*	*6,513*	*8,418*	*77.4%*
	Total All Muni Screenlines	***19,781***	***355***	***20,136***	***27,328***	***73.7%***
Convention Event						
Northeast	Kearny/Stockton Corridor	2,260	193	2,453	3,327	73.7%
	All Other Lines	683	58	741	1,078	68.8%
	Subtotal	*2,943*	*251*	*3,194*	*4,405*	*72.5%*
Northwest	Geary Corridor	1,971	29	2,001	2,623	76.3%
	California	1,327	20	1,347	1,752	76.9%
	Sutter/Clement	427	6	433	630	68.8%
	Fulton/Hayes	1,188	18	1,206	1,323	91.1%
	Balboa	628	9	637	974	65.4%
	Subtotal	*5,541*	*82*	*5,623*	*7,302*	*77.0%*
Southeast	Third Street	785	27	813.	793	102.5%
	Mission Street	1,417	49	1,466	2,601	56.4%
	San Bruno/Bayshore	1,544	54	1,598	2,134	74.9%
	All Other Lines	1,090	38	1,128	1,675	67.4%
	Subtotal	*4,837*	*169*	*5,006*	*7,203*	*69.5%*

TABLE 5.2-43
UPDATED USING DATA IN SAN FRANCISCO PLANNING DEPARTMENT MAY 2015 MEMO
DOWNTOWN TRANSIT SCREENLINES - EXISTING PLUS PROJECT - NO EVENT AND CONVENTION EVENT SCENARIOS - WEEKDAY P.M. PEAK HOUR

Scenario/Screenline/Corridor[a]		Existing Ridership	Project Trips	Existing plus Project Ridership	Existing Capacity	Capacity Utilization
Southwest	Subway Lines	4,923	53	4,976	6,164	80.7%
	Haight/Noriega	981	11	992	1,554	63.8%
	All Other Lines	556	6	562	700	80.3%
	Subtotal	*6,460*	*70*	*6,530*	*8,418*	*77.6%*
	Total All Muni Screenlines	***19,781***	***572***	***20,353***	***27,328***	***74.5%***

NOTE:

[a] Muni downtown screenlines reflect outbound trips from downtown San Francisco.

SOURCE: Adavant Consulting/Fehr & Peers/LCW Consulting, 2015

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-141**, beginning of first full paragraph, as follows:

> ***Basketball Game Scenario***
>
> **Capacity Utilization.** As indicated in Section 5.2.5.2, in addition to the existing scheduled transit service in the project vicinity, the SFMTA would provide additional service to accommodate peak evening events, including basketball games and concerts with more than ~~14,000~~ 12,500 attendees (see **Table 5.2-15** for the proposed frequencies).

As discussed in Response TR-2d, SEIR **page 5.2-141** states that the Basketball Game scenario would generate 681 outbound transit trips. Of the 681 outbound transit trips, 647 trips were assigned to the T Third line (496 trips) and the 22 Fillmore route (151 trips), and 34 trips would walk to the Caltrain station (about 50 percent of the outbound trips assigned to Caltrain). In response to the comment, the following clarification was made to SEIR p. 5.2-141, first bullet:

- During the weekday p.m. peak hour, the Basketball Game scenario would generate 1,625 new transit trips (944 inbound and 681 outbound). About 73 percent of the outbound transit demand would be on the T Third (496 trips), about 22 percent on the 22 Fillmore (151 trips), and 5 percent would walk to Caltrain (34 trips). As indicated in **Table 5.2-40**, the additional outbound trips would be accommodated on the T Third line and 22 Fillmore.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-143** as follows:

Other Events

Transit conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario which assessed the maximum attendance event for evening conditions, and which would also be representative of conditions for sell-out concert events. The proposed Muni Special Event Transit Service Plan would be provided for other large events (i.e., with more than ~~14,000~~ 12,500 attendees), and the service levels of the additional service would be adjusted to reflect the anticipated attendance level.

Mitigation Measure M-TR-5a and M-TR-5b on **page 5.2-147** was revised as follows for clarification:

As a mitigation measure to accommodate transit demand to and from the South Bay for weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~ consult with Caltrain to provide additional Caltrain service to and from San Francisco on weekdays and weekends. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

As a mitigation measure to accommodate transit demand to the North Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~ consult with Golden Gate Transit and WETA to provide additional ferry and/or bus service from San Francisco following weekday and weekend evening events. The need for additional service shall be based on surveys of event center attendees conducted as part of the TMP.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-160**, beginning of second full paragraph, as follows:

Other Events. Bicycle conditions during other events at the project site would be similar to or better than described above for the Basketball Game scenario, which assessed the maximum attendance event, and which is also representative of conditions for sell-out evening concert events. TMP measures, such as street closures for events with more than ~~14,000~~ 12,500 attendees, would not be required for many of the other events.

Improvement Measure I-TR-8 on **page 5.2-165** was revised as follows for clarification:

Improvement Measure I-TR-8: Truck and Service Vehicle Loading Operations Plan

As an improvement measure to reduce potential conflicts between driveway operations, including loading activities, and pedestrians, bicycles and vehicles on South Street, Terry A. Francois Boulevard, and 16th Street, the project sponsor shall prepare a Loading Operations Plan, and submit the plan for review and approval by the OCII, or its designee, and the SFMTA. As appropriate, the Loading Operations Plan shall be periodically

reviewed by the sponsor, the OCII or its designee, and SFMTA and revised if required ~~feasible~~ to more appropriately respond to changes in street or circulation conditions.

The Loading Operations Plan shall include a set of guideline related to the operation of the on-site and on-street loading facilities, as well as large truck curbside access guidelines; it shall also specify driveway attendant responsibilities to minimize truck queuing and/or substantial conflicts between project-generated loading/unloading activities and pedestrians, bicyclists, transit and autos. Elements of the Loading Operations Plan shall include:

- Commercial loading activities within on-street commercial loading spaces on South Street, Terry A. Francois Boulevard, and 16th Street shall ~~should~~ comply with all posted time limits and all other posted restrictions.
- Double parking or any form of illegal parking or truck loading/unloading shall ~~should~~ not be permitted on any streets adjacent to the project site, and particularly on 16th Street which would include a bicycle lane. Working with the SFMTA Parking Control Officers, building management shall ~~should~~ ensure that no truck loading/unloading activities occur within the bicycle lanes on 16th Street.
- All move-in and move-out activities for commercial office uses shall ~~should~~ be coordinated by building management, and, in the event that moving trucks cannot be accommodated within the below-grade loading area, building management shall ~~should~~ obtain a reserved curbside permit from the SFMTA in advance of move-in or move-out activities.

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-168**, middle of second full paragraph, as follows:

…For events that necessitate closure of the northbound travel lanes of Third Street between 16th and South Streets (generally events with ~~14,000~~ 12,500 or more attendees) for post-game conditions for a period of one to two hours depending on the size of the event, emergency vehicles traveling on Third Street southbound would not be affected, and if necessary, emergency vehicles traveling northbound on Third Street would be permitted to continue through the closed segment between 16th and South Streets, as PCOs would be able to remove the temporary barriers….

Improvement Measure I-TR-10a, UCSF Emergency Vehicle Access and Garage Signage Plan, on **page 5.2-169**, was revised as follows for clarification:

Improvement Measure I-TR-10a: **UCSF Emergency Vehicle Access and Garage Signage Plan**

As an improvement measure to enhance access for emergency vehicles and other visitors to the UCSF Children's Hospital emergency room and parking facilities at the UCSF Medical Center, the project sponsor shall work with UCSF, SFMTA, Caltrans, and DPW to develop and implement a UCSF emergency vehicle access and garage signage plan for

I-280 and Mariposa, Owens, and 16th Streets to reflect desirable access routes for UCSF and event center access.

As discussed in Response TR-11, in response to this comment, Improvement Measure I-TR-10b: Mariposa Street Restriping Study on SEIR **page 5.2-169** was clarified as follows:

Improvement Measure I-TR-10b: Mariposa Street Restriping Study

In connection with the Mission Bay Plan improvements to the I-280 on-ramp and off-ramp at Mariposa Street and the Owens Street extension, the SFMTA will be reevaluating the travel lane striping plan for Mariposa Street between Pennsylvania Avenue and Fourth Street. As part of this evaluation, the SFMTA will assess the feasibility of lengthening the dedicated left turn lane from eastbound Mariposa Street onto northbound Fourth Street. The evaluation is anticipated to take place in 2016, two years prior to the opening of the proposed event center. A re-evaluation may be needed following the opening of the event center. Therefore, ~~A~~as an improvement measure to enhance access to the UCSF Medical Center Children's Hospital, subsequent to the opening of the event center, the project sponsor shall retain a qualified transportation professional approved by SFMTA to conduct a traffic engineering study to evaluate potential changes to the travel lane configuration and related signage on Mariposa Street between the I-280 ramps and Fourth Street. The study, to be conducted in ~~coordination~~ consultation with UCSF and SFMTA, would be used to determine if the dedicated eastbound left turn lane into Fourth Street/UCSF passenger loading/unloading and emergency vehicle entrance to the UCSF Children's Hospital should ~~could~~ be extended west from its existing length of about 150 feet to provide for a longer ~~additional~~ queuing area separated from event-related traffic flow. If the study recommends restriping, the project sponsor shall fund SFMTA's cost of the design and implementation of the restriping.

To reflect the addition of the Local/Hospital Access Plan for weekday pre-event conditions, the following revision was made on **page 5.2-172** to Table 5.2-47 to indicate that footnote g is added to apply to intersection #14, Fourth and 16th Street (headings and relevant footnote added for context, but only the table row with the change is shown):

TABLE 5.2-47, REVISED
INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS – WITH A SF GIANTS EVENING GAME – WEEKDAY PM AND SATURDAY EVENING PEAK HOURS

			Weekday PM				Saturday Evening			
			Existing		Existing plus Project – Basketball Game		Existing		Existing plus Project – Basketball Game	
#	Intersection Location		Delay[a]	LOS	Delay	LOS	Delay	LOS	Delay	LOS
14	Fourth Street	16th Street[e,g]	28.7	C	**70.9**	**E**	14.0	B	18.0	B

g As part of the Local/Hospital Access Plan, for the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park, a PCO would be stationed at this study intersection during the weekday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

To reflect the addition of the Local/Hospital Access Plan for weekday pre-event conditions, the following revision was made on **page 5.2-174** to Table 5.2-48 to indicate that footnote g is added to apply to intersection #14, Fourth and 16th Street (headings and relevant footnote added for context, but only the table row with the change is shown):

TABLE 5.2-48, REVISED
INTERSECTION LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS – WITH A SF GIANTS EVENING GAME – WEEKDAY EVENING AND LATE EVENING PEAK HOURS

			Evening				Late Evening			
			Existing		Existing plus Project – Basketball Game		Existing		Existing plus Project – Basketball Game	
#	Intersection Location		Delay[a]	LOS	Delay	LOS	Delay	LOS	Delay	LOS
14	Fourth Street	16th Street[e,g]	19.7	B	23.7	C	15.1	B	22.3	C

g As part of the Local/Hospital Access Plan, for the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park, a PCO would be stationed at this study intersection during the weekday pre-event period, and, as necessary, would manually direct vehicles, pedestrians, transit, and bicyclists through the intersection. LOS reflects conditions without PCO intervention.

As discussed in Response 12a, subsequent to publication of the Draft SEIR, proposed off-site parking facilities included in Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts during Overlapping Events have been further defined by the City, and analysis has been conducted for surface parking lots at two sites south of the project site. The discussion of the Mitigation Measure M-TR-11c on SEIR **pages 5.2-178 – 5.2-179** was revised as follows to reflect the updated analysis:

> In addition to the mitigation measures describe above, **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events,** has been identified to ~~would~~ require the project sponsor to continue to work with the City to pursue ~~seek~~ additional strategies ~~feasible mitigation measures~~ to reduce transportation impacts during overlapping events. The feasibility of these ~~measures~~ strategies has not yet been determined. One strategy involves using off-site parking lot(s) south of the event center and providing shuttles to the event center if the location of off-site parking is not within walking distance to the event center. ~~If this strategy were to become feasible, the City would identify one or more off-site parking lot(s) on Port of San Francisco or other lands to the south of the event center to provide approximately 250 additional parking spaces for all events and up to an approximately 750 additional parking spaces (for a total of approximately 1,000 spaces) during dual events of 12,500 or more event center attendees or for other circumstances if needed, and the project sponsor shall provide free shuttles from such off-site parking lot(s) to the event center on a maximum 10-minute headway (i.e., six shuttles per hour) before and after events. Preliminary discussions with the Port have identified potential parking lot locations at an area northwest of Pier 70 in the vicinity of the intersection of Illinois/19th and an area near~~

~~Pier 80 referred to as the Western Pacific site. These locations are approximate only and subject to change based on a variety of factors including, but not limited to, proximity to the event center, infrastructure and development cost, and availability. In addition, any specific locations identified for this purpose would be subject to subsequent review, design, and approvals that may involve both local and State agencies.~~

~~Given the current uncertainties regarding the availability, location, and size of one or more off-site parking lots, the effectiveness of this strategy cannot be quantified at this time.~~ If ~~such~~ an off-site parking lot(s) were to be determined to be feasible, it is possible that use of this off-site parking could reduce traffic impacts in the project vicinity. However, drivers who may use these potential additional parking facilities could travel along different routes, which could result in significant traffic impacts south of the project site such as along Third Street, Cesar Chavez Street, 25th Street or other streets that may be used as access to or from affected freeway on-ramps and off-ramps and approaches in the vicinity of the parking lot(s). Mitigation for such traffic impacts may be available depending on the areas affected~~. Standard mitigation techniques that could be employed involve temporary or permanent removal of on-street parking to accommodate traffic flow, addition of stop signs or traffic signals, adjustment to signal timing where signals exist, addition of dedicated turn lanes or turning lane traffic indicators if the physical constraints of the intersection or adjoining streets could accommodate such changes, and other available traffic control devices. These measures could be implemented where feasible~~ to maintain a LOS D or better; ~~. Similar physical or geometric constraints to fully mitigating traffic impacts may also be applicable at affected freeway on-ramps, off-ramps and approaches.~~ ~~H~~however, due to the physical limitations of the City's street grid, land may not be available for City purchase that would allow for the expansion of street width to accommodate additional travel lanes or other design techniques to achieve the standard of LOS D or better, and City policies disfavor expansion of roadway capacity in order to achieve the City's Transit First and other goals that attempt to limit private vehicle use. Consequently, ~~until a site-specific analysis of the identified parking lot(s) is conducted,~~ it cannot be determined what mitigation measures may be available for affected areas, and then whether the measures would be feasible given the physical constraints of the street network and the availability of funding to implement the measures. ~~Under the circumstances, the~~ The City would implement those measures that it deems feasible to achieve a LOS D or better in the affected areas, but regardless, secondary traffic impacts associated with Mitigation Measure M-TR-11c, Additional Strategies to Reduce Transportation Impacts of Overlapping Events, involving the use of one or more off-site parking lot(s) at this time would be considered potentially *significant and unavoidable with mitigation.*

The City has identified two sites located south of the project site: a surface lot containing 250 vehicle spaces on Port property within the Pier 70 area located less than a half-mile south of the event center (referred to as the 19th Street parking lot) that is currently being planned for by the Port; and a surface lot containing 800 vehicle spaces on Port property adjacent to and north of Pier 80 located about one mile south of the event center (referred

to as the Western Pacific parking lot) included as part of this mitigation measure. Environmental review and Port approval is required for implementation of these parking facilities.

- At the 19th Street site, a 24-hour parking facility is currently being pursued by the Port, and the facility is proposed to be operational prior to the operation of the event center. Thus, the facility would likely be available for use during all events at the project site. Vehicular access to the facility would be via 20th Street from the planned Georgia Street (i.e., to the west of Michigan Street). Attendees would walk approximately one half mile between the parking lot and the event center, or they could take the T Third. Pedestrian access to the site would be either via 20th Street or via the planned 19th Street extension (as part of the Crane Cove Park project).

- The Western Pacific site would be converted into a temporary parking facility for use during large events (i.e., more than 12,500 attendees) that overlap with SF Giants evening games at AT&T Park (i.e., on average about nine times per year). Vehicular access to this site would be via Cesar Chavez Street and Michigan Street. The facility would open two hours prior to the start of an event, and close two hours following the end of an event. Free bus service procured by the project sponsor would shuttle event attendees between the project site and the Western Pacific parking lot before and after the event.

Mitigation Measure M-TR-11a on **page 5.2-179** was revised as follows for clarification:

Mitigation Measure M-TR-11a: Additional PCOs during Overlapping Events

As a mitigation measure to manage traffic flows and minimize congestion associated with overlapping events, the proposed project's TMP shall be expanded to include two additional PCOs that shall be deployed to the following intersections where the proposed project would result in significant traffic impacts, as conditions warrant during events: King/Fifth/I-280 ramps, ~~Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Seventh/Mission Bay Drive,~~ and Fourth/16th, where PCOs would not be located as part of the project TMP or Mitigation Measure M-TR-2a: Additional PCOs during Events ~~and Seventh/Mississippi/16th~~. The PCO Supervisor shall make the determination where the additional PCOs would be located, based on field conditions during an event. This measure shall be implemented in coordination with Mitigation Measure M-TR-2a: Additional PCOs during Events, and these two additional PCOs during overlapping events shall be in addition to the four additional PCOs that shall be provided as part of Mitigation Measure M-TR-2a: Additional PCOs during Events.

As discussed in Response 12a, the following edits were made to the text of the Mitigation Measure M-TR-11c on **page 5.2-180** to reflect the updated analysis and to add supplemental strategies that have been developed in response to comments, and to provide miscellaneous minor corrections. In addition, following this measure, a new section "Impacts of Mitigation Measure M-TR-11c, Off-site Parking" was inserted as required by CEQA Guidelines Section 15126.4:

Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events

The project sponsor shall work with the City to pursue and implement~~, if feasible,~~ additional strategies to reduce transportation impacts associated with overlapping events at AT&T Park and the proposed event center. These strategies shall ~~could~~ include one or more of the following:

- The project sponsor shall exercise commercially reasonable efforts to avoid scheduling non-Golden State Warriors events of 12,500 or more event center attendees that start within 60 minutes of the start ~~(respectively)~~ of events at AT&T Park.

- When overlapping non-Golden State Warriors events of 12,500 or more event center attendees and evening SF Giants games cannot be avoided ~~through commercially reasonable efforts~~, the project sponsor shall exercise commercially reasonable efforts to negotiate with the event promoter ~~as feasible~~ to stagger start times such that the event headliner starts no earlier than 8:30 p.m.

- The City has identified two ~~shall identify one or more~~ off-site parking lot~~s(s)~~ on Port of San Francisco ~~or other~~ lands to the south of the event center (19th Street and Western Pacific sites) that can accommodate ~~to provide~~ approximately 250 additional parking spaces for all events and up to approximately ~~950~~ 800 additional parking spaces for use during dual events of 12,500 or more event center attendees (for a total of approximately ~~1,000~~ 1,050 additional off-site parking spaces). As long as the Port of San Francisco takes all necessary actions to make the land available for public parking, the ~~The~~ project sponsor shall: (1) make commercially reasonable efforts to negotiate with the Port of San Francisco or its designee to acquire sufficient rights for the use of such parking lot(s) through lease, purchase, or other means as necessary; and (2) ~~pay its fairfare share contribution towards any improvements required for the use of such parking lot(s), including but not limited to grading, paving, striping, fencing, lighting, drainage, stormwater pollution prevention measures, curb cuts, and ramps; and (3)~~ provide free shuttles to the event center from such off-site parking lot(s) that are more than ½~~¼~~ mile from the event center on a maximum 10-minute headway before and after events.

- In the event that the off-site parking lots at 19th Street and the Western Pacific site are implemented, the SFMTA shall consult with Caltrans in assessing the feasibility of signalizing the intersection of Pennsylvania/I-280 southbound off-ramp. If determined feasible by SFMTA and Caltrans, the SFMTA and Caltrans shall establish the level of traffic volumes that would trigger the need for a signal, and the project sponsor shall fund its fair share cost of the design and implementation of the new signal, based on project contributions to annual average weekday traffic volumes at this intersection.

  In addition, as part of monitoring of traffic conditions during overlapping events, the SFMTA shall consult with Caltrans regarding the need to deploy an SFMTA PCO or CHP officer to expedite traffic exiting I-280 southbound (i.e., waving vehicles exiting I-280 southbound and turning left onto southbound Pennsylvania Street through the existing stop sign) during overlapping events when the Western Pacific parking lot is used for project event parking. The PCO or CHP officer could

be deployed during those events prior to installation of a traffic signal or if signalization of this intersection is determined not to be feasible.

- To manage traffic flows and minimize congestion associated with non-Golden State Warriors events overlapping with events at AT&T Park, and to incentivize event attendees and UCSF employees to use alternatives to the private automobile, the City and the project sponsor shall pursue and implement additional transportation management actions, during the pre-event period during overlapping events. This measure shall be implemented in coordination with and in addition to Mitigation Measure M-TR-11a: Additional PCOs during Events and Mitigation Measure M-TR-11b: Additional Strategies to Reduce Transportation Impacts. Strategies shall include one or more of the following:

  Strategies to Increase Use of Non-auto Modes

  - Encouraging coordinated parking pricing strategies among nearby facilities designed to discourage driving for event attendees and employees.
  - Marketing "No drive" events.
  - Installing Clipper Card add-value machines on-site at the event center to facilitate purchase and value-adding, and to minimize impacts on transit "dwell times" of paying cash fares.
  - Exploring implementation of congestion pricing tools to charge event-related fees for driving and parking in the immediate area.
  - Establishing event-sponsored promotions to encourage additional use of transit, such as event-branded Clipper Cards, bundled discounts and subsidies for transit ticket purchases, or automatic prize/raffle entries/merchandise discounts for event attendees taking transit.
  - Exploring implementation of priority access or fast-track security clearance to the event center for attendees arriving by transit or bicycling to the event center.
  - Promoting the above strategies through event tickets and ticketholder emails, website transit information, and real-time updates.
  - Consulting with local TMAs targeting employees who might drive during the peak pre-event period to provide increased shuttle service, alternative travel mode promotions, and advertising the use of real-time information and technology applications.
  - Sponsoring use of taxis, TNCs, or pedicabs by event sponsor to facilitate the connection between the regional transit hubs and the event center, as well as between the regional transit hubs and AT&T Park.

  Strategies to Increase Transit, Capacity of Alternative Modes, and Enhance Pedestrian Safety

  - Providing additional PCOs to manage and direct local traffic, and to favor circulation of pedestrians, cyclists, and persons arriving or departing by transit.

- Expanding the network of PCO-controlled intersections during the peak pre-event period beyond those identified in the Local/Hospital Access Plan.
- Exploring implementation of a program to require employees driving in the vicinity during the peak pre-event period to produce vehicle badges (e.g., rearview hanger, sticker) by employer for access to local employment sites, and coordinating with SFMTA and SFPD to honor said badges.
- Using the Western Pacific site for off-site parking for all events, not only large overlapping events.
- Increasing transit or High Occupancy Vehicle (HOV) capacity by operating additional SFMTA buses and/or additional private shuttle buses.
- Supporting WETA analysis of the feasibility and operational benefits of a ferry/water taxi landing near 16th Street.
- Increasing capacity and use of alternative modes, such as secure or valet bicycle parking, bicycle sharing, or bicycle infrastructure along the east-west corridors.
- Expanding the SFMTA's Vision Zero treatments to nearby intersections to improve the physical pedestrian environment to enhance pedestrian safety.

Impacts of Mitigation Measure M-TR-11c, Off-site Parking

As required by CEQA Guidelines Section 15126.4, this section presents a summary of the potential effects of implementation of the proposed off-site parking facilities at the 19th Street site, located at the southeast corner of Illinois and 19th Streets less than one-half mile from the project site, and at the Western Pacific site, located adjacent to Pier 80, approximately one mile south of the project site. More detailed discussion and supporting data for the information below is included in Appendix TR-X of SEIR Appendix TR. Environmental review and Port approval is required for implementation of these two parking facilities.

Traffic. With implementation of the 19th Street and Western Pacific parking facilities, project vehicle trips would be dispersed over a broader area south of the project site, reducing the effect of increased traffic at intersections closer to the project site. Attendees traveling to the facilities from the south would be encouraged to park at these facilities instead of seeking parking closer to the event center. Intersection LOS analysis was conducted for the Basketball Game scenario for conditions without and with a SF Giants evening game at AT&T Park for the weekday p.m. weekday evening, weekday late evening, and Saturday evening peak hours (see Appendix TR-X in Appendix TR). In addition to the 22 study intersections analyzed for the proposed project, nine additional study intersections in the vicinity of the two parking lots were analyzed. The additional study intersections include 18th/I-280 southbound off-ramp, 18th/I-280 northbound on-ramp, Third/20th, Pennsylvania/I-280 southbound off-ramp, Pennsylvania/I-280 southbound on-ramp, Indiana/25th/I-280 northbound on-ramp, Third/25th, Pennsylvania/Cesar/I-280 northbound off-ramp, and Illinois/Cesar Chavez. The four

intersections with the I-280 ramps on 18th and Pennsylvania Streets are unsignalized intersections, and the others are signalized intersections. Traffic counts for conditions without and with a SF Giants evening game at AT&T Park were obtained from earlier counts conducted in June 2013 and January 2014, supplemented with new counts conducted in July and August 2015.

For the Basketball Game scenario without a SF Giants evening game at AT&T Park, the analysis assumed that all of the 250 parking spaces within the 19th Street parking lot would be available to event center attendees. For these analyses, vehicles that had been assigned to UCSF parking facilities (i.e., specifically the vehicles assigned to the Medical Center and Community Center garages) were reassigned to the 19th Street parking lot. The intersection LOS analysis results for the weekday p.m., weekday evening, weekday late evening, and Saturday evening indicate that the nine additional study intersections would continue to operate at LOS D or better, with minimal changes in delay. At the original 22 study intersections, average vehicle delay would change minimally and LOS conditions would generally remain the same as identified in Impact TR-2 above. Use of the 19th Street parking lot would not result in new significant traffic impacts, or eliminate the significant traffic impacts identified in Impact TR-2 (i.e., at King/Fourth, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Fourth/Channel, Seventh/Mission Bay Drive, Seventh/Mississippi/16th). Thus, without or with the use of the 19th Street parking lot, the project would result in significant and unavoidable traffic impacts at seven study intersections that would operate at LOS E or LOS F conditions under existing plus project conditions without a SF Giants evening game at AT&T Park. This impact is no more severe than described above.

For the Basketball Game scenario with a SF Giants game at AT&T Park, the analysis assumed use of both parking lots by event attendees, for an additional parking supply of 1,050 vehicle spaces. Similar to the conditions without a SF Giants evening game, vehicles that were assigned to UCSF parking facilities were reassigned to both parking lots. In addition, vehicles that had conservatively been previously assumed to park at Mission Bay garages that were close to or slightly over capacity, such as the 450 South Street or the 1670 Owens Street garages, were also reassigned to the two lots. Due to the two parking facilities south of the project site, vehicle access to/from I-280 would shift from the Mariposa Street ramps to those located at Pennsylvania Avenue and Cesar Chavez Street. The analysis also assumes that for post-event late evening conditions, one to two PCOs would be stationed at the intersection of Third/Cesar Chavez, and that both travel lanes on the westbound approach of Cesar Chavez Street would be westbound through lanes (i.e., westbound left turns would not be permitted, drivers destined to destinations south on Third Street would be required to make a westbound left turn at Illinois Street). West of Third Street there are two westbound travel lanes, and the temporary post-event travel lane configuration can be accommodated. With implementation of the off-site parking facilities, the intersection LOS analysis results indicate that for conditions with overlapping events, intersections LOS would remain similar to those reported for the proposed project, with the following exceptions:

Weekday p.m. peak hour – Implementation of the off-site parking facilities would cause the intersection of Pennsylvania/Cesar Chavez/I-280 northbound off-ramp to operate at LOS E rather than LOS D; however, with use of the off-site parking facilities, the intersection of Fourth/16th Street would operate at LOS D rather than LOS E.

Weekday evening peak hour - Implementation of the off-site parking facilities would cause the intersection of Pennsylvania/Cesar Chavez/I-280 northbound off-ramp to operate at LOS F rather than LOS D; however, with use of the off-site parking facilities, the intersection of Mariposa/I-280 northbound off-ramp would operate at LOS C rather than LOS E.

Weekday late evening peak hour – With implementation of the off-site parking facilities, intersection LOS conditions and identified impacts would remain the same as described in Impact TR-11. As described above, with implementation of traffic management strategies to provide for two westbound through lanes at the intersection of Third/Cesar Chavez, the intersection would operate at overall LOS D conditions.

As described above, traffic impacts for the Basketball Game scenario with an overlapping SF Giants evening game at AT&T Park were identified as significant and unavoidable at ten study intersections. With implementation of this mitigation measure, the significant project impacts at the intersection of Fourth/16th during the weekday p.m. peak hour, and at the intersection of Mariposa/I-280 northbound off-ramp would not occur. With implementation of the mitigation measure, the proposed project would result in traffic impacts at nine, rather than ten intersections.

The change in location of traffic impacts at intersections (i.e., no project impact at the intersections of Fourth/16th and Mariposa/I-280 northbound off-ramp, and a project impact at the intersection of Pennsylvania/Cesar Chavez/I-280) is consistent with the determination noted above, that it is possible that use of this off-site parking lots during overlapping events could reduce traffic impacts in the project vicinity, but that drivers who may use these additional parking facilities could travel along different routes, which could result in traffic impacts south of the project site, such as along Third Street, Cesar Chavez Street, 25th Street, or other streets that may be used as access to or from affected freeway on-ramps and approaches in the vicinity of the parking lots. Thus, use of off-site parking facilities identified in Mitigation Measure M-TR-11c would not result in a substantial increase in the severity of the proposed project's traffic impacts identified for conditions without this measure. Therefore, with implementation of Mitigation Measure M-TR-11c, Impact TR-11 conclusion remains the same: the proposed project would result in significant traffic impacts at multiple intersections that would operate at LOS E or LOS F under existing plus project conditions with an overlapping SF Giants evening game at AT&T Park. Impact TR-11 would be considered potentially *significant and unavoidable with mitigation.*

Transit. The additional parking facilities would serve to reduce the number of attendees seeking and finding parking at parking facilities closer to the project site, and are not

expected to result in a mode shift for access to and from the event center. Therefore, with the two additional facilities accommodating a total of 1,050 vehicle parking spaces, the transit impact analysis related to capacity utilization would remain the same as presented in Impact TR-4 and Impact TR-5 for conditions without an overlapping SF Giants evening game at AT&T Park, and in Impact TR-13 and Impact TR-14 for conditions with an overlapping SF Giants evening game at AT&T Park.

Shuttle buses would connect the event center with the Western Pacific site. Prior to an event, shuttle buses would travel to the event center via Cesar Chavez Street westbound, Illinois Street northbound, and would return via 16th Street westbound, Third Street southbound to Cesar Chavez Street eastbound. Pre-event, the shuttle buses would drop off passengers on the east side of Illinois Street between 16th and Mariposa Streets. The shuttle zone on the east curb of Illinois Street would be used by the Muni Special Event 16th Street BART station shuttle post-event, and therefore, would not result in additional temporary parking displacement during overlapping events. Following an event, shuttle buses would travel to the event center via Cesar Chavez Street westbound, Third Street northbound, 16th Street eastbound, Illinois Street southbound, and would return via Illinois Street southbound, Mariposa Street westbound, Third Street southbound, to Cesar Chavez Street eastbound. Post-event, buses would use the west curb of Illinois Street between 16th and Mariposa Streets to load passengers, which would require temporary parking prohibition for a portion of the west side of Illinois Street between 16th and Mariposa Streets during overlapping events (currently there are about 40 on-street parking spaces on this section of Illinois Street). The shuttle zone on the east curb of Illinois Street would be used by the Muni Special Event 16th Street BART station shuttle post-event, and therefore, would not result in additional temporary parking displacement during overlapping events.

The project sponsor would be responsible for accommodating the passenger demand on the shuttles. The majority of the arrivals and departures would occur within one hour of the start and end of the event, and would be greater during the post-event period. Assuming a shuttle capacity of 60 passengers per bus, about eight buses making three round trips between the event center and the Western Pacific parking lot would be needed to accommodate the peak post-event passenger demand of 1,400 passengers (i.e., 800 vehicles each with an average vehicle occupancy of 2.52 passengers, and about 70 percent of the demand occurring within a one-hour period). If shuttle buses with less capacity are used, more shuttle buses would be required to accommodate the passenger demand. Impacts would be less than significant.

Pedestrians. The 19th Street site is located about 0.45 miles south of the project site, and it is anticipated that given this short distance attendees would walk between the event center and the parking lot. Pedestrian access to the 19th Street lot would be via 20th Street, where a sidewalk is currently provided on the north side of 20th Street, or via the planned extension of 19th Street as part of the Phase 1 of Crane Cove Park. Because a sidewalk is not currently provided on the east side of Illinois Street between 20th and Mariposa Streets (it

is being built out as development on the east side of Illinois Street occurs), pedestrians would walk on the west side of Illinois Street. At Mariposa Street, pedestrians would most likely continue north on Terry A. Francois Boulevard to access the main entrance to the site. Some pedestrians may choose to walk between the event center and the 19th Street site on Third Street. The ultimate configuration of the sidewalk on the west side of Terry A. Francois Boulevard is 12.5 feet wide, on the west side of Illinois Street is generally 10.5 feet wide, and on the east side of Third Street is 12 feet wide. Pedestrian volumes during the evening and late evening periods are generally low, and the additional pedestrians walking between the event center and the 19th Street parking lot would be accommodated on the sidewalks and at the crosswalks at intersections without substantially affecting pedestrian flows.

Travel for event attendees between the Western Pacific parking lot and the event center would be via a shuttle bus. Pedestrians would enter the shuttle bus within the Western Pacific parking lot (e.g., similar to a shuttle bus system at an airport parking lot), and exit at a temporary stop on the east side (pre-event) and west side (post-event) of Illinois Street between 16th and Mariposa Streets. For pre-event and post-event conditions, PCOs would be stationed at the intersection of Illinois/16th to manage pedestrian, transit, traffic, and bicycle flows through the intersection.

The two parking lots would result in fewer pedestrians accessing the project site, particularly from parking facilities located primarily west of the project site (i.e., fewer attendees would park at UCSF parking facilities that were assumed to be available for parking during events at the project site), which would instead travel via shuttle. This would reduce the effect of additional pedestrians at the intersections of Third/South and Third/16th. Impacts would be less than significant.

Bicyclists. Illinois Street in the vicinity of both parking facilities is part of Bicycle Route 5 and a bicycle lane is provided in each direction. The additional vehicles traveling to and from the parking lots would primarily travel on Third Street and turn onto or from 20th Street and Cesar Chavez Street to access the lots. Therefore, it is not anticipated that the parking lots would result in a substantial number of project-generated vehicles on Illinois Street. In addition, the use of the sites would result in a reduction in the number of vehicles on streets in the project vicinity, where bicycle lanes are also located, but it would result in an increase of bus shuttles on 16th Street between Third and Illinois Streets, and on the west side of Illinois Street, both of which include bicycle facilities. Pre-event, the Western Pacific parking lot shuttle bus would unload passengers on the east curb of Illinois Street between 16th and Mariposa Streets, and post-event would load passengers at the west curb of Illinois Street between 16th and Mariposa Streets. On both sides of Illinois Street, the passenger loading/unloading zones would be adjacent to existing bicycle lanes. Post-event both the Muni Special Event 16th Street BART shuttle and the Western Pacific parking lot shuttle bus would load passengers along Illinois Street between 16th and Mariposa Streets, which could result in an increased potential for bus-bicycle conflicts and bicycle safety concerns. As described in the SEIR, post-event

16th Street between Illinois Street and Terry A. Francois Boulevard, as well as northbound Illinois Street between Mariposa and 16th Streets, would be closed to vehicular traffic to facilitate Muni Special Event Shuttle operations (local access to adjacent building from Mariposa Street would be permitted). As the event center bicycle valet parking would be accessed from the north sidewalk along 16th Street in this segment, signage, cones and PCOs would be used to direct departing bicyclists towards the signalized intersection of Terry A. Francois Boulevard/16th Street, where they can safely mount their bicycles and travel northbound and southbound on Terry A. Francois Boulevard within the planned cycle track. At the intersection of Illinois/16th, a PCO would be stationed to facilitate transit, vehicle and bicycle travel along 16th Street, as well as direct southbound pedestrians and vehicles across 16th Street. Thus, post-event bicyclists traveling southbound would be directed towards Terry A. Francois Boulevard, away from Illinois Street between 16th and Mariposa Streets, which would be extensively used by event shuttle buses and vehicles departing the project garage, and instead directed towards the cycle track on Terry A. Francois Boulevard. Thus, implementation of TMP measures during events would facilitate bicycle access and minimize conflicts. Impacts would be less than significant.

Loading. Implementation of the two parking lots would not affect on-site loading operations. However, the Western Pacific site is currently used to stage semi-trailer trucks serving the Moscone Center. With implementation of the parking lot, the staging of trucks would either continue on-site or be relocated to Pier 96. A conceptual facility layout was prepared for the Western Pacific site that confirmed that the maximum truck staging demand (i.e., 100 trailer plus 60 semi-trailer trucks for the Moscone Center operations and 25 project-generated semi-trailer trucks) and the proposed 800-vehicle surface parking facility could be accommodated within the Western Pacific site. Therefore, the existing uses on the Western Pacific site would continue to be accommodated. During overlapping events when the Western Pacific site is proposed to be used for parking, the semi-trailer trucks staging at the Western Pacific site would be parked, and not circulating, and therefore conflicts between pedestrians, vehicles, and the staging trucks would not occur. Impacts would be less than significant.

Emergency Vehicle Access. With implementation of the off-site parking lots on Port of San Francisco properties, the project-generated vehicles would be dispersed over a broader area south of the project site, reducing the effect of increased vehicle traffic on the roadway network closer to the project site. The operation of the two facilities would not block access to 20th, Illinois, or Cesar Chavez Streets. Impacts would be less than significant.

Construction-related Transportation Impacts. Construction activities associated with the Western Pacific lot would include minimal construction activities, and would primarily include application of organic surfactant to reduce dust, installation of temporary night-lighting stands, and signage. The improvements would occur over a six months to a year.

The 19th Street parking lot would be constructed as part of a separate environmental review and permitting process. Impacts would be less than significant.

Air Quality Impacts. The off-site parking lot refinement does not affect the operational traffic health risk assessment (HRA) as presented in the SEIR. As shown in the Air Quality Appendix Tables 6.1-3 and 6.1-4, a screening level HRA was conservatively performed assuming that each of the trips generated circled a city block, and the highest possible resulting risk from the four roadways was presented. Since the total number of trips generated does not change, this screening level analysis still represents a hypothetical maximum impact.

Noise Impacts. The additional availability of parking at these locations would result in a subtle redistribution of vehicle traffic on the local roadways which could affect the predicted roadway noise impacts. Roadway noise modeling was conducted to evaluate increases in roadside noise levels along local roadways where sensitive receptors exist (see Appendix TR-X). In addition to the six roadway segments that were analyzed for the proposed project, two new roadway segments were analyzed to assess potential impacts to Third Street between 20th Street and 23rd Street and to 20th Street between Illinois Street and 3rd Street, both of which have residential uses adjacent to roadways. Roadside noise level increases at all of the roadway segments would be less than 5 dBA, and therefore, the impact would be less than significant. The severity of the significant and unavoidable noise impact along Illinois Street between Mariposa Street and 20th Street would be marginally decreased with this mitigation measure, but the overall impact (Impact NO-5) would remain significant and unavoidable with mitigation.

In addition, noise modeling was conducted in the cumulative (Year 2040) scenario assuming a basketball game event and a simultaneous Giants Game event at AT&T Park and operation of both the 19th Street lot and the Western Pacific lot, the results of which are presented in Appendix TR-X. There would still be significant and unavoidable noise impacts along Illinois Street and Mariposa Street as was identified in the SEIR even with the off-site parking lot mitigation.

Cultural Resources Impacts. The 19th Street site is located within the Union Iron Works Historic District (Historic District), a maritime industrial district listed on the National Register of Historic Places. The approximately 8,300-square foot Building 40 (former Employment Office Annex) located in the southwest corner of the 19th Street site was determined to be a contributing resource to this Historic District; however it was not hierarchically rated as significant or significant among the 41 buildings in the Historic District. The Port plans to remove Building 40 as a part of the construction phase of the rehabilitation of the 20th Street Historic Buildings in order to permit the future development of a continuous sidewalk on the east side of the Illinois Street frontage. The Port determined, and the Planning Department concurred, that Building 40's removal would not affect the historic significance of the Historic District.[49a,49b] If Building 40 were to remain, it would not affect the capacity (number of spaces) or access points of the proposed

parking lot. At the Western Pacific site, there would be no impacts on historic resources because there would be no demolition or excavation required for construction of the parking lot. While construction of either parking lot would only involve minor grading, there would be the potential to encounter archaeological resources in the shallow soils; but this potentially significant impact would be subject to and reduced to less than significant with implementation of the same mitigation measure as the proposed project.

Hydrology and Water Quality Impacts. At the 19th Street site, construction of the parking lot would need to comply with San Francisco's Stormwater Guidelines, including the installation of stormwater controls to reduce the volume and rate of stormwater runoff from the site by 25 percent; thus, impacts related to constructing new stormwater infrastructure, exceeding the capacity of a stormwater system or providing and additional source of polluted runoff would be less than significant. For this site, the project sponsor would be required to obtain a Construction Site Runoff Control Permit and implement an Erosion and Sediment Control Plan for construction activities, in accordance with the Construction Site Runoff requirements of Article 4.2 of the *San Francisco Public Works Code*, Section 146. The Western Pacific site is located within an area served by a separate storm sewer system. There would be no changes to the surface conditions that would result in a change in stormwater runoff from the site. Construction activities at the Western Pacific site would be required to comply with the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, so construction impacts would also be less than significant.

Flooding and Tsunami Impacts – The 19th Street site is not located within a 100-year flood zone,[49c] therefore there would be no impact related to flooding. The Western Pacific site is partially located within a 100-year flood zone,[49d] but the parking lot project does not include construction of any structures that could be damaged by flood flows or impede flood flows. Both sites are located within a tsunami inundation zone,[49e] but the parking lots would not include the construction of any structures in this zone that could be damaged. Neither site would be permanently inundated with 11-inches of sea level rise by 2050 or with 36-inches of sea level rise by 2100.[49f] Even if flooding were to occur in the future, the parking lots do not include the construction of structures that could be damaged. Further, no people would be put at risk because of the intermittent use of the site. Therefore, impacts related to flooding as a result of sea level rise would be less than significant.

Hazardous Materials Impacts – The 19th Street site is also located within the Pier 70 Master Plan Area and soil may have been contaminated as a result of historic land uses. However, similar to the proposed project, impacts related to exposure to hazardous materials in the soil would be less than significant with implementation of the requirements of the Pier 70 Risk Management Plan.[49g] Impacts related to the potential to encounter naturally-occurring asbestos would be substantially the same or less than that of the proposed project, and the same mitigation measure would apply. The Western Pacific site was a former switchyard for Western Pacific, and the soil and groundwater are contaminated with inorganic and organic chemicals as a result of past activities. The

City and County of San Francisco recorded a deed restriction[49h] on the property in 2002, which reports that a 2000 Human Health and Ecological Risk Assessment (approved by the RWQCB) determined that the chemicals in the soil would not pose a human health risk under most land uses. In addition, construction of the parking lot at this site would not involve any excavation, so workers and the public would not be exposed to hazardous materials or naturally occurring asbestos potentially present in the soil.

Other Impacts. Implementation of these two surface parking lots would result in no impacts on wind/shadow, recreation, utilities, public services, and geology, because none of these resources would be affected. Impacts associated with land use, population/ housing, GHG emissions, biological resources and energy resources would be substantially the same or less than those disclosed for the proposed project and the same mitigation measures would apply.

Overall, as described above, the use of the parking facilities at the 19th Street site (planned by the Port of San Francisco) and Western Pacific site (implemented as part of this mitigation measure) during evening events at the project site would not result in any new or substantially more severe transportation impacts associated with the proposed project related to vehicular traffic, transit, pedestrians, bicycles, emergency vehicle access, or construction-related transportation impacts. Potential impacts on other resources would be less than significant, assuming implementation of the same mitigation measures as those identified for the proposed project. However, as discussed above, even with implementation of the off-site parking facilities included in Mitigation Measure M-TR-11c, the identified traffic impacts in Impact TR-11 would remain *significant and unavoidable with mitigation.*

As with the Impact TR-11, without or with implementation of the off-site parking facilities included in Mitigation Measure M-TR-11c, under 2040 cumulative conditions described in Impact C-TR-2, the proposed project in combination with other past, present, and reasonably foreseeable future projects would result in significant cumulative traffic impacts at 16 intersections in the project vicinity. To further address traffic impacts of the proposed project after implementation of the parking facilities at the 19th Street site and Western Pacific site, Mitigation Measure M-TR-11c is augmented as shown above. With implementation of Mitigation Measure M-TR-11c, cumulative Impact C-TR-2 would remain *significant and unavoidable.*

49a Carey and Company, *Analysis of Proposed Demolitions within the Union Iron Works Historic District at Pier 70*, February 20, 2015.

49b Richard Sucre, Preservation Planner, San Francisco Planning Department, *Historic Resource Evaluation Response Pier 70 BAE Ship Repair*, February 20, 2015.

49c City and County of San Francisco, San Francisco Interim Floodplain Map, East, Final Draft. July, 2008.

49d *Ibid.*

49e California Emergency Management Agency, California Geological Survey, University of Southern California. Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay). June 15, 2009.

49f San Francisco Water, Power, Sewer. Climate Stressors and Impact: Bayside Sea Level Rise Mapping, Final Technical Memorandum. June 2014.

49g Treadwell & Rollo. Pier 70 Risk Management Plan, Pier 70 Master Plan Area, San Francisco, California. July 25, 2013.
49h San Francisco Assessor-Recorder. Covenant and Environmental Restriction on Property (Re: Former Western Pacific Property, City and County of San Francisco. April 30, 2002.

Mitigation Measure M-TR-13 on SEIR **page 5.2-184** was renamed and revised for clarification and corrected to include the appropriate reference to the BART/Muni station, as follows:

> **Mitigation Measure M-TR-13: ~~Additional~~ Enhanced Muni Transit Service during Overlapping Events**
>
> As a mitigation measure to accommodate Muni transit demand to and from the project site and AT&T Park on the T Third light rail line during overlapping evening events, the project sponsor shall work with the ~~Ballpark/Mission Bay Transportation Coordinating Committee to coordinate with the~~ SFMTA to provide ~~additional~~ enhanced shuttle buses between key Market Street locations and the project. Examples of the ~~additional~~ enhanced service include Muni bus shuttles between Union Square and/or Powell Street ~~Montgomery~~ BART/Muni station and the project site. The need for ~~additional~~ enhanced Muni service shall be based on characteristics of the overlapping events (e.g., projected attendance levels, and anticipated start and end times).

Mitigation Measure M-TR-14 on **page 5.2-185** was revised as follows for clarification:

> As a mitigation measure to accommodate transit demand to the East Bay following weekday and weekend evening events, the project sponsor shall work with the Ballpark/Mission Bay Transportation Coordinating Committee to ~~coordinate~~ consult with BART to provide additional service from San Francisco following weekday and weekend evening events. The additional East Bay BART service could be provided by operating longer trains. The need for additional BART service shall be based on characteristics of the overlapping events (e.g., event type, projected attendance levels, and anticipated start and end times).

As discussed in Response TR-3a, in response to a comment, the correct level of attendees at which implementation of the Muni Special Event Transit Service Plan would be implemented was corrected to be 12,500 attendees, and not 14,000 attendees on **page 5.2-191**, beginning of first full paragraph, as follows:

> As described in Section 5.2.5.3, the project sponsor is working with the City to secure funding for the Muni Special Event Transit Service Plan as part of the project improvements, and which would be implemented by the SFMTA during large evening events with more than ~~14,000~~ 12,500 attendees at the project site.

Mitigation Measure M-TR-18 on **pages 5.2-195 to 5.2-196** was revised as follows for clarification (only the portions of the measure with changes are shown, no changes in footnote referenced in this section, so the footnote is not shown):

Performance Standards and Strategies for Achieving Them

[sections not shown]

- Conducting cross-marketing strategies with event center businesses (e.g., ~~10 percent off~~ discount on merchandise/food if patrons arrive by transit and/or bike or on foot).

[sections not shown]

Monitoring and Reporting

The project sponsor shall retain a qualified transportation professional[50] to conduct travel surveys, as outlined below, and to document the results in a *Transportation Demand Management Report*. Prior to beginning the travel survey, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII (or its designated representative, such as the Planning Department's Environmental Review Officer (ERO)) and in consultation with SFMTA. It is anticipated that data collection would occur at least during four days for two different types of events, for a total of eight days annually. Specifically, data collection shall be conducted during at least two weekday and two weekend NBA basketball games with 12,500 or more attendees, and two weekday and two weekend non-basketball events with attendance of 12,500 or more attendees.

[sections not shown]

- Mode of travel to/from event center
  - If by transit, list mode and name of transit operator (AC Transit, BART, Caltrain, Muni, etc.)
  - If by rail or ferry, name of station trip started and ended

[sections not shown]

The *Transportation Demand Management Report(s)* shall be submitted to OCII, or its designee, for review within 30 days of completion of the data collection. If OCII, or its designee, ~~the City~~ finds that the project exceeds the stated mode share performance standard, the project sponsor shall revise the proposed project's Transportation Management Plan (TMP) to incorporate a set of measures that would lower the auto mode share. OCII, or its designee, shall review and approve the revised TMP. For basketball events, the TMP shall be revised by no later than August 15th of the calendar year to ensure adequate lead time to implement TDM measures prior to the start of the following basketball season. For non-basketball events, the proposed project's TMP shall be revised within 90 days of submittal of the *Transportation Demand Management Report* to incorporate a set of measure that would lower the auto mode share.

[sections not shown]

The data collection plan described above may be modified by OCII, or its designee, ~~(or the ERO)~~ in ~~coordination~~ consultation with SFMTA if field observations and/or other

circumstances require data collection at different times and/or for different events than specified above. The modification of the data collection plan, however, shall not change the performance standards set forth in this mitigation measure.

As discussed in Response TR-2a, the following the text on SEIR **page 5.2-202**, second full paragraph, was revised as follows to clarify the impacts that would be anticipated for conditions with overlapping SF Giants games:

Overall, under existing plus project conditions without the Muni Special Event Transit Service Plan, the proposed project would result in *significant* project-specific transit impacts, as follows:

- T Third during the weekday evening, weekday late evening, and Saturday evening peak hours.
- 22 Fillmore during the weekday late evening, and Saturday evening peak hours.

Impacts to the T Third and 22 Fillmore would be in addition to the significant impacts identified for the proposed project with implementation of the Muni Special Event Transit Service Plan in Impact TR-13 for conditions with an overlapping SF Giants evening game.

The impact statement for Impact TR-22 on **page 5.2-203** was revised as follows for clarification:

Impact TR-22: Without implementation of the Muni Special Event Transit Service Plan, the proposed project could result in a substantial overcrowding on public sidewalks, ~~nor~~ create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility on the site and adjoining areas under Existing plus Project conditions. (Less than Significant with Mitigation)

Mitigation Measure M-TR-22 on **pages 5.2-204** to **5.2-206** was revised as follows for clarification (only the portions with changes are shown, no changes in footnote referenced in this section, so the footnote is not shown):

Mitigation Measure M-TR-22: Provide Safe Pedestrian Access to Adjacent Transit and Parking Facilities and Monitoring

[sections not shown]

Other pedestrian management measures that could be implemented include but are not limited to: installation of barricades, proper signage and announcements to disperse patrons to other streets around the project site, such as to Terry A. Francois Boulevard, and cross-marketing incentives such as ~~20 percent discount~~ discounts at the restaurant and retail establishments to extend the peak departure period. Through the implementation of various strategies, the project sponsor shall ensure that pedestrian conflicts with other modes are minimized by separating vehicles, bicycles, transit and pedestrian flows to the greatest extent possible, including ensuring that various modes are adequately instructed about when it is their turn to proceed. The project sponsor shall also ensure that Muni

platforms are not overcrowded by staging event attendees on the adjacent sidewalks until there is sufficient space on the Muni platforms, which are proposed to be expanded as part of the project.

At the intersection of Third/South, the trained personnel shall implement strategies to allow pedestrians to cross the street safely. The strategies could include allowing authorized personnel to manually overrideing the traffic signal and directing pedestrians to cross, erecting temporary pedestrian crossing barriers, allowing use of the closed Third Street as a pedestrian access route, providing a defined passenger waiting area within the closed Third Street, and shielding passengers waiting to board light rail from adjacent pedestrian traffic.

Monitoring and Reporting

The project sponsor shall retain a qualified transportation professional[51] to conduct field observations of pedestrian hazards and safety conditions along Third Street adjacent to the project site, as outlined below, and to document the results in a *Pedestrian Access Report*. City staff shall verify the field data collection results. Prior to beginning field observations, the transportation professional shall develop the data collection methodology in consultation with and approved by OCII, or its designee, ~~(or its designated representative such as the ERO)~~ in coordination with SFMTA. The data collection methodology shall be reviewed and revised annually, if appropriate. Field observations shall be conducted during the following event types and attendance levels:

[sections not shown]

…. The implementation of various measures shall be intensified until pedestrian access to and from the site occurs in a safe manner, as determined by OCII, or its designee ~~(or the ERO)~~.

[sections not shown]

Further, in reviewing the *Pedestrian Access Report,* OCII, or its designee, ~~(or the ERO)~~ may adjust the size of the events for which this measure is applicable. For example, if small scale events (e.g., those with 5,000 attendees) do not result in crosswalk and/or Muni platform overcrowding or other similar pedestrian safety conditions, OCII, or its designee, ~~(or the ERO)~~ may revise this mitigation measure to apply to events of 5,001 or more attendees.

As discussed in Response TR-2a, the following the text on SEIR **page 5.2-210**, first full paragraph, was revised as follows to clarify assumptions for implementation of the Muni Special Event Transit Service Plan:

As described in Section 5.2.5.3 above, future 2040 cumulative traffic, transit and pedestrian forecasts were estimated based on cumulative development and growth identified by the SFCTA SF-CHAMP travel demand model. The 2040 cumulative analysis

for the Basketball Game scenarios include implementation of the Muni Special Event Transit Service Plan.

Impact C-TR-1 on SEIR **page 5.2-211**, third full paragraph, was revised as follows to reflect the potential cumulative impacts associated with the Third Street Bridge Rehabilitation project (footnote referenced in this paragraph not shown because no changes made to the footnote):

> If Caltrain adopts the electrification project and funding remains available, construction of the Peninsula Corridor Electrification Project could start in 2016, and the first electrically-powered trains would be in service by 2020 or 2021.[53] Construction activities would occur primarily within the Caltrain right-of-way to the west of the project site. The Third Street Bridge Rehabilitation project construction activities are scheduled to overlap with proposed project construction activities during a 14-month period, and would include temporary daytime closures of Third Street across Mission Creek. As described in Impact TR-1, proposed project construction truck traffic would primarily be routed to and from the south and west of the project site, and would generally not travel on the Third Street Bridge. Construction trucks would primarily use the I-280 ramps at Mariposa Street and the I-80 ramps at Eighth and Fifth Streets for access to and from the project site, and therefore would not be directly affected by the temporary bridge closures or associated detours.

As discussed in Response 12a, Impact C-TR-2 on SEIR **page 5.2-219**, second and third full paragraphs, were revised as follows to reflect the detailed analysis of off-site parking locations associated with implementation of Mitigation Measure M-TR-11c:

> Generally, to mitigate poor operating conditions of study intersections, additional travel lane capacity would be needed on one or more approaches to the intersection, particularly at intersections with the I-80 ramps. The provision of additional travel lane capacity by narrowing sidewalks, removal of on-street parking, and/or removal of bicycle lanes would generally be infeasible and inconsistent with the transit, bicycle, and pedestrian environment encouraged by the City's *Transit First* Policy by removing space dedicated to pedestrians, and/or bicycles and increasing the distances required for pedestrians to cross streets. Implementation of **Mitigation Measure M-TR-2a: Additional PCOs during Events, Mitigation Measure M-TR-2b: Additional Strategies to Reduce Transportation Impacts, Mitigation Measure M-TR-11a: Additional PCOs During Overlapping Events, Mitigation Measure M-TR-11b: Participation in Ballpark/Mission Bay Transportation Coordinating Committee,** and **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events,** as revised, would reduce the proposed project's contribution to cumulative impacts related to event-related traffic conditions but would not reduce the contribution to less-than-significant levels.
>
> Overall, combined for all analysis peak hours, the proposed project would result in cumulative impacts, or contribute to 2040 cumulative impacts at the following 16 study

intersections: King/Third, King/Fourth, King/Fifth/I-280 ramps, Fifth/Harrison/I-80 westbound off-ramp, Fifth/Bryant/I-80 eastbound on-ramp, Third/Channel, Fourth/Channel, Seventh/Mission Bay Drive, Third/South, Third/16th, Fourth/16th, Owens/16th, Seventh/Mississippi/16th, Illinois/Mariposa, Mariposa/I-280 northbound off-ramp, Third/Cesar Chavez. As noted above, the proposed project would result in project-specific impacts or contribute considerably to cumulative impacts at nine intersections during the weekday p.m. peak hour, and at the eight intersections during the Saturday evening peak hour, and these impacts would be *significant and unavoidable with mitigation.* With implementation of Mitigation Measure M-TR-11c, the proposed project would result in cumulative impacts, or contribute to 2040 cumulative impacts at 16 study intersections; however, significant traffic impacts would not occur at the intersections of Fourth/16th or Mariposa/I-280 northbound off-ramp, and instead would occur at the intersections of Pennsylvania/Cesar Chavez/I-280 northbound off-ramp and Pennsylvania/I-280 southbound off-ramp, and these impacts would be *significant and unavoidable with mitigation.* Thus, under 2040 cumulative conditions, implementation of Mitigation Measure M-TR-11c would not result in a substantial increase in the severity of the proposed project's traffic impacts identified for conditions without this measure.

As discussed in Response TR-14, SEIR **page 5.2-258**, the following text was added following the last paragraph to provide additional relevant regulations governing laser pointers:

Laser products in the United States are regulated under 21 CFR 140, "Performance for Light-Emitting Products." This federal regulation applies to laser products and three uses of lasers: 1) demonstrations, 2) medical, and 3) surveying/alignment.

Title 18 *US Code*, Chapter 2, §39A, "Aiming a Laser Pointer at an Aircraft," was signed into law in February 2012. This federal law makes it a criminal offense to knowingly aim the beam of a laser pointer at an aircraft operating the navigable airspace of the US or at the flight path of an aircraft. This law provides for fines or imprisonment of not more than 5 years, or both. California Penal Code §247.5 makes it a criminal offense to willfully and maliciously discharges a laser at an aircraft, whether in motion or in flight, while occupied.

As a result of project refinements discussed in Section 12.3.1 related to tower cranes, and to augment text to the Draft SEIR related to crawler cranes, SEIR **page 5.2-261**, the description of the information used to conduct the airspace analysis was revised as follows:

Information used to conduct the analysis included:

- aerial photography obtained from the City of San Francisco (DataSF.org)
- the UCSF Benioff Children's Hospital Helipad Layout Plan prepared by Heliplanners, Inc. for UCSF, which depicts the location of the hospital's helipad and its airspace surfaces and elevations
- site plans for the proposed project development, including building heights, provided by the project sponsor

- refined ~~preliminary~~ construction tower crane plan details, including type, size, height, radii, and location of ~~tower~~ cranes, provided by the project sponsor
- construction crawler crane plan details, including type, size, height, radii, and working area, provided by the project sponsor
- ALTA/ACSM Land Title Survey for the project site, prepared by Martin M. Ron Associates, provided by the project sponsor

As a result of project refinements discussed in Section 12.3.1 related to tower cranes and augmented text to the Draft SEIR related to crawler cranes, SEIR **page 5.2-261**, second to last paragraph, last sentence was revised to reflect additional information on the construction crane details:

> In addition, the location and heights of the temporary project construction cranes, as provided by the project sponsor, were separately added to the base map to evaluate and, where appropriate, illustrate the location and approximate elevations of the construction ~~tower~~ cranes in relation to the existing airspace surfaces.

As a result of project refinements discussed in Section 12.3.1 related to tower cranes and augmented text to the Draft SEIR related to crawler cranes, SEIR **page 5.2-261**, footnote 77 was revised to reflect additional information on the construction crane details:

> [77] It should be noted that both the sponsor's proposed site plans and refined~~preliminary~~ construction ~~tower~~ crane plan details are not design level plans, and consequently, reported elevations and effects on airspace are considered approximate.

As a result of project refinements discussed in Section 12.3.1 related to tower cranes, and to augment text to the Draft SEIR related to crawler cranes, SEIR **page 5.2-262**, first full paragraph was revised to reflect additional information on the construction crane details:

> As a conservative approach in evaluating the temporary project construction tower cranes, the varying crane ~~maximum working~~ elevation across each crane's working radius was considered (ground elevation plus ~~crane~~ height of each crane component) ~~within each crane's working radius was assumed~~. This accounts for the fact that the critical tower crane working elevations change from the highest point at the fixed tower crane's vertical mast to the lowest point at the outer end of the tower crane's horizontal jib arm~~some mobility of the cranes during construction~~. These ~~crane maximum~~ critical working elevations were then assessed for each tower crane to determine if they had the potential to penetrate the airspace surfaces associated with the helipad.
>
> For purposes of conservatively assessing potential effects of the construction crawler cranes, given the mobility of the crawler cranes, it was assumed the crawler cranes were within their respective on-site work areas at points closest to the nearest airspace surfaces. Furthermore, it was assumed that crawler cranes would have their jib arms extended to their maximum potential towards the airspace surfaces.

As a result of project refinements discussed in Section 12.3.1 related to tower cranes, and to augment text to the Draft SEIR related to crawler cranes, SEIR Impact TR-9a, on **page 5.2-262**, fourth full paragraph through **5.2-265** was revised to reflect additional information on the construction crane details:

Impact TR-9a: Construction of the proposed project could temporarily obstruct helipad airspace surfaces. (Less than Significant~~-~~with Mitigation)

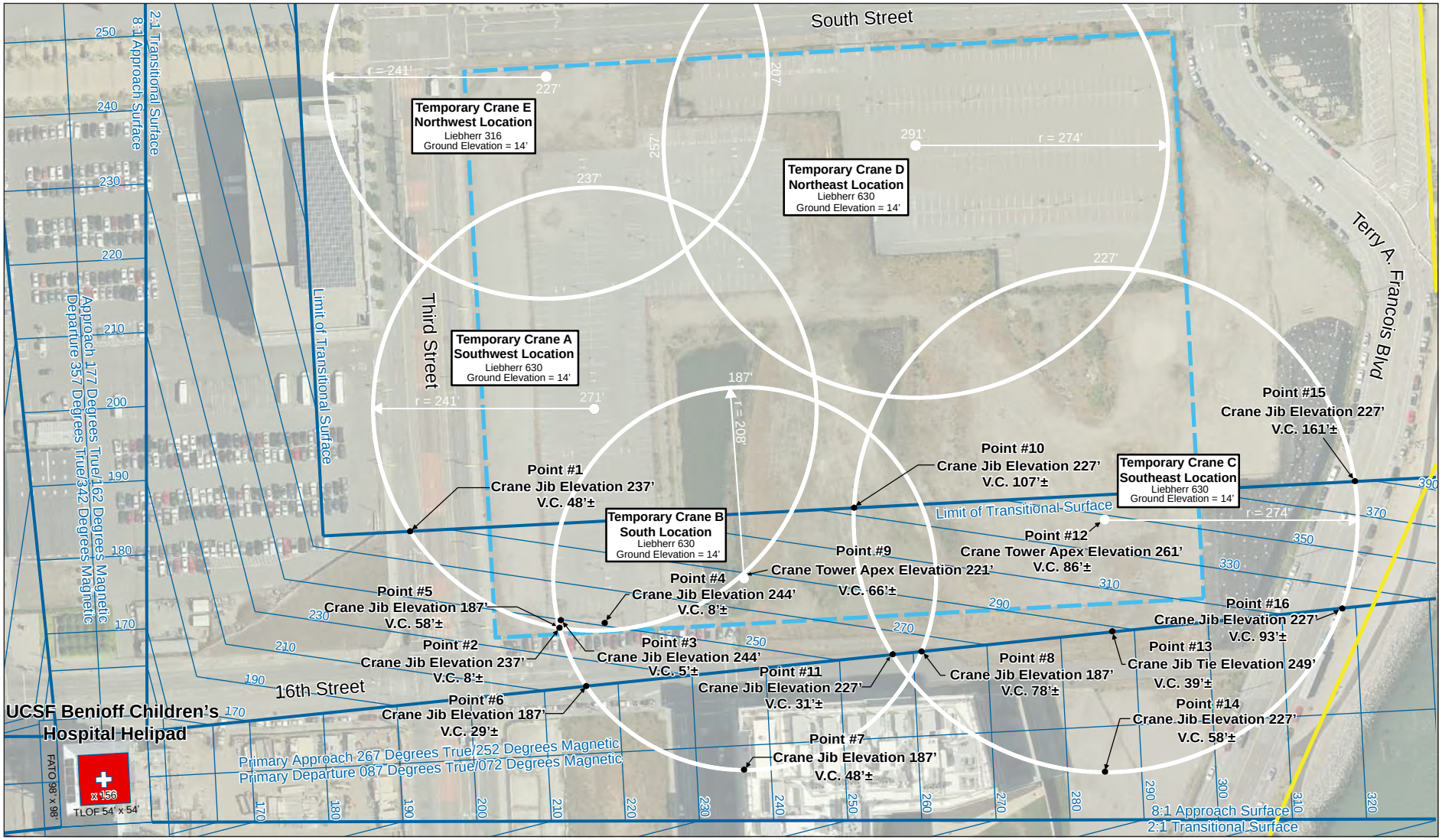
Tower Crane Analysis

As described in detail in Chapter 3, Project Description, construction of the proposed project is anticipated to begin in late 2015 and occur over an approximate 26-month period. Construction activities would include, among other activities, construction of all proposed development, including event center, podium structure, office towers, and plazas. Building erection would require the use of tower cranes, which may be used throughout the construction duration. Tower cranes are comprised of a fixed vertical mast (or tower), a long horizontal jib arm, a shorter horizontal machinery arm, operators cab, and slewing unit (engine).

The ~~preliminary~~ refined project construction plan as proposed by the sponsor anticipates the placement and use of multiple construction cranes on the project site during construction. Four tower cranes are anticipated to be required between months 3 through 5 of construction, and five tower cranes would be used starting in month 6 ~~and used~~ through ~~to~~ approximately ~~to~~ the end of construction ~~period~~. Under the refined tower crane plan, t~~T~~he maximum crane heights would range between 207 and 277~~be either 200 or 240~~ feet agl, depending on the tower crane and its location. **Revised Figure 5.2-28** illustrates the proposed construction tower crane locations, tower crane maximum working elevations (msl) and tower crane working radii.[78] As shown in Revised Figure 5.2-28, the estimated maximum ~~working~~ elevation of the cranes would range from 221 to 291~~be either 214 or 254 feet~~ msl, with a working radii of between 208 and 274 ~~201 and 267~~ horizontal feet, depending on the tower crane and its location.

Using the approach and methodology discussed under *Approach to Analysis* above, the project construction cranes were assessed to determine if they would have the potential to penetrate the Part 77 Approach and Transitional airspace surfaces established for the UCSF helipad. **Revised Figure 5.2-28** shows the UCSF helipad and illustrates its existing airspace surfaces in relation to the proposed refined construction tower crane plan~~construction cranes and their maximum working elevation~~. Based on the information provided and the evaluation of potential obstructions conducted for this study, the following observations can be made:

- As illustrated in Revised Figure 5.2-28, three construction tower cranes ([Southwest Tower Crane (Crane A), South Crane (Crane B), and Southeast Crane (Crane C)] would extend under the helipad's primary Approach and/or the adjacent Transitional Surface. However, no penetrations to the established Part 77 Approach and Transitional surfaces would occur from the construction tower cranes.



SOURCE: Heliplanners, Inc., 2014 (UCSFMC Helipad Features, Airspace Contours, and Elevations); Golden State Warriors, 2015 (Proposed Site Plan, Tower Crane Plan, and Associated Elevations); ALTA/ACSM Land Title Survey, 2014 (Existing Ground Elevations); www.DataSF.org, 2012 (Aerial). Adapted by ESA, 2015.

NOTES: Elevations and airspace contours are expressed in mean feet above sea level (msl).
All elevation values reference NAVD88. All elevations are approximate.
V.C. = Vertical Clearance

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Revised Figure 5.2-28

Refined Project Construction Tower Crane Plan, and UCSF Benioff Children's Hospital Helipad Airspace Surfaces

- The most critical locations for Cranes A, B and C, and associated vertical clearances, are illustrated in Revised Figure 5.2-28 and tabulated in **Table 5.2-73A,** below. The working radii of Crane A would experience a minimum vertical clearance of approximately 5 feet (see Point 3). The working radii of Crane B and Crane C would have minimum vertical clearances of 29 and 32 feet, respectively (see Points No. 6 and 11).

TABLE 5.2-73A
PART 77 AIRSPACE VERTICAL CLEARANCES - PROPOSED CONSTRUCTION TOWER CRANES

Temporary Construction Tower Crane	Crane Evaluation Point	Crane Elevation (feet msl)	Lowest Affected Part 77 Surface	Part 77 Surface Penetration (feet msl)	Vertical Clearance (feet)
Crane A - Southwest	1	237	Transitional Surface	285	48
	2	237	Transitional Surface	245	8
	3	244	Transitional Surface	249	5
	4	244	Transitional Surface	252	8
Crane B – South	5	187	Transitional Surface	245	58
	6	187	Approach Surface	216	29
	7	187	Approach Surface	235	48
	8	187	Approach Surface	265	78
	9	221	Transitional Surface	287	66
Crane C - Southeast	10	227	Transitional Surface	334	107
	11	227	Approach Surface	258	31
	12	261	Transitional Surface	347	86
	13	249	Approach Surface	288	39
	14	227	Approach Surface	285	58
	15	227	Transitional Surface	388	161
	16	227	Approach Surface	320	93

SOURCE: ESA, 2015, Heliplanners, 2014

- None of the project construction tower crane masts would be located under the helipad's Approach Surfaces. However, the masts of Crane B and Crane C, would be located under the helipad's Transitional Surface adjacent to the primary Approach Surface, but with vertical clearances of 65 and 86 feet, respectively.

- As shown in Figure 5.2-26 in the Draft SEIR, one of UCSF's alternative arrival/departure flight paths follows along the alignment of South Street. As shown in Revised Figure 5.2-28, while the working radii of two construction tower cranes on the north side of the site [Northwest Tower Crane (Crane E) and Northeast Tower Crane (Crane D)] would extend over South Street, they are not located under any of the established Part 77 Approach or Transitional Surfaces. However, for purposes of analyzing the potential impact of the construction tower cranes on the use of the South Street alternate flight path, an 8:1 "curved" Approach Surface was assumed along this segment of the alternate flight path and it intercepted the existing northern approach surface for a 90 degree turn[79] at an elevation of approximately 250 feet msl. Under this assumed "curved" Approach Surface scenario, the minimum amount of

clearance over Crane E would be approximately 64 feet and the minimum amount of clearance over Crane D would be approximately 65 feet.

78 Crane "heights" are expressed feet above ground level (agl). "Elevations" in Revised Figure 5.2-28 are expressed in mean feet above sea level (msl) referencing NAVD 88 datum, which is commonly used for airport and heliport drawings and conducting airspace evaluations.

79 Curved approach/departure surfaces have not been established for the helipad. Although FAA criteria for curved approach/departure surfaces would require a wider turn radius, this analysis assumed a tighter turn radius based on the use of existing approach/departure flight paths.

- ~~The working radii of the central-west project construction crane would penetrate the helipad's Transitional Surface adjacent to primary Approach Surface (i.e., the westbound approach from the Bay) by up to approximately 23 feet (see Point No. 2 in Figure 5.2-28). The penetration would occur if this construction crane were to work over the southwest corner of the project site at an elevation of between approximately 232 to 254 feet msl. The potential penetration in this area would be a temporary obstruction to the helipad's Transitional Surface.~~

- ~~The working radii of the two southern project construction cranes would extend under the helipad's primary Approach Surface and adjacent Transitional Surface, with minimum vertical clearances of 5 and 7 feet, respectively (see Points No. 3 and 8 in Figure 5.2-28)~~

- ~~None of project construction crane masts would be located under the helipad's Approach Surfaces. However, the masts of the two southernmost project construction cranes would be located under the helipad's Transitional Surface adjacent to primary Approach Surface, but with vertical clearances of 81 and 91 feet, respectively.~~

- ~~As shown in Figure 5.2-26, one of UCSF's alternative arrival/departure flight paths follows along the alignment of South Street. As shown in Figure 5.2-28, while the working radii of two project construction cranes would extend over South Street, they are not located under any of the Part 77 Approach or Transitional Surfaces. Assuming that an 8:1 "curved" Approach Surface was established along this segment of the alternate flight path and it intercepted the existing northern approach surface for a 90 degree turn[79] at an elevation of approximately 250 feet msl, the minimum amount of clearance over the construction crane in the northwest corner of the project site would be approximately 44 feet; and the minimum amount of clearance over the clearance over the construction crane in the northeast corner of the project site would be approximately 64 feet.~~

Mobile Crawler Crane Analysis

In addition to the proposed use of five tower cranes as discussed above, up to three smaller mobile crawler cranes would also be used on-site during construction over an approximate 12-month period. A crawler crane is a crane mounted on an undercarriage with a set of tracks that provide stability and mobility, and without need for outriggers. The proposed crawler cranes would be equipped with booms and luffer jibs that can be raised and lowered. The sponsor indicates the elevation of the crawler cranes would range from approximately 169 feet msl and 249 feet msl, depending on the height of their lifter arms. The working radii of each crawler crane would range between 70 and 200 horizontal feet,

depending on the height of the lifter arms. Two of the crawler cranes would be located and work within the interior of the proposed event center; the third crawler crane would be located within the area of the proposed Third Street Plaza. As discussed above, given the mobility of these cranes, for purposes of conservatively assessing potential effects of these crawler cranes on the Part 77 Approach or Transitional Surfaces, it was assumed the crawler cranes were located within their respective on-site work areas at points closest to the nearest airspace surfaces. Based on the information provided and the evaluation of potential obstructions conducted for this study, the following observations can be made:

- None of the proposed crawler cranes or their working radii would be located under a Part 77 Approach Surface.

- A portion of the working radius of the crawler cranes that would be located within the interior of the proposed event center would have the potential to extend under the Part 77 Transitional Surface associated with the helipad's primary approach along 16th Street. Under these conditions, at the lowest elevation of the Part 77 Transitional Surface and at the edge of the crane's longest working radius, the crane's lifter arm would have approximately 111 feet of vertical clearance.

- A portion of the working radius of the crawler crane that would work within the area of the proposed Third Street Plaza would have the potential to extend under the Part 77 Transitional Surface associated with the helipad's primary approach along 16th Street, as well as under the Transitional Surface associated with the north Approach Surface. At this location, the crane's lift arm would have a minimum vertical clearance of approximately 76 feet under the 16th Street Transitional Surface, and a minimum vertical clearance of approximately 111 feet under the Third Street Transitional Surface.

- An analysis of the potential impact of the crawler cranes on the use of the South Street alternate flight path was conducted using the same assumed 8:1 "curved" Approach Surface discussed above for the analysis of tower crane impacts. For purposes of conservatively assessing potential effects, it was also assumed the crawler cranes were within their respective on-site work areas at points closest to the assumed Transitional Surface along South Street. Under these conditions, a portion of the working radius of the crawler cranes would have the potential to extend under the assumed Transitional Surface for the South Street alternate flight path. The crane's lift arm would have a minimum vertical clearance approximately113 feet under this assumed Transitional Surface.

Conclusion

In summary, based on the analysis of~~preliminary project construction plan for~~ the project construction cranes, none of the project construction cranes would penetrate~~have the potential to result in a temporary penetration of~~ a Part 77 Transitional Surface associated with the UCSF helipad~~, which would be considered a potentially significant impact~~. Furthermore, adequate clearance for the construction cranes would be provided for the South Street alternate flight path. However, ~~I~~if the preliminary project construction plan details were to change with respect to proposed tower crane size, location, or other factors, then the project would have the potential to result in greater and/or less airspace

penetration effects than those reported above. **Mitigation Measure M-TR-9a**, **Crane Safety Plan for Project Construction**, identifies feasible measures that would reduce potential temporary impacts associated with the use of cranes during the construction period to less than significant. The objective of the crane safety plan is to ensure the safe use of the UCSF Benioff Children's Hospital helipad, and the safety for people residing or working in the project area during construction. Therefore, with implementation of Mitigation Measure M-TR-9a, this impact would be *less than significant with mitigation*.

Mitigation Measure M-TR-9a: Crane Safety Plan for Project Construction

Prior to construction, the project construction contractor shall develop a crane safety plan for the project construction cranes that would be implemented during the construction period. The crane safety plan shall identify appropriate measures to ~~reduce, and where possible,~~ avoid~~,~~ potential conflicts that may be associated with the operation of the project construction cranes in the vicinity of the UCSF Benioff Children's Hospital helipad airspace. These safety protocols shall be developed in consultation ~~and coordination~~ with OCII (or its designated representative) and UCSF, and the crane safety plan shall be subject to approval by OCII or its designated representative. The crane safety plan shall include, but is ~~may~~ not ~~be~~ limited to, the following measures:

- Convey project crane activity schedule to UCSF and OCII
- If other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the project sponsor shall participate in joint consultation ~~coordination~~ with those project sponsors and OCII or its designated representative to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized.
- Use appropriate markings, flags, and/or obstruction lighting on all project construction cranes working in proximity to the helipad's airspace surfaces.
- Light all construction crane structures at night (e.g., towers, arms, and suspension rods) to enhance a pilot's ability to discern the location and height of the cranes.
- Inform crane operators of the location and elevation of the hospital helipad's Part 77 airspace surfaces and the need to avoid ~~minimize~~ penetrations to the surfaces.
- ~~Use construction methods that minimize the duration of Part 77 airspace surface penetrations that may occur.~~
- Issue a Notice to Airmen (NOTAM) to advise pilots in the area of the presence of construction cranes at the project site.

Comparison of Impact TR-9a to Mission Bay FSEIR Impact Analysis

At the time the Mission Bay FSEIR was prepared, no helipad was specifically proposed by UCSF in the Plan area. As such, the Mission Bay FSEIR did not discuss potential construction-related impacts from new development in the Plan area on a helipad.

Addenda to the Mission Bay FSEIR were prepared in 2005 and 2008 that analyzed potential impacts associated with operation of a UCSF helipad (explained further above), however, those addenda also did not address potential construction-related impacts from new development in the Plan area on the helipad operations. However, because project construction impacts to the UCSF helipad airspace discussed in this SEIR would be less than significant with mitigation, the project would result in no new or substantially more severe significant impacts than was previously identified in the Mission Bay FSEIR, as addended.

The text of Mitigation Measure M-TR-9d on **page 5.2-272**, first paragraph, was revised as follows for clarification:

Mitigation Measure M-TR-9d: Event Center Exterior Lighting Plan

The project sponsor shall develop an exterior lighting plan that incorporates measures to ensure specialized exterior lighting systems would not result in a substantial air safety risk and/or create a safety hazard ~~have an undue impact on~~ relating to helipad operations. Feasible measures shall be developed in consultation ~~and coordination~~ with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation, and OCII (or its designated representative), and the exterior lighting plan shall be subject to approval by OCII or its designated representative. Measures may~~shall~~ include, but are not ~~be~~ limited to, the following:

- ~~p~~Prohibit the use of high-intensity lights that are directed towards the UCSF helipad
- ~~p~~Prohibit the use of high-intensity outdoor flashing lights or strobe lights in proximity to the hospital helipad's three approaches
- ~~p~~Prohibit the use of outdoor lasers directed upward, and laser light shows that have not been subject to prior review by OCII in consultation with SFO staff knowledgeable of the effects of lighting on pilots and safe air navigation and, if necessary the FAA
- ~~a~~Avoid outdoor fireworks proximate to flight paths unless (1) the SFFD approves the proposed use of fireworks, and (2) notice of the event is provided to UCSF
- ~~a~~Avoid the use of light configurations similar to those associated with the UCSF helipad landing area, and locate primary outdoor lighted displays and television/lighted screens away from the project property line at 16th Street, South Street, or Third Street, where feasible
- Notify in advance and consult ~~advance notification and coordination of planned special event lighting~~ with OCII and UCSF representatives regarding planned special event lighting
- ~~d~~Develop exterior specialized lighting guidelines and ensure event organizers are informed of the hospital helipad, its approaches, and safety concerns related to outdoor nuisance lighting
- Identify appropriate management policies and procedures to respond to the use of handheld laser pointers by the public on the project site which may pose a hazard to pilots

- Identify appropriate management policies regarding the use of drones on the project site and procedures to respond to aerial drone activity that may pose a hazard to pilots

SEIR Impact C-TR-9, on **page 5.2-273**, last paragraph, second and third sentences were revised as follows for clarification:

> Mitigation Measure M-TR-9a would require that the project's crane safety plan include a measure to convey ~~coordinate~~ the project crane activity schedule to~~with~~ UCSF and OCII. Furthermore, Mitigation Measure M-TR-9a would require that if other projects on adjacent properties are under construction concurrent with the proposed project and are using tower cranes, the sponsor would participate in joint consultation~~coordination~~ with those project sponsors and OCII to ensure any potential cumulative construction crane effects on the UCSF helipad would be minimized.

Section 5.3 Noise and Vibration

Table 5.3-5 and the text following, on page **5.3-17** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

TABLE 5.3-5, REVISED
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level (dBA, Lmax at 50 feet)
Dump Truck	76
Air Compressor	78
Street Sweeper	82
Excavator	81
Scraper	84
Loader	79
Tractor/Dozer	82
Dewatering Generator ~~Rapid Impact Compactor~~[a]	75 ~~90~~
Auger Drill Rig	84
Crane, Mobile	81
Forklift[b]	84
Concrete saw	90
Grout-mixing Plant (pump)	81
Grandall Forklift	83
Concrete Mixer	79

NOTES:

[a] ~~From Dietmar, et.al., Rapid Impact Compactor – An Innovative Dynamic Compaction Device for Soil Improvement, 2007.~~

[b~~a~~] From Ventura County Construction Noise Threshold Criteria and Control Plan, 2010.

SOURCE: Federal Highway Administration, *Roadway Construction Noise Model User Guide*, 2006.

100 feet) to 8:00 a.m. to 5:00 p.m., Monday through Friday. As long as project construction activities comply with the noise ordinance, construction noise impacts from non-impact equipment would be considered less than significant. If construction activities using non-impact equipment would exceed these standards and the restrictions of the Mission Bay Good Neighbor Policy, then the noise effects would be potentially significant and mitigation measures would be required. ~~The San Francisco Noise Ordinance does not identify any quantitative noise limit standard for impact equipment. To assess the potential impacts related to rapid impact compaction, this analysis employs the general construction noise assessment methodology and criteria suggested by the Federal Transit Administration (FTA).[16] This guidance identifies a 1-hour L_{eq} of 90 dBA for daytime and 80 dBA for nighttime construction noise exposure at residential uses. Commercial and industrial land use exposure to construction noise of 100 dBA is suggested as an assessment criterion.~~

~~[16] U.S. Department of Transportation, Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.~~

Impact NO-1 on SEIR **page 5.3-20** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

Other Construction Activities. ~~Soil stabilization of the project site would involve rapid impact compaction. Rapid impact compaction is a ground improvement technique that densifies shallow, loose granular soils, using a hydraulic hammer which repeatedly strikes an impact plate. The energy is transferred to the underlying loose granular soils and rearranges the particles into a denser configuration. The impact locations are typically located on a grid pattern, the spacing of which is determined by the subsurface conditions and foundation loading and geometry.~~

Other construction activities such as general building construction would be less noise intrusive, involving cranes, forklifts saws, and nail guns. Trucks would be used to off-haul demolition wastes, which would also marginally increase hourly noise levels on Third Street, Mariposa Street, and Caesar Chavez Street.

Impact NO-1, including Table 5.3-7, on SEIR **page 5.3-21** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

TABLE 5.3-7, REVISED
NOISE LEVELS FROM CONSTRUCTION ACTIVITIES AT SENSITIVE RECEPTORS IN THE PROJECT AREA

Location	Noise Levels in dBA (Hourly Leq)						
	Existing Leq	Mass Excavation	~~Compaction~~ Dewatering	Pug Mill	Pile Installation	Shoring	Building Construction
1. Madrone Mission Bay Residential Towers Nearby residential receptor 800 feet north of project site	70.1	63.8	~~64.0~~51.2	49.2	67.7	61.6	66.0
2. UCSF Mission Bay Housing (Hearst Tower) Nearby residential receptor 200 feet from the project site	71.2	75.9	~~75.7~~63.2	61.2	79.8	73.6	78.0
3. UCSF Hospital Nearby receptor 560 feet from the project site	67.0	66.9	~~66.8~~54.3	52.3	70.8	64.6	69.1

NOTE: See Figure 5.3-1 for noise measurement locations. L_{eq} represents the constant sound level

SOURCE: Environmental Science Associates, 2015.

~~**Rapid Impact Compaction.** Construction of the proposed project would involve use of rapid impact compaction to stabilize soils on the project site. Up to three tractors with compactor attached could operate at a given time over a 3-month period. Using an estimated noise level of 90 dBA,[21] a mounted impact hammer (which is also rated at 90 dBA) was used as a proxy in the Roadway Noise Construction Model to estimate noise levels from simultaneous operation of the compactors. As can be seen from the Table 5.3-7, the contribution of compaction noise at residential receptors and the hospital would be less than 10 dBA over existing levels. Actual noise levels would likely be up to 10 dBA less than indicated in the table, as compaction would occur within an excavation pit and surrounding earth walls would provide additional attenuation of compaction noise, particularly at the western site perimeter where excavation would be deepest. Predicted noise levels from impact compaction would also be less than 80 dBA at any residential receptor and less than 100 dBA at any commercial receptor, which are thresholds suggested by FTA guidance and applied here for impact equipment (since they are not subject to the noise limit restrictions of the San Francisco construction noise ordinance).~~

~~[21] Dietmar, et.al., *Rapid Impact Compactor – An Innovative Dynamic Compaction Device for Soil Improvement*, June 2007.~~

Impact NO-1 on SEIR **page 5.3-22**, fourth full paragraph, was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

Cumulative Project Construction Noise. The construction schedule indicates that excavation, ~~compaction,~~ dewatering, pug mill operation, pile installation, and shoring activities could take place concurrently during two months of the construction schedule. This would represent the worst case scenario in terms of cumulative construction noise from the project.

The following text was added to Impact NO-1 on SEIR **page 5.3-22** at the end of the page to address construction noise from the extension of the Muni light rail platform:

The proposed project also includes extension of the existing northbound Muni light rail platform and associated track work within the median of Third Street north and south of South Street. Construction activities would require temporary travel lane closure of one of the two northbound lanes on Third Street. Consequently work would be scheduled on weekends when impacts on light rail service would be less than during the weekdays and consequently would not occur simultaneously with construction activities for the arena or office towers. Assuming use of a backhoe, jack hammer and truck crane, construction activities for the extension would generate noise levels of 79.4 dBA, Leq at the nearest receptor (Hearst Tower), 75 feet away, which would result in a less than 10 dBA increase over existing ambient noise levels of 71.2 dBA, Leq. Construction noise impacts of the northbound Muni light rail platform extension would be *less than significant*.

Table 5.3-8 on SEIR **page 5.3-23** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods and the addition of pug mill operations and dewatering generator operation:

TABLE 5.3-8, REVISED
CUMULATIVE WORST CASE NOISE LEVELS FROM CONSTRUCTION ACTIVITIES AT SENSITIVE RECEPTORS IN THE PROJECT AREA

Location	Noise Levels in dBA (Hourly L_{eq})	
	Existing Leq	Concurrent Excavation, Dewatering, Pug Mill Operation, ~~Compaction,~~ Pile Installation and Shoring Activities
1. Madrone Mission Bay Residential Towers Nearby residential receptor 800 feet north of project site	70.1	~~70.9~~69.9
2. UCSF Mission Bay Housing (Hearst Tower) Nearby residential receptor 200 feet from the project site	71.2	~~80.8~~80.5
3. UCSF Hospital Nearby receptor 560 feet from the project site	67.0	~~72.8~~72.2

NOTE: See Figure 5.3-1 for noise measurement locations. L_{eq} represents the constant sound level

SOURCE: Environmental Science Associates, 2015.

Impact NO-3 on SEIR **page 5.3-24** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

Impact NO-3: Construction of the proposed project would not expose people and structures to or generate excessive groundborne vibration levels. (Less than Significant)

~~Groundborne vibration from construction activities that involve impact activities, primarily rapid impact compaction, could produce detectable vibration at nearby sensitive buildings and sensitive receptors unless proper precaution is followed.~~

Impact NO-3 on SEIR **pp 5.3-25 to 5.3-26** was revised as follows to reflect the removal of rapid impact compaction from the proposed construction methods:

Building Damage

Standard (non-impact) construction equipment proposed, such as bulldozers and drill rigs, generate much more modest vibration levels on the order of 0.089 inches per second at 25 feet, which would be further reduced to 0.01 inches per second at the nearest structure, approximately 100 feet away, and would be well below thresholds commonly applied by Caltrans and FTA for assessing the potential for building damage. Consequently, proposed project construction would have a *less than significant* vibration related impact with respect to building damage

~~Rapid impact compaction activities are proposed during the first two to three months of construction. The magnitude of vibration caused by rapid impact compaction is a function of distance from the receptor or structure of concern and the nature of surrounding soils. Groundborne vibration from activities that involve impact tools could produce significant vibration. A recent study of vibration induced by rapid impact compaction indicates that compliance with a safe level of vibration with respect to building damage can be achieved provided that the activity occur no closer than 10 meters (33 feet) from a structure.[23] The nearest structure north, across South Street, and to the south, across 16th Street would be located farther than 75 feet away, while the nearest structure to the west would be over 100 feet away. Consequently, proposed compaction activities would result in *less than significant* vibration impacts with respect to building damage.~~

Human Annoyance

Vibration levels can also result in interference or annoyance impacts at residences or other land uses where people sleep, such as hotels and hospitals. Vibration impact criteria published by Caltrans relative to these land uses are stated in terms of PPV, in inches per second. For adverse human reaction, this analysis applies the "strongly perceptible" threshold of 0.1 inches per second PPV.[24]

The closest residence would be the UCSF Mission Bay Housing (Hearst Tower), approximately 200 feet from the project site while the nearest hospital would be approximately 560 feet away. The standard construction equipment proposed, such as

bulldozers and drill rigs, generate much more modest vibration levels on the order of 0.089 inches per second at 25 feet, which would be further reduced to 0.01 inches per second at the nearest structure, approximately 100 feet away, and would not be perceptible, based on Caltrans criteria.[24a]

~~A recent study of vibration induced by rapid impact compaction indicated that at a distance of 30 meters (100 feet), cumulative vibration energy results in maximum vibration level of 2.3 millimeters per second (0.09 inches per second).[25] Because sensitive land uses would be more than 100 feet away, worst-case cumulative vibration levels generated by rapid impact compaction would be below the strongly perceptible threshold.~~ Therefore, due to the distance of receptors from the project site, construction-related impacts from vibration with respect to human annoyance would be *less than significant*.

Vibration-Sensitive Equipment

Land uses with operations that could be considered to have high sensitivity to vibrations include vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration depends on the specific equipment that would be affected by the vibration as well as on the design of the specific building in which the equipment is located. Equipment such as electron microscopes and high resolution lithographic equipment can be very sensitive to vibration, and even normal optical microscopes can sometimes be difficult to use when vibration is well below the human annoyance level. Vibration levels at the UCSF hospital from the standard construction equipment proposed, approximately 560 feet away, would be reduced to below 50 VdB (0.0015 inches per second) which is below typical background vibration levels for a urban area[25a] and would not be expected to interfere with vibration-sensitive equipment, were it considered to be an environmental impact.

~~Existing medical or research uses adjacent to the project site that contain vibration-sensitive equipment could experience vibration levels during construction that exceed 0.008 inches per second (65 VdB) and potentially disturb the operation of sensitive medical equipment. As discussed in the 1998 FSEIR, construction vibration effects on sensitive equipment would be a concern for users of research buildings and could be an inconvenience. However, these users are not considered sensitive receptors, and therefore, construction vibration effects are not considered a significant environmental effect under CEQA. Nevertheless, human annoyance associated with the temporary increases in noise levels during construction could be reduced with implementation of **Improvement Measure I-NO-2**, Neighbor Notification of Vibration-Inducing Construction Operations.~~

Summary of Impact NO-3

~~Rapid impact compaction during c~~Construction at the project site would not result in excessive vibration levels that would result in structural damage or human annoyance at nearby structures or at residential or hospital receptors, ~~. All other construction activity would generate lesser vibration levels~~ and project construction vibration-related impacts would be *less than significant*. ~~However, implementation of Improvement Measure I-NO-3,~~

~~Neighbor Notification of Vibration-Inducing Construction Operations, could reduce the temporary human annoyance associated with land uses involving vibration-sensitive equipment during construction.~~

~~**Mitigation:** Not required.~~

~~**Improvement Measure I-NO-3: Neighbor Notification of Vibration-Inducing Construction Activities**~~

~~At least one week prior to the start of rapid impact compaction activities, the project sponsor shall notify owners and occupants within 500 feet of the project site of the dates, hours, and expected duration of such activities.~~

~~[23] Lauzon, Marc et.al., *Ground Vibrations Induced by Dynamic compaction and Rapid Impact Compaction*; submittal to the 2011 CGS Geotechnical Conference, 2011.~~

[24] Caltrans, *Transportation and Construction Vibration Guidance Manual*, September 2013.

[24a] Caltrans, Transportation and Construction Vibration Guidance Manual, September 2013, Page 21.

~~[25] Lauzon, Marc et.al., *Ground Vibrations Induced by Dynamic compaction and Rapid Impact Compaction*; submittal to the 2011 CGS Geotechnical Conference, 2011.~~

[25a] U.S. Department of Transportation, Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006 pg. 7-5.

Impact NO-4 on SEIR **pp. 5.3-27 to 5.3-28** was revised as follows to reflect the relocation of the emergency standby generators (footnote referenced in this paragraph not shown because no changes made to the footnote):

Stationary Noise Sources – Generators and Mechanical Equipment

The project anticipates installing on-site generators capable of providing up to three megawatts (MW) of emergency, standby and optional power to the event center in the case of temporary loss of normal utility power.[26] In addition, each office and retail building would have an on-site generator capable of approximately 0.75 MW, and the proposed food hall would have a generator capable of approximately 0.5 MW, to provide fire and life safety emergency power in the case of temporary loss of normal utility power to those uses.

Section 2909 of the City's Police Code establishes a not-to-exceed noise standard for fixed sources of noise, such as building mechanical equipment and industrial or commercial processing machinery. Unlike the state building code (Title 24) standard, which is applicable to interior living space only, the standards in Section 2909(a), (b), and (c) are applicable outdoors, at the property line of the affected use, and the standards vary based on the residential or commercial nature of the noise generator's use. The limits for noise generated by commercial and industrial properties such as the proposed project provide that no person shall produce or allow to be produced a noise level more than 8 dBA above the local ambient level at the property plane.

As is common for noise standards, the permitted noise level for fixed residential interior noise limits identified in Section 2909(d) is lower at night than during the day. For example,

maximum noise levels at any sleeping or living room in any dwelling unit located on residential property must not exceed 45 dBA between 10:00 p.m. and 7:00 a.m., and 50 dBA between 7:00 a.m. and 10:00 p.m.

~~Under the proposed project, all emergency generators would be located within the parking structure on Lower Parking Level 1 and would be enclosed within dedicated rooms inside the lower level parking garage. Consequently, engine noise from generator testing is not expected to generate audible noise at receptors located outside of the event center and office structures. With the exception of emergency conditions during which these sources would be exempt from restrictions of the Noise Ordinance, all of these generators would be tested approximately once a week for less than one hour for maintenance purposes.~~

The majority of the mechanical equipment would be located on the rooftops of each office building tower. All mechanical equipment would be either fully screened or located within a fully enclosed penthouse room enclosure. At the lower levels for the office buildings, mechanical equipment would be located within fully enclosed equipment rooms. For the event center, all mechanical equipment would be located indoors within fully enclosed equipment rooms located on various levels of the building. The only mechanical equipment on the roof would be the cooling tower, which would be fully screened on all four sides. Consequently, all proposed mechanical equipment would be screened and located sufficiently distant from receptors to be operated within the restrictions of the noise ordinance.

~~Under the proposed project, the generators would be located in a subgrade parking garage at a distance of approximately 300 feet from the nearest existing residential land use and are not expected to increase ambient noise levels because of their protected, subgrade location. Thus, maintenance operations of the backup generators and other mechanical equipment would not result in noise levels in excess of standards established in the *San Francisco General Plan* or San Francisco Noise Ordinance, and the operational noise impacts from generators and other mechanical equipment would be *less than significant*.~~

The two generators (1.5 MW) supporting the event center would be the largest of the emergency standby generators and would generate the highest sound levels. The sources of noise associated with generator operations include fan and engine noise emanating from the air discharge vent as well as generator engine block noise emanating from the air intake screen and finally exhaust noise. The two 1.5 MW Tier 4 event center generators would be equipped with critical grade exhaust silencers and low pressure loss silencers at the intake and exhaust vents. Available data indicate[26a] that the combination of low-pressure loss silencers on intake air and exhaust air and the industrial grade silencer at the exhaust port can achieve a reduction to 76 dBA at 50 feet.

The nearest sensitive receptor to the event center generators that would vent on the south side of the event center would be the UCSF hospital located approximately 650 feet to the southwest of the event center generator locations. At this distance, the noise-controlled generators at the event center would result in a daytime noise level from vents and exhaust

of 54 dBA or 57 dBA, if both generators were tested simultaneously. This would be less than 8 dBA above the existing monitored daytime background noise level of 61 dBA (L_{90}). Consequently, operational noise impacts from these generators would be *less than significant*.

Also on the south side of the event center, the generator for the south office tower would be approximately 600 feet from the UCSF Hospital. This proposed south office tower generator would be 750 kilowatts, which typically generates a noise level on the order of 91 dBA at 23 feet which would attenuate to 63 dBA at UCSF Hospital; this would be less than 8 dBA above the existing monitored daytime background noise level of 61 dBA (L_{90}).

On the north side of the arena, the generator for the north office tower would be approximately 380 feet from the UCSF Hearst Tower housing building. This proposed north office tower generator would be 750 kilowatts, which typically generates a noise level on the order of 91 dBA at 23 feet. This noise level would attenuate to 67 dBA at UCSF Hearst Tower housing building; this would be less than 8 dBA above the existing monitored daytime background noise level of 61 dBA (L_{90}). The proposed market hall generator would be 500 kilowatts, which typically generates a noise level on the order of 88 dBA at 23 feet which would attenuate to 58 dBA at UCSF Hearst Tower housing building, approximately 700 feet away; this would be less than 8 dBA above the existing monitored daytime background noise level of 61 dBA (L_{90}).

[26a] American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Technical Committee 2.6 Sound and Vibration, Generator Noise Control, An Overview. 2008 presentation.

Mitigation Measure M-NO-4b on SEIR **page 5.3-41**, third and fourth bullets, were revised as follows for clarification:

- There shall be no noise audible outside the establishment during the daytime or nighttime hours that violates the San Francisco Municipal Code Section 49 or 2900 et. seq. Further, ~~absolutely~~ no sound from the establishment shall be audible inside any surrounding residences or businesses that violates San Francisco Police Code section 2900 et. seq.

- Permit holder shall take all reasonable measures to ~~i~~ensure the sidewalks adjacent to the premises are not blocked or unnecessarily affected by patrons or employees due to the operations of the premises and shall provide security whenever patrons gather outdoors.

Mitigation Measure M-C-NO-1 on SEIR **page 5.3-31**, next to last bullet, was revised as follows for clarification:

- Construction-related vehicles and equipment shall be required to use designated truck routes to travel to and from the project sites as determined ~~with~~in consultation with the SFMTA as part of the permit process prior to construction (see **Improvement Measure I-TR-1**: **Construction Management Plan and Public Updates)**.

Section 5.4 Air Quality

As discussed in Response NOI-1, the 300 distance presented in the Air Quality Section in Table 5.4-5, incorrectly presented the distance between the project site and the energy center adjacent to the hospital. A text revision to Table 5.4-5 on **page 5.4-17** was made as follows to correct this error (table title and table headings added here to provide context):

TABLE 5.4-5, REVISED
SENSITIVE RECEPTORS IN THE PROJECT SITE VICINITY

Receptor Type	Distance and Direction from the Project Site
Residential: UCSF Mission Bay Housing (Hearst Tower), Block 22	200 feet northwest
Residential: Madrone Mission Bay Residential Towers	800 feet to the north, on Mission Bay Boulevard North
Hospital: UCSF Benioff Children's Hospital facility at Mission Bay, plus the UCSF Betty Irene Moore Women's Hospital and the UCSF Bakar Cancer Hospital	~~300~~560 feet southwest

SOURCE: Environmental Science Associates, 2015

Table 5.4-7, Average Daily Construction-Related Emissions, **page 5.4-31**, was revised as follows to reflect the use of on-site soil treatment, additional dewatering pump generators, extension of the Muni platform, and removal of rapid impact compaction:

TABLE 5.4-7, REVISED
AVERAGE DAILY CONSTRUCTION-RELATED EMISSIONS

	Average Daily Construction Emissions (pounds/day)			
	ROG	**NOx**	**PM10**	**PM2.5**
Off-road Equipment Emissions	13	~~175~~ 185	7.1	7.1
Truck and Vehicle emissions	7.4	51	0.84	0.77
Architectural Coating Emissions	39	0	0	0
Total[a]	~~59~~ 60	~~226~~ 236	~~8.0~~ 7.9	7.9
Significance Threshold	54	54	82	54
Above Threshold?	**Yes**	**Yes**	No	No

NOTES:

[a] The total emissions may not sum precisely due to rounding of subtotals. The Project Sponsor has committed to Tier 4 engines for all construction generators used during construction, so those emissions are presented for the Uncontrolled and both mitigated scenarios. The Muni construction requires Tier 2 + NOx VDECS, so those emissions are presented for the Uncontrolled scenario.

SOURCE: Ramboll Environ, 2015

Table 5.4-8, Mitigated Average Daily Construction-related Emissions, **page 5.4-33**, was revised as follows to reflect the use of on-site soil treatment, additional dewatering pump generators, extension of the Muni platform, and removal of rapid impact compaction:

TABLE 5.4-8, REVISED
MITIGATED AVERAGE DAILY CONSTRUCTION-RELATED EMISSIONS

	Average Daily Construction Emissions (pounds/day)			
	ROG	**NOx**	**PM10**	**PM2.5**
With Tier 2 + Nox VDECS Off-road Equipment (minimum compliance for Nox)				
Off-road Equipment Emissions	~~0.52~~ 0.97	~~93~~ 104	0.62	0.62
Truck and Vehicle Emissions	7.4	51	0.84	~~0.8~~ 0.77
Architectural Coating Emissions	39	0	0	0
Total[a]	**47**	**~~144~~ 155**	**~~1.4~~ 1.5**	**1.4**
Significance Threshold	54	54	82	54
Above Threshold?	No	**Yes**	No	No
With Tier 4 Off-road Equipment (maximum compliance for NOx)				
Off-road Equipment Emissions	~~2.5~~ 2.9	~~22~~ 32	0.40	0.40
Truck and Vehicle Emissions	7.4	51	0.8.4	~~0.8~~ 0.77
Architectural Coating Emissions	39	0	0	0
Total[a]	**49**	**~~73~~ 83**	**1.2**	**~~1.1~~ 1.2**
Significance Threshold	54	54	82	54
Above Threshold?	No	**Yes**	No	No

NOTES:

[a] The total emissions may not sum precisely due to rounding of subtotals. The Project Sponsor has committed to Tier 4 engines for all construction generators used during construction, so those emissions are presented for the Uncontrolled and both mitigated scenarios.

SOURCE: Ramboll Environ, 2015

As discussed in Response AQ-6d, Mitigation Measure M-AQ-1: Construction Emissions Minimization, on **pages 5.4-35** to **5.4-36** was revised as follows in response to a comment suggesting use of renewable diesel and to correct minor errors (only portions of measure with corrections are shown, see corrections to Table 1-2 in Chapter 1 for the full measure):

1. All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

    a) Where access to alternative sources of power are reasonably available, portable diesel engines shall be prohibited. Where portable diesel engines are required because alternative sources of power are not reasonably available, the diesel engine shall meet the equipment compliance step-down schedule in **Table M-AQ-1-1**

[sections not shown]

4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but are not limited to: equipment type, equipment manufacturer, equipment identification

number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, CARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used. Renewable diesel shall be considered as an alternative fuel if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential. The plan shall also include estimates of ROG and NOx emissions.

5. The project sponsor shall keep the Plan available for public review on site during working hours. The project sponsor shall post at the perimeter of the project site a legible and visible sign summarizing the requirements of the Plan. The sign shall also state that the public may ask to inspect the Plan at any time during working hours, and shall explain how to request inspection of the Plan. Signs shall be posted on all sides of the construction site that face a public right-of-way. The project sponsor shall provide copies of the Plan to members of the public as requested.

SEIR text **page 5.4-41**, middle of the first full paragraph, was revised as follows to correct an error:

> … Based on the current Carl Moyer cost effectiveness criteria and a 5 percent administrative fee, payment of ~~$321,646~~ $321,836 to the Strategic Incentives Division of the BAAQMD to…..

As discussed in Responses AQ-6c and AQ-6f, the following SEIR text on **page 5.4-42** was revised as follows to provide clarification and in response to a comment regarding alternative diesel fuel:

> **Mitigation Measure M-AQ-2a: Reduce Operational Emissions**
>
> The project sponsor shall implement the following measures ~~as feasible~~:
>
> - Provision of outlets for electrically powered landscape equipment
> - Use of renewable diesel to power back-up diesel generators if it can be demonstrated to OCII or the City's air quality specialists that it is compatible with tiered engines and that emissions of ROG and NOx from transport of fuel to the project site will not offset its NOx reduction potential.
> - **Mitigation Measure M-TR-2e~~b~~: Additional Strategies to Reduce Transportation Impacts** (see Section 5.2, Transportation and Circulation, Impact TR-2)
> - **Mitigation Measure M-TR-11c: Additional Strategies to Reduce Transportation Impacts of Overlapping Events** (see Section 5.2, Transportation and Circulation, Impact TR-11)

As discussed in Response AQ-7, text changes were made to Mitigation Measure M-AQ-2b on **pp. 5.4-42 to 5.4-43** so as to allow the direct implementation of a program as opposed to providing funding for third-party implementation and in response to a comment concerning oversight of the project sponsor in the ultimate determination of the quantity of offsets to be procured. In addition

the measure is revised to ensure that on-road trucking emissions are recalculated based on actual disposal locations. Mitigation Measure M-AQ-2b was revised as follows:

Mitigation Measure M-AQ-2b: Emission Offsets

Upon completion of construction, and prior to issuance of certificate of occupancy, the project sponsor, with the oversight of OCII or its designated representative, shall either:

1. ~~p~~Pay a mitigation offset fee to the Bay Area Air Quality Management District's (BAAQMD) Strategic Incentives Division in an amount not to exceed $18,030 per weighted ton per year of ozone precursors per year requiring emissions offsets plus a 5 percent administrative fee to fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin (SFBAAB). This fee is intended to fund emissions reduction projects to achieve reductions of 17~~.0~~ tons ~~per year~~ of ozone precursors per year, the estimated tonnage of operational and construction-related emissions offsets required. Documentation of payment shall be provided to OCII or its designated representative.

   The project sponsor shall provide calculat~~i~~ons to the satisfaction of OCII or its designated representative of the final amount of emissions ~~offset required~~ from construction activities based on the reporting requirements of Mitigation Measure M-AQ-1, which shall consider the final destination of off-hauled soil and construction waste materials by on-road trucks, contributions from Electrical Power Distribution System Expansion, and the degree of compliance with off-road equipment engine types that were ~~determined to be~~ commercially available. If the calculated construction emissions of ozone precursors ~~requires~~require offsets in excess of 17~~.0~~ tons per year, then the applicant shall provide the additional offset amount commensurate with the calculated ozone precursor emissions exceeding 17~~.0~~ tons per year.

   Acceptance of this fee by the BAAQMD shall serve as an acknowledgment and commitment by the BAAQMD to: (1) implement an emissions reduction project(s) within one year of receipt of the mitigation fee to achieve the emission reduction objectives specified above; and (2) provide documentation to OCII or its designated representative and to the project sponsor describing the project(s) funded by the mitigation fee, including the amount of emissions of ROG and NOx reduced (tons per year) within the SFBAAB from the emissions reduction project(s). If there is any remaining unspent portion of the mitigation offset fee following implementation of the emission reduction project(s), the project sponsor shall be entitled to a refund in that amount from the BAAQMD. To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements~~.~~; or

2. Directly implement a specific offset program to achieve reductions of 17 tons per year of ozone precursors (or greater as described in item 1 above). To qualify under this mitigation measure, the specific emissions retrofit project must result in emission reductions within the SFBAAB that would not otherwise be achieved through compliance with existing regulatory requirements. Prior to implementation of the offset project, the project sponsor must obtain OCII's approval of the proposed offset

project by providing documentation of the estimated amount of emissions of ROG and NOx to be reduced (tons per year) within the SFBAAB from the emissions reduction project(s). The project sponsor shall notify OCII within six months of completion of the offset project for OCII verification.

Impact AQ-3, on **page 5.4-43,** was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

Impact AQ-3: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, ~~and could~~ but would not expose sensitive receptors to substantial air pollutant concentrations. (Less than Significant ~~with Mitigation)~~

Impact AQ-3, on **page 5.4-45,** second and third full paragraphs, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

Operational TAC Emissions

The sources of TAC emissions that would occur during the operational phase of the project include emissions from mobile sources (passenger vehicles and delivery vehicles) and five stationary sources (diesel generators). Mobile source air toxics are compounds emitted from highway vehicles, which are known or suspected to cause cancer or other serious health and environmental effects. Examples of mobile source air toxics include benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, polycyclic organic matter (POM), naphthalene, and diesel particulate matter.

Under the project, the five proposed diesel back-up generators would all be located above grade. ~~within the parking structure on Lower Parking Level 1. Diesel generators, if larger than 50 horsepower, must obtain a permit from the BAAQMD and comply with the Air Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines. As a practical matter, the BAAQMD will not issue a permit for a new generator that results in an operational cancer risk greater than 10 in one million.~~ The proposed Tier 4 generators for the event center would be installed in the southwest portion of the site on the Mezzanine Level at approximately 87 feet above ground level (agl). The proposed generators for the 16th Street office and retail building, and the food hall, would be located in the southwest and northeast locations of the site, respectively, but would be located in the at-grade Ground Level/Upper Parking Level. The generator for the South Street office and retail building would be located in the north location of the site but would be located at the Plaza Level at approximately 10 feet agl.

Impact AQ-3, on **page 5.4-46,** third full paragraph, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

> To evaluate TAC and $PM_{2.5}$ impacts from operational sources, a screening level assessment was conducted. Emissions from the proposed emergency generators were assumed to comply with BAAQMD permitting requirements. The permitting process under BAAQMD Regulation 2, Rule 5 requires a Health Risk Screening Analysis, the results of which are posted on the District's website. Per its Policy and Procedure Manual, the BAAQMD requires implementation of Best Available Control Technology for Toxics and would deny an *Authority to Construct* or a *Permit to Operate* for any new or modified source of TACs that exceeds a cancer risk of 10 in one million. ~~As a worst case analysis, it was conservatively assumed the two generators each associated with the retail and office buildings, respectively, could potentially be permitted by a separate entity than the permit held by the arena operator and that therefore three separate permits could be required, each allowing an increased cancer risk of up to 10 in one million. Therefore, it was conservatively assumed that increased cancer risk associated with the five proposed generators could be up to 30 in one million and no refined health risk modeling was conducted for the emergency generators.~~

Impact AQ-3, on **page 5.4-47** third full paragraph, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform (footnote not shown because no changes made to footnote):

> **Source Parameters – Operation.** The proposed project would include new natural gas-fired boilers to provide heating to the proposed arena. According to the BAAQMD,[73] non-diesel boilers are regarded as minor, low-impact sources that can be excluded from the CEQA process. The project would also include five stationary emergency diesel engines which would require stationary source permits. These generators would require stationary source permits from the BAAQMD. ~~BAAQMD Rule 2-5-302 limits project risks to 10 in one million, so for screening purposes incremental risk from the generators is assumed to be 10 in one million. In the worst case, the generators might have up to three different owners, resulting in three separate permits with risks of up to 10 in one million each, for a total potential risk of 30 in one million associated with project generators~~ Generators would have Tier 4 engines and are assumed to be operated for up to 50 hours per year, which is the standard BAAQMD permit limit.

Impact AQ-3, Table 5.4-10, Annual Average $PM_{2.5}$ Concentrations at Off-site Receptors, **page 5.4-48**, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site

soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

TABLE 5.4-10, REVISED
ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATIONS AT OFF-SITE RECEPTORS

Source	$PM_{2.5}$ Concentration ($\mu g/m^3$, Annual Average)	
	UCSF Hearst Tower Receptor	**UCSF Hospital Receptor**
Construction		
Background at the maximally impacted receptor	8.5	8.6
Unmitigated Construction Contribution	0.31	0.31
Mitigated (Tier 2 + NOx VDECS) Construction Contribution	~~0.053~~ 0.061	~~0.053~~ 0.055
Cumulative Total (Unmitigated/with Mitigation)[a]	~~8.8 / 8.5~~ 8.8 / 8.6	8.9 / 8.7
Significance Threshold	10	10
Above Threshold?	No	No
Operation		
Background at the maximally impacted receptor	8.5	8.6
Project Operations – Generators	~~0.055~~ 0.0034	~~0.055~~ 0.0048
Project Operations – Mobile Sources	0.32	0.32
Cumulative Total (Project, Unmitigated)[a]	~~8.9~~ 8.8	~~9.0~~ 8.9
Significance Threshold	10	10
Above Threshold?	No	No

NOTES:
[a] The total concentrations may not sum precisely due to rounding of subtotals.
SOURCE: Ramboll Environ, 2015

Impact AQ-3, **pages 5.4-48** to **5.4-50**, including Table 5.4-11 (Lifetime Excess Cancer Risk at Off-site Receptors), was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

Cancer Risk

The results of the risk assessment are presented in **Table 5.4-11** below for both the unmitigated and mitigated scenarios, the latter of which assumes the minimum level of compliance (Tier 2 engines with NOx VDECS) with implementation of **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** described above under Impact AQ-1. Table 5.4-11 shows that under unmitigated conditions, the excess cancer risk for a child resident at the UCSF Hearst Tower and Hospital would not exceed the significance threshold of 100 per one million persons exposed. ~~More specifically, a resident child at the UCSF Hearst Tower could be exposed to an excess cancer risk of up to 117 per one million under unmitigated project conditions, a significant impact~~. The proposed

project's unmitigated construction emissions would account for an excess cancer risk of ~~54~~ 55 in one million, and unmitigated operational emissions would account for an excess cancer risk of ~~37~~ 7.4 in one million at this receptor location. Implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization) would further reduce the impacts from standardized construction equipment for which "tiered" equipment is available, as shown in Table 5.4-11. With the minimum level of compliance with this mitigation measure (Tier 2 plus NOX VDECS), increased cancer risk as a result of project construction activities at the maximally impacted receptor would be approximately ~~9.2~~ 11 in one million~~ and cumulative excess cancer risk at all receptor locations would be reduced to below the significance threshold of 100 per one million~~.

TABLE 5.4-11, REVISED
LIFETIME EXCESS CANCER RISK AT OFF-SITE RECEPTORS

Source	Excess Cancer Risk (in one million)		
	UCSF Hearst Tower Receptor		UCSF Hospital Receptor
	Child Resident	Adult Resident	(Child Resident)
Background at the maximally impacted receptor	26	26	44
Unmitigated Construction Contribution	~~54~~ 55	~~2.8~~ 2.9	28
Mitigated (Tier 2 + NOx VDECS) Construction Contribution	~~9.2~~ 11	~~0.48~~ 0.55	~~4.8~~ 4.9
Project Operations – Generators	~~30~~ 0.24	~~30~~ 0.14	~~30~~ 0.056
Project Operations – Mobile Sources	7.2	7.2	7.2
Cumulative Total (Unmitigated/with Mitigation)[a]	~~117 / 72~~ 88 / 44	~~66 / 64~~ 36 / 34	~~109 / 86~~ 79 / 56
Significance Threshold	100	100	100
Above Threshold? (Unmitigated/with Mitigation)	~~Yes / No~~ No /No	No / No	~~Yes / No~~ No / No

NOTES:
[a] The total risks may not sum precisely due to rounding of subtotals.

SOURCE: Ramboll Environ, 2015

~~While unmitigated increased cancer risk at the maximally impacted receptors would exceed the threshold of 100 in one million,~~ Consequently, with or without implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), increased cancer risk at the maximally impacted receptors would be below the threshold of 100 in one million. Furthermore, at no off-site location would cumulative excess cancer risk exceed 100 per one million persons exposed ~~with implementation of Mitigation Measure M-AQ-1~~. Therefore, the proposed project would not result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria for excess cancer risk, and construction and operational cancer risk would be *less than significant ~~with mitigation~~*.

Summary of Impact AQ-3, Exposure to Toxic Air Contaminants

Both construction and operation of the proposed project would generate emissions of $PM_{2.5}$ and toxic air contaminants, including DPM. The project-specific HRA conducted indicated that with or without mitigation, the project—including both construction and

operational impacts added to the existing background levels— would not exceed significance thresholds for increased cancer risk for off-site receptors~~;~~ and concentrations of $PM_{2.5}$ emissions would not exceed significance thresholds. ~~With implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization) described above for Impact AQ-1, impacts related to increased cancer risk would be reduced to less than significant.~~ Therefore, this impact is *less than significant ~~with mitigation~~*.

> ~~**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1, above)~~

Impact AQ-3, **pages 5.4-51**, first full paragraph, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

> Therefore, because the project's impacts would be less than significant ~~with mitigation~~, the project would not result in new or substantially more severe significant impacts than was previously identified in the Mission Bay FSEIR.

Impact C-AQ-2, **pages 5.4-56 to 5.4-57,** the impact statement and then starting with the fifth paragraph to the end of the measure, was revised as follows to reflect the updated analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

> **Impact C-AQ-2: The project, in combination with other past, present, and reasonably foreseeable future projects, ~~could~~ would generate toxic air contaminants, including diesel particulate matter, ~~and could~~ but would not expose sensitive receptors to substantial air pollutant concentrations. (Less than Significant ~~with Mitigation~~)**
>
> [sections not shown]
>
> The Uber/ARE project on Blocks 26/27 is estimated to start construction by the end of 2015, and construction could be concurrent with the proposed project. This project is immediately north of the project site, across South Street, and immediately across Third Street from the nearest sensitive receptor to the project site, the UCSF Mission Bay housing at Hearst Tower. Although primarily designated as office use this development and any development in Mission Bay could include child care facilities and therefore have the potential to represent a future sensitive receptor. Occupancy of this cumulative, offsite project would likely not occur until 2017 at which time the construction of the proposed project would be in its third and final year. Consequently, sensitive receptors at this site would be exposed to at most eight months of the construction emissions, resulting in an excess cancer risk of about 13 ~~12~~ in one million assuming minimum compliance with **Mitigation Measure M-AQ-1, Construction Emissions Minimization**. Adding this exposure to existing levels modeled by the City and the project contributions

from generators and vehicles results in a cumulative exposure of 40 ~~70~~ in a million, which would be below the cumulative threshold of 100 in one million. In addition the Uber/ARE project would be subject to Mission Bay FSEIR Mitigation Measure J.2: Child Care Development, which sets forth the Mission Bay Risk Management Plan requirements for child care facilities to ensure that human health and environmental risks are within acceptable limits. Consequently, the project's contribution to cumulative TAC exposure to receptors potentially proposed by future cumulative projects would be *less than significant ~~with mitigation~~*.

~~**Mitigation Measure M-AQ-1: Construction Emissions Minimization** (see Impact AQ-1)~~

Comparison of Impact C-AQ-2 to Mission Bay FSEIR Impact Analysis

Cumulative impacts regarding TACs were identified as less than significant with mitigation in the Mission Bay FSEIR. This was based on the less than significant with mitigation finding at a project level. Since the impact conclusion for the proposed project is ~~the same~~ less severe, the project would not result in a new or substantially more severe significant impact than was previously identified in the Mission Bay FSEIR.

Section 5.5 Greenhouse Gas Emissions

As discussed in Response GHG-2, the text on **pages 5.5-10 to 5.5-12** was revised as follows to clarify the distinction between the CEQA greenhouse (GHG) analysis and the AB 900 GHG analysis (text below does not include the footnotes in the original text, which remain unchanged):

Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with waste removal, disposal, and landfill operations.

The proposed project would increase the activity onsite primarily by introducing occupants of the new office buildings and commercial businesses as well as event attendees. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) as well as event-related, commercial, and office operations that would result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions. ~~However, as described above under Regulatory Framework, the proposed project is a certified environmental leadership~~

~~project under AB 900 and CARB has determined that the project would not result in any net additional GHG emissions due in part to the voluntary purchase of carbon credits by the project sponsor (see Improvement Measure I-C-GG-1, below).~~

~~Moreover~~However, the proposed project would be subject to and required to comply with several regulations adopted to reduce GHG emissions as identified in the ~~GHG~~ Greenhouse Gas Reduction Strategy. The proposed project would comply with the following regulations or their equivalent: Commuter Benefits Ordinance; Emergency Ride Home Program; Transportation Management Programs (see Project Description and Appendix TMP); Transit Impact Development Fee to the extent applicable under the Mission Bay Redevelopment Plan; Jobs-Housing Linkage Program (residential uses less than ¼ -mile north of the project site); Bicycle Parking requirements (the project would exceed these requirements and provide a total of 586 bicycle parking spaces); Fuel Efficient Vehicle and Carpool Parking (providing 51 carpool spaces and 51 fuel efficient and vehicle charging stations); San Francisco Green Building Requirements (increased energy efficiency, purchase of renewable energy credits, reduction of potable water consumption by about 35 percent, enhanced energy commissioning); San Francisco Stormwater Management Ordinance (low impact development practices including filtration basins, rain gardens, and approximately 50,000 square feet of self-treating green roofs); San Francisco Water Efficient Irrigation Ordinance (the project's landscaped areas include low-water use planting selections, use of sedum and allium-based green roof materials, and soil mix design for a high available water holding capacity); Mandatory Recycling and Composting Ordinance (paper, glass, corrugated cardboard, plastic, and metals would be collected on site for recycling, and recycling bins and composting containers would be located throughout the buildings); San Francisco Construction and Demolition Debris Recovery Ordinance (to be included as part of the construction specifications); Street Tree Planting Requirements for New Construction (the project includes approximately 79 new street trees); Light Pollution Reduction (exterior lighting fixture selections will have minimum backlight/uplight/glare ratings as allowed by required illuminance levels); Construction Site Runoff Control (site is served by a separate storm sewer system and construction contractors would implement best management practices to comply with conditions of a site-specific stormwater pollution prevention plan); Enhanced Refrigerant Management; Finished Material Pollutant Control; and Regulation of Diesel Backup Generators.

These regulations, as outlined in San Francisco's *Strategies to Address Greenhouse Gas Emissions*, have proven effective as San Francisco's GHG emissions have measurably ~~reduced~~decreased when compared to 1990 emissions levels, demonstrating that the City has met and exceeded the GHG reduction goals specified in EO S-3-05, EO B-30-15, AB 32, and the Bay Area 2010 Clean Air Plan for the year 2020. The proposed project was determined to be consistent with San Francisco's ~~GHG~~ Greenhouse Gas Reduction Strategy. Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG

reduction plans and regulations, and thus the proposed project's contribution to GHG emissions would not be cumulatively considerable or generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed project would result in a *less-than-significant* impact with respect to GHG emissions.

As described in Chapter 2 ~~In addition to compliance with the applicable provisions of the San Francisco's GHG Reduction Strategy or their equivalents~~, the project has been certified by Governor Brown as a leadership project under the Jobs and Economic Improvement Through Environmental Leadership Act of 2011 (AB 900). As discussed under Regulatory Framework above, on April 20, 2015, CARB determined that based on the documentation submitted by the project sponsor, the proposed project would not result in any net additional GHG emissions for purposes of certification under AB 900. CARB's determination and the Governor's certification of the project under AB 900 further supports the impact conclusion above that the project's GHG emissions would be a less-than-significant impact.

As part of the AB 900 application, the project sponsor has committed to purchase carbon credits from a qualified GHG emissions broker in an amount sufficient to offset all GHG emissions from project construction and operations, as reiterated in **Improvement Measure I-C-GG-1, Purchase Voluntary Carbon Credits**. Net additional GHG emissions would be calculated in accordance with the methodology agreed upon by CARB in connection with their determination and the AB 900 certification of the project. ~~Thus, the Governor's certification of the proposed project as a leadership project further supports the determination that the proposed project would not have a significant impact on global climate change due to GHG emissions.~~

~~Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations, and because the proposed project would not result in any net additional GHG emissions, the project would not contribute to cumulative GHG emissions impacts. As such, the proposed project would result in a *less-than-significant* impact with respect to GHG emissions.~~

Section 5.6 Wind and Shadow

Section 5.6, Wind and Shadow, **page 5.6-10**, Impact WS-1 heading was revised as follows to reflect the sponsor's selection of an on-site design modification to reduce the significant project wind hazard impact to less than significant:

Impact WS-1: The project ~~w~~could alter wind in a manner that would substantially affect off-site public areas. (~~Significant and Unavoidable~~Less than Significant with Mitigation)

Section 5.6, Wind and Shadow, **page 5.6-13**, last paragraph through page 5.6-14, fourth full paragraph was revised as follows to reflect the sponsor's selection of an on-site design modification to reduce the significant project wind hazard impact to less than significant:

> In summary, the project would result in a net increase in the total duration of the wind hazard exceedance at off-site public walkways in the project vicinity. Consequently, the project would alter wind in a manner that would substantially affect off-site public areas, and accordingly, the impact would be significant. **Mitigation Measure M-WS-1**, identified below, describes potential design measures that would serve to reduce or avoid related project wind hazards. ~~Preliminary evaluation by t~~The project sponsor ~~of certain potential~~ has selected a specific on-site design modification~~s~~ (installation of a solid canopy with a porous vertical standoff at the ground level of the southwest corner of the proposed 16th Street office building)~~indicate such modifications would~~ that is demonstrated to be effective in reducing the project wind hazard impact to a *less than significant* level. ~~However, given that the project design is not yet finalized, the impact is conservatively identified as *significant and unavoidable with mitigation*.~~ It should be noted that the project impact discussed above is identified only for the interim conditions prior to implementation of planned cumulative development in the project vicinity. As described in Impact C-WS-1, below, under cumulative-plus-project conditions, wind hazard impacts would also be less than significant.
>
> **Mitigation Measure M-WS-1: Develop and Implement Design Measures to Reduce Project Off-site Wind Hazards**
>
> The project sponsor shall develop and implement design measures to reduce the identified project off-site wind hazards ~~to the extent feasible~~. The project sponsor has selected a specific on-site design modification (installation of a solid canopy with a porous vertical standoff at the ground level of the southwest corner of the proposed 16th Street office building) that is demonstrated to be effective in reducing the project wind hazard impact to a less than significant level. Other measures ~~This~~ may include additional on-site project design modifications or additions, additional on-site landscaping; and the implementation of potential additional off-site streetscape landscaping or other off-site wind-reducing features. Potential on- and/or off-site project site wind-reduction design measures developed by the sponsor would be coordinated with, and subject to review and approval, by OCII.

Comparison of Impact WS-1 to Mission Bay FSEIR Impact Analysis

As discussed under Summary of Impacts in the Mission Bay FSEIR, the Mission Bay FSEIR reported that proposed buildings 100 feet or higher could generate pedestrian-level wind effects, including increased wind speeds and turbulence. The Mission Bay FSEIR determined that with implementation of Mitigation Measure D.7, which required wind review, including wind tunnel testing, of proposed structures over 100 feet in height, and provided for design-specific analysis of wind hazards and a basis to

incorporate design modifications to reduce significant wind hazards, that Mission Bay plan wind impacts would be less than significant.

Consistent with Mission Bay FSEIR Mitigation Measure D.7 (and the South Design for Development *Wind Analysis* standards), wind tunnel testing and analysis was conducted for the proposed project. As discussed above, project wind hazard impacts at off-site public areas are conservatively determined to be significant. ~~If i~~Implementation of Mitigation Measure M-WS-1 ~~does not~~ would effectively mitigate the project off-site wind hazard to a less than significant level~~, then the project would result in a substantially more severe significant wind impact than was previously identified in the Mission Bay FSEIR~~. As discussed above, this would be an interim significant wind impact, and under cumulative-plus-project conditions, wind hazard impacts would be less than significant.

Section 5.7 Utilities and Service Systems

As discussed in Response UTIL-6, the following text revision was included on SEIR **page 5.7-7** to reflect the status of construction of the interim facilities improvements (text below does not include the footnotes in the original text, which remain unchanged):

The Mariposa Pump Station consists of a dry-weather and wet-weather pump station. The dry weather pump station was built in 1954 and ~~has~~ originally had a capacity of 1.2 mgd. The SFPUC constructed interim improvements to the pump station in 2015 to accommodate ~~With the addition of~~ peak wastewater flows from the planned and approved development in the plan area, including those of the University of California, San Francisco (UCSF) ~~developments in the Plan area, the SFPUC anticipates that peak flows would exceed the capacity of the dry-weather pump station. To address this need for additional capacity, the SFPUC is~~. The interim improvements consisted of connecting the 10-inch dry weather force main to the 20-inch wet weather force main and upsizing the influent sewer, which ~~will~~ increased the capacity of the dry-weather pump station to 3.5 mgd in dry weather conditions ~~on an interim basis until long-term improvements can be constructed to permanently increase the capacity of the pump station.[5] Completion of this connection is expected by fall of 2015~~.

Section 5.7, Utilities and Service Systems, **page 5.7-12**, first paragraph through page 5.7-13 first paragraph, was revised as follows to reflect a revised distribution of wastewater flows based on more detailed hydraulic studies (footnotes referenced in these paragraphs not shown because no changes made to the footnote):

The sewer analysis for the proposed project conducted by BKF Engineers estimates that the daily average wastewater flow during an event at full capacity (e.g., a sold-out NBA basketball game) would be 0.164 mgd, and the daily peak wastewater flows would be 1.074 mgd.[9,10] The preliminary project design indicates that 0.892~~0.844~~ mgd of the peak wastewater flows from the project site would be discharged to the sewer drainage area of the Mariposa Pump Station (within the reconfigured Mariposa sub-basin), and 0.182~~0.230~~

mgd of the peak flows could be directed to the Mission Bay Sanitary Pump Station located at Park P15 (within the reconfigured Central sub-basin).[11]

Mariposa Pump Station

The SFPUC has indicated that with the recent addition of peak wastewater flows from UCSF planned developments, the total existing peak dry-weather flows to the Mariposa sub-basin would be up to 2.54 mgd[12] which would exceed the 1.2 mgd capacity of the Mariposa Pump Station. To address this, the SFPUC is constructing interim improvements to temporarily increase the dry-weather capacity of the pump station to 3.5 mgd by cross connecting the dry- and wet-weather force mains and upsizing the influent sewer, as discussed in Section 5.7.5.3, Combined Sewer System. With the proposed additional discharge of 0.892~~0.844~~ mgd of peak wastewater flows from the project site to this pump station, the total peak wastewater flows would be increased to 3.43~~3.38~~ mgd. This is within the 3.5 mgd capacity of the interim improvements.

Mission Bay Sanitary Pump Station

As discussed in Section 5.7.5.3, Combined Sewer System, the Mission Bay Sanitary Pump Station has the capability of pumping up to 6.7 mgd of wastewater and existing peak flows to the pump station are 3.3 mgd. The project's addition of 0.182~~0.230~~ mgd would increase peak flows to 3.48~~3.53~~ mgd, which would be within the 6.7 mgd capacity of the pump station.

Because the addition of project-related peak wastewater flows would be within the remaining capacity of the interim improvements already planned and currently under construction by the SFPUC for the Mariposa Pump Station and would be within the remaining capacity of the Mission Bay Sanitary Pump Station, the proposed project would not require the construction of new wastewater treatment facilities or expansion of existing facilities, and this project-level impact would be *less than significant*.

Comparison of Impact UT-5 to Mission Bay FSEIR Impact Analysis

As discussed in Section 5.7.2.2, Mission Bay FSEIR Impacts and Mitigation Measures, the FSEIR estimated that peak wastewater flows from the project site to the Mariposa Pump Station and the Mission Bay Sanitary Pump Station would be 0.29 mgd. The project's addition of 0.892~~0.844~~ mgd of peak flows to the Mariposa Pump Station would exceed this amount, but the impact would remain less than significant because the additional flows would be within the capacity of interim improvements already planned by the SFPUC. The project's addition of 0.182~~0.230~~ mgd of peak flows to the Mission Bay Sanitary Pump Station would be less than the originally estimated 0.29 mgd and would be within the remaining capacity of the pump station. Therefore, the project would not result in new or substantially more severe impacts related to wastewater facilities than was previously identified in the Mission Bay FSEIR.

As discussed in Response HYD-3, SEIR **page 5.7-13** (text below does not include the footnotes in the original text, which remain unchanged) was clarified as follows:

> While the system can currently accommodate project-related wastewater flows as discussed in Impact UT-5, the capacity of the Mariposa Sanitary Pump Station could be exceeded as future projects are implemented, including UCSF's Phase 2 Medical Center. It is assumed that the SFPUC will implement the permanent pump station and associated force main and conveyance piping improvements at the Mariposa Pump Station as soon as feasible, but the schedule for these improvements is currently unknown and completion could occur after the proposed project is constructed and operational.[15] In the event that additional future wastewater flows would exceed the pump station capacities before the needed wastewater system improvements could be completed, it is assumed that the SFPUC would make internal operational or piping changes to accommodate the additional flows in the interim in order to remain in compliance with RWQCB permit requirements. The interim system modifications would be subject to the approval of the RWQCB under the terms of the Bayside NPDES permit. Approval by the RWQCB would ensure that water quality of the Bay would be protected during the interim period. Any interim system modifications are assumed to be operational or internal to the existing pump stations and therefore would not result in any physical environmental effects. Please see Section 5.9, Hydrology and Water Quality, Impact HY-6, for the analysis of project impacts on water quality.

As described in Response UTIL-4, first sentence on SEIR **page 5.7-16** was revised as follows to address total flows to the Mission Bay Pump Station:

> As discussed above in Impact UT-5, total wastewater flows to the Mission Bay Pump Station would be ~~3.53~~ 3.48 mgd with the addition of flows from the proposed project. UCSF has indicated to the SFPUC that under full build out of its recently approved LRDP, ~~UCSF~~ total flows to this pump station would be 6.63 mgd, close to the most recently measured capacity of 6.7 mgd.

Mitigation Measure M-C-UT-4 on SEIR **page 5.7-20** was revised as follows for clarification:

> Upon a determination by the SFPUC of the nature and cost of needed improvements, ~~T~~the project sponsor shall pay its fair share for improvements to the Mariposa Pump Station and associated wastewater facilities required to provide adequate sewer capacity within the project area and serve the project as determined by the SFPUC. The contribution shall be in proportion to the wastewater flows from the proposed project relative to the total design capacity of the upgraded pump station(s). The project sponsor shall not be responsible for any share of costs to address pre-existing pump station deficiencies.

Section 5.8 Public Services

No text changes were made to this section.

Section 5.9 Hydrology and Water Quality

As described in Response UTIL-3, the text on **page 5.9-34** of the SEIR incorrectly states the wet weather capacity of the Mariposa Pump Station. The fourth sentence of the third paragraph on page 5.9-34 was revised as follows to reflect the correct capacity:

> The potential effect would be greatest in the reconfigured Mariposa sub-basin, which has a wet weather capacity of ~~12~~ 11.2 mgd.

14.2.6 Chapter 6: Other CEQA Issues

Chapter 6, Other CEQA Issues, **page 6-4**, first paragraph was deleted as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

- ~~The proposed project structures would alter wind in a manner that would substantially increase the number of wind hazard hours at off-site public areas, and while feasible mitigation measures have been identified, the design refinements required to reduce this impact to a less-than-significant level have not been finalized. This would be a significant and unavoidable impact not previously identified in the Mission Bay FSEIR. (Impact WS-1)~~

Chapter 6, Other CEQA Issues, **page 6-6**, between the fourth and fifth full bulleted paragraphs, the following bulleted paragraph was added to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

- **Wind.** With implementation of identified mitigation measures, the proposed project structures would not alter wind in a manner that would substantially increase the number of wind hazard hours at off-site public areas.

14.2.7 Chapter 7: Alternatives

Chapter 7, Alternatives, **page 7-6**, fourth paragraph was deleted as follows to reflect the updated wind analysis due to the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant with mitigation:

> ~~***Wind***~~
>
> - ~~The proposed project structures would alter wind in a manner that would substantially increase the number of wind hazard hours at off-site public areas, and while feasible mitigation measures have been identified, the design refinements required to reduce this impact to a less-than-significant level have not been finalized. This would be a significant and unavoidable impact not previously identified in the Mission Bay FSEIR. (Impact WS-1)~~

Chapter 7, Alternatives, **page 7-7**, sixth paragraph was deleted as follows to reflect the updated air quality analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

- ~~Exposure of sensitive receptors to emissions of toxic air contaminants, including diesel particulate matter, from project construction and operation and under cumulative conditions, could result in a significant cancer risk but could be mitigated through implementation of construction emissions minimization measures. (Impact AQ-3 and C-AQ-2)~~

Chapter 7, Alternatives, **page 7-8**, a new section was inserted after the first partial paragraph to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant with mitigation:

Wind

- The proposed project structures could alter wind in a manner that would not substantially increase the number of wind hazard hours at off-site public areas, and feasible mitigation measures have been identified that would reduce this impact to a less-than-significant level. (Impact WS-1)

Chapter 7, Alternatives, **page 7-10**, last paragraph was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

Chapter 5, Section 5.6, conservatively determined that the proposed project ~~w~~could result in significant ~~and unavoidable~~ wind hazard impacts~~, even with implementation of identified mitigation measures, because the wind effects of final design refinements have not yet been confirmed~~. The only feasible strategy to avoid or lessen wind hazards impacts, regardless of the location of the proposed project, would be to implement the identified mitigation measure, namely to develop and test design measures (using wind tunnel testing methodologies) to confirm site-specific changes in wind conditions attributable to the proposed project, as indicated in Mitigation Measure M-WS-1, Develop and Implement Design Measures to Reduce Off-site Wind Hazards. Thus, even though Impact WS-1 was identified as significant ~~and unavoidable with mitigation, it is anticipated that during final project design and prior to construction,~~ the project sponsor would implement Mitigation Measure M-WS-1 and develop appropriate project design refinements to reduce the wind hazard impact at off-site public areas to less than significant. Therefore, no specific alternative strategies are discussed in this alternatives analysis regarding avoiding or lessening wind hazard impacts. ~~However, p~~Please see also Chapter 8, Third Street Plaza Variant, which analyzes a variation of the proposed project that would result in less-than-significant wind hazards impacts without the need for mitigation.

Chapter 7, Alternatives, Table 7-1, **page 7-16**, was revised as follows to correct an error in the square footage of other office uses and the associated total gross square footage of Alternative B, Reduced Intensity Alternative:

	Alternative B: Reduced Intensity
Size, gross square feet (gsf)	750,000 event center 25,000 GSW offices ~~348,000~~ 373,000 other office uses 75,000 retail use 350,000 parking and loading ~~1,548,000~~ 1,573,000 Total

As discussed in Response ALT-2, SEIR **page 7-21**, footnote 2 was revised as follows to clarify the parking assumptions used for the No Project Alternative:

> [2] Based on the requirements of the South Plan and the Design for Development, a minimum of ~~1,061~~ 1,057 spaces would be needed for the commercial uses, and there is no minimum requirement for retail uses. However, it is reasonable to assume that a developer would provide some level of parking for the retail uses, and the maximum retail parking allowed under the Design for Development would range from 64 to 160 spaces, depending on the gross square footage of those retail uses. Therefore, assuming the minimum parking for commercial uses plus a range of parking for retail uses, a minimum of 1,121 spaces and maximum of ~~1,081~~ 1,217 spaces would be needed for a proposed development of this size. ~~With the inclusion of the 132 spaces at the South Street garage, the requirements for on-site parking would range from 929 to 949 spaces.~~ Thus, the parking estimates~~s~~ of 1,182 spaces used for the No Project Alternative is within this range ~~exceed the requirements, though would likely be adjusted should an actual development proposal be submitted~~.

Chapter 7, Alternatives, **page 7-39**, last paragraph, first sentence was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

> **Wind.** As described in Chapter 5, Section 5.6, the proposed project would result in significant but mitigable~~and unavoidable~~ wind hazard impacts at off-site public areas based results on wind tunnel testing.

Chapter 7, Alternatives, **page 7-45**, fifth and sixth bullets in the second paragraph were deleted as follows to reflect the updated air quality analysis due to project refinements associated with the relocation of the emergency standby generators as well as the use of on-site soil treatment during construction, addition of dewatering pump generators, removal of rapid impact compaction, and extension of the Muni platform:

- ~~Cancer risk associated with emissions of toxic air contaminants (Impact would change from LSM to LS.)~~
- ~~Cumulative cancer risk associated with emissions of toxic air contaminants (Impact would change from LSM to LS).~~

Chapter 7, Alternatives, **page 7-46**, first paragraph in Section 7.3.2.1, was revised as follows to reflect that project refinements described in Chapter 12 are assumed to also apply Alternative B, Reduced Intensity Alternative, and to correct an error in the square footage of other office uses of Alternative B, Reduced Intensity Alternative:

> The Reduced Intensity Alternative, developed as a hypothetical scenario for the purposes of this SEIR, is designed to reduce transportation and construction-related impacts that were identified for the proposed project. This alternative would be identical to the proposed project with respect to the event center's design and siting on Blocks 29-32, but the mixed use development of commercial-industrial-retail uses throughout the rest of the site would be reduced in scale by 40 percent. Project refinements associated with the relocation of the emergency generator to above grade locations would also apply to this alternative. The office uses would be reduced from 580,000 to 373,000 gsf, retail uses would be reduced from 125,000 to 75,000 gsf, and on-site, subgrade parking reduced from 950 to 750 stalls. The total development would be reduced from 1,9555,000 to ~~1,673,000~~ 1,573,000 gsf, or a reduction of ~~282,000~~ 382,000 gsf…..

Chapter 7, Alternatives, **pages 7-58** to **7-60**, including Table 7-18 (but not Table 7-17), was revised as follows to reflect the updated air quality analysis due to project refinements associated with the relocation of the emergency standby generators for the both the project and the Reduced Intensity Alternative:

> Similarly, the lifetime cancer risk at off-site receptors under the Reduced Intensity Alternative would be less than significant ~~with mitigation~~, the same as that identified for the proposed project~~, and the same mitigation measure would apply to this alternative~~. ~~For the proposed project (see Table 5.4-11 in Section 5.4, Air Quality), the unmitigated risk would exceed the significance threshold but implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization) would reduce the risk to less than significant.~~ For the Reduced Intensity Alternative, as shown in **Table 7-18**, under both unmitigated and mitigated conditions, the excess cancer risk for a child resident at the UCSF Hearst Tower and Hospital would not exceed the significance threshold of 100 per one million persons exposed. More specifically, a resident child at the UCSF Hearst Tower could be exposed to an excess cancer risk of up to 81 ~~111~~ per one million under unmitigated conditions, a less-than-significant impact. The Reduced Intensity Alternative 's unmitigated construction emissions would account for an excess cancer risk of 48 in one million and unmitigated operational emissions would account for an excess cancer risk of ~~37.2~~ 7.4 in one million at this receptor location. Implementation of Mitigation Measure M-AQ-1 (Construction Vehicle Emissions Minimization) would further reduce the impacts from standardized construction equipment for which "tiered" equipment is available, as shown in Table 5.4-11. With the minimum level of compliance with this mitigation measure (Tier 2 plus NOX VDECS), increased cancer risk as a result of project construction activities at the maximally impacted receptor would be approximately 8.5 in one million and cumulative excess cancer risk at all receptor locations would be reduced to below the significance threshold of 100 per one million.

TABLE 7-18, REVISED
LIFETIME EXCESS CANCER RISK AT OFF-SITE RECEPTORS
FOR THE REDUCED INTENSITY ALTERNATIVE

Source	Excess Cancer Risk (in one million)		
	UCSF Hearst Tower Receptor		UCSF Hospital Receptor
	Child Resident	Adult Resident	Child Resident
Background at the maximally impacted receptor	26	26	44
Unmitigated Construction Contribution	48	2.5	25
Mitigated (Tier 2 + NOx VDECS) Construction Contribution	8.5	0.44	4.4
Project Operations – Generators	~~30~~ 0.24	~~30~~ 0.14	~~30~~ 0.056
Project Operations – Mobile	7.2	7.2	7.2
Cumulative Total (Unmitigated/ Mitigated)[a]	~~111 / 72~~ 81/42	~~66 / 64~~ 36/34	~~106 / 86~~ 76/56
Significance Threshold	100	100	100
Above Threshold? (Unmitigated/ Mitigated)	~~Yes/No~~ No/No	No/No	~~Yes/No~~ No/No

NOTES:

[a] The total risks may not sum precisely due to rounding of subtotals.

SOURCE: Ramboll Environ, 2015

While unmitigated increased cancer risk at the maximally impacted receptors would not exceed the threshold of 100 in one million, with implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), increased cancer risk at the maximally impacted receptors would be further reduced ~~below the threshold of 100 in one million~~. Furthermore, at no off-site location, would cumulative excess cancer risk exceed 100 per one million persons exposed with or without implementation of Mitigation Measure M-AQ-1. Therefore, the Reduced Intensity Alternative would not result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria for excess cancer risk, and construction and operational cancer risk would be *less than significant ~~with mitigation~~*.

Chapter 7, Alternatives, **pages 7-60** to **7-61**, last paragraph on p. 7-60 and continuing on p. 7-61, was revised as follows to reflect the updated air quality analysis due to project refinements associated with the relocation of the emergency standby generators for the both the project and the Reduced Intensity Alternative:

The Reduced Intensity Alternative would result in a similar cumulative health risk impact as the proposed project, which was determined to be *less than significant* with or without implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization). The planned Uber/ARE project could locate childcare facilities on Blocks 26/27, directly north of the project site. However, these sensitive receptors would be exposed to at most eight months of construction period emissions and these receptors' health risk exposure would not exceed significance thresholds with or without implementation of Mitigation Measure M-AQ-1.

Chapter 7, Alternatives, **page 7-61**, second full paragraph, first sentence was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

> **Wind.** As described in Chapter 5, Section 5.6, the proposed project would result in significant but mitigable~~and unavoidable~~ wind hazard impacts at off-site public areas based on results of wind tunnel testing.

Chapter 7, Alternatives, **page 7-90**, second full paragraph, last sentence was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

> Based on these results, the wind hazard impact for the Off-site Alternative would be *less than significant*, and this alternative would avoid a significant but mitigable ~~and unavoidable project~~ wind hazard that would occur under the proposed project at Mission Bay Blocks 29-32.

Chapter 7, Alternatives, **page 7-97**, third bulleted item was deleted to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

- ~~Wind hazard impacts at off-site pedestrian locations (Impact would change from SUM to LS.)~~

Chapter 7, Alternatives, **page 7-98**, the following item was inserted after the first bulleted item to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

- Wind hazard impacts at off-site pedestrian locations (Impact would change from LSM to LS.)

Chapter 7, Alternatives, **page 7-99**, third bullet, was revised as follows to reflect the updated air quality analysis due to project refinements associated with the relocation of the emergency standby generators for the project:

- Exposure of sensitive receptors to increased $PM_{2.5}$ concentrations and cancer risk from toxic air contaminant concentrations during construction and operation and associated contribution to cumulative impacts. (Impact would change from LS~~M~~ to SUM.)

Chapter 7, Alternatives, **page 7-100**, second and third paragraphs were revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

> . . . The Third Street Plaza Variant would have all of the same significant impacts as the proposed project, save one: wind impacts at off-site public areas. This impact, though determined to be significant ~~and unavoidable for the proposed project due to current~~

~~unknowns in the project design, can be expected to~~ would be mitigated to less than significant prior to project implementation with appropriate design refinements.

Therefore, overall, the Reduced Intensity Alternative is considered the environmentally superior alternative, because it would reduce the severity of adverse environmental effects across a broad range of environmental resources and would not result in any new significant environmental impacts.

Table 7-27 compares the significant impacts of the No Project, Reduced Intensity, and Off-site Alternatives with those of the proposed project; please see Chapter 8 for the impacts of the Third Street Plaza Variant (as described in Chapter 8, the Third Street Plaza Variant would have all the same significant impacts as the proposed project except that Impact WS-1, regarding wind hazards at off-site public areas would be less than significant instead of significant but mitigable~~and unavoidable with mitigation~~). . .

significant instead of significant but mitigable~~and unavoidable with mitigation~~). . .

Chapter 7, Alternatives, Table 7-27, **page 7-106**, third row was revised as follows to reflect the updated air quality analysis associated with the generator relocation for both the project and the Reduced Intensity Alternative (table headings added here to provide context):

Environmental Resource	Proposed Project	Alternative A: No Project	Alternative B: Reduced Intensity	Alternative C: Off-site at Piers 30-32 and Seawall Lot 330
Air Quality	Impact AQ-3: Construction and operation would not generate toxic air contaminants that could exceed significance thresholds for cancer risk~~, but identified mitigation would reduce the risk to less than significant~~.	Impacts related to toxic air contaminants would be less than significant and no mitigation required.	Impacts related to cancer risk of toxic air contaminants would be the same as that identified for the proposed project ~~and the same mitigation measures would reduce impacts to less than significant~~.	Significant construction-related impact from PM2.5 emissions could be reduced to less than significant with feasible measures ***Significant and unavoidable with mitigation*** construction-related impact from increased cancer risk contributions at off-site receptors.

Chapter 7, Alternatives, Table 7-27, **page 7-107**, third row was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant (table headings added here to provide context):

Environmental Resource	Proposed Project	Alternative A: No Project	Alternative B: Reduced Intensity	Alternative C: Off-site at Piers 30-32 and Seawall Lot 330
Wind and Shadow	Impact WS-1: The project ~~w~~could alter wind in a manner that would substantially increase the number of wind hazard hours at off-site public areas. Identified mitigation would reduce this impact to less than significant.~~Due to the currently unknown wind effects that would occur under the final design refinements, this impact would be *significant and unavoidable, with mitigation.*~~	Wind hazard impacts could be the same as or less than that of the project, but in the absence of wind tunnel testing, the specific change in wind conditions cannot be quantified.	Wind hazard impacts could be the same as or less than that of the project, but in the absence of wind tunnel testing, the specific change in wind conditions cannot be quantified.	Wind hazard impacts would be less than significant based on wind tunnel testing conducted for the previous design proposal at this location.

14.2.8 Chapter 8: Third Street Plaza Variant

Chapter 8, **page 8-11**, last paragraph, was revised as follows to reflect the sponsor's selection of an on-site design modification that would reduce the significant project wind hazard impact to less than significant:

Comparison of Variant Impact V-WS-1 to Proposed Project Impact WS-1

As discussed in Section 5.6, in Impact WS-1, the project would result in a net increase in the total duration of the wind hazard exceedance at off-site public walkways in the project vicinity. Consequently, the project would alter wind in a manner that would substantially affect off-site public areas, and accordingly, Impact WS-1 would be significant. Pursuant to Mitigation Measure M-WS-1 in Section 5.6, identifies potential design measures that would serve to reduce or avoid related project wind hazards., however, given that the project design is not yet finalized, the project sponsor has selected a specific on-site design modifications (installation of a solid canopy with a porous vertical standoff at the ground level of the southwest corner of the proposed 16th Street office building) that is demonstrated to be effective in reducing the project wind hazard impact to a *less than significant* level. Impact WS-1 is ~~conservatively~~ identified as *less than significant ~~and unavoidable~~ with mitigation.* ~~Since, a~~As discussed in Impact V-WS-1 above, the variant wind hazard impacts would be less than significant with no mitigation required~~, the variant would avoid the significant wind hazard impact of the project~~.

14.2.9 Chapter 9: Report Preparers

Chapter 9, Report Preparers, **page 9-1**, the list of SEIR Authors was updated as follows:

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- Tina Thomas, CEQA Counsel
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Chapter 9, Report Preparers, **page 9-2**, the list of Environmental Science Associates staff was updated as follows:

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Chapter 9, Report Preparers, **page 9-2**, the SEIR Consultants was revised to add an additional consultant used in the preparation of the Responses to Comments document:

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Chapter 9, Report Preparers, under SEIR Consultants, OCII's outside CEQA counsel staff was revised as follows on **page 9-3** to add additional staff used in the preparation of the Responses to Comments document:

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14.2.10 Appendix NOP-IS: Notice of Preparation and Initial Study

As discussed in Response BIO-3, Table 2 in Appendix A of the Initial Study (**page A-7**) was revised as shown below to more accurately characterize the potential for occurrence for California red-legged frog and western pond turtle (table headings added here to provide context:

TABLE 2, REVISED
SPECIAL-STATUS ANIMAL SPECIES REPORTED OR WITH POTENTIAL TO OCCUR NEAR THE EVENT CENTER AND MIXED-USE DEVELOPMENTAREA AT MISSION BAY BLOCKS 29-32

Common Name *Scientific Name*	**Federal Status**	**State Status**	**Habitat Description**	**Potential to Occur in the Action Area**
Reptiles and Amphibians				
Western pond turtle *Emys marmorata*	--	CSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	**Absent ~~Low~~.** Low-quality habitat for this species occurs in the shallow, ponded depression of the site that lacks hydrologic connectivity to other more diverse sites and basking substrate preferred by western pond turtle. Closest occurrence records are documented more than five miles from the project site in Golden Gate Park, Pine Lake Park, and North Lake (Merced).[1] Surrounding dense, built-up environment and absence of nearby occupied habitat makes colonization of the ponded depression by western pond turtle since site remediation in 2005 highly unlikely. ~~No suitable habitat present.~~
California red-legged frog *Rana draytonii*	FT	CSC	Freshwater ponds and slow streams with emergent vegetation for egg attachment.	**Absent ~~Low~~.** Low-quality habitat occurs within the shallow, ponded depression of the project site that lacks deep pools, overhanging riparian vegetation, connection to upland dispersal

Common Name *Scientific Name*	Federal Status	State Status	Habitat Description	Potential to Occur in the Action Area
Reptiles and Amphibians				
				sites, viable prey base, and woody emergent vegetation to attach egg masses during the breeding season. Closest occurrence records are documented five miles from the project site in Golden Gate Park.[2] Surrounding dense, built-up environment and absence of nearby occupied habitat makes colonization of the ponded depression by California red-legged frog since site remediation in 2005 highly unlikely. ~~No suitable habitat present.~~

[1] CDFW, 2015. California Natural Diversity Database (CNDDB) Rarefind 5. Biogeographic Data Branch, Sacramento, CA. Data dated September 13, 2015.

[2] CDFW, 2015. California Natural Diversity Database (CNDDB) Rarefind 5. Biogeographic Data Branch, Sacramento, CA. Data dated September 13, 2015.

As discussed in Response BIO-6, Table 2 in Appendix A of the Initial Study (**pp. A-8 to A-9**) was revised as shown below to reconcile an error in the correct code citation (table title and table headings added here to provide context):

TABLE 2, REVISED
SPECIAL-STATUS ANIMAL SPECIES REPORTED OR WITH POTENTIAL TO OCCUR NEAR THE EVENT CENTER AND MIXED-USE DEVELOPMENTAREA AT MISSION BAY BLOCKS 29-32

Common Name *Scientific Name*	Federal Status	State Status	Habitat Description	Potential to Occur in the Action Area
Birds				
Double-crested cormorant *Phalacrocorax auritus*	--	WL, 3503 ~~3503.5~~	Coastal areas and inland lakes in fresh, saline, and estuarine waters.	**Low.** No suitable nesting habitat present at the proposed project site though colonies are known to nest on the Bay Bridge. Species may occur in adjacent Bay waters or over the project site on a transient basis.
Great blue heron *Ardea herodias*	--	3503 ~~3503.5~~	Shallow estuaries and fresh and saline emergent wetlands.	**Low.** May forage in standing water of the onsite basin.
American goldfinch *Carduelis tristis*	--	3503 ~~3503.5~~	Cismontane foothills; riparian and cropland habitats.	**Present.** Suitable habitat is present.
Barn swallow *Hirundo rustica*	--	3503 ~~3503.5~~	Open areas from coastal grassland and shrubland to mixed coniferous forests.	**Moderate.** Suitable habitat is present.

14.2.11 Other Appendices

Please see supplemental Appendices AQ2, TR2, and WS2 for corrections and project refinement updates to the supporting information and tables for air quality, transportation, and wind, respectively.