



## MEMORANDUM

*Date:* September 14, 2023  
*Case No.:* **2019-020115ENV**  
*Project Title:* **Ocean Beach Climate Change Adaptation Project**  
*To:* Members of the Planning Commission and Interested Parties  
*From:* Lisa Gibson, Environmental Review Officer  
*Re:* Responses to Comments on the Draft Environmental Impact Report for the Ocean Beach Climate Change Adaptation Project

Attached for your review please find a copy of the Responses to Comments document for the Draft Environmental Impact Report (EIR) for the above-referenced project. **This document, along with the Draft EIR, will be before the planning commission for Final EIR certification on September 28, 2023.** The planning commission will receive public testimony on the Final EIR certification at the September 28<sup>th</sup> hearing. Please note that the public review period for the draft EIR ended on January 24, 2022; any comments received after that date, including any comments provided orally or in writing at the final EIR certification hearing, may not be responded to in writing.

The planning commission does not conduct a hearing to receive comments on the responses to comments document, and no such hearing is required by the California Environmental Quality Act. Interested parties, however, may always write to commission members or to the president of the commission at [commissions.secretary@sfgov.org](mailto:commissions.secretary@sfgov.org) (preferred) or 49 South Van Ness Avenue and express an opinion on the responses to comments document, or the commission's decision to certify the completion of the Final EIR for this project.

Please note that the responses to comments document in addition to the draft EIR is the final EIR. If you have any questions concerning the responses to comments document or the environmental review process, please contact Julie Moore at [CPC.OceanBeachEIR@sfgov.org](mailto:CPC.OceanBeachEIR@sfgov.org) or at 628.652.7566.

Thank you for your interest in this project and your consideration of this matter.

DRAFT EIR

RESPONSES TO COMMENTS

RTC

# Ocean Beach Climate Change Adaptation Project

San Francisco Planning

Case No. **2019-020115ENV**

State Clearinghouse No. 2020090171

*Draft EIR Publication Date:* December 8, 2021

*Draft EIR Public Hearing Date:* January 6, 2022

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*Responses to Comments Publication Date:* September 14, 2023

*Final EIR Certification Hearing Date:* September 28, 2023



**San Francisco**  
**Planning**

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# CHAPTER 8

## INTRODUCTION TO RESPONSES TO COMMENTS

### 8.1 Purpose of the Responses to Comments Document

The purpose of this responses to comments (RTC) document is to present comments on the draft environmental impact report (draft EIR) for the proposed Ocean Beach Climate Change Adaptation Project (project), to respond in writing to comments on environmental issues, and to revise the draft EIR as necessary to provide additional clarity. Comments were made in written form during the public comment period from December 8, 2021, to January 24, 2022, and as oral testimony received before the San Francisco Planning Commission at the public hearing on the draft EIR held on January 6, 2022. A complete transcript of proceedings from the public hearing on the draft EIR and all written comments are included herein in their entirety (**Attachment A**). A complete list of commenters is provided in Chapter 10, List of Persons Commenting.

Pursuant to the California Environmental Quality Act<sup>1</sup> (CEQA) sections 21091(d)(2)(A) and (B), the San Francisco Planning Department (planning department) has considered the comments received on the draft EIR, evaluated the issues raised, and prepared written responses that fully address each substantive physical environmental issue that has been raised. CEQA Guidelines section 15088 requires the evaluation of all public comments received on the draft EIR and the identification of comments that raise significant environmental issues requiring a good faith, reasoned analysis in the written response. As further stated in CEQA Guidelines section 15088(c), the level of detail in response may correspond to the level of detail provided in the comment. Where appropriate, this RTC document also includes EIR text changes made in response to comments.

In accordance with CEQA, the responses to comments focus on clarifying the project description and addressing physical environmental issues associated with the project. Since publication of the draft EIR, the City and County of San Francisco (city) has revised elements of the project. These changes are described in Chapter 9, Revisions to the Project Description, along with summaries of their corresponding potential environmental effects. Text revisions to the EIR in response to these changes are also presented in Chapter 12, Draft EIR Revisions. Where relevant to topics raised in public comments, the responses provide additional clarifying project description information. These clarifications do not affect the EIR's analysis or conclusions.

“Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. Economic or social changes alone are not considered a significant effect on the environment. Therefore, this document focuses primarily on responding to comments that relate to physical environmental issues, in compliance with CEQA.<sup>2</sup> However, for informational purposes, this RTC document also provides limited responses to general comments on the

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<sup>1</sup> Public Resources Code sections 21000–21189 (the California Environmental Quality Act, or CEQA).

<sup>2</sup> CEQA Guidelines sections 15382, 15064(c), 15064(d), and 15064(e).

draft EIR that were received during the public review period that are not related to physical environmental issues.

This RTC document does not include any significant new information that would require recirculation of the EIR under CEQA Guidelines section 15088.5. For example, the comments do not identify any new significant environmental impacts, or substantial increases in the severity of previously identified environmental impacts, compared to those analyzed in the draft EIR. The comments also do not identify feasible project alternatives or mitigation measures that are considerably different from those analyzed in the draft EIR that would clearly lessen the severity of significant environmental impacts of the project but that the project sponsor has not agreed to study or implement. The comments include recommendations for additional mitigation measures to address project effects on bank swallow habitat that the project sponsor has agreed to study and implement. These comments and the associated EIR mitigation measure revisions are presented in Section 11.9, Biological Resources, Comment BI-1 and Response BI-1. As explained in that section, the mitigation measure revisions have the potential to lessen the severity of the project's impact on the bank swallow. However, because the project cannot fully avoid impacts to bank swallow habitat and considering that some of the additional measures are experimental or would be beyond the city's control to implement, the draft EIR's conclusion that the project's effects on bank swallow habitat would be significant and unavoidable remains unchanged.

The planning department is the lead agency under CEQA, responsible for administering the environmental review of projects within the city. The draft EIR together with this RTC document constitutes the final EIR for the project in fulfillment of CEQA requirements consistent with CEQA Guidelines section 15132. The final EIR has been prepared in compliance with CEQA, including the CEQA Guidelines, and the San Francisco Administrative Code, chapter 31. Certification of the final EIR by the planning commission would mean that the EIR complies with these requirements; certification is not approval of the project. The final EIR is an informational document for use by (1) governmental agencies (such as the city) and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the project and identifying possible ways of reducing or avoiding the potentially significant impacts; and (2) the planning commission and other city entities (such as the San Francisco Public Utilities Commission [SFPUC], Recreation and Parks Department [Rec and Park], and the board of supervisors) where applicable prior to their decision to approve, disapprove, or modify the project. If the city approves the project, CEQA requires these entities adopt CEQA findings and a mitigation monitoring and reporting program (MMRP or mitigation program) to ensure that mitigation measures identified in the final EIR are implemented.

## **8.2 Environmental Review Process**

CEQA Guidelines sections 15080 to 15097 set forth the EIR process, which includes multiple phases involving notification and input from responsible agencies and the public. The main steps in this process are described below.

### **8.2.1 Notice of Preparation and Public Scoping**

On September 9, 2020, the planning department published and distributed a Notice of Availability of a Notice of Preparation (NOP) of an EIR to governmental agencies, organizations, known interested parties, owners and occupants of properties within 300 feet of the project area. Distribution of the NOP initiated the public scoping process, which provides the public and government agencies an opportunity to comment on the

scope and content of the EIR. The 30-day public review period extended from September 9, 2020, to October 9, 2020. The planning department held a virtual public scoping meeting on Wednesday, September 30, 2020, to describe the project and receive oral comments on the scope of the EIR. A video of the scoping meeting presentation was also available for viewing on the planning department website. During the scoping period, the planning department received a total of 30 comments, via letters, e-mails, and oral comments. Draft EIR Table 1-2 presents a summary of public scoping comments received. The planning department has considered all comments made by the public and agencies during the scoping period in preparing the draft EIR.

### **8.2.2 Draft EIR Public Review**

The planning department published the draft EIR, including an initial study, on December 8, 2021. The planning department mailed paper copies of the notice of availability of the draft EIR and notice of public meeting to relevant federal, state, regional, and local agencies, potentially interested parties, and owners and occupants of property within 300 feet of the project site. The planning department also distributed the notice by email, to recipients who had provided email addresses, published notification of the draft EIR's availability in a newspaper of general circulation in San Francisco (the San Francisco Examiner), posted the notice at the county clerk's office, and posted 10 notices within and around the project area. More than 1,800 notices were distributed. The planning department posted the draft EIR on its website at <https://sf-planning.org/sfceqadocs> and sent hard copies to those who requested it.

The 47-day public review period for the draft EIR started on December 8, 2021, and ended on January 24, 2022. During the public review period, the planning department conducted a public hearing to receive oral comments on the draft EIR. The public hearing was held virtually/electronically before the San Francisco Planning Commission on January 6, 2022. During the draft EIR public review period, the planning department received written and oral comments from six public agencies, five organizations, and 158 individuals. See Chapter 10, List of Persons Commenting, for a complete list of commenters. A transcript of the public hearing and all comment letters are included in Attachment A of this RTC document.

### **8.2.3 Responses to Comments Document and Final EIR**

This RTC document addresses all substantive written and oral comments on the draft EIR received during the public review period. Under CEQA Guidelines section 15201,<sup>3</sup> public participation is an essential part of the CEQA process. CEQA Guidelines section 15204(a) states that the focus of public review should be “on the sufficiency of the [draft EIR] in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated.” In addition, “when responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.” CEQA Guidelines section 15088 specifies that the lead agency is required to respond to the comments on the major environmental issues raised in the comments received during the public review period. Therefore, this RTC document is focused on the sufficiency and adequacy of the draft EIR in disclosing the significance of the physical environmental impacts of the project that was evaluated in the draft EIR.

The planning department distributed this RTC document for review to the San Francisco Planning Commission, public agencies and commissions, organizations, and individuals who commented on the draft

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<sup>3</sup> CEQA section 21082.1(b).

EIR. In accordance with CEQA section 21092.5, the planning department has distributed the document at least 10 days prior to the planning commission hearing at which EIR certification will be considered. The planning commission will consider the adequacy of the final EIR—consisting of the draft EIR and this RTC document—in complying with the requirements of CEQA, the CEQA Guidelines, and San Francisco Administrative Code chapter 31. If the planning commission finds that the final EIR is adequate, accurate, and complete and complies with CEQA requirements, it will certify the final EIR under CEQA.

If the final EIR is certified, the SFPUC and Rec and Park will then review and consider the final EIR before making a decision to approve the project. If these city agencies decide to approve the project, they will adopt CEQA findings, including adopting or rejecting mitigation measures and alternatives to avoid or reduce significant impacts, and a mitigation monitoring and reporting program (MMRP). Consistent with CEQA Guidelines section 15097,<sup>4</sup> the MMRP is designed to ensure implementation of the mitigation measures identified in the final EIR and adopted by decision-makers to mitigate or avoid the project's significant environmental effects. CEQA also requires the adoption of findings prior to approval of a project for which a certified EIR identifies significant environmental effects (CEQA sections 21002, 21002.1, and 21081 and CEQA Guidelines sections 15091 and 15092). If the EIR identifies significant adverse impacts that cannot be mitigated to less-than-significant levels and the project is approved, the findings must reject project alternatives and include a statement of overriding considerations for those impacts (CEQA Guidelines section 15093(b)). The SFPUC and Rec and Park would adopt the MMRP as a condition of project approval.

## 8.3 Document Organization

Because the final EIR consists of the draft EIR together with the RTC document, this RTC document is organized to follow the draft EIR section numbering. The draft EIR consists of Chapters S through 7 and Appendices A through H.

This RTC document consists of Chapters 8 through 12 plus supplemental attachments, as follows:

- **Chapter 8, Introduction to Responses to Comments.** This chapter describes the purpose of the RTC document, the environmental review process, and the organization of the EIR.
- **Chapter 9, Revisions and Clarifications to the Project Description.** This chapter summarizes and analyzes changes to the description of the project, as described in draft EIR Chapter 2, that the city has initiated since publication of the draft EIR. The revisions and clarifications consist of minor updates to the project description and the associated environmental analysis previously presented in the draft EIR. This chapter concludes that these revisions and clarifications to the project would not result in any new environmental impacts not already discussed in the draft EIR or a substantial increase in the severity of previously identified significant environmental impacts.
- **Chapter 10, List of Persons Commenting.** This chapter lists the public agencies, organizations, and individuals who submitted written comments during the public review period or spoke at the public hearing on the draft EIR. The tables in this chapter indicate whether the comments were submitted in writing (i.e., via letter) during the public comment period, or orally at the draft EIR public hearing. Commenters within each category are listed in alphabetical order. These lists also show a comment code

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<sup>4</sup> CEQA Guidelines section 15097 cites CEQA section 21081.6 as the authority for the CEQA Guidelines section.

corresponding to the comment topic and the format (i.e., public hearing transcript, letter, or e-mail) and the date of each set of comments.

- **Chapter 11, Responses to Comments.** This chapter presents the substantive comments excerpted verbatim from the public hearing transcript and comment letters. The complete transcript, letters, and e-mails containing the comments are provided in Attachment A of this RTC document. The comments and responses in this chapter are organized by topic and, where appropriate, by subtopic, in the same order as the environmental topics addressed in draft EIR Chapter 4 and Appendix B (Initial Study). Similar comments on the same topic were received from multiple commenters. These comments are grouped together, and a single comprehensive response is provided. The responses generally clarify the text in the draft EIR. In some instances, the responses may result in revisions or additions to the draft EIR. Text changes are shown as indented text, with deleted material shown as ~~striketrough~~ text and new text double underlined.
- **Chapter 12, Draft EIR Revisions.** This chapter presents changes and additions to the draft EIR. The planning department has made changes and revisions to the draft EIR either in response to comments received on the draft EIR, to include updated information, or as necessary to clarify statements and conclusions made in the draft EIR. In all cases, changes are provided to clarify or correct content in the draft EIR or to add information received after the release of the draft EIR. These changes do not result in significant new information with respect to the proposed project, including the level of significance of project impacts, nor do they identify any new significant impacts. None of the changes or additions in Chapter 12 substantially affect the conclusions presented in the draft EIR.
- **Attachment A, Draft EIR Comments.** Attachment A includes full copies of the written comments received on the draft EIR and the transcript of the public hearing held for the draft EIR. The attachment also shows, in the margin of each letter or transcript, the bracketing and comment code used to identify each comment and the corresponding response topic code.
- **Attachment B, Supplement to Draft EIR Appendix E, Noise Analysis Supporting Documentation.** Attachment B provides additional noise analysis supporting information.
- **Attachment C, Supplement to Draft EIR Appendix G, Air Quality Technical Memorandum and Health Risk Assessment.** Attachment C provides additional air quality analysis supporting information.
- **Attachment D, Fort Funston Bank Swallow Habitat Assessment.** Attachment D provides the results of a spatial analysis that quantifies the amount of suitable bank swallow nesting habitat within the project area and a greater 2.9-mile-long study area that extends beyond Fort Funston.
- **Attachment E, Bank Swallow Nesting Habitat Mitigation Concepts Memorandum.** Attachment E discusses the feasibility of bank swallow nesting habitat mitigation concepts considered by SFPUC.
- **Attachment F, Dune Delineation Memorandum.** Attachment F presents the methods and results of a delineation of coastal dunes in the South Ocean Beach project area.
- **Attachment G, Great Highway Closure Increased Mileage Emissions – 2024.** Attachment G presents estimated greenhouse gas emissions from increased vehicle miles traveled.
- **Attachment H, Supplement to Draft EIR Appendix D, Transportation Analysis Supporting Documentation.** Attachment H presents construction truck and worker overlap during project construction, including with additional trucks from the North Ocean Beach sand placement during construction.

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## CHAPTER 9

# REVISIONS AND CLARIFICATIONS TO THE PROJECT DESCRIPTION

Since publication of the draft environmental impact report (draft EIR), the City and County of San Francisco (city) has revised the project described in draft EIR Chapter 2, Project Description. This chapter summarizes these revisions and clarifications and analyzes whether such revisions would result in any new significant environmental impacts not already discussed in the draft EIR. Revisions and clarifications to the project description and relevant environmental impact analyses and mitigation measures are presented in this chapter (deletions are shown in ~~strike-through~~; new text is double-underlined). Draft EIR text revisions are presented in this chapter only where they have been made specifically in Chapter 2, Project Description, and in the text of the mitigation measures; text revisions in other portions of the draft EIR that are updated as a result of these changes are presented in Chapter 12, Draft EIR Revisions.

The revisions clarify, expand, or update the information in the draft EIR. The changes to the project description would not cause any new significant impacts that were not already identified in the draft EIR, nor would they increase the severity of any of the project's impacts identified in the draft EIR. Mitigation measures identified in the draft EIR would continue to be required in order to reduce or avoid significant environmental impacts. No new measures would be required to mitigate the significant impacts identified for the proposed project in the draft EIR.

California Environmental Quality Act (CEQA) Guidelines section 15088.5 requires recirculation of an EIR when “significant new information” is added to the EIR after publication of the draft EIR but before certification. The CEQA Guidelines state that information is “significant” if “the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project proponents have declined to implement.” Section 15088.5 further defines “significant new information” that triggers a requirement for recirculation as including, but not limited to, identification of (1) a new significant impact, (2) a substantial increase in the severity of an impact (unless mitigation is adopted to reduce the impact to a less-than-significant level), or (3) a new feasible alternative or mitigation measure that would lessen the environmental impacts of the proposed project but that the project sponsor is unwilling to adopt. CEQA Guidelines section 15088.5(b) states that recirculation is not required if “new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.”

### 9.1 Summary of Project Description Revisions

The minor revisions to the proposed project (the “project”) consist of the following:

- Refined plan for site revegetation of the reshaped bluff on the slope stabilization layer
- Refined nighttime lighting plan for the proposed multi-use trail, service road, and Skyline coastal parking lot
- Addition of Americans with Disabilities Act (ADA) access improvements between Sloat Boulevard and Taraval Street

- Addition of a plant propagation site within Fort Funston for plants to be used for project revegetation and maintenance
- Placement of North Ocean Beach sand over the slope stabilization layer during construction
- Updated project construction schedule

As described below, certain aspects of the project are superseded or replaced by the minor revisions presented in this chapter; the project description revisions include new project elements in two locations (Middle Ocean Beach<sup>1</sup> and Fort Funston) outside of the draft EIR project area (South Ocean Beach and North Ocean Beach). All other aspects of the project description remain unchanged, as presented in draft EIR Chapter 2, Project Description. Similarly, the analyses of the environmental effects of the minor project revisions presented in this chapter augment the relevant analyses presented in the draft EIR such that the environmental effects of the proposed project with the project refinements incorporated are fully covered by the analyses in this chapter together with the analyses in draft EIR Chapter 4, Environmental Setting and Impacts.

### 9.1.1 Habitat Restoration and Enhancement Plan

Draft EIR Chapter 2, Project Description, Section 2.4.3 describes the city's approach to site revegetation. Since publication of the draft EIR, the city has refined the project's revegetation plan, now called the habitat restoration and enhancement plan (restoration plan). Accordingly, the EIR has been revised to provide more specificity regarding the type and location of vegetation, and associated irrigation requirements, proposed for the project.

The second full paragraph on draft EIR page 2-16 has been revised as follows:

The city, in coordination with NPS, would also plant native vegetation along the reshaped bluff in accordance with a habitat restoration and enhancement plan (restoration plan). The vegetation would include locally sourced plants historically native to San Francisco, the types of which would vary depending on elevation, as shown in Figure 2-6a. Lower elevation areas seaward of the buried wall would be planted with an assemblage of native dune vegetation that tolerates sand burial and storm overwash and grows rapidly, while higher elevation areas would be planted with a denser and more diverse array of native dune plants, including those appropriate for coastal dunes, that help cover and stabilize sand. The restoration plan area would be established in three zones. The farthest landward zone would be the stable backdunes zone, located between the service road and the multi-use trail. Next would be the native vegetative stabilization zone, west of the multi-use trail, above the slope stabilization layer and low-profile wall. The farthest seaward zone would be the sacrificial zone, which would be expected to erode periodically and be replenished by beach nourishment (sand placement). Sand nourishment of the native vegetative stabilization zone and stable backdunes zone would be expected to occur naturally from sand blown from the beach and sacrificial zone during windy conditions. For the initial installation, plants would be sourced from established nurseries in the region—plants proposed for installation on NPS lands would be sourced from NPS nurseries such as the proposed Fort Funston propagation site (see Section 2.4.6, Fort Funston Plant Propagation Site, for details), or nurseries that otherwise meet NPS native plant

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<sup>1</sup> Middle Ocean Beach generally refers to the portion of Ocean Beach between Lincoln Avenue in the north to Sloat Boulevard to the south. The project elements proposed within Middle Ocean Beach would occur between Sloat Boulevard in the south and Taraval Avenue in the north.

requirements. The SFPUC would follow the *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands to prevent the spread of invasive species and pathogens.*<sup>12a</sup>

The restoration plan would be informed by nearby natural examples and reference sites. For example, the vegetative stabilization zone would draw upon local and regional sites where shallow dune fields are present below marine terrace scarps and bluffs with perched groundwater seepage, such as Franklin Point and Año Nuevo in San Mateo County, Point Reyes National Seashore (north of Abbott's Lagoon), and MacKerricher State Park in Mendocino County. The restoration plan would include specifications for planting, monitoring, and adaptive management.

The city ~~may~~ would install temporary irrigation to support the plants during their establishment period. Irrigation would be provided for up to three years for the initial dune vegetation establishment. A small-scale irrigation system would be installed and would rely on existing potable or recycled water lines already within the project areas analyzed in the draft EIR. Irrigation water demand would be approximately 48,000 gallons per week during low-precipitation months (April to October), amounting to approximately 1,344,000 gallons of water annually. Periodic replanting and removal of invasive weeds would be conducted by the city, consistent with the maintenance schedule for other San Francisco parks. Once established, landscape maintenance would be minimal, generally limited to restoration of portions of the vegetative stabilization zone that erode due to large storms.

The city may also implement other wind-erosion control measures to help keep the placed sand on the beach and bluff. These measures may include sand fencing, *brushwood fencing*,<sup>13</sup> and placing a layer of coarse sand over the finer beach sand. During initial dune landscape establishment, such nature-based features could be used to stabilize the sand and promote the formation of dune landscape topography. Brushwood fencing or similar woody surface stabilization features, if used, would be installed intermittently within or behind the native vegetative stabilization zone (e.g., between the plantings and the trail), such that it would not preclude transport of sand between the sacrificial zone and native vegetative stabilization zone. Coarse sand compatible with establishment of native vegetation, if used, would be placed immediately after project construction, before vegetation is established, and after major storm wave erosion or nourishment events. The city would install signs along the multi-use trail, between the beach access stairs and sand ramp, educating visitors about the restoration area and its habitat values, and directing people to use designated beach accessways. To further discourage public access through the restoration plan area, the city would install a low-profile post and cable fence west of the multi-use trail.

Footnote 12a has been added to draft EIR p. 2-16 as follows:

<sup>12a</sup> City and County of San Francisco Public Utilities Commission Natural Resources and Land Management Division, *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands.*

Footnote 13 on draft EIR page 2-16 has been modified as follows:

Sand fencing consists of wooden slats, plastic, or fabric attached to fence posts and is designed to reduce local wind speed and trap sand. Brushwood fencing performs a similar function and consists of bunched narrow branches formed into a low fence. Sand fencing or brushwood fencing on a beach or berm can assist in building additional berms and helps prevent sand from blowing onto roads and paths.

New **Figure 2-6a**, shown on the following page, has been added after draft EIR page 2-16.

### 9.1.2 Refined Nighttime Lighting Plan

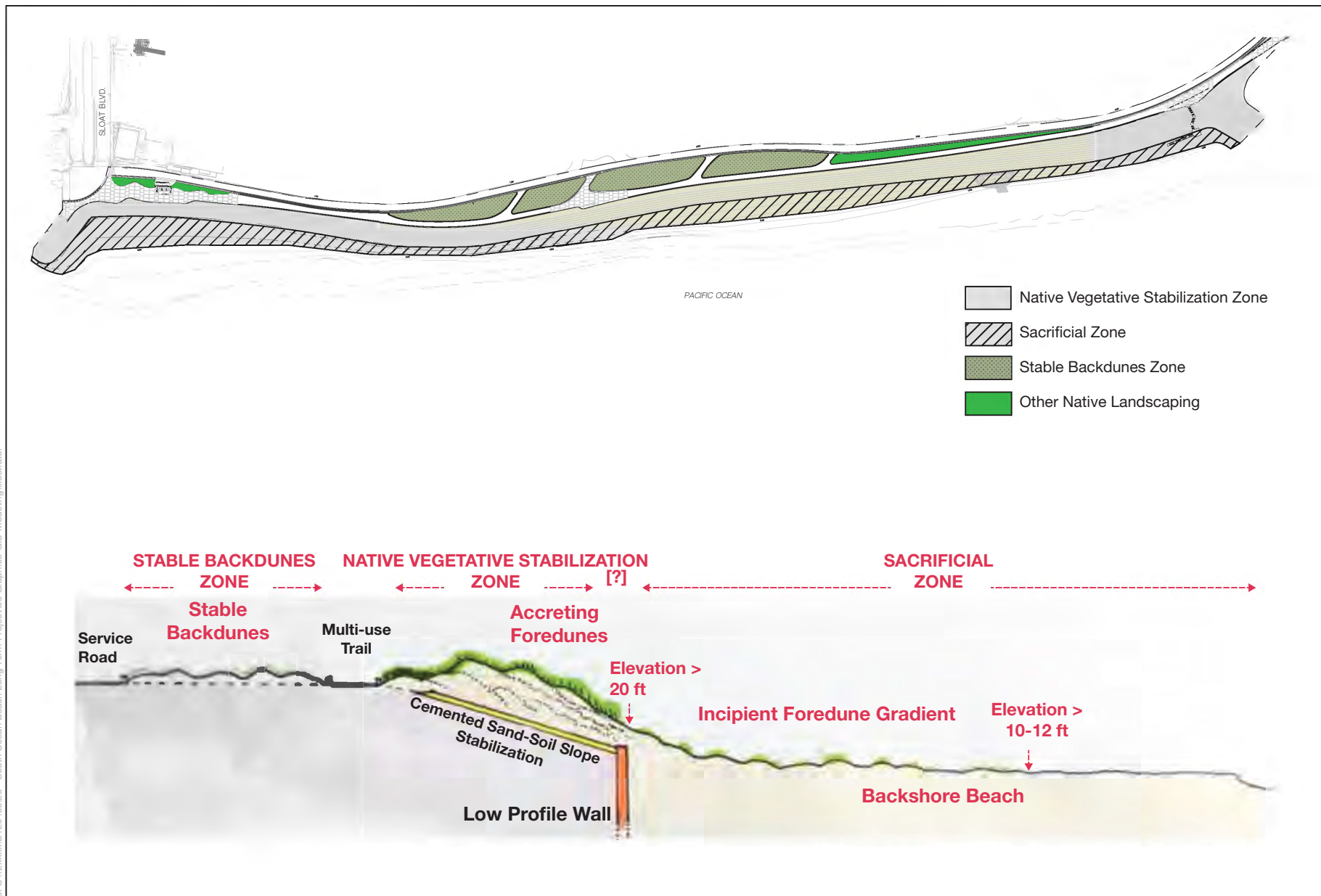
The draft EIR's Chapter 2, Project Description, indicates that existing street lights on the west side of the Great Highway would be removed and new lighting would be provided along the multi-use trail and service road. Since publication of the draft EIR, the city has refined the project's nighttime lighting plan. Accordingly, the EIR has been revised to provide more specificity regarding the types and locations of nighttime lighting under the project.

The subsection heading *Multi-use Trail* on draft EIR page 2-16 has been revised to *Multi-use Trail and Lighting*, and the first full paragraph on draft EIR page 2-17 has been revised as follows:

The new service road storm drain system described in Section 2.4.1.2, *Service Road*, would collect storm water runoff from the multi-use trail and service road. Up to 31 new solar-powered lighting fixtures ~~Lighting~~ would be provided for users of the multi-use trail and service road. Of the new fixtures, up to 15 would be mounted on 15-foot-tall poles along the service road, and up to 15 would be mounted on 3-foot-tall bollards in the median between the service road and multi-use trail near the new beach access stairway. One additional light fixture would be mounted on a 25-foot-tall pole within the median between the service road and the Skyline coastal parking lot. ~~The minimal~~ All lighting ~~along the multi-use trail~~ would incorporate NPS best management practices for lighting, including only adding lighting where it is needed, shielding lights and directing them downward, and using lamps with warmer colors. Plantings along the multi-use trail would be native, climate-appropriate, locally adaptive, and non-invasive, and would require little water.

### 9.1.3 Americans with Disabilities Act Access Improvements

Beach access discussed in draft EIR Chapter 2, Project Description, consists of a new multi-use trail along Great Highway from Sloat Boulevard to Skyline Boulevard, a new beach access stairway connecting the multi-use trail and beach located toward the south end of the project area near Fort Funston, and an existing sand ramp at Great Highway and Sloat Boulevard. Since publication of the draft EIR, the city has refined the project's modes of visitor access by incorporating ADA access improvements along a section of the existing multi-use trail along Great Highway from Sloat Boulevard north to Taraval Street. Accordingly, the EIR has been revised to add these improvements to the project.



SOURCE: Peter Baye et al., Ocean Beach Climate Change Adaptation Project Design Basis for Native Vegetation and Wind-Blown Sand in Managed Coastal Dunes, August 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 2-6a**  
Generalized Conceptual Layout and Cross-Section View of the Habitat Restoration and Enhancement Plan Area

New Section 2.4.4.4 has been added starting on draft EIR page 2-19 after Section 2.4.4.3, as follows:

#### **2.4.4.4 AMERICANS WITH DISABILITIES ACT ACCESS IMPROVEMENTS**

The project would include improvements to the existing multi-use trail along Middle Ocean Beach to provide greater access to and along the coast for people with disabilities. Under the project, the city would improve an approximately 2,200-foot-long segment of the multi-use trail between the Upper Great Highway and Lower Great Highway, from Sloat Boulevard to Taraval Street. The improvements would occur within the existing trail footprint and include pavement grinding, surface grading, and repaving to make the trail smoother. The purpose of these improvements is to make the existing multi-use trail compliant with Americans with Disabilities Act (ADA) and city building code (Division 4 of Chapter 11B) standards, and to provide continuous ADA-compliant access between the new multi-use trail (between Sloat Boulevard and Skyline Boulevard) and existing ADA access features at Taraval Street and the Great Highway.

The improved multi-use trail would connect to the existing ADA-compliant facilities at Taraval Street and the Upper and Lower Great Highway, including the city's public convenience station (restroom) and the Taraval Street beach access intersection improvements completed during restroom renovations in 2013.

The project would also improve access to the beach from Taraval Street. The project would provide new beach access for wheelchairs and walkers via *mobi-mats*, which are ADA-compliant non-slip rollable pathway mats that would be placed on the beach at the Taraval Street beach access. These mats would be neutral-colored and low-profile.

Construction of the ADA improvements would be completed in the first phase of construction activity, over an approximately four-week period during which segments of the existing multi-use trail and associated beach access points would be closed to the public and signage would direct users to adjacent beach access points.

**Table 2-4** on draft EIR page 2-35 has been revised to reflect the updated Phase 1 construction activities and haul loads, as follows:

**Table 2-4 Construction Assumptions for the Project**

Construction Activity	Quantity of Material Import and Export (Haul Loads) <sup>a</sup>	Estimated Construction Equipment	Workers (Daily)	Estimated Construction Duration
<b>Phase 1:</b> Modify Sloat Boulevard/ Great Highway intersection, remove NPS restroom, reconfigure San Francisco Zoo parking access, reroute Muni 23 Monterey bus layover and turn-around, permanently close Great Highway, <u>construct ADA access improvements</u>	Export: 444484 Import: 3,240 3,280 Vendor: 245	<ul style="list-style-type: none"> <li>• Air Compressors</li> <li>• Crawler Tractors</li> <li>• Excavators</li> <li>• Forklift</li> <li>• Generators</li> <li>• Heavy Duty Breaker Hammer</li> <li>• Motor Grader</li> <li>• Front End Loader</li> <li>• Paving Equipment</li> <li>• Vibration Compactor</li> <li>• AC Roller</li> <li>• Pumps</li> <li>• Signal Boards</li> <li>• Tractors/ Loaders/ Backhoes</li> <li>• Water Trucks</li> <li>• Haul Trucks</li> </ul>	50	12 months

Temporary closure of the northbound lane of the Upper Great Highway for staging near the anticipated ADA access improvements has been added to the list of potential staging areas on draft EIR page 2-31, as follows:

Multiple areas may be used for construction staging, including construction worker parking, as shown on **Figure 2-11**. The following potential construction staging areas may be used:

- The Great Highway's closed northbound and (until demolished) southbound lanes between Sloat Boulevard and Skyline Boulevard. SFPUC operations and maintenance staff would also use the Great Highway's northbound lanes to access the Westside Pump Station and Oceanside Treatment Plant during construction.
- The existing NPS parking lot at the western terminus of Sloat Boulevard (until removed).
- The closed area of Ocean Beach, intermittently during Phase 3 (revetment removal and initial sand placement). Work on the beach would be weather- and wave-condition-dependent.
- Available space within the Oceanside Treatment Plant, Westside Pump Station, and Zoo Pump Station.
- The northbound lane of the Upper Great Highway north of Sloat Boulevard in the vicinity of the ADA access improvements.

Draft EIR **Figure 2-11** has been modified to include ADA access improvements construction staging, as shown on the following page.

The first line of the second paragraph on draft EIR page 2-2 has been revised as follows:

Major project components, which are shown in **Figures 2-1a, 2-1b, 2-1c, and 2-1d**, include:

New **Figure 2-1c, Project Elements Proposed for Middle Ocean Beach**, and new **Figure 2-1d, Project Elements Proposed for Fort Funston**, shown on the following pages, have been added after draft EIR Figure 2-1b (draft EIR p. 2-5).

#### 9.1.4 Fort Funston Plant Propagation Site

Draft EIR Chapter 2, Project Description, states that the city would plant appropriate native vegetation along the reshaped bluff. The vegetation would vary depending on elevation; lower elevation areas would be planted with native vegetation that would grow rapidly and tolerate sand burial and storm overwash, while higher elevation areas would be planted with native vegetation that would help cover and stabilize placed sand. Plants would be sourced from established nurseries in the region, including existing National Park Service (NPS) nurseries for plants proposed on NPS lands. Since publication of the draft EIR, the city has further developed the restoration plan for the site (Section 9.1.1) and identified a new potential source for obtaining plants. In addition to established nurseries in the region, a new propagation site located within Fort Funston, in the vicinity of the existing plant nursery, could be a source of dune plants supporting revegetation efforts and routine re-planting on an as-needed basis following erosion and replenishment events. The site would be approved by the NPS through a permit or agreement, span approximately 0.5 acre and would be funded in part by the city for the establishment, operations, and maintenance of propagation. Accordingly, the EIR has been revised to add the new propagation site to the project.



SOURCE: ESA, 2019; Google Earth, 2019

Ocean Beach Climate Change Adaptation Project

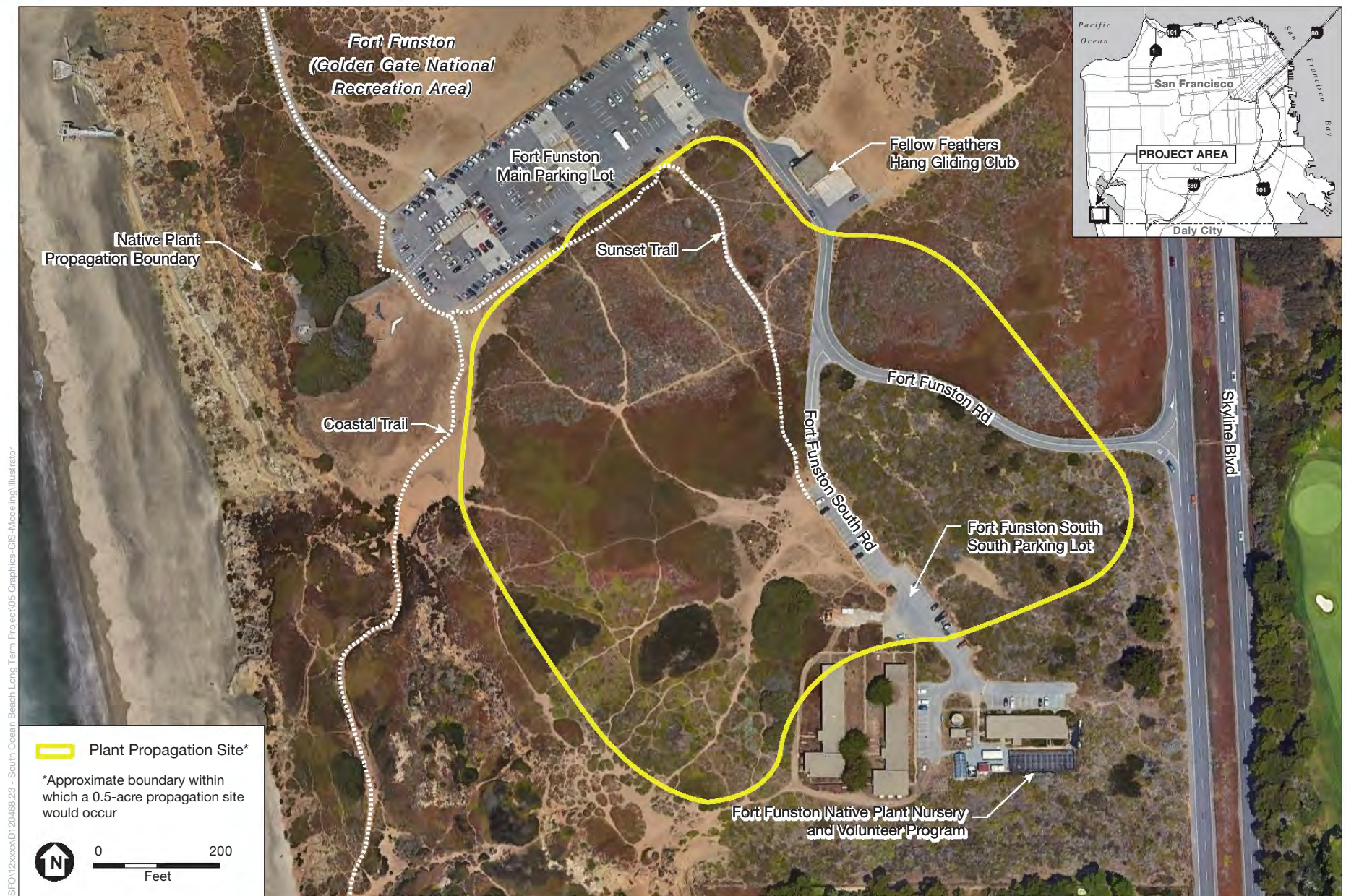
**Revised Figure 2-11**  
Staging for Construction and Operational Sand Placement Activities



SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 95% Submittal, May 2023

Ocean Beach Climate Change Adaptation Project

**New Figure 2-1c**  
Project Elements Proposed for Middle Ocean Beach



SOURCE: ESA, 2022; Google Earth, 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 2-1d**  
Project Elements Proposed for Fort Funston

New Section 2.4.6 has been added on page 2-26 after Section 2.4.5.6 of draft EIR Chapter 2, Project Description, as follows:

## **2.4.6 Fort Funston Plant Propagation Site**

The project would include city funding to establish a plant propagation site through an NPS permit or agreement on lands owned by the NPS within nearby Fort Funston. The plant propagation site would provide a self-replenishing stand of native dune plants that may be used on an as-needed basis for initial revegetation and periodic maintenance planting of the reshaped bluff between the beach and upland areas of South Ocean Beach. The 0.5-acre Fort Funston plant propagation site would be located within an approximately 16-acre area, in dune flats generally dominated by ice plant mats and perched on Colma formation sands in the vicinity of the GGNRA native plant nursery (Figure 2-1d). The site would be clear of park trails and nearby hang-gliding areas. The ice plant mats would be removed prior to planting in the early wet season (fall/winter). Hand tools, an NPS-approved herbicide, mechanical equipment (e.g., small backhoe or excavator), or combination thereof would be used to remove ice plant mats.

Once the ice plant mats have been removed, activities at the propagation site would consist of (1) initial planting of native seedlings, plugs, or plant divisions; (2) routine manual weeding around the transplants; and (3) as-needed hand watering of plants in the first season following initial planting and dependent on precipitation. Irrigation would not be necessary to sustain the native species planted within the propagation site because existing dune sand is suitable for semi-wild plant cultivation. Soil amendments would be limited to re-use of decayed ice plant litter and duff as compost, and low doses of nitrate or organic nitrogen incorporated into the organic matter placed directly under transplant roots. To avoid stimulation of undesirable weedy species within the propagation beds, no surface application of fertilizers (organic or synthetic) is proposed. Small signs would be installed near the propagation site to inform visitors and protect against trampling.

All vegetation planted in the propagation beds would be historically native to San Francisco and consist of clonal (creeping) and perennial species. The source material for propagation beds would be local to the San Francisco Peninsula, with San Francisco populations prioritized. The majority of planted vegetation in the beds would be American dune grass (*Elymus mollis* [= *Leymus*]), a native beach and foredune grass likely to be in greatest long-term demand for routine revegetation efforts. Other species would be planted in the propagation beds for one-time planting during the initial revegetation effort. These include native perennial, creeping dune grasses, such as Vancouver wildrye (*E. x vancouverensis*) and Pacific wildrye (*E. pacificus*; or natural local San Francisco hybrid species with beardless wildrye [*E. triticoides*]), as well as a diverse assemblage of broadleaf native dune forbs and low shrubs, as approved by the GGNRA.

The propagation site would be planted during the first phase of construction. Once planted, propagation beds would take at least two growing seasons to establish mature vegetation suitable for transplanting. Any watering would be performed by hand, and no other irrigation would be required. All cultivated low shrubs and most creeping dune grasses and dune forbs (one-time planting species) would be harvested from the beds to support project revegetation. The American dune grass would be harvested such that sufficient above and below ground matter remains to repopulate the plots for future planting efforts within two growing seasons, depending on rainfall.

Long-term use of the plots would be to supply the project and the NPS with American dune grass for revegetation following major beach erosion and replenishment events.

Details for funding the installation, propagation, and maintenance of the native vegetation would be approved through either an NPS Agreement or Special Use Permit mutually agreed upon by the NPS and SFPUC. The funding agreement would stipulate that the SFPUC's standard construction measures, as applicable, would be implemented to protect against inadvertent impacts on sensitive resources. As described in Section 2.4.3, NPS nurseries (such as the proposed Fort Funston propagation site) could serve as a source for initial plantings and replacement plantings within the project's restoration plan area along South Ocean Beach. However, NPS may also use the Fort Funston propagation site as a plant source for other restoration projects within GGNRA.

The text of draft EIR Section 2.6.2 on p. 2-37 has been revised as follows:

The NPS does not regularly conduct beach maintenance at Ocean Beach (designated by the NPS as a Natural Zone management area).<sup>33</sup> Maintenance of the vegetation on the reshaped bluff would be minimal, as the plants would be native and adapted to project area conditions. However, some landscape maintenance may be needed after sand placement, ~~or storm~~ erosion events, and significant wind-induced sand movement. Replacement plants would be sourced from established nurseries in the region and/or the Fort Funston plant propagation site (see Section 2.4.6, Fort Funston Plant Propagation Site for details). ~~Replacement plants on NPS lands would be sourced from NPS nurseries or nurseries that otherwise meet NPS native plant requirements, including the Fort Funston plant propagation site.~~

### **9.1.5 Placement of North Ocean Beach Sand Over Slope Stabilization Layer During Construction**

Draft EIR Chapter 2, Project Description, states that sand excavated from the sandy bluff would be stockpiled onsite during buried wall and slope stabilization layer construction, and that 40,000 cubic yards of the stockpiled material would be placed on top of these features once constructed. Since publication of the draft EIR, to better account for potential incompatibility of the excavated bluff sand with the beach sand, the SFPUC has refined the project description and Phase 3 construction duration to include the potential use of North Ocean Beach sand to bury the wall and slope stabilization layer. The draft EIR has been revised to reflect this change.

The text of draft EIR Section 2.5.1.3 on page 2-30 has been revised as follows:

#### **2.5.1.3 PHASE 3 – REMOVE REVETMENTS AND RUBBLE, PLACE SAND ON BEACH**

As segments of the buried wall and slope stabilization are completed, the city would begin to remove the existing boulder and sandbag revetments, along with the various rubble and debris, from the bluff and beach areas seaward of those segments. This work would be conducted intermittently over a period of approximately ~~18-24~~ months, using excavators working on the beach during low tide and when weather permits. A coffer dam would not be required; however, a temporary sand berm comprised of materials onsite could be constructed to allow for protection of the active construction area from ocean waves and tidal activity. The approximately 20,000 cubic yards of material requiring removal would be stockpiled within staging areas prior to being hauled offsite.

Construction of the buried wall and slope stabilization would require substantial excavation of the sandy bluff. The excavated materials would be sorted and stockpiled onsite. Once the wall and slope stabilization are constructed, bulldozers would move approximately 40,000 cubic yards of the stockpiled sandy material onto these constructed features. In addition, approximately 85,000 cubic yards of sand would be obtained from North Ocean Beach for additional wall and slope stabilization cover at the end of Phase 3, likely in two placement episodes (fall of 2026 and fall of 2027). The North Ocean Beach sand would be obtained using the same types of equipment and placed in a manner similar to that of the proposed small sand placements described in Section 2.4.5.4, Small Sand Placements. As described in that section, the city would use excavators, loaders, dozers, and off-road dump trucks to move the sand. At North Ocean Beach, equipment would enter and exit the beach through an access point at the south end of the O'Shaughnessy Seawall near Lincoln Way. At South Ocean Beach, equipment required for the sand placement activities would enter and exit the beach via the sand ramp located at the northwestern corner of the Sloat Boulevard/Great Highway intersection. The city would also place sand from existing sandbag revetments onto the beach prior to off-hauling the bags. The reshaped bluff would include a minimum of 3 to 4 feet of graded sand sourced locally and from North Ocean Beach over the stockpiled sandy material, wall and slope stabilization.

**Table 2-4** on draft EIR page 2-35 has been revised to reflect the updated phase 3 estimates of material exported and imported and construction duration, as follows:

**Table 2-4 Construction Assumptions for the Project**

Construction Activity	Quantity of Material Import and Export (Haul Loads) <sup>a</sup>	Estimated Construction Equipment			Workers (Daily)	Estimated Construction Duration
<b>Phase 3:</b> Remove revetments and rubble from beach, place sand on beach	Export: 2,500 Import and Vendor: <del>None</del> <u>2,834</u> Vendor: <del>None</del> <u>None</u>	<ul style="list-style-type: none"> <li>Air Compressors</li> <li>Cranes</li> <li>Crawler Tractors</li> <li>Excavators</li> <li>Forklifts</li> <li>Dozers</li> </ul>	<ul style="list-style-type: none"> <li>Generators</li> <li>Heavy Duty Breaker Hammer</li> <li>Motor Grader</li> <li>Front End Loader</li> <li>Pumps</li> </ul>	<ul style="list-style-type: none"> <li>Signal Boards</li> <li>Tractors/ Loaders/ Backhoes</li> <li>Water Trucks</li> <li>Haul Trucks</li> <li><u>Off-road Dump Trucks</u></li> </ul>	20	<del>18-24</del> months

### 9.1.6 Updated Project Construction Schedule

Draft EIR Chapter 2, Project Description, indicates that construction would begin in the second quarter of 2023. Since publication of the draft EIR, the SFPUC has updated the project construction schedule. The draft EIR has been revised to reflect the revised estimated construction start in the third quarter of 2024.

Section 2.5.2, Construction Schedule, on draft EIR page 2-31 has been revised to reflect the updated construction schedule, as follows:

The city would construct the project over approximately four years, with an estimated construction period from ~~2023 to 2027~~ 2024-2028. During this period, the city would close the entire construction area, including the Great Highway and beach, to the public. **Table 2-3** presents an overview of the proposed construction implementation sequence, by component. Construction would proceed up to seven days per week, except holidays, between 7 a.m. and 8 p.m. consistent with the city's noise ordinance. Some nighttime construction may be required for the buried wall, which would require the use of portable lights.

**Table 2-3** on draft EIR page 2-32 has been revised to show that Phase 1 would start in late summer 2024, and all subsequent construction phases would shift accordingly. Thus, under the revised schedule, Phase 1 of project construction would be expected to commence in the third quarter of 2024, and project construction would be expected to be completed in the third quarter of 2028. In addition, the duration of Phase 3 has been revised from 18 months to 24 months, and the duration of Phase 4 has been revised from 9 months to 12 months, as shown in the table below, to account for seasonal limitations on construction activities.

**Table 2-3 Project Construction Schedule**

Construction Activity	2023	2024	2025	2026	2027	2028
<b>Phase 1:</b> Modify Sloat Boulevard/Great Highway Intersection, remove NPS restroom, reconfigure San Francisco Zoo parking access, reroute Muni 23 Monterey bus layover and turn-around, permanently close Great Highway, <u>construct ADA access improvements, establish Fort Funston plant propagation site</u>						
<b>Phase 2:</b> Remove Great Highway southbound lanes, construct a buried wall, and stabilize the slope						
<b>Phase 3:</b> Remove revetments and rubble from beach, place sand on beach <u>and on slope stabilization layer</u>						
<b>Phase 4:</b> Remove or repurpose Great Highway northbound lanes; install multi-use trail and service road; construct Skyline coastal parking lot, new restroom, and beach access stairways, install multi-use trail landscaping; restripe Great Highway/Skyline Boulevard intersection						
<b>Phase 5:</b> Install native landscaping and temporary irrigation, undertake site cleanup						

## 9.2 Environmental Impacts

The project description revisions and clarifications outlined above could result in changes to the assumptions and analyses described in the draft EIR assessment of environmental impacts of the project as presented in draft EIR Chapter 4, Environmental Setting and Impacts, and the initial study (draft EIR Appendix B) for the following environmental topics: aesthetics, transportation and circulation, noise and vibration, recreation, biological resources, cultural resources and tribal cultural resources, air quality, greenhouse gas emissions, utilities and service systems, geology and soils, hydrology and water quality, and hazards and hazardous materials. The environmental impacts of the project description revisions for these topics are summarized below. Chapter 12 presents specific text edits to the draft EIR's impact discussions resulting from these revisions and clarifications.

### 9.2.1 Aesthetics

Most of the project description revisions involve clarifications to project elements already addressed in the draft EIR and would not change the draft EIR's aesthetics impact analysis or conclusions. These project description revisions include the restoration plan, the refined nighttime lighting plan, the placement of North Ocean Beach sand during construction, and the updated construction schedule. The restoration plan and nighttime lighting plan provide additional detail regarding project elements addressed in the draft EIR. The restoration plan does not deviate from the concepts evaluated in the draft EIR and their implementation would still be expected to improve the existing visual character and quality of the project area. Similarly, the lighting plan refinements provide greater detail regarding the types and locations of nighttime lighting elements but are consistent with the concept evaluated in the draft EIR. As explained in the draft EIR, the nighttime lighting would comply with NPS best management practices for lighting and the resulting illumination from these fixtures would not constitute a new source of substantial lighting or glare that would adversely affect nighttime views in the area. The use of North Ocean Beach sand is similarly addressed in the draft EIR as part of the project's beach nourishment program. Due to their location, scale, and nature, the above-listed project changes would not result in new or substantially more severe project or cumulative aesthetics effects relative to those presented in the draft EIR.

Two elements of the revised project description represent an expansion of the visual study area: the ADA improvements and the Fort Funston plant propagation site. The ADA access improvements to the existing multi-use trail's surface would involve no new vertical structures. Construction activities associated with these improvements would be noticeable to trail visitors and motorists traveling along the Great Highway during the work period of approximately four weeks but would appear similar to activities required for periodic trail maintenance along the existing multi-use trail. After construction, the improved multi-use path would be similar in appearance to the existing path. Passersby traveling along the beach or Great Highway may have fleeting views of the low-profile mobi-mats, but considering the undulating dune topography of the area, the mats would not be conspicuous and would not otherwise alter the visual character or scenic views in the area. Once installed, the proposed ADA improvements would provide visitors with expanded access to scenic viewing opportunities along Ocean Beach.

Given its absence of conspicuous vertical elements, the Fort Funston plant propagation site work would not affect scenic vistas. While activity at the plant propagation site would be noticeable to park visitors during installation, it would not represent a substantial change in the quality or character of views within the park, as there are several areas of the park where vegetation has been removed due to overuse or restoration

initiatives. Once established, the propagation site would appear similar to other areas of the park where restoration activities have occurred.

The proposed ADA access improvements and Fort Funston plant propagation site would not substantially adversely affect a scenic vista, degrade the existing character or quality of public views of the sites or surroundings, or damage scenic resources. These changes to the project description would not result in new or substantially more severe aesthetic impacts, under either project or cumulative conditions, relative to those presented in the draft EIR. The impact conclusions and significance determinations in draft EIR Section 4.2, Aesthetics, would remain the same.

### **9.2.2 Transportation and Circulation**

Four of the six project description revisions would affect the transportation network during project construction and/or operation. These are the ADA access improvements, the Fort Funston plant propagation site, the placement of North Ocean Beach sand during construction, and the updated project construction schedule. The restoration plan and the refined nighttime lighting plan would not affect the transportation network.

During construction, deliveries of North Ocean Beach sand to the South Ocean Beach project site would be via the Great Highway between Lincoln Way and Sloat Boulevard and would involve between approximately 94 and 135 trucks per work day traveling to and from the South Ocean Beach work site for a four- to six-week period.<sup>2</sup> Haul truck circulation at and between the North Ocean Beach and South Ocean Beach work areas would be subject to permitting and a traffic control plan as required under the San Francisco Regulations for Working in San Francisco Streets (also known as the “blue book”). The traffic control plan would include measures such as circulation and detour plans, advance warning signage, truck routes, maintenance of pedestrian and bicycle access, and monitoring of construction vehicle movements. Thus, sand deliveries from North Ocean Beach during project construction would not create potentially hazardous conditions or interfere with accessibility for people walking, bicycling, or driving on the Great Highway.

Construction activities associated with the proposed ADA access upgrades and the plant propagation site would be limited in area, duration, and intensity, and therefore would not result in potentially hazardous conditions for people walking, bicycling, or driving, or interfere with emergency access or accessibility for people walking and bicycling during construction. Sand deliveries or construction activities associated with the proposed ADA access upgrades and plant propagation site also would not alter roadway infrastructure nor generate vehicle trips; therefore, these project elements would not result in impacts on public transit delay, vehicle miles traveled, or loading. The updated project schedule would shift construction start by approximately nine months and extend the durations of construction phases 3 and 4, but would not substantially alter the construction traffic and construction activities discussed in the draft EIR. Thus, the conclusions and significance determinations in the draft EIR related to transportation-related construction impacts would still be applicable to the project and no new or substantially more severe impacts would occur. After construction, the ADA access improvements on the existing multi-use trail would improve the pedestrian and bicycle network and enhance accessibility and safety, compared to existing conditions.

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<sup>2</sup> While the Transportation and Circulation discussion conservatively assumes that the placement of North Ocean Beach sand during construction would occur daily during a four- to six-week period, sand placement during construction would likely occur in two episodes in fall 2026 and fall 2027.

Vehicle travel demand associated with the Fort Funston propagation site activities would be intermittent and limited. Thus, operation of the propagation site would not result in potentially hazardous conditions, impede accessibility for people walking and bicycling, or delay transit. Overall, operation of these new project components would not create potentially hazardous conditions or adversely affect accessibility and therefore would not result in new or substantially more severe transportation impacts. In addition, the minor changes to the project would not result in new or substantially more severe impacts with respect to other transportation operations (e.g., transit delay, vehicle miles traveled, and loading) under project or cumulative conditions as analyzed in the draft EIR because the changes would not alter vehicle roadway infrastructure or result in increased or redistributed vehicle trips. The impact conclusions and significance determinations in draft EIR Section 4.3, Transportation and Circulation, would remain the same.

### **9.2.3 Noise and Vibration**

Four of the six project revisions would not have the potential to result in new or substantially more severe noise and vibration impacts. The ADA access improvements and addition of small sand placements would result in minor noise increases during construction. None of the project description revisions would result in new or substantially more severe significant noise impacts.

The restoration plan clarifies the type of work that would occur in an area where the noise and vibration from off-road equipment has already been assessed and would not contribute to new or more substantial noise or vibration impacts than what is already assessed in the draft EIR. Similarly, the refined nighttime lighting plan calls for installation of lights in a location where the noise and vibration from off-road equipment has already been assessed and would not contribute to new or substantially more severe noise or vibration impacts relative to those presented in the draft EIR. The Fort Funston plant propagation site would be located more than 1,000 feet from the nearest noise-sensitive receptor (Lakewood Apartments) and activities associated with removal of existing ice plant and planting and maintenance of new plants are not anticipated to require substantial off-road construction equipment or vibration-inducing activities. The updated construction schedule would shift construction start by approximately nine months and extend the durations of construction phases 3 and 4, but would not alter the construction activities discussed in the draft EIR and therefore would not result in new or substantially more severe noise or vibration impacts than disclosed in the draft EIR.

The ADA access improvements and placement of North Ocean Beach sand during construction would involve construction activities that could result in a minimal increase in noise impacts during construction. The ADA access improvements would involve construction noise associated with grading and repaving the existing trail. The nearest receptors would be residential uses 120 feet to the east on the Lower Great Highway. Pavement repair, grading, and repaving would be expected to proceed along the existing trail alignment at a rate of approximately 500 feet per week. Therefore, due to the limited duration of construction, and the location of the closest receptors on the Lower Great Highway, construction activities for these improvements would not result in a substantial temporary increase in construction noise levels and would not result in new or substantially more severe noise or vibration impacts than disclosed in the draft EIR. Material for the proposed placement of North Ocean Beach sand during construction Phase 3 would be obtained using the same types of equipment and placed in a manner similar to that of the proposed small sand placements described in Section 2.4.5.4, Small Sand Placements. As discussed in the draft EIR (Impact NO-3) for the small placements, transport of 85,000 cubic yards of sand using 30-cubic-yard articulated off-road dump

trucks would require approximately 2,833 truck loads over the approximately four to six weeks of activity, which would result in up to 11 truck trips per hour over the 12-hour workday.<sup>3</sup>

The draft EIR (Impact NO-1) concluded that neither construction Phase 3 nor Phase 4 would result in a substantial prolonged noise impact because construction noise would not exceed 10 dBA Leq above ambient levels and impacts would, therefore, be less than significant. Sand placement would occur at the end of construction Phase 3, and could overlap with construction of the restroom under Phase 4. The additional trucks and equipment needed for sand placement during Phase 3 and Phase 4 would increase noise levels along the Great Highway by less than 6 dBA and would also not exceed 10 dBA Leq above ambient levels (refer to **Attachment B**). Consequently, the placement of North Ocean Beach sand during construction also would not have a substantial prolonged noise impact and would not cause new or substantially more severe construction noise impacts.

There would be no new or substantially more severe noise impacts and the impact conclusions and significance determinations in draft EIR Section 4.4, Noise and Vibration, would remain the same.

#### 9.2.4 Recreation

The project description revisions involve minor clarifications to elements already addressed in the draft EIR and would not change the draft EIR's recreation impacts analysis or conclusions. The restoration plan and refined nighttime lighting plan modify project components within the South Ocean Beach project area but would not affect the duration or area of closure during construction or the proposed recreational facilities during operation, and therefore would not result in new or substantially more severe individual or cumulative recreational facilities impacts compared to those described in the draft EIR.

The ADA access improvements would require temporary closure of the existing multi-use trail between Sloat Boulevard and Taraval Street during the approximately four-week construction period and trail users would be redirected to use the Great Highway (when open to pedestrians on weekends) or the Lower Great Highway sidewalk on weekdays. At least one of the two beach access points (at Vicente Street or Taraval Street) along the trail would remain open during ADA improvements construction, except during the two days of repaving when both beach access locations would be closed. The project evaluated in the draft EIR did not assume these areas would be closed during construction. During the temporary construction closure, Middle Ocean Beach and adjacent beach access locations at Rivera Street and Pacheco Street would remain open and accessible and the city would install temporary signage to direct users along the Lower Great Highway sidewalk to these locations. This work would be temporary and would not displace large numbers of visitors such that other recreational destinations would experience an influx of people that could cause or accelerate physical deterioration of those facilities. Upon completion of construction, the multi-use trail and beach accessways would re-open and provide expanded access opportunities to and along Middle Ocean Beach for recreational users. Although the Fort Funston plant propagation site could be near park trails, it would not encroach on the trail or nearby hang-gliding areas, affect the frequency or intensity of use along the trails or adjoining areas, or otherwise limit use of the park such that visitors would be displaced during or

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<sup>3</sup> While the Noise and Vibration discussion conservatively assumes that the placement of North Ocean Beach sand during construction would occur daily during a four- to six-week period, sand placement during construction would likely occur in two episodes in fall 2026 and fall 2027.

after construction. Overall, the ADA access improvements and Fort Funston plant propagation site would not result in new or substantially more severe recreation impacts compared to those described in the draft EIR.

The North Ocean Beach sand placement during construction would involve a change in the duration of a construction activity that could affect recreational facilities in the project area. The recreation-related effects of North Ocean Beach sand placement during construction would be the same as impacts of sand placement during operations evaluated in Impact RE-1 on draft EIR p. 4.5-14, and occurring under existing conditions (sand backpass). As discussed in the draft EIR (Impact RE-1) for the small sand placements, a portion of North Ocean Beach would be closed for four to six weeks to allow for the excavation and transport of sand. During this period, the approximately 2 miles of Middle Ocean Beach, as well as the approximately 3 miles of Fort Funston Beach, Phillip Burton Memorial Beach, and Thornton State Beach, would remain open and unaffected. Visitors displaced from North Ocean Beach during this period of project construction would have alternative nearby beach recreational opportunities, the use of which would not result in new or substantially more severe individual or cumulative impacts on recreational facilities compared to those described in the draft EIR.

The updated construction schedule would delay the construction start date but would not alter the duration of construction and therefore would not affect the draft EIR's conclusions regarding recreation impacts during construction.

For the reasons above, the project description revisions would not result in new or substantially more severe recreational impacts, under either project or cumulative conditions, relative to those identified in the draft EIR. The impact conclusions and significance determinations in draft EIR Section 4.5, Recreation, would remain the same.

### **9.2.5 Biological Resources**

The project revisions involve minor clarifications to elements already addressed in the draft EIR and would not change the draft EIR's biological resources impact analysis or conclusions, as discussed in greater detail below. The restoration plan, refined nighttime lighting plan, and placement of North Ocean Beach sand would each occur within the biological resources study areas, as defined and assessed in the draft EIR (Section 4.6, Biological Resources). The updated schedule would have no effect on such resources. The ADA access improvements and the Fort Funston plant propagation site were not within the draft EIR biological resources study areas.

The restoration plan would not result in new or substantially more severe biological resources impacts compared with the draft EIR because it would be implemented within the same footprint as that analyzed for the draft EIR and would continue the use of native, climate-appropriate, locally adaptive, and non-invasive plants, as evaluated in the draft EIR.

The refined nighttime lighting plan provides greater detail regarding the types and locations of nighttime lighting but is consistent with the concept evaluated in the draft EIR. The project's nighttime lighting would comply with NPS best management practices for lighting, as discussed in the draft EIR, and therefore would not result in any new or substantially more severe impacts on migrating birds.

Repaving and grading of the existing multi-use trail between Taraval Street and Sloat Boulevard as part of the ADA access improvements would occur within the limits of existing pavement and would not affect nearby

vegetation. Similarly, mobi-mats would not result in new or substantially more severe impacts on biological resources because the areas where these mats would be deployed consist of bare sand that does not support dune vegetation, sensitive or otherwise.

Because the propagation site area is generally composed of dense ice plant mats (see Figure 2-1d), direct impacts on special-status plants from development of this area are not expected, and there would be no associated impacts on sensitive natural dune communities (e.g., yellow sand verbena – beach burr dune mat alliance). The Fort Funston propagation site would be located within established dune habitat that may be considered an environmentally sensitive habitat area (ESHA) under the California Coastal Act. Because use of the site would support the continuance of dune habitat and enhance the ecological function through native dune species diversification within the site, the project would not result in a substantial adverse effect related to dune ESHA. For these reasons, the Fort Funston plant propagation site would not result in new or substantially more severe significant impacts on biological resources than identified in the draft EIR.

The excavation and placement methods for North Ocean Beach sand during project construction would be the same as analyzed in the draft EIR for the small sand placements, and for the same reasons the additional placement during construction would have no new or substantially more severe significant impacts on biological resources.

The updated project construction schedule would shift construction start by nine months but otherwise would not change the project. The updated construction schedule would not result in new or substantially more severe significant biological resources impacts because the construction footprint and activities would not change.

The project as revised would not result in new or substantially more severe significant biological resources impacts, under either project or cumulative conditions, relative to those identified in the draft EIR. The impact conclusions and significance determinations in draft EIR Section 4.6, Biological Resources, would remain the same.

## **9.2.6 Cultural Resources and Tribal Cultural Resources**

One of the six project revisions—the Fort Funston plant propagation site—would have the potential to result in less-than-significant cultural resources impacts. The restoration plan, refined nighttime lighting plan, and placement of North Ocean Beach sand would each occur within the horizontal and vertical CEQA Area of Potential Effects (C-APE), as defined and assessed in the draft EIR (Appendix B, Initial Study) for historic architectural resources, archeological resources, and tribal cultural resources. The updated construction schedule would have no effect on such resources. The ADA access improvements would require minor ground disturbance in areas outside the reviewed C-APE. There are no previously recorded cultural resources in the location of the ADA access improvements. The proposed ground disturbance would be shallow (no greater than 6 inches) and would not extend below disturbed and redeposited sand dunes.

The Fort Funston plant propagation site would be located in a 0.5-acre area within an approximately 16--acre portion of southeastern Fort Funston (referred to as the plant propagation site C-APE) that was not evaluated in the draft EIR as part of the project C-APE. To assess potential impacts on cultural resources within the plant propagation site C-APE, records from the Northwest Information Center and historic maps/aerial imagery were reviewed. Three Native American archeological resources are in a 0.5-mile radius of the approximate plant propagation site C-APE. Sites CA-SFR-106, CA-SFR-183, and CA-SFR-414 are all Native

American midden sites; none has been tested or evaluated for eligibility determinations and no site visit was conducted.

The archeological analysis indicates that there is the potential for Native American resources to be present in the plant propagation site C-APE. However, the SFPUC would implement standard construction measures for the project, including Standard Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring).<sup>4</sup> These measures would be implemented in the same manner described in the draft EIR (Appendix B) for the South Ocean Beach portion of the C-APE. With implementation of SFPUC Standard Archeological Measures I and II during construction, work at the Fort Funston plant propagation site would result in less-than-significant impacts on archeological resources.

There are no known human remains, including those interred outside of dedicated cemeteries, located in the vicinity of the plant propagation site C-APE. While unlikely, ground disturbance associated with the Fort Funston plant propagation site could uncover previously undiscovered human remains, either in the context of an archeological site or in isolation, and any inadvertent damage to the remains would be considered a significant impact. However, as explained for other project components evaluated in the draft EIR, work at the Fort Funston plant propagation site would be subject to provisions of the California Health and Safety Code, California Public Resources Code, and SFPUC Standard Archeological Measure I (Archeological Discovery) and II (Archeological Monitoring) governing the discovery and treatment of human remains or funerary objects encountered during construction. For the same reasons described in the draft EIR, through compliance with statutory requirements and with incorporation of SFPUC standard construction measures Archeological Measure I and II (Archeological Monitoring), project activities at the Fort Funston plant propagation site would have a less-than-significant impact related to previously unknown human remains.

There are no known tribal cultural resources in the plant propagation site C-APE, although there is the potential for the presence of undiscovered Native American archeological resources that may also be determined to be tribal cultural resources. Activity at the Fort Funston plant propagation site could result in the inadvertent discovery of Native American archeological resources. Any such archeological resource that may be encountered could be identified as a tribal cultural resource at the time of discovery or at a later date. Therefore, the Fort Funston plant propagation site has the potential to affect tribal cultural resources to the same extent that it would affect unidentified archeological resources. As discussed above, SFPUC Standard Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring), which set forth procedures for identification, protection, and treatment of archeological resources (which may also be tribal cultural resources), would require that any potential tribal cultural resources encountered during construction excavation are promptly recognized, appropriately treated in consultation with associated Native American tribal representatives, and, if applicable, subject to an interpretive program developed in consultation with the associated Native American tribal representatives. With implementation of these standard construction measures, project activities at the Fort Funston plant propagation site would have a less-than-significant impact on tribal cultural resources.

The project description revisions would not result in new or substantially more severe cultural or tribal cultural resources impacts, under either project or cumulative conditions, relative to those identified in the

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<sup>4</sup> As discussed in draft EIR Section 2.5.5, SFPUC Standard Construction Measures, the standard construction measures apply to all SFPUC-sponsored projects and would be implemented for all project components.

draft EIR. The impact conclusions and significance determinations in draft EIR Appendix B, Sections E.4, Cultural Resources, and E.5, Tribal Cultural Resources, would remain the same.

### 9.2.7 Air Quality

The air quality analysis evaluates short-term impacts from construction and long-term impacts from project operation by calculating air pollutant emissions during project construction and operation. Project revisions that change the number or type of equipment used during either construction or operations, and that change the schedule during which the equipment is used, can affect air quality impacts. The restoration plan provides additional detail regarding the landscaping but does not affect the equipment needed to construct or operate the revegetated area. The refined nighttime lighting plan similarly provides additional information about the locations and heights of light standards but does not affect the equipment needed to construct or operate the project. These project components would not contribute to new or substantially more severe significant impacts on air quality than what is already assessed in draft EIR Appendix B, Initial Study. The activities associated with the Fort Funston plant propagation site related to removal of existing ice plant and planting and maintenance of new plants would require at most a small backhoe for several days, and would not contribute to new or substantially more severe significant impacts on air quality than those already assessed in draft EIR Appendix B, Initial Study.

The three other project description revisions consisting of the proposed ADA access improvements, placement of North Ocean Beach sand, and the increased duration of construction would increase the number or type of equipment used or change the schedule of equipment use during project construction. The proposed ADA access improvements that would be built during construction Phase 1 would require the use of a dozer and a paver and up to 60 additional one-way truck trips over a period of approximately 20 workdays during construction Phase 1. Material for the proposed placement of North Ocean Beach sand during construction of Phase 3 would be obtained and delivered to the site using the same types of equipment and placed in a manner similar to that of the proposed small sand placements described in draft EIR Section 2.4.5.4, Small Sand Placements. As discussed above, in Section 9.1.5, the placement of sand would require the transport of up to approximately 85,000 cubic yards of sand using an excavator, four dozers, one loader, and 30-cubic-yard articulated off-road dump trucks. It is estimated that up to 2,833 additional truck loads (5,666 one-way truck trips) would be required over a four- to six-week period during Phase 3 construction. In addition, it has been determined that Phase 3 would require up to 240 workdays instead of 180 workdays and Phase 4 would require up to 213 workdays instead of 160 workdays. As this work would overlap with other phases, the total construction period would remain approximately four years. Furthermore, the project description has been updated to reflect a construction schedule beginning in 2024 instead of 2023, and concluding in 2028, instead of 2026.

To evaluate the air quality impacts of the project with these project description revisions, the air pollutant emissions modeling for the project has been updated to reflect the revised construction assumptions described above. The updated modelling results are presented in **Attachment C** of this responses to comments (RTC) document. Incorporating the project revisions into the emissions modeling results in slightly reduced emissions estimates compared to those described in the draft EIR Appendix G and Appendix B. This is because the modeling assumes that the available construction equipment inventory will continue to become cleaner in the future, and because the average daily emissions concentrations would be reduced with the increase in the overall Phase 3 and Phase 4 construction periods. In fact, the revised results indicate that there would only be two calendar years (i.e., years 2 and 4) when emissions of nitrogen oxides

(NO<sub>x</sub>) would exceed the significance threshold compared to the previously estimated three years (i.e., years 2 through 4) of NO<sub>x</sub> exceedances identified in the draft EIR. In addition, the maximum-year mitigated estimated NO<sub>x</sub> emissions would be reduced from approximately 53 pounds per day to approximately 43 pounds per day. Similarly, total onsite diesel particulate matter emissions associated with the revised project construction activities, which can increase local health risks and cause adverse odors, would be reduced by more than 3 percent compared to the emissions described in the draft EIR. With the exception of one fewer year that construction NO<sub>x</sub> emissions would exceed the significance threshold, the impact conclusions and significance determinations in draft EIR Appendix B, Initial Study, Section E.8, Air Quality, would remain the same.

### **9.2.8 Greenhouse Gas Emissions**

The Fort Funston plant propagation site, the ADA access improvements, the placement of North Beach sand during construction, and the project construction schedule update do not affect the analysis of greenhouse gas (GHG) emissions presented in draft EIR Appendix B, Initial Study. The revised project construction activities would continue to result in the temporary generation of emissions over an approximately four-year construction period. The proposed construction activity emissions would continue to be subject to the San Francisco Clean Construction Ordinance provisions, including the use of biodiesel fuel grade B20 for all off-road equipment and off-road engines. In addition, pursuant to Executive Directive 06-02 (Biodiesel for Municipal Fleets), all SFPUC and San Francisco Recreation and Parks Department diesel vehicles used during construction and operation of the project would use renewable fuel. Use of biodiesel, which is made of nonpetroleum renewable resources such as natural fats, vegetable oils, and greases, results in a net reduction in life cycle carbon dioxide (CO<sub>2</sub>) emissions compared to the use of conventional diesel fuel. With regard to long-term operations, the restoration plan includes the installation of a small-scale drip-line irrigation system that would be provided via existing potable or recycled water lines located within or immediately adjacent to the project areas analyzed in the draft EIR. The refined nighttime lighting plan clarifies that the project's nighttime lighting would be solar-powered, and therefore would not affect the draft EIR's analysis of electricity demand and supply or its consistency with the city's GHG Reduction Strategy.

These changes to the project would not result in new or substantially more severe GHG emissions impacts, under either project or cumulative conditions, relative to those analyzed in the draft EIR. The impact conclusions and significance determinations in draft EIR Appendix B, Section E.9, Greenhouse Gas Emissions, would remain the same.

### **9.2.9 Utilities and Service Systems**

The project revisions would not affect the assessment of wastewater treatment service and demand, solid waste reduction, or compliance with federal, state, and local regulations related to solid waste presented in draft EIR Appendix B, Initial Study, because they would not generate additional wastewater or solid waste.

A temporary irrigation system to support plant establishment in revegetated project areas was evaluated in the draft EIR. The restoration plan clarifies the estimated volume of water needed and indicates that the irrigation would be provided via connections to existing potable or recycled water lines within or immediately adjacent to the project areas analyzed in the draft EIR. Due to the limited amount of water to be used and the short duration of use, this project clarification would not result in new or substantially more severe significant impacts related to utilities or service systems. The refined nighttime lighting plan clarifies

that the project's nighttime lighting would be solar-powered; therefore, the lighting would not affect the draft EIR's conclusion that relocation or construction of electric power facilities would not be required. The impact conclusions and significance determinations in draft EIR Appendix B, Section E.13, Utilities and Service Systems, would remain the same.

### **9.2.10 Geology and Soils**

The restoration plan, refined nighttime lighting plan, and placement of North Ocean Beach sand would each occur within the areas assessed for geology and soils impacts in the draft EIR (Appendix B, Section E.16, Geology and Soils) and do not include features or activities that could cause adverse effects due to seismic hazards or unstable soils. The updated construction schedule would have no effect on geology and soils.

The ADA access improvements would be located in an area not evaluated for geology and soils impacts in the draft EIR; however, they would be located within the same seismically active region and liquefaction hazard zone as the project site. The improvements would be limited to repaving activities. The ADA access improvements would not exacerbate the existing potential for risk of loss, injury, or death involving seismic ground shaking, liquefaction, landslides, or expansive soils because the improvements would not build new structures. Repaving would require minor (less than 6 inches) ground disturbance that would be completed in less than 2 weeks in an area underlain by recent-age windblown sand and therefore would not result in substantial soil erosion or risk directly or indirectly destroying a paleontological resource. The ADA access improvements would not introduce septic systems or alternative wastewater disposal systems. Therefore, the ADA access improvements would not result in new or substantially more severe geology and soils impacts than were identified in the draft EIR.

The Fort Funston plant propagation site also is not within the area evaluated for geology and soils impacts in the draft EIR. The Fort Funston plant propagation site is not located in an Alquist-Priolo zone or other seismic hazard zone and would not build new structures; therefore, the propagation site would not exacerbate the existing potential for risk of loss, injury or death involving seismic ground shaking, liquefaction, or landslides. The propagation site is located on sand and therefore would not be located on expansive soil, and would not introduce septic systems or alternative wastewater disposal systems. Ground disturbance at the propagation site would occur within recent unconsolidated sand and therefore would not risk directly or indirectly destroying a paleontological resource. Therefore, the Fort Funston plant propagation site would not result in new or substantially more severe geology and soils impacts than were identified in the draft EIR.

These changes to the project description would not result in new or substantially more severe significant geology and soil impacts, under either project or cumulative conditions, relative to those disclosed in the draft EIR. The impact conclusions and significance determinations in draft EIR Appendix B, Section E.16, Geology and Soils, would remain the same.

### **9.2.11 Hydrology and Water Quality**

Due to their location, scale, and nature, the refined nighttime lighting plan, the ADA access improvements, the placement of North Ocean Beach sand during construction, and the construction schedule update would not result in any new or substantially more severe individual or cumulative hydrology or water quality effects relative to those presented in the draft EIR.

The restoration plan includes the installation of an irrigation system. As discussed in revised Section 2.4.3, the reshaped bluff would be planted with native plants appropriate for coastal dunes and unwanted vegetation would be removed by hand; these practices would reduce the need for fertilizer or herbicide. The use of city potable or recycled water and associated maintenance for the establishment of native dune vegetation within the project area would not be expected to substantially degrade surface or groundwater quality, impede sustainable groundwater management of the basin, or substantially alter the drainage pattern of the site.

The Fort Funston plant propagation site would be a 0.5-acre plot, located within a 16-acre portion of Fort Funston. The propagation site would preserve the existing natural topography and would not alter existing drainage patterns. Given that use of herbicide would be limited to the initial ice plant removal, soil amendments and fertilizers would consist of decayed plant litter as compost (already onsite) and low doses of nitrate or organic nitrogen (placed directly under transplant roots), and watering would be by hand (no irrigation), this project revision would not substantially degrade surface or groundwater quality, impede sustainable groundwater management of the basin, or substantially alter the drainage pattern of the site.

These changes to the project description would not result in new or substantially more severe hydrology or water quality impacts, under either project or cumulative conditions, relative to those analyzed in the draft EIR. The impact conclusions and significance determinations in draft EIR Appendix B, Section E. 17, Hydrology and Water Quality, would remain the same.

### **9.2.12 Hazards and Hazardous Materials**

The restoration plan, the revised nighttime lighting plan, and the placement of North Ocean Beach sand during construction would involve ground disturbance in locations already discussed in the draft EIR and would not use different or substantially greater quantities of hazardous materials or generate hazardous waste. The updated project construction schedule would not affect ground disturbance locations, hazardous materials usage, or hazardous waste generation. These project revisions therefore would not change the draft EIR's hazards or hazardous materials impacts analysis or conclusions.

The ADA access improvements are located approximately 0.25 mile from four sensitive receptor sites: Saint Gabriel Catholic School, Ulloa Elementary School, Little People Preschool, and Phoebe Apperson Hearst Home. Similar to construction of other project components, construction of the ADA access improvements would require the use of limited quantities of hazardous materials such as fuels, oils, and tar for paving. Construction of the ADA access improvements would be included in the project's erosion and sediment control plan or stormwater pollution prevention plan (SWPPP), which would specify minimum best management practices related to housekeeping that would reduce the risk of releasing hazardous materials to the environment. Implementation of SFPUC standard construction measure 6, Hazardous Materials, would also require hazardous materials management, spill prevention, and spill response measures that would apply to hazardous materials used during construction of the ADA access improvements. There would be minor (less than 6 inches) ground disturbance associated with the ADA access improvements in an area underlain by windblown sand and therefore there would be no risk of encountering hazardous materials in soil or groundwater. The ADA access improvements are not on a hazardous materials site listed pursuant to Government Code section 65962.5 and are not located within an airport land use plan or within 2 miles of a public or public use airport. The ADA access improvements area does not include and is not adjacent to areas at risk of wildland fire and therefore would not alter exposure to wildfires.

According to mapping compiled by the city (Maher Ordinance Layer), one site associated with the Department of Toxic Substances Control (DTSC) Cortese List is located near the Fort Funston plant propagation site. The DTSC cleanup status for Fort Funston is “Inactive-Action Required” due to the discovery of munitions on the Fort Funston beach.<sup>5</sup> The plant propagation site would be located on a coastal bluff approximately 150 feet above and 350 to 1,300 feet east of the beach. Furthermore, any hazardous materials encountered during construction would be characterized and appropriately treated, contained, or removed, in accordance with SFPUC standard construction measure 6, Hazardous Materials, as discussed in the draft EIR.

These changes to the project would not result in new or more substantially severe hazards or hazardous materials impacts, under either project or cumulative conditions, relative to those analyzed in the draft EIR. The impact conclusions and significance determinations in draft EIR Appendix B, Section E.18, Hazards and Hazardous Materials, would remain the same.

### 9.2.13 Other Environmental Topics

The project description revisions would have similar or reduced environmental effects as the project for the following topics, as further explained below: land use and land use planning, population and housing, wind and shadow, public services, energy, mineral resources, agriculture and forestry resources, and wildfire.

The nature and locations of the project description revisions would not divide established communities or conflict with land use plans adopted for the purpose of avoiding or mitigating an environmental effect. The project description revisions do not include housing or employment and therefore would not result in population growth and would have less-than-significant population and housing impacts.

The project description revisions would not include any new structures, and therefore would not create wind hazards or shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. The project description revisions would therefore have no impacts with respect to wind or shadow.

The project description revisions would have less-than-significant public services impacts as they would not cause population growth or alter land use such that new or altered governmental facilities would be needed.

The project description revisions would not include new operational energy use. Similar to other project components, construction equipment used for project description revisions that involve equipment (ADA access improvements, Fort Funston plant propagation site) would be diesel powered; it is expected that the quantity of diesel used for construction equipment, as well as workers’ vehicles and haul vehicles, would be comparable to the quantity used for other construction projects within the city. Therefore, energy usage would not be unusually large or inefficient, wasteful, or unnecessary, and would represent a less-than-significant impact.

Lands affected by the project description revisions are not in areas designated by the state or the city as containing mineral deposits of significance, and thus the project description revisions would have the same less-than-significant mineral resources impacts as the project. Lands affected by the project description revisions also are not used for farming or agricultural activities, are not zoned for agricultural or timber uses,

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<sup>5</sup> Department of Toxic Substances Control (DTSC), EnviroStor database search, Available online at: [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=80001046](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80001046), accessed on August 25, 2022.

and are not classified as very high fire hazard severity zones, and therefore the project description revisions would not result in any impacts related to these topics.

### **9.3 Alternatives to the Revised Project**

As discussed in draft EIR Chapter 6, Alternatives, under CEQA the discussion of project alternatives must focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project.<sup>6</sup> Compared to the project, the revised project would not result in any significant project-level or cumulative impacts that were not previously identified in the draft EIR. Because the project revisions would not result in new or substantially more severe significant impacts, no new alternatives need to be analyzed. The findings in draft EIR Chapter 6, Alternatives, remain valid and are applicable to the revised proposed project.

### **9.4 Overall Conclusion on the Potential Environmental Impacts of the Revised Project**

As discussed in greater detail at the beginning of this chapter, CEQA Guidelines section 15088.5 requires recirculation of an EIR when “significant new information” is added to the EIR after publication of the draft EIR but before certification. CEQA Guidelines section 15088.5 further defines “significant new information” that triggers a requirement for recirculation as including, but not limited to, identification of a new significant impact or of a substantial increase in the severity of an impact (unless mitigation is adopted to reduce the impact to a less-than-significant level).

For the reasons presented above, the project revisions would not result in any new significant impacts that were not already identified in the draft EIR, nor would these changes substantially increase the severity of any impacts identified in the draft EIR. The mitigation measures identified in the draft EIR for the project would continue to be required to reduce or avoid the significant environmental impacts of the revised project. No new or modified measures would be required to mitigate impacts identified for the project description revisions presented in this chapter. Because the revisions would not result in any new or substantially more severe significant impacts than those identified in the draft EIR, recirculation of the draft EIR pursuant to CEQA Guidelines section 15088.5 is not required.

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<sup>6</sup> Public Resources Code Section 15126.6(b).

## 9. Revisions and Clarifications to the Project Description

### 9.4 Overall Conclusion on the Potential Environmental Impacts of the Revised Project

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# CHAPTER 10

## LIST OF PERSONS COMMENTING

This chapter lists all persons who submitted comments on the draft environmental impact report (draft EIR). Commenters are grouped according to whether they commented as individuals or represent a public agency or organization. **Table 10-1** lists commenters' names; the corresponding commenter codes used in Chapter 11, Responses to Comments, to denote each set of comments; the comment format; and the comment date. The complete set of written and oral comments received on the draft EIR is contained in Attachment A, Comments on the Draft EIR. Comments received from individuals after the comment deadline of January 24, 2022, are not listed in this table or Attachment A, but are discussed in Section 11.15, Late Comments.

In this responses to comments (RTC) document, each commenter who submitted written correspondence or provided oral comment during the San Francisco Planning Commission hearing is assigned a unique commenter code in the following manner:

- Commenters from public agencies are designated by "A-" and the agency's name or acronym thereof.
- Commenters from organizations are designated by "O-" and the organization's name or acronym thereof.
- Commenters as individuals are designated by "I-" and the commenter's last name (or other name if the last name was not provided).

If a commenter provided more than one set of comments, the acronym or name is followed by a hyphen and number indicating the comment set (e.g., -1, -2, -3). Within each category (public agencies, organizations, and individuals), commenters are listed in alphabetical order by code.

Similarly, each individual comment is assigned a unique comment code. Within each comment letter or public hearing testimony, individual comments on separate topics are bracketed and numbered sequentially; these numbers follow the commenter code described above, separated by a period. For example, the first comment from the letter submitted by the California Coastal Commission (CCC) is designated as A-CCC.1, the second comment as A-CCC.2, and so on.

In this way, the reader can locate a particular comment in a comment letter or the public hearing testimony by referring to the comment's coded designation. Attachment A includes the bracketing and coding of all substantive comments. These comment codes are used in Chapter 11 to identify which responses apply to which comments.

**Table 10-1 Agencies, Organizations, and Individuals Commenting on the Draft EIR**

Commenter Code	Name, Title, and Affiliation of Commenter	Format	Date
<b>PUBLIC AGENCIES</b>			
A-Caltrans	Yunsheng Luo, Associate Transportation Planner, California Department of Transportation, District 4	E-mail	January 24, 2022
A-CCC	Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District	Letter	January 24, 2022
A-CDFW	Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife	Letter	January 21, 2022
A-CPC-1	Sue Diamond, Commissioner, San Francisco Planning Commission	Planning Commission Hearing Transcript	January 6, 2022
A-CPC-2	Kathrin Moore, Commissioner, San Francisco Planning Commission	Planning Commission Hearing Transcript	January 6, 2022
A-GGNRA	Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior	Letter	January 26, 2022
A-SFBOS	Myrna Melgar, Supervisor, District 7, San Francisco Board of Supervisors	Letter	January 24, 2022
<b>ORGANIZATIONS</b>			
O-CNPS	California Native Plant Society, Yerba Buena Chapter: Eddie Bartley; Paul Bouscal; Sophie Constantinou; Bob Hall; Jake Sigg; Noreen Weeden; Susan Karasoff; Beth Cataldo; Libby Ingalls; Elliot Goliger	Letter	January 24, 2022
O-GGAS	Whitney Grover, Golden Gate Audubon Society San Francisco Conservation Committee	Letter	January 24, 2022
O-SFB	Ian Wren, San Francisco Baykeeper	Letter	January 25, 2022
O-SURF	Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation	Letter	January 18, 2022
O-WSF	Jodie Medeiros, Walk San Francisco	Letter	January 24, 2022
<b>INDIVIDUALS</b>			
I-Aguilar	Lisa Aguilar	E-mail	January 21, 2022
I-Akin	Kelley Akin	E-mail	January 23, 2022
I-Anderson	Jon Anderson	E-mail	January 19, 2022
I-Antell	Edmund Antell	E-mail	January 21, 2022
I-Argaman	Maya Argaman	E-mail	January 19, 2022
I-Atkind-1	Nina Atkind	E-mail	January 20, 2022
I-Atkind-2	Nina Atkind	E-mail	January 20, 2022
I-Barzano	Laura Barzano	E-mail	January 24, 2022
I-Basso	Anne-Marie Basso	E-mail	January 19, 2022
I-Beale	Katharine Beale	E-mail	January 21, 2022

**Table 10-1 Agencies, Organizations, Individuals Commenting on the Draft EIR (Continued)**

Commenter Code	Name, Title and Affiliation of Commenter	Format	Date
<b>INDIVIDUALS (CONT.)</b>			
I-Bekkerman	Alina Bekkerman	E-mail	January 19, 2022
I-Belden	Peter Belden	E-mail	January 18, 2022
I-Bense-Kang	Delia Bense-Kang	E-mail	January 19, 2022
I-Block	Corey Block	E-mail	January 20, 2022
I-Boccia	Daniel Boccia	E-mail	January 19, 2022
I-Bocharova	Maria Bocharova	E-mail	January 21, 2022
I-Boken-1	Eileen Boken	E-mail	January 23, 2022
I-Boken-2	Eileen Boken	Planning Commission Hearing Transcript	January 6, 2022
I-Brinner	Kristin Brinner	E-mail	January 21, 2022
I-Bruchman	Christian Bruchman	E-mail	January 24, 2022
I-Burke	Anamarie Burke	E-mail	January 23, 2022
I-Busse	Ben Busse	E-mail	January 19, 2022
I-Cassa	Mary Rose Cassa	E-mail	January 12, 2022
I-Cawthon-1	Michael Cawthon	E-mail	January 24, 2022
I-Cawthon-2	Michael Cawthon	Planning Commission Hearing Transcript	January 6, 2022
I-Chen	June Chen	E-mail	January 20, 2022
I-Ciganek	Matt Ciganek	E-mail	January 20, 2022
I-Colvin	Lucy Colvin	E-mail	January 24, 2022
I-D	s d	E-mail	January 23, 2022
I-Damon	Paul Damon	E-mail	January 24, 2022
I-Daniel	Jeff Daniel	E-mail	January 18, 2022
I-Dave	Dave	E-mail	January 20, 2022
I-Davies	Lynne Davies	E-mail	January 19, 2022
I-Day	Parker Day	E-mail	January 19, 2022
I-Deanna	Deanna	E-mail	January 20, 2022
I-Derbin	Maksim Derbin	E-mail	January 22, 2022
I-Devore	Ashley Devore	E-mail	January 19, 2022
I-Dillingham	Shelby Dillingham	E-mail	January 19, 2022
I-Doolittle	Georgina Doolittle	E-mail	January 24, 2022
I-Dorazio	Marissa Dorazio	E-mail	January 22, 2022
I-Dow	Brian Dow	E-mail	January 23, 2022
I-Dumanovsky	James Dumanovsky	E-mail	January 19, 2022
I-Eberspächer	Timo Eberspächer	E-mail	January 24, 2022
I-Ernst	Max Ernst	E-mail	January 19, 2022
I-Feeney	Scott Feeney	E-mail	January 21, 2022
I-Flack	Andrew Flack	E-mail	January 19, 2022
I-Foo	Amy Foo	E-mail	January 19, 2022
I-Fowler	Margaret Fowler	E-mail	January 23, 2022
I-Fu	Alan Fu	E-mail	January 19, 2022
I-Garneau	Courtney Garneau	E-mail	January 19, 2022

**Table 10-1 Agencies, Organizations, Individuals Commenting on the Draft EIR (Continued)**

Commenter Code	Name, Title and Affiliation of Commenter	Format	Date
<b>INDIVIDUALS (CONT.)</b>			
I-Gates	Damian Gates	E-mail	January 20, 2022
I-Gill	Elise Gill	E-mail	January 20, 2022
I-Giovara	Joey Giovara	E-mail	January 19, 2022
I-Gold	Josh Gold	E-mail	January 19, 2022
I-Gorski	Judi Gorski	E-mail	January 19, 2022
I-Greer	Paul Greer	E-mail	January 19, 2022
I-Hall	Spencer Hall	E-mail	January 21, 2022
I-Hanley	Will Hanley	E-mail	January 19, 2022
I-Hansen	Heidi Hansen	E-mail	January 24, 2022
I-Hardcastle	Holden Hardcastle	E-mail	January 19, 2022
I-Hardison	Heather Hardison	E-mail	January 19, 2022
I-Haslam	Christopher Haslam	E-mail	January 19, 2022
I-Hill-1	Steven Hill	E-mail	January 23, 2022
I-Hill-2	Steven Hill	Planning Commission Hearing Transcript	January 6, 2022
I-Holl-1	Dennis Holl	E-mail	December 14, 2021
I-Holl-2	Dennis Holl	E-mail	December 23, 2021
I-Holl-3	Dennis Holl	E-mail	January 24, 2022
I-Holstad	Hennie Holstad	E-mail	January 20, 2022
I-Honan	Harper Honan	E-mail	January 21, 2022
I-Howell	Krista Howell	E-mail	January 21, 2022
I-Huang_L	Lena Huang	E-mail	January 19, 2022
I-Huang_P	Paul Huang	E-mail	January 19, 2022
I-Huckins	Mark Huckins	E-mail	January 19, 2022
I-Hunt	Ryan Hunt	E-mail	January 21, 2022
I-Ingram	Linda Ingram	E-mail	January 22, 2022
I-Ininns	Matt Ininns	E-mail	January 19, 2022
I-Jaffee	Jim Jaffee	E-mail	January 19, 2022
I-Jca	jca	E-mail	January 19, 2022
I-Jo	Chanti Jo	E-mail	January 24, 2022
I-Kagel	Adam Kagel	E-mail	January 24, 2022
I-Kelly_B	Brian Kelly	E-mail	January 19, 2022
I-Kelly_J	Joshua Kelly	E-mail	January 18, 2022
I-Ketchum	Toby Ketchum	E-mail	January 19, 2022
I-Krumm	Christoph Krumm	E-mail	January 19, 2022
I-Kwong	Jonny Kwong	E-mail	January 24, 2022
I-Laharty	James Laharty	E-mail	January 22, 2022
I-Latham	Jennifer Latham	E-mail	January 19, 2022
I-Lawrence-1	Steve Lawrence	E-mail	December 13, 2021
I-Lawrence-2	Steve Lawrence	E-mail	January 5, 2022
I-Lenahan	Colleen Lenahan	E-mail	January 19, 2022

**Table 10-1 Agencies, Organizations, Individuals Commenting on the Draft EIR (Continued)**

Commenter Code	Name, Title and Affiliation of Commenter	Format	Date
<b>INDIVIDUALS (CONT.)</b>			
I-Liu	Helen Liu	E-mail	January 19, 2022
I-Louie	Denise Louie	E-mail	January 23, 2022
I-Lux	Lucas Lux	E-mail	January 19, 2022
I-Lyford	Henry Lyford	E-mail	January 19, 2022
I-Mach	J. Mach	E-mail	January 19, 2022
I-Madsen	Drew Madsen	E-mail	January 19, 2022
I-Malone	Marni Malone	E-mail	January 19, 2022
I-Marshall	Brett Marshall	E-mail	January 19, 2022
I-Martin	Alix Martin	E-mail	January 24, 2022
I-Matt	Matt	E-mail	January 19, 2022
I-Matt_R	Matt	E-mail	January 19, 2022
I-McCubbin	Kendra McCubbin	E-mail	January 19, 2022
I-McLaughlin	Bill McLaughlin	E-mail	January 20, 2022
I-Meyerowitz	Zachary Meyerowitz	E-mail	January 21, 2022
I-Miller	Vanessa Miller	E-mail	January 20, 2022
I-Montgomery	Matt Montgomery	E-mail	January 21, 2022
I-Moore	Goffrey Moore	Letter	January 23, 2022
I-Moseson	Heidi Moseson	E-mail	January 18, 2022
I-Musselman	Mark Musselman	E-mail	January 19, 2022
I-Neeser	Amy Neeser	E-mail	January 19, 2022
I-Nelissen	Pieter Nelissen	E-mail	January 19, 2022
I-Niffenegger	Molly Niffenegger	E-mail	January 19, 2022
I-Olsen	Anna Olsen	E-mail	January 19, 2022
I-O'Neil	Hazel O'Neil	E-mail	January 24, 2022
I-Pace	Maggie Pace	E-mail	January 19, 2022
I-Page	Will Page	E-mail	January 19, 2022
I-Pam	Robin Pam	E-mail	January 19, 2022
I-Perry	Richard Perry	E-mail	January 19, 2022
I-Peshkin	Dan Peshkin	E-mail	January 19, 2022
I-Petterson-1	Paul Petterson	E-mail	January 3, 2022
I-Petterson-2	Paul Petterson	Planning Commission Hearing Transcript	January 6, 2022
I-Pielock	Christopher Pielock	E-mail	January 19, 2022
I-Pirolli	Peter Pirolli	E-mail	January 24, 2022
I-Place	Pizza Place	E-mail	January 20, 2022
I-Polesky	Alice Polesky	E-mail	January 19, 2022
I-Raimondi	Ayni Raimondi	E-mail	January 19, 2022
I-Raskin	Adam Raskin	Voicemail	January 4, 2022
I-Rasmussen	David Rasmussen	E-mail	January 19, 2022
I-Reckas	Ted Reckas	E-mail	January 19, 2022
I-Regan	Mike Regan	E-mail	January 6, 2022

**Table 10-1 Agencies, Organizations, Individuals Commenting on the Draft EIR (Continued)**

Commenter Code	Name, Title and Affiliation of Commenter	Format	Date
<b>INDIVIDUALS (CONT.)</b>			
I-Richardson-1	Emily Richardson	E-mail	January 20, 2022
I-Richardson-2	Emily Richardson	E-mail	January 20, 2022
I-Rife	Tessa Rife	E-mail	January 20, 2022
I-Robertson	Benek Robertson	E-mail	January 24, 2022
I-Royer-1	James Royer	E-mail	January 19, 2022
I-Royer-2	James Royer	E-mail	January 24, 2022
I-San Francisco Events	San Francisco Events - Anonymous	E-mail	January 21, 2022
I-Sarjapur	Melinda A. Sarjapur	Letter	January 24, 2022
I-Segal	Chad Segal	E-mail	January 19, 2022
I-Sheffield	Sheffield	E-mail	January 18, 2022
I-Silverstein	Mitch Silverstein	E-mail	January 21, 2022
I-Simonian	Mike Simonian	E-mail	January 19, 2022
I-Solmssen	Christopher Solmssen	E-mail	January 19, 2022
I-Sowalsky	Bobby Sowalsky	E-mail	January 19, 2022
I-Spector-1	Beverly Spector	E-mail	January 19, 2022
I-Spector-2	Beverly Spector	E-mail	January 20, 2022
I-Stanfield	Sky Stanfield	E-mail	January 21, 2022
I-Stevens	Aaliyah Stevens	E-mail	January 20, 2022
I-Strader	Rachel Strader	E-mail	January 19, 2022
I-Stuebe	Max Stuebe	E-mail	January 19, 2022
I-Sugino	Chris Sugino	E-mail	January 19, 2022
I-Sullivan	Meg Haywood Sullivan	E-mail	January 19, 2022
I-Surin	Pinya Surin	E-mail	January 19, 2022
I-Taputuarai	Irwin Taputuarai	E-mail	January 21, 2022
I-Thompson	Teagan Thompson	E-mail	January 19, 2022
I-Ting	Antonio Ting	E-mail	January 19, 2022
I-Tull-1	Katy Jane Tull	E-mail	January 19, 2022
I-Tull-2	Katy Jane Tull	E-mail	January 19, 2022
I-Unidentified	(unidentified speaker)	Planning Commission Hearing Transcript	January 6, 2022
I-Veraldi	Anne Veraldi	E-mail	January 19, 2022
I-Wahn	Udo WAHN	E-mail	January 21, 2022
I-Wang	David Wang	E-mail	January 19, 2022
I-Ward	Steve Ward	E-mail	January 20, 2022
I-Weinberger	Mark Weinberger	E-mail	January 19, 2022
I-Weiss	Lisa Weiss	E-mail	January 19, 2022
I-Weyland	Nathan Weyland	E-mail	January 24, 2022
I-Whitworth	Michael Whitworth	E-mail	January 19, 2022
I-Winklerprins	Lukas Winklerprins	E-mail	January 20, 2022
I-Wittenmeier	Forrest Wittenmeier	E-mail	January 19, 2022

# CHAPTER 11

## RESPONSES TO COMMENTS

### 11.1 Organization

This chapter presents the substantive comments received on the draft environmental impact report (draft EIR) and responses to those comments. The comments and responses are organized by subject and are generally in the same order as presented in the draft EIR, including the initial study (Appendix B). The San Francisco Planning Department (planning department) did not receive comments on all draft EIR subjects; therefore, the number of subjects listed below and addressed in this responses to comments (RTC) document is smaller than the number in the draft EIR.

General comments on the EIR, including comments on the merits of the project, are grouped together toward the end of the chapter. Comments unrelated to a specific draft EIR section or impact category are also classified as general comments. Comments on specific mitigation measures are included under the comments regarding the relevant impact category of the draft EIR.

This chapter presents the comments and responses in the following order, and with the following prefixes to the subject and response codes (indicated in square brackets):

11.2 Project Description [PD]	11.9 Biological Resources [BI]
11.3 Plans and Policies [PP]	11.10 Alternatives [AL]
11.4 Aesthetics [AE]	11.11 Greenhouse Gas Emissions [GHG]
11.5 Tribal Cultural Resources [TC]	11.12 Geology and Soils [GE]
11.6 Transportation and Circulation [TR]	11.13 Energy Use [EN]
11.7 Noise and Vibration [NO]	11.14 General Comments [GC]
11.8 Recreation [RE]	11.15 Late Comments

Within each section under each subject area, similar comments are grouped together and identified using a topic code prefix and sequential numbering for each subtopic. For example, project description [PD] comments are listed as PD-1, PD-2, PD-3, and so on, and the corresponding responses are similarly coded as responses PD-1, PD-2, PD-3, and so on. Each topic code has a corresponding subsection heading that introduces the comment subject. These subsections reproduce the comments and include the commenter's name and the commenter code described in Chapter 10, List of Persons Commenting. Comments containing language that is unique to an individual commenter are presented verbatim. Comments that contain language that is substantially similar or identical to that of four or more other comments are grouped and one of the comments, referred to as a "representative comment," is presented verbatim.

The reader is referred to **Attachment A**, Comments on the Draft EIR, for the full text and context of each comment letter or e-mail, as well as the public hearing transcript. In that attachment, the bracketing of the

substantive comments and the associated comment code and response code are provided in the margin of each comment, allowing the reader to locate the response to an individual comment.

Following each comment or group of comments, a comprehensive response is provided to address issues raised in the comment and to clarify or augment information in the draft EIR as appropriate. Response numbers correspond to the topic code; for example, the response to Comment PD-1 is presented under Response PD-1. The responses may clarify the draft EIR text or revise or add text to the EIR. Revisions to the draft EIR are shown as indented text. New or revised text, including text changes initiated by planning department staff, is double underlined; deleted material is shown in ~~striketrough~~.

Footnotes included in written comments are numbered as in the original letter or e-mail and thus may be non-consecutive. Footnotes to responses are numbered consecutively.

## 11.2 Project Description

The comments and corresponding responses in this section cover topics in draft EIR Chapter 2, Project Description. The comment topics are related to:

- PD-1: Roadway and Intersection Modifications
- PD-2: Buried Wall
- PD-3: Slope Stabilization Layer
- PD-4: Revegetation and Landscape Management
- PD-5: Public Access, Parking, and Restroom Improvements
- PD-6: Beach Nourishment
- PD-7: Project Construction
- PD-8: Project Operations and Maintenance
- PD-9: Other Project Elements (Sandbag Use and Service Road)
- PD-10: Permits/Approvals/Regulatory Compliance

### Comment PD-1: Roadway and Intersection Modifications

This response addresses the following comments, which are quoted below:

I-Hill-1.1, I-Hill-2.2, I-Moore.10, I-Pirolli.3

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“To date, we have not been able to find a single study, and no data or research, that has established scientifically that the presence of a road there, i.e. the Great Highway Extension, is in any way contributing to coastal erosion, either now or in the future. Did I miss a report that established this connection between how the Great Highway Extension is contributing to coastal erosion?

This is an important highway for commuters, workers, and people wanting to recreate south of the city and who all live on the west side of San Francisco. Yet the various city agencies are trying to ram this road closure through, just like they did with JFK Drive, “slow streets,” the Upper Great Highway, and other road closures during the pandemic. Despite the lack of science and data on this, it appears that the usual agencies have manipulated the information to create yet another "conventional wisdom" that will be extremely hurtful to people living on the west side.” (Steven Hill [I-Hill-1.1])

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“In fact, I read through just about every document you have beyond EIR, and no one has made a case for why the road, the existing road, and the continuance of that road or automobiles are contributing to coastal erosion. There just seems to be an assumption. There's no data, no science, no research showing that coastal erosion is somehow being abetted by the presence of this road or automobiles.

So then why are these -- is this road and these automobiles being removed in total disregard of the needs of the people on the west side?” (Steven Hill [I-Hill-2.2])

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“The DEIR states that “[n]o feasible mitigation measures are available for the VMT impact. The substantial additional VMT is caused by the project’s closure of the Great Highway between Sloat and Skyline boulevards and associated vehicular travel redistribution. This roadway closure is a key component of the project that is needed to accommodate the shoreline changes for long-term coastal management, including managed retreat, sea level rise adaptation, and to preserve and enhance coastal public access and recreation, habitat, and scenic quality at South Ocean Beach. Therefore, its removal from the project would not be feasible.” There is no explanation as to why public access for “vehicles” is framed such that some motorized vehicles would be precluded from further use in the area, while other motorized vehicles and non-motorized vehicles would be given preference, nor why a “managed retreat” strategy includes the creation of new infrastructure for certain vehicles in the erosion zone – not only bicycles, but public works vehicles at the exclusion of community vehicles. There is also no explanation as to why roadway usage must be repurposed at all when the Project goal seemingly is directed towards the ongoing protection of separate infrastructure just beneath it, nor why the existing vehicle roadway would be repurposed for use solely by public official vehicles when the roadway could simply be narrowed to one lane in each direction for broad and ongoing community use.<sup>8</sup>” (Goffrey Moore [I-Moore.10])

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<sup>8</sup> The possibility of maintaining the Sloat extension in single lanes for community usage, or otherwise moving the road inland closer to the zoo, was raised when the Ocean Beach Master Plan was first being formulated, and was ignored by SPUR and other project coordinators so intent on maximizing bike access that they were unable to avoid designing a mutually exclusive framework. This idea continues to be discounted by City officials with no analysis or explanation of possible traffic and emissions benefits, notwithstanding the significant congestion that has been introduced at the Sloat, Skyline, and 39th Avenue intersection during UGH closure, as well as the significant new safety risks introduced at 45th and Sloat by the inexplicable and reactive closure of the intersection at 47th and Sloat.

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“The proposed destruction of the Great Highway is unmotivated. To date, we have not been able to find a single study, and no data or research, that has established scientifically that the presence of a road there, i.e. the Great Highway Extension, is in any way contributing to coastal erosion, either now or in the future. Did I miss a report that established this connection between how the Great Highway Extension is contributing to coastal erosion?

This is an important highway for commuters, workers, and people wanting to recreate south of the city and who all live on the west side of San Francisco. Yet the various city agencies are trying to ram this road closure through, just like they did with JFK Drive, “slow streets,” the Upper Great Highway, and other road closures during the pandemic. Despite the lack of science and data on this, it appears that the usual agencies have manipulated the information to create yet another “conventional wisdom” that will be extremely hurtful to people living on the west side.” (Peter Pirolli [I -Pirolli.3])

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## RESPONSE PD-1

The comments above are related to features of the project, specifically the closure of the Great Highway to public vehicles, but do not address the adequacy or accuracy of the EIR’s assessment of potential project effects on the environment. As explained in draft EIR Section 1.4, Project Background, the South Ocean Beach shoreline is eroding due to ocean forces and sea level rise. The vulnerability of public infrastructure, including the Great Highway and the Lake Merced Tunnel, to coastal erosion and related hazards is well documented and plainly visible. As explained on draft EIR p. 1-6, “Monthly U.S. Geological Survey (USGS)

shoreline data collected at South Ocean Beach between 2004 and 2020 shows an average annual shoreline erosion rate of about 1.7 feet per year, with as much as 4.3 feet per year occurring towards the south end of the project site (i.e., near the Southwest Ocean Outfall).<sup>11,12</sup> As discussed on draft EIR pp. 1-7 through 1-10, the city has undertaken various measures over the past several decades to protect the Great Highway and underlying infrastructure from these hazards, including by placing revetment rock and sandbags. The idea of removing the Great Highway as part of a comprehensive shoreline management strategy was borne out of an extensive community planning process culminating in the 2012 Ocean Beach Master Plan (discussed in draft EIR Section 1.4.4 on p. 1-12).

As threats to public infrastructure along South Ocean Beach are expected to increase with sea level rise, the city in 2015 initiated an update to its Western Shoreline Area Plan to address the shoreline management challenge. Drawing upon the concepts developed through the Ocean Beach Master Plan process, and following a separate and robust public engagement process, the city in 2018 adopted new Western Shoreline Area Plan policies aimed at addressing coastal hazards. These policies specifically address transportation modifications along South Ocean Beach. For example, Western Shoreline Area Plan policy 12.1 states that the city shall pursue adaptation measures to preserve, enhance, and restore public access, scenic quality, and natural resources along Ocean Beach, including:

- (a) Close the Great Highway between Sloat and Skyline boulevards and make circulation and safety improvements along Sloat and Skyline boulevards to better accommodate bicyclists, pedestrians, and vehicles.

The proposed repurposing of the road for service vehicles would provide continued, restricted vehicle access to the Oceanside Treatment Plant, the Westside Pump Station, and associated facilities for SFPUC operations in accordance with Western Shoreline Area Plan policy 12.1, which requires that the adaptation measures:

- (g) Maintain service vehicle access necessary for the continued operation and maintenance of existing wastewater and stormwater infrastructure systems.

As discussed further in draft EIR Chapter 2, Project Description, removal of the Great Highway is required to implement the project, and the service road is necessary for continued wastewater system operations. Draft EIR Section 4.3, Transportation and Circulation, evaluates the effects of Great Highway removal on transportation and circulation.

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## Comment PD-2: Buried Wall

This response addresses the following comments, which are quoted below:

A-CCC.25, A-CCC.26, O-SURF.2

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**“Buried Wall.** Regarding Section 2.4.2 (“Buried Wall” on page 2-13), please provide justification for the size and location of the tiebacks. To reduce the amount of beach encroachment, please analyze whether it is possible that the tiebacks could be shorter, angled differently, or driven in at a lower elevation, or if the wall could be reinforced in another manner so that the minimum distance of 27-feet between the wall and tunnel

might be reduced and the wall could be located further landward. Please explain whether drainage for the buried wall has been considered and incorporated into the design and conduct such an analysis if it has not already been done.

In addition, please provide justification for the extent (60-100-feet below grade) of the buried wall secant piles and specifically address whether the proposed depth is intended for lateral support of the upper landward materials. We remain concerned about unnecessary disturbances to the substrate and the ease of potential future removal should the City decide to reconsider managed retreat at a later date. Please clarify if there is a means to stabilize the wall to account for lateral pressure that would allow for a reduction in the pile depth. In addition, please provide a copy of the full geotechnical report once available and indicate the referenced grade and bottom pile depth elevations on the site plans.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.25])

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**“Seawall Exposure.** In the discussion of Impact RE-1, the potential operational impacts on recreation during exposure of the proposed seawall analyzed are as follows: “While the wall would be buried initially, over time as beach recession continues with shore erosion the wall would become exposed, similar to conditions that periodically occur along the Taraval seawall” (page 4.5-17). It is our understanding that the Taraval seawall is at a lower profile than the proposed seawall, and does not include the additional footprint of the proposed SSL. For the seawall proposed as part of this project, please indicate an estimated average height of the wall that will be exposed, what percentage of the wall would be exposed, and how often (how much of the year) the exposures would occur.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.26])

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“Our concern also stems from the technical analysis that SFPUC worked on in 2015, entitled “Coastal Protection Measures & Management Strategy For South Ocean Beach - Ocean Beach Master Plan: Coastal Management Framework” (referred to hereafter as the ‘2015 Design Concept’).” While we are aware that SFPUC now considers certain features of the 2015 Design Concept to be technically infeasible, the concept would have drastically different implications for the beach and demonstrates the need for an environmentally preferable alternative that still achieves OBMP goals.

### **The EIR Has Failed to Analyze an Environmentally Preferable Alternative**

While SFPUC seems to treat the 2015 Design Concept as a jumping off point for the project in the draft EIR, the 2015 Design Concept features an armoring proposal with drastically limited impacts to the beach and beach resources. The wall in the 2015 concept was much shorter in both length and height, in addition to being more landward<sup>6</sup>. The concept featured a shotcrete cap covered by 6 feet of artificial fill and sand and colma formation instead of a fixed cementitious layer. In combination with the more seaward siting of other infrastructure discussed in the plan,<sup>7</sup> these features allowed for a back beach and more traditional dune system which was generally more recreatable and held more capacity to retain sand naturally.

As stated above, Surfrider acknowledges that SFPUC has done further analysis of this design concept and found aspects of the design to be infeasible and/or unaffordable. We reference the concept in order to illustrate the point that, although the EIR concept may ‘look’ similar to the 2015 Design Concept in certain features (the presence of a low profile wall, and some managed retreat of the beach), many of the

environmental benefits of the 2015 design are missing and should be restored in a reimagined design alternative.

The planning context surrounding South Ocean Beach must facilitate a project with increased natural capacity to resist and respond to erosion without constant artificial replenishment. This has widespread impacts for environmental resources; including access, habitat, and recreation.

The EIR fully acknowledges that erosion in combination with high tides could become so significant under sea level rise conditions that the wall in its proposal may become exposed, which would signify the complete loss of portions of the beach and would trigger further erosion-inducing effects caused by the seawall. This is made clear on page 2-14:

“Under normal conditions, the wall and slope stabilization would remain buried. However, the wall and slope stabilization could be exposed after severe storms and high wave conditions when the beach and bluff can erode away rapidly.” (EIR, 2-14)

Surfrider strongly encourages the City to explore opportunities for reinstating aspects of the dune system and back beach; which may include an adjustment to the location of the coastal trail and/or aspects of the seawall that will reduce the slope fronting the wall and allow the wall to be situated more landward.

Further, Surfrider would like to point out that the wall; which is larger, higher, and more seaward than was expected based on previous design concepts and a history of intentions to limit armoring in the area, is not the only form of armoring proposed in the EIR project concept. The pedestrian path is attached to the cementious sand slayer [sic] slope, and a service road now exists along the path. All of this is not easily removable and sets a back to the beach as sea levels rise.

The enforced slope in particular will serve as a front line of ‘de facto’ armoring that can contribute to beach erosion in the near future. Surfrider is aware that the SFPUC project team researched concepts that had made use of this material in order to justify its stabilizing features and make conclusions about its ability to retain sand. However, none of those projects were situated on marine coastlines and would therefore not experience the same impacts from coastal dynamics. There has been insufficient analysis to show that dunes would actually form on top of this material and the steep 3:1 slope that is planned.” (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.2])

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<sup>6</sup> The 2015 Design Concept states that, “structural protection [of the LMT] consists of a low-profile wall seaward of the tunnel and a cap over the tunnel that provides the required hold down within six feet vertically of the LMT.” The 2015 Design Concept also divided the project site into 4 phases, and proposed a wall for approximately 800 linear feet of seawall in phase 1 and another 800 feet in phase 2. Phase 3 and 4 would feature strategies implemented on a trigger basis. (*Coastal Protection Measures & Management Strategy For South Ocean Beach - Ocean Beach Master Plan: Coastal Management Framework*, Page 10).

<sup>7</sup> The proposed seawall would be located at least 14 feet seaward from the 2015 Design Concept.

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## RESPONSE PD-2

### **BURIED WALL DESIGN**

Comments A-CCC.25 and O-SURF.2 request modifications or additional information regarding the rationale for buried wall design decisions and the feasibility of design refinements. These comments do not raise

issues about the adequacy of the draft EIR's impact analysis; however, the following response is provided for informational purposes. The Coastal Commission will have the opportunity to request from the SFPUC additional design detail during the permitting stage of the project. If minor adjustments to tieback dimensions and wall position result, they would not be expected to change the EIR's conclusions regarding potential physical environmental effects.

Design of the buried wall, including tieback lengths, angles, and pile depths, is based on engineering analysis that considered multiple factors including substrate, the strength of the Lake Merced Tunnel, and anticipated static and seismic loads that could be experienced by the wall.<sup>1</sup> As noted in the draft EIR (pp. 2-13 through 2-14), the wall would be set back as far from the shoreline as feasible while also meeting project design objectives. A specific distance from the Lake Merced Tunnel to the low-profile wall was not included in the Ocean Beach Master Plan concept, but the structural engineering study relied upon for the Coastal Protection Measures & Management Strategy For South Ocean Beach – Ocean Beach Master Plan: Coastal Management Framework (“2015 Design Concept” and “2015 report”) (included as Appendix 3 to the 2015 report) presents a concept plan with the wall offset from the tunnel by approximately 10 feet. The structural engineering report notes, “The actual offset distance will ultimately depend on the specific type of pile wall constructed and the geotechnical conditions present along the tunnel.”<sup>2</sup> Based upon the additional geotechnical investigations performed as part of the Conceptual Engineering Report, the minimum distance between the edge of the Lake Merced Tunnel and the buried wall was established at 18 feet, and the proposed wall alignment is between 19 and 38 feet from the edge of the Lake Merced Tunnel with more than half of the wall length offset from the Lake Merced Tunnel by 19 feet.<sup>3</sup>

The buried wall is not proposed with the previously identified minimum structural buffer distance of 10 feet because the wall requires installation of tieback anchors.<sup>4</sup> The angle of the tieback anchors required for the wall's lateral support is a primary determinant of wall proximity to the Lake Merced Tunnel. To minimize the distance between the wall and the Lake Merced Tunnel while ensuring stability of both, based on the recommendation of the geotechnical engineer, the tieback angle is 40 to 45 degrees below the horizontal plane.<sup>5</sup> As discussed in the geotechnical engineering report (which informed the design), tiebacks are typically installed at a shallower inclination (between 15 and 30 degrees below the horizontal plane), although an inclination up to 45 degrees below the horizontal can generally be installed by most contractors.<sup>6</sup> While tiebacks could technically be installed at a steeper angle, which would allow the wall to be built closer to the Lake Merced Tunnel, steeper angled tiebacks would reduce the strength and capacity of the wall. Other stabilization, such as a rock buttress in front of the wall, would be required to provide the same strength and load capacity if the tiebacks were installed at a steeper angle.

Notwithstanding the above feasibility constraint, locating the wall closer to the Lake Merced Tunnel would not avoid or substantially lessen any identified significant adverse environmental effects of the project.

Drainage through the buried wall has been considered and is included in the buried wall design. A six-inch-diameter slotted underdrain embedded in drain rock would be installed behind the buried wall and under

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<sup>1</sup> MN + AGS JV, Ocean Beach Long-Term Improvements Project Conceptual Engineering Report, Prepared for SFPUC, September 2019.

<sup>2</sup> SPUR et al., Coastal Protection Measures & Management Strategy for South Ocean Beach Ocean Beach Master Plan: Coastal Management Framework, April 24, 2015. Appendix 3.

<sup>3</sup> MN + AGS JV, Ocean Beach Long-Term Improvements Project Conceptual Engineering Report, Prepared for SFPUC, September 2019.

<sup>4</sup> Ibid.

<sup>5</sup> MN + AGS JV, Ocean Beach Climate Change Adaptation Project Design Analysis Report – 65% Submittal, Prepared for SFPUC, December 2021.

<sup>6</sup> MN + AGS JV, Ocean Beach Long-Term Improvements Project Conceptual Engineering Report, Prepared for SFPUC, September 2019.

the slope stabilization. Four-inch-diameter weep holes would be installed in the wall's pile cap to convey drainage from the drain rock to the front of the wall. The weep holes would be placed regularly along the length of the buried wall.<sup>7</sup>

## **SEAWALL EXPOSURE**

Comment A-CCC.26 requests additional characterization of the extent and duration of wall exposure. As shown in draft EIR Table 2-2 (p. 2-26), the average width of South Ocean Beach under project conditions is estimated to be greater than 50 feet wide about 90 percent of the time on average over the life of the project (until 2060). When the beach is wider than 50 feet, the pile cap (the top of the wall) would not be exposed. If the wall were exposed during the winter of a given year, the exposure would last approximately four months. The draft EIR's project description (pp. S-9, 2-25) states that sand placements would occur in summer or fall. Based upon design advancements and discussions with regulatory agency staff since draft EIR publication, the project description has been revised to state that small sand placements would generally occur in late spring, and large sand placements would occur during the Corps dredging season which is typically between May and September, as shown in the text revisions below. According to the city's design consultant for the project, approximately once every 4 to 10 years, on average, a portion of the buried wall up to 500 linear feet long and up to 5 feet tall could be exposed between February and April. However, as South Ocean Beach generally lowers and narrows during the winter and spring (which could result in wall exposure), and rises and widens during the summer and fall (which could result in wall burial), the beach may recover naturally following the wall exposure event such that a sand placement would not be required. Beach geometry prior to storms, characteristics of waves or storms, and presence of vegetation all affect the response of the beach and the patterns of wall exposure.

Draft EIR page S-9 has been revised as follows:

The type and frequency of sand placements would depend upon sand availability (i.e., Corps and North Ocean Beach) and shoreline conditions (e.g., sea level rise and related erosion rates). Sand placements would occur about once every four to ten years; Small sand placements from North Ocean Beach would occur generally in late spring, while large sand placements from Corps dredging would occur generally in summer or early fall.<sup>13</sup>

Draft EIR page 2-25 has been revised as follows:

### **2.4.5.5 TYPE AND FREQUENCY OF SAND PLACEMENT**

The type and frequency of sand placements would depend upon sand availability (i.e., Corps dredge and North Ocean Beach) and observed shoreline conditions (e.g., sea level rise and related erosion rates). In general, the project could involve three beach nourishment scenarios. Under the first scenario, the city would undertake both large and small sand placements. Under the second scenario, the city would undertake small placements only, without the use of Corps dredge sand. Under the third scenario, the city would undertake large placements only, without the small sand placements. Small sand placements would occur generally in late spring, while large sand placements would occur generally in summer or early fall. Placement of sand cleared from the Great

<sup>7</sup> MN + AGS JV. Ocean Beach Climate Change Adaptation Project Long-term Improvements, 65 percent submittal, Sheet S-5002. October 2021.

Highway or multi-use trail, movement of sand within South Ocean Beach, and sand grooming could occur year-round, as conditions allow.

### **PROGRESSION OF DESIGN CONCEPTS**

Comment O-SURF.2 recommends that the EIR evaluate an alternative similar to the design concept presented in the 2015 report.<sup>8</sup> CEQA requires the lead agency to evaluate a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives but would avoid or substantially lessen any identified significant adverse environmental effects of the project (CEQA Guidelines section 15126.6). As summarized below, the 2015 Design Concept was not evaluated in the EIR because the city found the concept would not be technically feasible and would not avoid or substantially lessen identified significant impacts.

The 2015 Design Concept is based on the high-level concept presented in the 2012 Ocean Beach Master Plan. The 2012 and 2015 concepts include a low-profile vertical wall (e.g., secant pile wall) to provide lateral constraint of the Lake Merced Tunnel and, in some locations, a horizontal slab, or concrete cap, constructed on the top of the Lake Merced Tunnel and covered in large cobble to provide additional protection, buoyancy resistance, and vertical restraint. The 2015 report further refines the Ocean Beach Master Plan concept and considers its feasibility in light of existing and anticipated future conditions at South Ocean Beach. Both the Ocean Beach Master Plan and 2015 report acknowledge that additional technical analysis (e.g., geotechnical, geo-structural, seismic response, conceptual engineering) would be needed to inform the subsequent design stages.

In the course of subsequent engineering study, namely the 2019 Conceptual Engineering Report,<sup>9</sup> feasibility concerns emerged that caused the city to reconsider this concept.<sup>10</sup> Construction for the cap and cobble berm concepts presented in the Ocean Beach Master Plan and 2015 report would require a greater amount of bluff excavation and permanent bluff removal than would be required for the proposed project. Geotechnical characterization of the native bluff formation performed for the Conceptual Engineering Report indicated that the upper soil layers served a useful purpose and their preemptive removal would have no benefit. Furthermore, the additional investigation found that, with removal of the bluff cover and due to the concrete cap's weight, the cap would need to be supported on piles located on the inland side of the Lake Merced Tunnel, so as not to impose its load on the Lake Merced Tunnel. The addition of piles in proximity to the Lake Merced Tunnel presented the additional risk of damaging the Lake Merced Tunnel.

The engineering analysis ultimately concluded that a slope stabilization layer that retained a larger volume of overlying material would provide greater structural protection to the Lake Merced Tunnel and prevent uplift of the tunnel due to buoyancy affected by high groundwater levels. Notably, construction of the 2015 Design Concept would still have resulted in closure of the Great Highway and reshaping of the coastal bluff, thereby resulting in the same types of significant traffic, noise, and habitat impacts as identified in the EIR for the proposed project. Therefore, for the above reasons, the SFPUC determined that the concrete cap and cobble concept was not technically feasible, and this concept was not carried forward for further analysis in the EIR.

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<sup>8</sup> SPUR et al., Coastal Protection Measures & Management Strategy for South Ocean Beach Ocean Beach Master Plan: Coastal Management Framework, April 24, 2015.

<sup>9</sup> MN + AGS JV, Ocean Beach Long-Term Improvements Project Conceptual Engineering Report, Prepared for SFPUC, September 2019.

<sup>10</sup> MN & AGS JV, Memorandum: Soil Stabilization Layer Above Low Profile Wall Ocean Beach Climate Change Adaptation Project, October 27, 2021.

### **NEED FOR PROJECT WITH INCREASED NATURAL CAPACITY**

Comment O-SURF.2 states further that the site conditions require a project with increased natural capacity to resist and respond to erosion without constant artificial sand replenishment, and that such replenishment has widespread impacts on environmental resources. The comment does not provide any evidence that such a project is feasible. As explained above, the Ocean Beach Master Plan and 2015 report concepts were found to be technically infeasible, and both the Ocean Beach Master Plan and 2015 report state that the concepts presented therein would require substantial amounts of beach nourishment.<sup>11,12</sup> The draft EIR does consider an alternative that would not require ongoing beach nourishment. As explained in draft EIR Section 6.6.6 (p. 6-45), the planning department considered a self-sustaining dune restoration alternative and concluded that such an alternative would not reduce environmental impacts relative to the proposed project and would not provide adequate protection for the Lake Merced Tunnel.

With respect to the environmental impacts analysis, the draft EIR's Chapter 4 and Appendix B present analyses of potential effects of the proposed project, including from an exposed wall and sand placement activities, on the full range of environmental topics normally addressed under CEQA. The comment does not challenge or identify any technical deficiency with that environmental analysis or its conclusions. Regarding the comment's request for incorporation of a dune system into the design, as described in RTC Section 9.1.1, the SFPUC has refined the project's landscape plan, now called the habitat restoration and enhancement plan (restoration plan). The proposed restoration plan would include the establishment of sacrificial dunes along the backshore, a native vegetation stabilization zone atop the buried wall and slope stabilization layer, and a stable backdunes zone inland of the multi-use trail. The restoration plan would be informed by nearby natural examples and reference sites. For example, the vegetative stabilization zone would draw upon local and regional sites where shallow dune fields have established below marine terrace scarps and bluffs with perched groundwater seepage, such as Franklin Point and Año Nuevo in San Mateo County, Point Reyes National Seashore (north of Abbott's Lagoon) in Marin County, and MacKerricher State Park in Mendocino County. The restoration plan would include specifications for planting, monitoring, and adaptive management. As stated in Section 9.1.1, this element of the project would increase the natural capacity of the project by helping trap and retain windblown sand.

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### **Comment PD-3: Slope Stabilization Layer**

This response addresses the following comment, which is quoted below:

A-CCC.24

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**“Slope Stabilization Layer (SSL)** The addition of the slope stabilization layer to the seawall, which the City purports will protect against scour behind the wall during high surf conditions, adds additional height and width to the proposed seawall, with the top of the wall ranging from +16 to +21 feet NAVD, and the top of the

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<sup>11</sup> SPUR, AECOM, ESA PWA, Nelson\Nygaard, Sherwood Design Engineers, Phil D. King, PhD, Ocean Beach Master Plan, Prepared for State of California Coastal Conservancy, San Francisco Public Utilities Commission, and the National Park Service, 2012.

<sup>12</sup> SPUR, ESA PWA, Moffatt & Nichol, McMillen Jacobs Associates, and AGS, Inc., *Coastal Protection Measures & Management Strategy for South Ocean Beach, Ocean Beach Master Plan: Coastal Management Framework*, Prepared for San Francisco Public Utilities Commission, April 24, 2015.

SSL ranging from +30 to +50 feet NAVD. This addition of greater seawall height and width will result in additional impacts to coastal resources such as occupied beach footprint, impacts to sand supply available to the beach, and recreational impacts. The City needs to provide a thorough analysis of why the added SSL component is the least environmentally damaging alternative for protection of the threatened structures and how these additional impacts will be mitigated for, should the SSL component be installed. In addition, each of the following require additional evaluation:

- a. In Section 2.5.1.2 (“Phase 2-Construct Buried Wall” on page 2-28), the SSL is described as being “...constructed using either a soil-cement mix, by mixing the existing soils with a cementitious grout in place; or a controlled low strength material, using a mixture of cement, aggregate, and water placed in sections with terraced wooden forms.” Please explain if there is a difference between the various SSL options in terms of strength, erodibility, and appearance; and if the SSL will match the appearance and character of the surrounding bluffs when exposed, given either of these SSL options.
- b. Please explain the anticipated maintenance needs for the cemented slope stabilization material above the buried wall if/when it becomes exposed. Please clarify whether the entire slope needs to be cemented, or if it would be sufficient protection to only cement/stabilize the lower portion of the slope. If wave runup is the primary erosion concern, the City should provide wave runup analyses that demonstrate the need to stabilize the entire slope over the tunnel.
- c. Please provide an explanation as to why the final grade depicted in Figure S-3 (on page S-8) is substantially lower than the original grade and whether the intent of this is to maintain a slope suitable for replanting and/or recreation. If the SSL is meant to be accessible to the public when the sand topping erodes it away, please evaluate an option of making the steps wider and easier to sit/recreate upon.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.24])

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## RESPONSE PD-3

CEQA Guidelines section 15126.6(a) requires that an EIR consider alternatives that would feasibly attain most of the basic project objectives and avoid or substantially lessen the potential project effects, and evaluate the comparative merits of the alternatives. The CEQA Guidelines explain that an EIR need not consider every conceivable alternative to a project. Draft EIR Section 6.5 compares the environmental impacts of the project and a broad range of potentially feasible alternatives, and identifies the environmentally superior alternative for purposes of CEQA. The draft EIR does not identify any significant environmental impacts associated with the slope stabilization’s construction, height, or width. The comment does not identify a deficiency in the analysis performed or provide evidence that contradicts the draft EIR’s impact conclusions. Therefore, additional analysis of potential alternatives to the slope stabilization is not required under CEQA. Nevertheless, the following response is provided for informational purposes. Please refer to Section 11.10 for additional responses to comments concerning alternatives.

The SFPUC’s design consultant has prepared a technical memorandum addressing the basis of design for slope stabilization, alternative design concepts, and how the proposed slope stabilization layer would require less excavation, be constructed in a manner that helps further reduce the impact on the beach and dunes, and would be the least environmentally damaging option. The memorandum states that the project design has the wall set back from the beach to the maximum extent feasible. It notes that while the wall would be buried most of the time, there would be periods when the wall would become exposed, and if

those exposure periods coincided with unusually high tide and storm events, scour of the slope behind the wall could result and ultimately threaten the infrastructure the wall is intended to protect (i.e., the Lake Merced Tunnel). The document describes an early design concept from the Ocean Beach Master Plan and subsequent studies, consisting of a cast-in-place concrete cover plate over the Lake Merced Tunnel and topped by cobblestone plating. This early design concept was envisioned as addressing the wave runup and scour issues. The memorandum explains that additional feasibility study performed during project design revealed problems with the initial concept, including but not limited to the massive amount of excavation of the existing bluff that would be necessary to install the cover plate; and the inability of the Lake Merced Tunnel to support the weight of the cover plate if the plate were installed by trench, thus requiring the cover plate to be supported on piling. According to the design document, the slope stabilization was conceived as a way to protect the Lake Merced Tunnel with minimal excavation of the existing bluff, avoiding the need for a cover plate and piles to support a cover plate and cobblestone plating. The memorandum goes on to note the slope stabilization layer would be composed of a weak cement and soil mixture, intended to mimic the naturally occurring Colma geologic formation prevalent in the area, and would be of a slope capable of supporting the vegetated dune formations.<sup>13</sup>

Regarding the comment's item a), since publication of the draft EIR, the design has progressed and soil cement has been recommended as the material used for the slope stabilization layer. Soil cement is created using native soils, additives to control color, and a weak cement; as a result, the color and strength of the slope stabilization layer would be similar to the Colma geologic formation. The Colma formation is present throughout the bluffs within and surrounding the project site. While no longer recommended for the project, controlled low-strength material is a mix of cement and aggregate with relatively high shear and bearing strength, similar to commonly used concrete.

Regarding the comment's item b), the slope stabilization layer would be buried most of the time and at an elevation above the wall, and would not be exposed to direct wave breaking forces. The slope stabilization layer would be exposed to wave runup occasionally. Any exposed portion of the slope stabilization layer would be inspected as part of the regular shoreline monitoring (discussed in draft EIR Section 2.4.5.1; refer also to Response PD-6, Beach Nourishment). The condition of the slope stabilization at the time of inspection would be documented and any recommendations for repair or maintenance would be included in the annual report for the corresponding monitoring period. Maintenance activities could include patching the slope stabilization layer using material similar to the soil cement. Maintenance of exposed portions of the slope stabilization layer would include localized patching, primarily with hand tools. If large areas were damaged, concrete would need to be pumped in from a truck. Maintenance of large areas would be infrequent and would last a couple of weeks for small areas and several weeks for larger areas.

Wave runup analyses conducted for the project design indicate that about 2 percent of storm wave runup would exceed an elevation of 25 feet North American Vertical Datum (NAVD),<sup>14,15</sup> which implies that the slope stabilization layer would need to rise to an elevation of at least 25 feet NAVD. The top of slope elevation is only about 5 feet higher (30 feet NAVD) for much of the length of the wall. If the slope stabilization layer were not constructed to the top of bluff, the project could experience gully erosion from stormwater runoff, which

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<sup>13</sup> MN+AGS JV, Slope Stabilization Layer Above Low Profile Wall, Ocean Beach Climate Change Adaptation Project, M&N Job No.: 10419-08, October 27, 2021 (Rev1\_4/7/22).

<sup>14</sup> North American Vertical Datum (NAVD) refers to the North American Vertical Datum of 1988, a fixed reference for elevations, and is generally close to the mean lower low water tidal datum.

<sup>15</sup> MN+AGS JV, Slope Stabilization Layer Above Low Profile Wall, Ocean Beach Climate Change Adaptation Project, M&N Job No.: 10419-08, October 27, 2021 (Rev1\_4/7/22).

has historically been an issue along the project reach. Similarly, during the largest wave events, the slope stabilization layer could experience overtopping and scour of the underlying slope, which could ultimately undermine the stabilization system. While the likelihood of such undermining would be low, such an event could require closure of project facilities (e.g., multi-use trail) pending emergency repairs.

Regarding the comment's item c), the final grade in draft EIR Figure S-3 is shown as being lower than existing to reflect the slope modifications required in association with constructing the buried wall and slope stabilization layer, and removing the revetment rock, sand bags, and rubble. A landward shift of the shoreline, or "managed retreat" from existing shoreline conditions, can only be accomplished by establishing a final grade that is below and/or landward of existing grade. It is important to note that the figure does not necessarily represent final design, but rather is intended for illustrative purposes to support the EIR's analysis of potential environmental effects. It is possible that a portion of any remnant bluff located seaward of the buried wall may be retained for its incidental shore protection benefits, but reshaped to protect against scarp formation and associated public safety hazards. As noted above, the slope stabilization layer would be buried by sand most of the time, and the sand layer would be expected to evolve into more undulating topography over time as it is shaped by wind. The slope stabilization layer has been designed to support sand placement and planting with native vegetation. It is not intended for recreational use.

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## Comment PD-4: Revegetation and Landscape Management

This response addresses the following comments, which are quoted below:

A-CCC.4, A-CCC.14, A-CCC.27, A-CCC.34, A-CCC.35, O-CNPS.1, O-CNPS.2, O-CNPS.5, O-CNPS.8, I-Louie.1, I-Louie.2, I-Louie.3, I-Louie.5, I-Louie.6

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"One major concern of this DEIR is that the establishment of a dune system and dune habitat is not viewed as one of the project's main priorities. Given the expectation set out in the Ocean Beach Master Plan, the potential visual and ecological benefits, and the potential for new dune habitat to provide mitigation for the construction and operational impacts of the project, we consider creating and sustaining a dune system (within design constraints) to be a key element of success for this project. The lack of prioritization of a dune system is particularly evident in the proposed nourishment scheme, which is based off of triggers to protect the hard infrastructure, as opposed to sustaining/protecting the dune system. In addition, there appears to be a lack of consideration for the type and quality of sand used for initial establishment, and the use of wind erosion techniques that might be incompatible with the success of dune vegetation. These concerns are addressed in more detail below." (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.4])

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**"Coarse Sand Impacts.** Section 2.4.3 ("Debris and Revetment Removal, and Sand Placement and Revegetation" on page 2-16), as well as Impact BI-10 (page 4.6-67), mention the use of coarse sand as a form of erosion control. Please clarify if the City plans to use this erosion control technique in the proposed dune system. If so, please evaluate the effects the coarse sand may have on the ability for the dune system to become established, or on the survival of dune vegetation. If the placement of coarse sand is found to be

incompatible or has a negative effect on the proposed dune plants, alternatives should be identified.”  
(Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.14])

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**“Beach and Landscape Maintenance.** Section 2.6.2 (“Beach and Landscape Maintenance” on page 2-37) provides an estimate of plant and dune maintenance that will be required after sand placement or erosion events. The City should evaluate the need for more plant and dune maintenance than is anticipated here. The 3:1 slope, combined with environmental and physical pressures, may require several rounds of replanting as well as the installation of sand fencing or other adaptive measures. The City needs to ensure that resources exist to both monitor and enact adaptive management strategies when needed to maintain viable dune habitat.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.27])

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“In addition, Section 2.5.1.3 Phase 3 (“Remove revetments and rubble, place sand on beach” (page 2-30)), states: “The reshaped bluff would include a minimum of 4 feet of graded sand over the slope stabilization.” As we understand it, this sand will come from the excavation conducted to build the seawall. Please clarify if this type of sand and bluff material is appropriate for successfully establishing dune vegetation, and if all the excavated material will be reused as a fill over the SSL, or if some will be exported offsite. Further, the City should confirm that sand placement will avoid the newly created dune habitat, and only be placed in a “sacrificial zone” between the beach and the dune habitat. There is a concern here that one version of this project will only use coarse sand and not native plantings as an erosion control technique (given the success of coarse sand placement during previous Ocean Beach sand placements).” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.34])

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“And finally, Section 2.5.1.4 Phase 4 (“Install multi-use trail, service road, and public parking lot, construct beach access stairway and restroom, restripe Great Highway/Skyline Boulevard intersection” (page 2-30)) describes the establishment of dunes, but lacks follow-up details on how this will be done successfully. In order to assure successful establishment of dunes here, the DEIR should provide further information for how the dunes will be established including: what will be used as a reference; what sand will be used; and how the dune forms will be initially formed. In addition, performance of the system needs be assessed, including through the definition of goals, objectives, indicators and sampling methods, statistical tests, and adaptive management actions that may be employed should the dunes fail to perform as intended. This should speak to not only the establishment and persistence of dune forms themselves but also ecological goals including the establishment of native dune vegetation.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.35])

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“We salute the city for taking steps to prepare for climate warming. As a coastal city, we’re on the frontlines of human-induced change. While it’s critical to protect San Francisco’s built infrastructure, we feel that protecting our local biodiversity from calamity is equally important. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, changes in land and sea use has been identified as the main driver of “unprecedented” biodiversity and ecosystem

change over the past 50 years. Three-quarters of the land-based environment and about 66% of the marine environment have been significantly altered by human actions. That's why it's important to recognize that the Draft EIR comes up short on natural resource protection, habitat enhancement and threatened species management. The Draft EIR does mention a small amount of habitat restoration, but not enough, considering how much mechanized development, and earth and water moving, is included in this project." (California Native Plant Society, Yerba Buena Chapter board members: Eddie Bartley, Paul Bouscal, Sophie Constantinou, Bob Hall, Jake Sigg, Noreen Weeden, Susan Karasoff, Beth Cataldo, Libby Ingalls, Elliot Goliger [O-CNPS.1])

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### **"Vegetation**

Re: Project Description, Section 2.4.3. We're delighted that the Project Description in the Draft EIR clearly states the intent to use native plants. Furthermore, we also appreciate the stated commitment to source the plants from "established nurseries in the region". However, unless the commitment is to using native plants that come from local genetics, further environmental analysis would need to be done on possible effects on habitat and biodiversity of, for example, planting Southern California native plants bought from "regional nurseries" -- plants which have little or no relation to the wildlife that has co-evolved with our local plants.

We suggest that especially good local sources for local native plants for this project would be the SF RPD Natural Resources Division, the Golden Gate National Parks Conservancy's nearby Fort Funston nursery or its Presidio nursery, and Literacy for Environmental Justice's nursery." (California Native Plant Society, Yerba Buena Chapter board members: Eddie Bartley, Paul Bouscal, Sophie Constantinou, Bob Hall, Jake Sigg, Noreen Weeden, Susan Karasoff, Beth Cataldo, Libby Ingalls, Elliot Goliger [O-CNPS.2])

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### **"Invasive Species Management**

In Section 2.6.2 of the DEIR, it is stated that "The NPS does not regularly conduct beach maintenance at Ocean Beach (designated by the NPS as a Natural Zone management area)."33 The implication is that once operation of the project begins there will be little-to-no landscaping maintenance or follow-up.

This is unacceptable, and the Draft EIR is incomplete because it has failed to analyze possible environmental impacts that could result from stakeholders NOT doing the following:

- Periodic habitat maintenance sweeps for invasive species, such as ice plant, sea fig, sea rocket and wild radish.
  - Inspection and cleaning of materials, including worker clothing, tools, equipment, machinery, vehicles and port-a-potties.
  - Inspection of beach nourishment dredgings for invasive species and seeds, and in the case of off-shore dredgings, pollutants from the ocean bottom." (California Native Plant Society, Yerba Buena Chapter board members: Eddie Bartley, Paul Bouscal, Sophie Constantinou, Bob Hall, Jake Sigg, Noreen Weeden, Susan Karasoff, Beth Cataldo, Libby Ingalls, Elliot Goliger [O-CNPS.5])
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“Finally, the city is to be lauded for developing climate solutions, but we ask that the project stakeholders live by the National Park Service beliefs stated in the Draft EIR: “Preserve and restore the natural abundances, diversities, dynamics, distributions, habitats and behaviors of native plant and animal populations.”” (California Native Plant Society, Yerba Buena Chapter board members: Eddie Bartley, Paul Bouscal, Sophie Constantinou, Bob Hall, Jake Sigg, Noreen Weeden, Susan Karasoff, Beth Cataldo, Libby Ingalls, Elliot Goliger [O-CNPS.8])

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“The EIR is heavily focused on movement and placement of sand and benefits for human use, even though a primary objective is to "preserve and enhance coastal...habitat...at South Ocean Beach". For example, plants and wildlife are not mentioned in the first few pages; only 3 words, "plant native vegetation" appear on p. 10, Biological Resources on p. 11. Further, while there is only one area marked for restoration of native plants, the EIR should require all SF native plants for the entire project and to source plants from nurseries like the Golden Gate National Parks Conservancy's nearby Fort Funston nursery or LEJ. LEJ propagates plants for projects like this.” (Denise Louie [I-Louie.1])

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"The plants selected would be native, climate-appropriate, locally adapted, and non-invasive, and would require low amounts of water." Nowhere is "native" defined; the EIR should define native as "native to San Francisco", inasmuch as "native" plants from outside SF are not native to SF. And the project is in or near sensitive habitats that have been degraded but still support naturally occurring rare, threatened or endangered indigenous species. Ref: p. 2-30. 2.5.1.4 PHASE 4” (Denise Louie [I-Louie.2])

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“Regarding invasive plants, the EIR should address cleaning of all materials—including clothing, tools, equipment, machinery, vehicles and port-a-potties—to avoid introduction or spread of invasive plants. (Not addressed in the EIR)” (Denise Louie [I-Louie.3])

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“The EIR should focus more on restoring habitat, which would be in line with the SF Board of Supervisors' Biodiversity Resolution, the State's Biodiversity Initiative, as well as the United Nations' Decade on Habitat Restoration. Considering all the cumulative negative environmental impacts humans have had on what was once an intact ecosystem, we should build back better, as President Biden would say. Consider also that "adverse effects on San Francisco spineflower, nesting bank swallow and other nesting birds, the sensitive natural community yellow sand verbena – beach burr dune mat alliance, jurisdictional waters, avian migration, and special-status bats or maternal roosts could occur under construction of the project or the cumulative projects. p. 4.6-72” (Denise Louie [I-Louie.5])

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“Restoring habitat should include removal of iceplant and other invasive plants and their replacement with specific SF native plants.” (Denise Louie [I-Louie.6])

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## **RESPONSE PD-4**

### ***DUNE LANDSCAPE***

Comments A-CCC.4, A-CCC.35, O-CNPS.1, O-CNPS.2, O-CNPS.8, I-Louie.1, I-Louie.2, and I-Louie.5 request additional information regarding the types and extents of landscaping proposed for the project, including the request that the project include a dune system. As noted in draft EIR Section 6.6, Alternatives Considered but Eliminated from Further Analysis (pp. 6-43 through 6-46), the city considered a dune restoration alternative but concluded it would not be feasible for multiple reasons, and therefore this alternative was not evaluated further in the EIR. However, since publication of the draft EIR, the SFPUC has advanced the project design and additional detail regarding the project site revegetation is now available. This additional detail is presented in Section 9.1.1, Habitat Restoration and Enhancement Plan, of this RTC document. As explained in that section, the project would include the establishment of a dune landscape generally between the beach and the service road. The vegetation in areas covered by the restoration plan would consist of locally sourced plants historically native to San Francisco, the types of which would vary depending on elevation. Lower elevation areas seaward of the buried wall would be planted with a sparse assemblage of native dune vegetation that tolerates sand burial and storm overwash and grows rapidly, while higher elevation areas would be planted with a denser and more diverse array of native dune plants that help cover and stabilize sand.

The habitat restoration and enhancement area (restoration plan area) would be established in three zones. The farthest landward zone would be the stable backdunes zone, located between the service road and the multi-use trail. Next would be the native vegetative stabilization zone, west of the multi-use trail, above the slope stabilization layer and low-profile wall. The farthest seaward zone would be the sacrificial zone, which would be expected to erode periodically and be replenished by beach nourishment (sand placement). Sand nourishment of the native vegetative stabilization zone and stable backdunes zone would be expected to occur naturally from sand blown from the beach and sacrificial zone during windy conditions. The design of the restoration plan area may be refined during the permitting stage of the project. Any minor adjustments to the planting plan are not expected to change the EIR's conclusions regarding potential physical environmental effects.

### ***COMPATIBILITY OF SAND***

Comments A-CCC.4 and A-CCC.34 request additional information regarding the source of sediment proposed for the restoration plan area and its compatibility with establishment of dune vegetation. As explained in the draft EIR's project description (p. 2-30), the project would involve placement of sandy material excavated from the bluff onto the slope stabilization layer and buried wall. Material placed within the planting zone would first be screened for compatibility with planting requirements. Unsuitable material would be used elsewhere or removed from the site. Since publication of the draft EIR, in order to better account for potential incompatibility of the excavated bluff sand with material required for plant establishment, the SFPUC has refined the project description to include the potential for using North Ocean Beach sand to bury the wall and slope stabilization layer. This additional detail is presented in Section 9.1.5, Placement of North Ocean Beach Sand Over Slope Stabilization Layer During Construction, of this RTC document. As evidenced by the prevalent dune habitat occurring along Ocean Beach to the north, the North Ocean Beach sand would be suitable for plants commonly found in dune communities and proposed for the restoration plan area.

## **NATIVE PLANTS**

Comments O-CNPS.2, I-Louie.1, I-Louie.2, I-Louie.5, and I-Louie.6 raise issues about the use of native plants in the project. As stated in the draft EIR's project description (p. 2-16), in areas covered by the restoration plan the city would use only native plants for its revegetation, meaning locally sourced plants historically native to San Francisco. The project description also states that plants proposed for National Park Service (NPS) lands would be sourced from NPS nurseries or nurseries that otherwise meet NPS native plant requirements. Since publication of the draft EIR, the SFPUC has further refined the project description to include additional detail regarding the source of plants to be used in the site revegetation. As discussed in Section 9.1.4, Fort Funston Plant Propagation Site, of this RTC document, dune plants supporting revegetation efforts and routine re-planting following erosion and sand placement events would be sourced from a new propagation site located within Fort Funston. All vegetation planted in the propagation beds would be historically native to San Francisco and consist of clonal (creeping) and perennial species. The source material for propagation beds would be local to the San Francisco Peninsula, with San Francisco populations prioritized.

## **COARSE SAND/SAND FENCING**

As noted in the draft EIR (pp. 2-25 through 2-26) and in Comment A-CCC.14, the project may also use coarse sand or sand fencing to prevent windblown sand from accumulating on the multi-use trail and service road. During initial dune landscape establishment, nature-based physical sand surface stabilization features such as brushwood fencing or coarse sand could be used to stabilize the sand and promote the formation of dune landscape topography. Brushwood fencing or similar woody surface stabilization features, if used, would be installed intermittently within or behind the native vegetative stabilization zone (e.g., between the plantings and the trail), such that these features would not preclude transport of sand between the sacrificial dunes zone and native vegetative stabilization zone. Coarse sand, if used, would generally be limited to the sacrificial zone; it would not be placed within the vegetated zone or the stable backdunes zone once the vegetation has become established.

## **LANDSCAPE MAINTENANCE**

With respect to landscape maintenance discussed in Comment A-CCC.27, additional detail regarding the types and frequency of maintenance activity anticipated in association with the project's site revegetation is presented in Section 9.1.1, Habitat Restoration and Enhancement Plan, of this RTC document. As described in that section, during plant establishment the city would provide temporary irrigation and remove invasive weeds consistent with the maintenance schedule for other San Francisco parks. Following plant establishment, the maintenance requirements would likely be minimal. The city would undertake invasive species and weed management within areas inland (east) of the multi-use trail, including the drainage swale within the stable backdunes zone. The native vegetative slope stabilization zone may be weeded during initial dune plant establishment but consistent with existing NPS landscape management practices would not be weeded once plants are established. More extensive replanting would likely be required following substantial beach erosion caused by large storm events, which would trigger beach nourishment and replanting.

## **INVASIVE SPECIES**

Comments asserting that the EIR overlooks potential environmental effects of invasive species, if not managed, are noted (Comments O-CNPS.5 and I-Louie.3). The EIR evaluates the potential effects of the

project relative to baseline conditions, i.e., the conditions occurring at the time the notice of publication is published. As explained in draft EIR Section 4.6, Biological Resources (p. 4.6-4), the project areas to be revegetated include some native vegetation interspersed among dense mats of non-native invasive ice plant, sea fig, sea rocket, and some European beachgrass. Similarly, under baseline conditions, the city obtains sand from North Ocean Beach, bayside quarries, and the Main Ship Channel (via the U.S. Army Corps of Engineers). Under the project, the city would remove non-native and invasive plants and replace them with native plants, as recommended in Comment I-Louie.6. In addition, the city would continue beach nourishment using the same sand sources as under baseline conditions. While some natural recruitment of non-native or invasive plants would likely occur over time without active preventative management, their return would not constitute an adverse environmental effect relative to baseline conditions. The SFPUC would follow the *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands* to help prevent the spread of invasive species and pathogens. Furthermore, regarding “pollutants from the ocean bottom,” as explained in draft EIR Appendix B (Initial Study), Section E.17 (p. 106), dredged sand would be subject to review by the Dredged Material Management Office for chemical safety and suitability prior to placement on the beach.

The second paragraph of draft EIR Section 2.4.3 on draft EIR p. 2-16 has been revised as shown in Section 12.3, *Revisions to Chapter 2, Project Description*, to include the following sentence:

The SFPUC would follow the *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands* to prevent the spread of invasive species and pathogens.<sup>12a</sup>

Footnote 12a has been added to draft EIR p. 2-16 as follows:

<sup>12a</sup> City and County of San Francisco Public Utilities Commission Natural Resources and Land Management Division, *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands*.

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## Comment PD-5: Public Access, Parking, and Restroom Improvements

This response addresses the following comments, which are quoted below:

A-CCC.5, A-CCC.8, A-CCC.9, O-SURF.9, I-Cassa.1

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**“Beach Access Points.** In Section 2.4.4 (“Public Access, Parking, and Restroom Improvements” on page 2-17), as well as in the Impact RE-1 analysis (“Operation Impacts” for “Beach Access and Recreation Resources” on page 4.5-15), the two access points to the sandy beach area are proposed as a staircase installed mid-way along the proposed multi-use throughway, and a sand ramp at the north end of the throughway near Sloat Boulevard, placed in a similar location to the existing sand ramp. We have several questions regarding these points of access:

- a. This section states that the expected average elevation difference between the staircase and the beach will be some 40 feet. Please explain whether the City anticipates the public to access the beach informally from any other points, for example through the proposed dune system extending through the project area. If so, please clarify if there will be delineated access paths established through the dunes to protect sensitive plant species or clear signage and fencing to restrict access onto these dunes.
- b. Please elaborate on how the City plans to maintain the sand ramp to the beach should seasonal sand movement expose the sea wall and create unsafe access conditions. Given there is up to a year lag expected between sand placements (as outlined in Section 2.4.6 “Beach Nourishment” on page 2-19), and the importance of this sand ramp as an access point in this area, please clarify whether there is a plan in place to maintain the sand ramp when needed, such as via the use of stockpiled sand, including to allow for its uninterrupted use.
- c. Please evaluate whether ADA access can be provided to and on the beach, such as a through a Mobi mat system or equivalent.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.5])

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**“Bicycle Access.** Section 2.4.1.2 (“Service Road” on page 2-12) mentions that in addition to usage by service and emergency vehicles, the service road may also be used as a bikeway once the project is completed. Please provide details on the City’s vision for this, including identifying bicycle access points and use parameters (e.g., protected bike lanes, etc.).” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.8])

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**“Restrooms.** While the proposed project includes a new restroom facility to replace the existing restroom facility at Sloat Boulevard, there are not any restroom or shower facilities planned for the new 60-space parking lot at the intersection of the Great Highway and Skyline Boulevard (referred to in the DEIR as the “Skyline Coastal Parking” lot). Due to the users being redirected to this location by the project for recreational use of the beach and multi-use pathway, please evaluate the potential for an additional bathroom facility at the proposed Skyline Coastal Parking Lot.”<sup>3</sup> (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.9])

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<sup>3</sup> And note that public amenities such as this can be used to offset certain project impacts as part of an overall mitigation package for the project.

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**“The Proposed Accessway is Concrete Subject to Coastal Hazards**

The 2015 Design had envisioned wooden sand ladder pathways to the beach similar to the ones found at other National Park Service beach access points in the Golden Gate National Recreation Area. Surfrider applauded that method as it was low impact and easy to fix if damaged by wave attack. Unfortunately, the new seawall is such a large structure that a concrete staircase access system is proposed to safely traverse over it. This again deviates from the goal of minimizing infrastructure that is subjected to coastal hazards.”

(Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.9])

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“Regarding the fact sheet that was sent with Vincent Mazzaferro’s email of January 12, I note that the proposed new restroom facility and new parking lot are at opposite ends of part of the Great Highway that will be taken out of service. It seems it would make a lot of sense to have restrooms close to the parking lot.” (Mary Rose Cassa [I-Cassa.1])

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## RESPONSE PD-5

### **BEACH ACCESS**

**Informal Access.** With respect to beach access, as noted by Comments A-CCC.5 and O-SURF.9, the city envisions access between the multi-use trail and beach occurring via either of the two dedicated accessways—the sand ramp and the stairway. Informal access between the multi-use trail and beach is not envisioned. As explained in Section 9.1.1, Habitat Restoration and Enhancement Plan, of this RTC document, the city would install signs along the multi-use trail, between the beach access stairs and sand ramp, directing people to use designated beach accessways, as well as a low-profile post and cable fence west of the seat wall to discourage access through the restoration plan area.

**Sand Ramp.** Sand ramp access maintenance would not necessarily be dependent upon beach nourishment episodes. Similar to existing practices, the sand ramp would be the placement location for several episodes of wind-blown sand placement from the Great Highway within any calendar year. In the event of a large storm that erodes the access ramp, the city would regrade the sand ramp and/or place additional sand obtained from North Ocean Beach, the Great Highway, or a commercial vendor as soon as possible after storm conditions subside and it is safe to go out on the beach again.

**ADA Access.** Due to the steepness of existing and planned slopes, it is not feasible to establish beach access consistent with Americans with Disabilities Act (ADA) or similar city building code standards within the project area. However, since publication of the draft EIR, the city has revised the project to include ADA access improvements between the project site and the beach to the north. The details of this project addition are presented in Section 9.1.3, Americans with Disabilities Act Access Improvements, and include improvements to the multi-use path extending north from Sloat Boulevard to Taraval Street, and multiple access improvements in the vicinity of Taraval Street.

**Beach Access Stairway.** The size and composition of the proposed beach access stairway is driven by its location, rather than the size of the proposed buried wall or slope stabilization layer. The stairway was located as far south as feasible, to provide the closest access for visitors arriving from the south, including from the Skyline coastal parking lot. At this location, the bluff is steep, rising some 50 feet above the beach, and unstable. The proposed beach access stairway design is based upon the results of geotechnical investigation and engineering standards necessary to provide safe, resilient access. Therefore, the city, in collaboration with NPS, determined that a wooden sand ladder at this location would not be safe or capable of withstanding long-term wave forces and bluff erosion.

## **BICYCLE ACCESS**

Regarding bicycle access to and along the service road discussed in Comment A-CCC.8, this would be provided through dedicated service road bicycle access points near Sloat and Skyline boulevards, from the Skyline coastal parking lot, and via established connections between the multi-use trail and service road (depicted on draft EIR Figure 2-2 as “maintenance access points”). Along the service road, *sharrows*<sup>16</sup> would be painted for northbound bicycle traffic and a green painted lane or similar demarcation would be used for southbound traffic.

## **RESTROOMS**

Comments A-CCC.9, O-SURF.9, and I-Cassa.1, concerning the restroom location, do not raise issues about the adequacy of the draft EIR’s impact analysis but rather are related to the merits of the project. Nevertheless, the following response is provided for informational purposes. The rationale for siting the proposed restroom at its proposed location, near the Sloat Boulevard/Great Highway intersection, and the potential for an additional restroom facility at the proposed Skyline coastal parking lot, are presented in a June 16, 2021 letter from the SFPUC to the California Coastal Commission.<sup>17</sup> In that letter, the city notes that the proposed location is optimal for a number of reasons, including:

- Proximity to the existing bathroom location where people are accustomed to having this facility
- Proximity to the Muni bus stop and Muni Metro light rail stop
- Location within an area that would be the new principal gateway to the beach and the trail—the focal point for recreation when entering the area from the north and east

The letter notes that the city considered six alternative locations for a second restroom, including within the Skyline coastal parking lot. Upon consideration of these potential locations, the following concerns arose:

- A restroom at a more central or southern location would be less visible and there is less public activity in these areas.
- Based on experiences at other Recreation and Parks Department (Rec and Park) restrooms, placing a restroom in a more central or southern location would result in a high likelihood of vandalism or crime.
- The city is assuming new maintenance and operational responsibilities for the proposed restroom near the Sloat Boulevard/Great Highway intersection (the existing facility is maintained by NPS), and does not have the capacity to maintain a second bathroom without straining Rec and Park operations and reducing overall restroom maintenance frequency and reliability.

Please see Section 11.3, Response PP-1, for discussion of the beach access stairway’s vulnerability to coastal hazards.

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<sup>16</sup> Sharrows, also referred to as shared lane markings, are pavement markings within the travel lane that are intended to help bicyclists better position themselves in a shared travel lane and to alert drivers to the presence of bicyclists. The standard shared lane marking is the bike-and-chevron sharrow.

<sup>17</sup> SFPUC, Letter from JT Mates-Muchin (SFPUC) to Coastal Commission Staff. Subject: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project – Future Bathroom Location Rationale. June 16, 2021.

## Comment PD-6: Beach Nourishment

This response addresses the following comments, which are quoted below:

A-CCC.15, A-CCC.16, A-CCC.17, A-CCC.18, A-CCC.19, A-CCC.21, A-CCC.22, A-GGNRA.5, A-GGNRA.10, A-GGNRA.15, A-GGNRA.19, O-SURF.4

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**“Beach Nourishment – Triggers, Goals, and Outcomes.** In Section 2.4.5 (“Beach Nourishment” on page 2-19) the process and triggers for beach nourishment are described as: “The first trigger would be reached if the beach width were observed to be less than 50 feet over 500 or more total linear feet of beach. The second trigger would be reached if 500 feet or more total length of the buried wall were observed to be exposed. Sand placements would occur as soon as possible after the trigger is reached, generally within one year.” We have several questions regarding this process:

- a. Please clarify what exactly each trigger will activate in terms of the amount of sand placed, and whether the second trigger speeds up the process, or results in a larger amount of sand placed.
- b. Please explain how often the City expects these triggers to be reached. On, Table 2-1 (page 2-26) the City outlines the frequency and duration of sand placements. Please clarify if this table is based on the expected triggers.
- c. Waiting for up to one year for sand to be placed represents a very long period of time for the buried wall to be exposed and for lateral access to the beach to be limited would undoubtedly lead to adverse impacts to public access that are not allowable under the Coastal Act or the City’s certified LCP. Further, this sort of impact would require its own mitigation under this DEIR. Please indicate if the City has considered a mechanism to reduce the wait time for sand placement to significantly less than one year, such as creating a stockpile of sand near the project site. To ensure lateral access to the beach and adequate protection of the exposed seawall, the City should consider contingency mitigation/adaptation plans for the times when they are unable to address the triggering event within a reasonable timeframe (e.g., a month or less).
- d. Please indicate if there will be funding sources secured for the sand placement when it is needed or whether such funding would be secured in advance.
- e. Please explain if the City anticipates the beach nourishment activities such as truck movement negatively impacting the slope stabilization layer.

The goals and expected outcomes of the nourishment should be better defined. Ideal goals and outcomes could include but are not limited to: maintain safe public access to the beach and ideal beach width; maintain full coverage of the sea wall and SSL; establish and maintain dune integrity; maintain a certain slope between the multi-use path and beach; and maintain the sand ramp as an access point.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A--CCC.15])

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**“Beach Nourishment – Mean High Water Level vs. Dynamic Total Water Level.** Section 2.4.5 “Beach Nourishment” describes using the mean high water level (MHWL) as the measurement for nourishment triggers. The MHWL is not an ideal measure for triggering nourishing events as it is not conservative when

considering impacts as it does not account for wave runup. Using a trigger based on the MHWL elevation that does not include wave runup is not inclusive or precautionary when considering potential coastal resource impacts, including maintaining ideal dry beach width in order to promote recreation and public access opportunities. Instead, there should be an analysis based on dynamic total water level (TWL), to measure the seaward limit of the 50-foot-wide recreational beach.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.16])

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**“Beach Nourishment – Public Access and Recreation.** Beach nourishment should be sufficient to provide safe lateral access seaward of the seawall. Please provide evidence that a trigger of 50 feet between the MHWL (or preferably TWL, both of which should be analyzed) and the seawall would provide dry sand for pass and repass. The concern here is to provide enough sandy beach area for public access and recreation, whereas the triggers as described seem to be focused primarily on providing protection to the seawall.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.17])

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**“Beach Nourishment – Dune System.** Previous projects along the California coast that involve both beach nourishment and the establishment of a dune system have recognized the need to balance maintenance of beach width with the protection of the dune system.<sup>4</sup> As such, we have several questions regarding the nourishment plans and the long-term establishment and success of the planned dune system:

- a. The triggers for sand placement mention “...beach widths were observed to be less than 50 feet over 500 or more total linear feet of the beach.” Please indicate if this beach width includes the dune system.
- b. Please elaborate on how the City anticipates the nourishment (large or small scale) interacting with the dune system.
- c. Please analyze whether there is sufficient space for the large-scale nourishment to be placed while ensuring the dune vegetation is not buried, given the placement of the seawall and SSL. An image of where sand is expected to be placed in relation to the dunes, the sea wall, and the beach is necessary to be illustrative of this condition.
- d. Please calibrate the nourishment trigger to better facilitate dune persistence to improve the dune’s likelihood to provide some level of habitat value, in addition to protecting the sea wall infrastructure.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.18])

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<sup>4</sup> See, for example, the Cardiff Beach Living Shoreline project and the Pillar Point Harbor West Trail Living Shoreline project.

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**“Beach Nourishment – North Ocean Beach.** Please explain how the proposed use of North Ocean Beach material will affect the sand budget in this area over both the short- and long-term and whether potential changes in North Ocean Beach volume or width have been evaluated. Section 2.4.5.4 of the DEIR indicates that semiannual monitoring at North Ocean Beach will be performed to ascertain whether there is “adequate sand” for redistribution to South Ocean Beach. Please clarify how the adequacy of the North Ocean Beach sand supply will be defined and determined and elaborate on what safeguards will be in place to prevent

significant impacts to public access and recreational uses at North Ocean Beach.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.19])

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**“Beach Nourishment – Shoreline Monitoring.** If monitoring is proposed at North Ocean Beach to determine the adequacy of sediment supply, an adequate baseline for comparison needs to be established either through prior measurements or surveys that begin before sediment from this area is needed. The baseline and subsequent surveys should consider beach width, elevation, and potential impacts to recreational uses that result from changes to the general dry shore topography and areal extent.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.21])

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**“Beach Nourishment – Large Sand Placements.** Regarding Section 2.4.5.3 (“Large Sand Placements” on page 2-22), during the previous large sand placement by the U.S. Army Corps of Engineers, large amounts of sediment were lost offshore and offshore waters were quite turbid. Some loss of sediment is anticipated as the deposited sediment adjusts to the ocean, including tides and waves; however, large losses of sediment can lead to both coastal resource impacts (e.g., high turbidity, marine resources, recreational access, etc.) as well as inefficient nourishment efforts. Please elaborate on the following: the BMPs associated with large sand placements; the anticipated losses of sediment associated with large nourishment events; incorporation of adaptation measures to keep more sediment on the beach before, during, or after placement efforts; and what efforts can be taken to reduce or slow the sediment losses and increased turbidity.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.22])

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**“SUMMARY, Section 2. Project Description, 2.4.5.1. Shoreline Monitoring Program:** Due to the project’s disclosed impacts to Geology and Soils, especially if sand supply is limited in the future, it is important for the shoreline monitoring program to consider NPS Beach Nourishment Guidance (NPS 2012) that has been provided to SFPUC. That guidance requires any sediments placed on the beach must closely match the native beach in terms of grain size, color, texture, and minerology. Furthermore, given the relative paucity of data on the grain size of native beach material at OB and the remaining uncertainty of how ongoing beach nourishment activities may affect the current and future grain size distribution at South Ocean Beach, the park requests that grain size analyses be added to the monitoring program and an adaptive management strategy developed in collaboration with NPS.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.5])

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**“Chapter 2. Project Description, 2.4.5.5 Type and Frequency of Sand Placement and Table 2-1:** Reconsider the accuracy of the description and related analysis in this section. Park staff believe the calculations are underestimated, especially for the large sand placement scenarios. For example, the U.S. Army Corps of Engineers (USACE) project placement of ~260,000 cubic yards took 6 weeks during its 2021 sand nourishment operations. So, the rate of application was ~43,333 cubic yards/week. Based on that average, it would take closer to 12 weeks for a volume over 500,000 cubic yards. The current table shows large placements taking 8 weeks. It would, therefore, be more accurate to describe it as a range, i.e., it could

take from 8 to 12 weeks.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.10])

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**“Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.5 Recreation, p 4.5-15:** Include a statement in this section that the appropriate city agency would coordinate with the park on monitoring and sand nourishment for recreational purposes, which would be especially important for public access and safety in the area proposed for a new beach access stairway.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A--GGNRA.15])

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**“Chapters 4 and 6, specifically 4.1.4 and 6.2.1.1,** regarding significant and unavoidable impacts: the park remains concerned that there may be significant and unavoidable adverse impacts to Geology and Soils from the proposed action, especially if there are unforeseen issues implementing the SFPUC OB CCAP Sand Management Plan (2020) or if assumptions about sand supply are incorrect. Given the critical role that the Sand Management Plan will play in maintaining a beach and keeping the seawall buried over the next 80 years, we request an explicit description of how and when the Sand Management Plan and the ongoing beach nourishment program will be evaluated to determine how well it is meeting its objectives. One way this could be achieved is by convening a formal technical review at set intervals, e.g., every 3-5 years, that includes interdisciplinary team members from the park, city, USGS, and other interested parties. Address these critical issues in one or both sections.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.19])

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“The project estimates that sand nourishment will be needed approximately every 2-3 years. This finding stands in contrast to the trend of replenishments needed every 1-3 years. The project assumes that a partnership with the US Army Corps (USACEOE) will bring ‘large’ sand placements to the beach, and these are estimated to be almost 200,000 cubic yards larger than the largest ever placement in this area (see Table 1-1 in Draft EIR.) Not only are details on the potential partnership very vague, but the additional cost of pumping so much additional sand from offshore has not been calculated. Additionally, the retention of this type of sand has not been properly analyzed, with the only similar offshore placement occurring in 2021 (thus there has not been enough time to analyze this offshore sand for multi-year retention success.)

Surfrider also questions whether the triggers that are meant to enact sand placement will be effective in this context. The first trigger, which would be reached if beach width were less than 50 feet over 500 or more total linear feet of beach, may happen multiple times in a given season when swells are strong. The report states that sand replenishment will likely occur “approximately once every 2-3 years,” “depending on sand availability,” which means the beach could be virtually lost for up to 3 years after a strong storm season.

The second trigger, which states that sand placements would occur if 500 feet or more total length of the buried wall were observed or exposed, doesn’t account for a scenario where less than 500 feet is exposed, and the beach has become pinched such that no lateral access is possible. The impacts on public recreation seem clear. **With such little information about the cost, the Army Corps partnership, the quality of offshore sand for this beach and the effectiveness of triggers in ensuring that the beach is walkable; Surfrider finds it difficult to assume that artificial sand replenishment will indeed keep the beach**

**covered 98% of the time<sup>9</sup>, as the report concludes.”** (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.4])

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<sup>9</sup> Table 2-2 on page 2-26 of the DEIR states that large sand placements will result in beaches being greater than 25 feet wide for 98% of the year.

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## RESPONSE PD-6

The draft EIR describes and evaluates the potential environmental effects associated with the project’s beach nourishment program, which is based upon the SFPUC’s sand management plan.<sup>18</sup> The sand management plan is a decision support tool that describes how the project area shoreline would be expected to respond to sand placements of volumes ranging between 85,000 and 500,000 cubic yards, including with consideration for varying oceanographic conditions, such as El Nino conditions and sea level rise, among others.

The plan is not envisioned as a prescriptive sand management scheme, but rather as noted in draft EIR Section 1.4.5.6 (p. 1-14) it is a framework to guide sand management decision-making, based upon beach conditions over the course of a given year. Multiple comments suggest that beach nourishment is proposed to protect the buried wall. The buried wall is designed to withstand coastal dynamics, including exposure to waves. Beach nourishment is proposed to maintain a sandy beach and is not required to protect the buried wall. The triggers identified in the sand management plan are meant to be used as a decision-making tool only, and not a public access design goal. The sand placement frequencies and beach widths presented in the draft EIR are the result of a risk-based probabilistic modeling approach that considers 1,000 potential shore and oceanographic configurations for each potential sand placement volume.<sup>19</sup> As noted in the draft EIR (p. 2-19), the nourishment program may be refined during consultation with the California Coastal Commission and NPS during the permitting process.

As explained in draft EIR Section 2.4.5.1 (p. 2-21), the SFPUC would prepare and implement a shoreline monitoring program in coordination with the California Coastal Commission and NPS, both of which have permit jurisdiction over the project. As noted in that section, the “program would likely identify performance objectives for the nourishment program, specify criteria against which performance would be evaluated, outline both qualitative and quantitative monitoring methods, and establish an implementation and reporting schedule.”

Several of the comments included above request additional detail regarding nourishment program implementation, including funding, goals, and performance measures, among others. The planning department appreciates the public’s interest in better understanding how the final nourishment program would be implemented and monitored. However, as the permitting process with the regulatory agencies has not been completed, and the monitoring program has not been finalized, many of these details are not available. Importantly, the purpose of the EIR is to disclose the potential physical environmental effects of the project. The planning department has determined that the level of project description detail provided by

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<sup>18</sup> Moffatt & Nichol, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, Sand Management Plan – Ocean Beach Climate Adaptation Project, Long-term Improvements, Prepared for San Francisco Public Utilities Commission, July 2020.

<sup>19</sup> Ibid.

the SFPUC for the beach nourishment program is sufficient to support the environmental analysis, and the draft EIR evaluates the potential effects of the full range of potential nourishment volumes and placement frequencies that could be implemented under the project, as analyzed in the sand management plan. Therefore, much of the additional detail requested in the comments regarding the nourishment program implementation and monitoring program is not required for CEQA adequacy. Nevertheless, where available, additional detail has been provided in response to these comments for informational purposes. Agency commenters will have opportunity to request additional information from the SFPUC as part of their permit application review process. Please refer to Response RE-1 within Section 11.8 of this RTC document for additional responses to comments concerning impacts on beach recreation.

### **BEACH NOURISHMENT AND TRIGGERS**

Item a) in Comment A-CCC.15 requests additional information regarding the amount and timing of sand placement in the event one or both triggers were reached. The amount of sand that would be placed in the event a trigger was reached would be determined based upon the volume deemed necessary at the end of the annual monitoring period. This is described in draft EIR Section 2.4.5.1 (p. 2-21). The sand management plan does not identify a prescribed amount of sand to be placed in the event one or more triggers is reached, nor a modified timeline for placement in such event. The draft EIR assumes approximately 85,000 cubic yards of sand would be placed if a trigger has been reached. However, more sand could be placed in a given year, if available (e.g., in association with a U.S. Army Corps of Engineers dredge event). Thus, the response would essentially be the same regardless of whether one or both triggers were reached.

Item b) in Comment A-CCC.15 asks how often the city expects the triggers to be reached. The frequency of a trigger being reached would vary depending upon intensity of storm activity and beach widths in preceding years. As sand placements would be expected to occur when a trigger is reached, draft EIR Table 2-1, Frequency and Duration of Sand Placements, is representative of the anticipated frequency of a trigger being reached. As summarized in draft EIR Section 2.4.5.1 (p. 2-21), the SFPUC would prepare a monitoring program in coordination with the Coastal Commission and NPS that outlines specific monitoring methods and reporting protocols. In general, the monitoring program would involve qualitative and quantitative assessments of beach conditions over the course of a given one-year monitoring period. An annual report prepared at the end of the monitoring period, in summer, would determine whether a trigger has been reached. In practice, as beach conditions and use patterns at South Ocean Beach fluctuate considerably throughout the year—narrower beaches with less use in winter/spring, wider beaches with greater use in summer/fall—the trigger determination would be based on summer conditions of the monitoring year. Given that South Ocean Beach (and adjacent shorelines) typically narrows in the winter/spring and widens in the summer/fall, it is possible that conditions described for the triggers (e.g., beach of less than 50 feet or more than 500 feet of wall exposure) could occur temporarily during the winter/spring and then naturally recover by summer/fall, such that a placement event would not be triggered. As stated in Response PD-2, according to the city's design consultant for the project, in a normal year of storm activity, a portion of the buried wall up to 500 linear feet long and up to 5 feet tall could be exposed between February and April. The wall exposure would correspond with a beach width narrower than 50 feet at the location of the exposure.

Item c) in Comment A-CCC-15 and Comment O-SURF.4 request additional information regarding the timing of sand placement after a trigger has been reached. The draft EIR (p. 2-19) states that sand would be placed as soon as possible after a trigger is reached, generally within one year. In practice, based upon the project description refinements presented in Response PD-2, if either trigger is reached, the SFPUC would most likely implement a sand placement in late spring of the following year. Placement is proposed in late spring,

instead of within a certain period of time after the trigger is reached (such as one month or less, as proposed in item c) in Comment A-CCC.15), because sand placed between late summer and early spring could wash away during winter/spring storm events and have minimal public benefit during higher use periods (i.e., summer/fall), given the shoreline dynamics at South Ocean Beach. As noted in the draft EIR (p. 2-25), supplemental sand placements could occur between triggered placement events and would be sourced from North Ocean Beach, a commercial vendor, or sand cleared from the Great Highway and multi-use trail.

Item d) in Comment A-CCC-15 requests additional information regarding funding availability for beach nourishment. Funding for implementation of the nourishment program would be programmed through city department funding or through the city's general fund.

Item e) in Comment A-CCC-15 asks whether beach nourishment activities, such as truck movement, could damage the slope stabilization layer. As discussed in the draft EIR, trucks and equipment for sand placements would access the placement areas via the sand ramp located at the northwest corner of the Sloat Boulevard/Great Highway intersection, and related dune and vegetation maintenance activities may be conducted from the multi-use trail. Beach nourishment activities involving heavy equipment would not occur on the slope stabilization layer.

Comments A-CCC.16, A-CCC.17, and O-SURF.4 request analysis of beach width using the dynamic total water level to measure the seaward limit of the 50-foot-wide beach (i.e., as the trigger for sand placement), and evidence that a 50-foot trigger would provide dry sand for pass and repass. The dynamic total water level is a measure of extreme wave runup (1 percent annual chance probability, or sometimes called the 100-year return period wave runup event). At South Ocean Beach, the dynamic total water level would be higher than +20 feet NAVD (i.e., higher than the top of the buried wall and midway up the vegetated slope). For this reason, it would not be practical to use the dynamic total water level as the trigger and have a design goal for safe public access during such an event. A beach width that would allow public access above the dynamic total water level would be several hundred feet wide, which would not be practical along South Ocean Beach due to space constraints. Notably, Ocean Beach to the north and the Fort Funston beach to the south would not allow access above the dynamic total water level either.

The sand management plan does, however, consider average beach widths and small sand placement frequencies that would be expected if the trigger width were increased from 50 feet to 80 feet, and if the trigger were based upon wave runup rather than the mean high water line. Under the former, if the trigger distance were increased to 80 feet, the average nourishment frequency would increase slightly (to approximately once every three years), and the beach would be wider than 80 feet at least 90 percent of the time. If the trigger distance were based on the wave runup limit, the average nourishment frequency (approximately once every four years) would not change, but the beach would be wider than 50 feet at least 80 percent of the time, rather than 90 percent without wave runup.

The EIR evaluates the potential effects of the project relative to baseline conditions, or those that occur at the time the notice of publication is published. Under baseline conditions, due to the shore profile, ongoing erosion, and existing revetment rock and rubble, it is not uncommon for safe lateral access during spring and

winter months to be impeded because there is no beach.<sup>20,21,22</sup> While the project’s beach width trigger is not intended to represent a beach access metric, the predicted average beach width during a given year for each of the above-referenced trigger distances—50 feet based upon mean high water, 80 feet based on mean high water, and 50 feet based on wave runoff—would be 101 feet, 129 feet, and 86 feet, respectively.<sup>23</sup> While not anticipated for extended periods, even if severe storm conditions were to result in the periodic elimination of passable beach, lateral access along the shore would be available via the sand ramp and proposed coastal access stairway. For these reasons, relative to baseline conditions, the project would not be expected to result in significant impacts related to public access along the shore. Item a) in Comment A-CCC.18 asks whether the beach width trigger of 50 feet includes consideration for the dune system. The 50-foot distance referenced in the trigger is the distance between the mean high water line and the face of the buried wall.<sup>24</sup>

Comment O-SURF.4 states that the draft EIR’s details regarding the city’s future partnership with the U.S. Army Corps of Engineers (Corps) for the large sand placement are vague and do not include a calculation of cost. The draft EIR identifies three potential sand sources for sand placement in Section 2.4.5.2, *Sand Sources and Placement Methods*, and summarizes modeled average beach widths with small sand placements only as well as with large placements in draft EIR Table 2-2. Details regarding potential future partnerships that may be required to implement elements of the project or their associated costs are not necessary for understanding the potential physical environmental effects of the project, which is the purpose of the EIR. CEQA Guidelines section 15131 states, “economic or social effects of a project shall not be treated as significant effects on the environment.” Section 15131 states further, “An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to *physical changes caused in turn by the economic or social changes*” (emphasis added). The comment does not identify any potential physical changes that could result from future partnership agreements or project costs. Therefore, no changes to the EIR are required. Nevertheless, for informational purposes, the city is currently developing a partnership with the Corps for large sand placements in the future. The costs of past sand placements, which include both small sand placements and one large sand placement in 2021, are publicly available. Future sand placement costs would be expected to be comparable to those of past placements.

Comment O-SURF.4 states that the draft EIR does not properly analyze the retention of sand obtained from the Corps, citing the lack of available monitoring information from a 2021 Corps sand placement event at South Ocean Beach. The EIR’s analysis of the large sand placement performance is based upon professional engineering analysis using industry standard modeling and analysis techniques, and with consideration for existing shore conditions and past performance of sand placements.<sup>25</sup> As described in the draft EIR (p. 2-25), the sand placement frequencies and beach widths presented in the draft EIR are the result of a risk-based probabilistic modeling approach that considers 1,000 potential shore and oceanographic configurations for each potential sand placement volume. The EIR’s analysis of large sand placement performance is also

<sup>20</sup> ESA, Ocean Beach Short-term Erosion Protection Measures Project – 2018-2019 Monitoring Report, Prepared for San Francisco Public Utilities Commission, July 2019.

<sup>21</sup> ESA, Ocean Beach Short-term Erosion Protection Measures Project – 2019-2020 Monitoring Report, Prepared for San Francisco Public Utilities Commission, June 2020.

<sup>22</sup> ESA, Ocean Beach Climate Change Adaptation Project, Short-term Improvements, Erosion Protection Measures: 2020-2021 Monitoring Report, Prepared for San Francisco Public Utilities Commission, October 2021.

<sup>23</sup> Moffatt & Nichol, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, Sand Management Plan – Ocean Beach Climate Adaptation Project, Long-term Improvements, Table 3-4, Prepared for San Francisco Public Utilities Commission, July 2020.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid.

based on the proposed project's beach geometry, in which the beach would be wider because the buried wall would be located approximately 80 feet east of the toe of the current revetments. With the wider beach, the slope of placed sand would be lower than the slope of sand in the 2021 Corps sand placement event. As explained further in CEQA Guidelines section 15064(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, based to the extent possible on scientific and factual data..." Similarly, CEQA Guidelines section 15064(f) states, "The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency." CEQA Guidelines section 15064(f)(5) clarifies further, "Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." The information relied upon in the EIR to assess sand placement constitutes substantial evidence, and additional observational information is not required for EIR adequacy.

### **BEACH NOURISHMENT AND VEGETATED AREAS**

Items b) through d) in Comment A-CCC.18 request additional information regarding the interaction of sand placements with the proposed dune landscape, analysis of whether there is sufficient space for large sand placements without affecting the proposed dune landscape, and calibration of the placement triggers to facilitate dune persistence. The draft EIR's Chapter 2, Project Description (Section 2.4.3, Debris and Revetment Removal, and Sand Placement and Revegetation) describes the city's approach to site revegetation. Since publication of the draft EIR, the SFPUC has refined the project's revegetation plan. Accordingly, the EIR has been revised to provide more specificity regarding the types and locations of vegetation and their management under the project, including in relation to sand placements. Please refer to Section 9.1.1, Habitat Restoration and Enhancement Plan, for additional description of the revised plan.

As explained in Section 9.1.1, the restoration plan area (i.e., between the beach and the service road) would include a "sacrificial zone," located below/seaward of the portion of the slope proposed for revegetation referred to as the "native vegetative stabilization zone." A diagram showing the revegetation zones in relation to the proposed buried wall has been added to the EIR (see new Figure 2-6a in Section 9.1.1). The sacrificial zone would extend seaward from the wall. Therefore, the target location for sand placement would be seaward of the wall. During large storms, portions of the sacrificial zone would experience erosion and require sand nourishment.

Following initial sand placement atop the reshaped bluff, the SFPUC would install brush fencing throughout the native vegetative stabilization zone. This fencing would facilitate the capture of windblown sand from the sacrificial zone, which would help with formation of dune-like topography, such as sand mounds, upon which dune vegetation would later be planted. A fuller description of how the dynamic vegetation zone would be established is provided in Section 9.1.1. The sacrificial zone would be capable of accommodating future small and large sand placements, and such placements in successive years would occur within the sacrificial zone, not within the native vegetative stabilization zone unless for restoration purposes following a major erosion event. Once established, the vegetation within the native vegetative stabilization zone would be expected to trap windblown sand from the sacrificial zone to help nourish and sustain sand supply.

### **SHORELINE MONITORING PROGRAM**

Item f) in Comment A-CCC.15 and Comments A-CCC.19, A-CCC.21, A-GGNRA.5, A-GGNRA.15, and A-GGNRA.19 request additional information regarding the goals and objectives of the nourishment and monitoring program, the approach to evaluating its effectiveness, specific program elements, and a commitment to coordination. As explained in draft EIR Section 2.4.5.1 (p. 2-21), the SFPUC would prepare a shoreline monitoring program that would outline qualitative and quantitative monitoring methods and establish an implementation and reporting schedule. Under the monitoring program, the SFPUC would monitor sand supply at North Ocean Beach to assess the sufficiency of sand supply. To date, there have been no documented adverse impacts on beach width or volume associated with prior sand backpass projects. If monitoring were to indicate insufficient supply in the future, the SFPUC would obtain a smaller volume of sand from North Ocean Beach and/or use an alternative source (e.g., commercial vendor or U.S. Army Corps of Engineers). The monitoring program would be prepared in consultation with the California Coastal Commission and NPS, both of which have permit jurisdiction over the project. The SFPUC has initiated monitoring program development; however, the specific elements of the program are in development with the agencies with jurisdiction, and therefore are not available for presentation in this RTC document. Nonetheless, the requests for details such as more specific goals and objectives of beach nourishment, the approach to evaluating the nourishment program to determine whether it is meeting its objectives, the approach to establishing North Ocean Beach baseline conditions and defining and determining the adequacy of its sand supply, and the metrics that would be used to evaluate baseline and future conditions (e.g., grain size, beach width, elevation, topography, benthic ecology) are noted and would be considered by the SFPUC during monitoring program development. Regarding Comment A-GGNRA.19's concern related to geology and soils impacts, refer to Response GE-1, which discusses the shoreline effects of seawall exposure, including effects at Fort Funston.

### **LARGE SAND PLACEMENT SEDIMENT LOSSES AND TURBIDITY**

Comment A-CCC.22 requests additional information regarding best management practices for large sand placements; anticipated losses from large sand placements; measures to retain sand before, during, and after placements; and measures to reduce or slow sediment losses. The draft EIR acknowledges the potential for and evaluates the environmental effects that could result from the loss of large amounts of sand during implementation of large sand placement. The draft EIR's project description (p. 2-22) estimates that roughly 15 percent of dredged sand could be lost during the placement process. As also explained in the project description (p. 2-23), to help contain the sand slurry and minimize loss of sand during large sand placements, the Corps would create large sand berms between the placement areas and the shoreline, referred to as "toe berms". These berms would be designed to help retain the water long enough for the sand to settle out before returning to the ocean. With the project, South Ocean Beach would be wider because the buried wall would be located approximately 80 feet east of the toe of the current revetments. With the wider beach, the slope of placed sand would be lower than the slope of sand in the 2021 Corps sand placement event, which could reduce the rate of erosion from the beach relative to the 2021 Corps sand placement. As discussed in draft EIR Impact BI-6 (p. 4.6-58) and HY-1 (Appendix B, Initial Study, p. 106), a 2018 Corps analysis of the sediment composition within the main ship channel found that the material is comprised of over 95 percent sand, would be expected to settle out of the water column quickly, and would not result in substantial adverse turbidity effects.

## REVISIONS AND CLARIFICATIONS

In response to Comment A-GGNRA.10, draft EIR Section 2.4.5.5, Table 2-1 (p. 2-26), and associated EIR references, have been revised to extend the potential duration of large sand placements from 8 to 12 weeks, as shown below and more fully in Chapter 12, Draft EIR Revisions. However, after accounting for potential work stoppages due to tides, wave conditions, and other potential equipment maintenance disruptions, the actual duration of active work would be expected to be considerably less, as was the case with 2021 Corps Ocean Beach Storm Damage Reduction Beach Nourishment Project referenced in the comment.

Draft EIR Table 2-1 (p. 2-26) has been revised as follows:

**Table 2-1 Frequency and Duration of Sand Placements**

Placement Scenario	Average <sup>a</sup>	Range (max - min) <sup>a</sup>	Duration <sup>b</sup>
Small sand placements only	4 years	3 to 5 years	6 weeks
Large sand placements only	10 years	9 to 16 years	8 <u>12</u> weeks
Large and small sand placements	7 years	3 to 16 years	6 to 8 <u>12</u> weeks

SOURCE: Moffatt & Nichol, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, 2020. Sand Management Plan – Ocean Beach Climate Adaptation Project, Long-term Improvements. Prepared for San Francisco Public Utilities Commission. July 2020.

NOTE:

<sup>a</sup> The first post-construction sand placement would likely occur about five years after construction is complete.

<sup>b</sup> Duration is approximate, accounts for work stoppages due to tides, wave conditions, or unanticipated equipment repair and maintenance.

In response to Comment A-GGNRA.15, draft EIR Section 4.5.4.2 (pp. 4.5-15 through 4.5-16) has been revised as follows:

### ***Beach Access and Recreation Resources***

As noted previously, Ocean Beach is a popular recreational destination where visitors regularly enjoy walking, jogging, fishing, surfing, and picnicking, among other activities.<sup>21</sup> The amount of dry sandy beach available for such activities along South Ocean Beach varies considerably by season and location. Beach width along South Ocean Beach typically ranges from 50 feet to 200 feet. However, during spring when the beach width is typically narrowest, shoreline monitoring conducted during 2018, 2019, and 2020 documented portions of South Ocean Beach with essentially no measurable dry sandy beach.<sup>22,23,24</sup> Under the project, the city would remove the existing shore protection structures, rubble and debris, and construct a buried wall along an alignment that is inland of the existing backshore location. Through these managed retreat actions, the city would widen the beach along the entire project shoreline – in some areas by more than 100 feet (e.g., through removal of the 2010 emergency riprap revetment). As discussed in Chapter 2, Section 2.4.5, Beach Nourishment, as placed sand erodes, the beach would narrow and portions of the proposed wall would no longer be continuously buried. To address this issue, the city would implement a shoreline monitoring program and place sand when established triggers are met during annual monitoring.<sup>25</sup> Sand placements would occur as soon as possible after the trigger is reached, generally within one year. The appropriate city agency would coordinate with the NPS on monitoring and sand nourishment for recreational purposes.

<sup>21</sup> San Francisco General Plan, Recreation and Open Space Element, April 2014.

<sup>22</sup> ESA, Ocean Beach Short-term Erosion Protection Measures Project – 2018-2019 Monitoring Report. Prepared for San Francisco Public Utilities Commission. July 2019;

<sup>23</sup> ESA, Ocean Beach Short-term Erosion Protection Measures Project – 2019-2020 Monitoring Report. Prepared for San Francisco Public Utilities Commission. June 2020.

<sup>24</sup> ESA, Ocean Beach Climate Change Adaptation Project, Short-term Improvements, Erosion Protection Measures: 2020-2021 Monitoring Report. Prepared for San Francisco Public Utilities Commission. October 2021.

<sup>25</sup> The first trigger would be reached if the beach width were observed to be less than 50 feet over 500 or more total linear feet of beach. The second trigger would be reached if 500 feet or more total length of the buried wall were observed to be exposed. The areas of measurements for sand placement triggers are those above the mean high water elevation.

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## Comment PD-7: Project Construction

This response addresses the following comment, which is quoted below:

A-CCC.6

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**“Construction Access.** Please explain why it is necessary to completely close the entire 0.5-mile-long beach area for 4 years, and evaluate whether it is possible to phase construction so as to maintain some access to this stretch of beach throughout the construction period.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.6])

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## RESPONSE PD-7

Comment A-CCC.6 requests additional information regarding the rationale for the construction approach and the feasibility of maintaining public beach access during construction. Impact RE-1 in draft EIR Section 4.5, Recreation, evaluates impacts of project construction on recreational facilities. As discussed there, ample similar recreational areas exist in the project vicinity and the project area’s closure would be temporary. Draft EIR Impact RE-1 concludes that project construction would have less-than-significant impacts on recreational resources. The comment does not raise an issue regarding the adequacy of the draft EIR’s impact analysis, and the subject of the inquiry (i.e., beach closure during project construction) is not related to a significant environmental effect. Nevertheless, the following response is provided for informational purposes. The commenter will have the opportunity to request additional design detail from the SFPUC during the permitting stage of the project. If changes to beach closures during construction result, they would not be expected to change the EIR’s conclusions regarding potential physical environmental effects.

During wall construction and debris/rock removal, the active construction zone would extend 30 to 60 feet west of the existing bluff edge. However, it may be possible to allow beach access during portions of project construction that do not involve or require equipment on the beach, or in areas where there is no active construction provided such access is safe, such as during periods when no equipment would be operating on the beach. This would reduce the duration of closure to approximately six months of each year of construction. The city would not preclude lateral egress along the beach from the water; however, the egress would be restricted to the nearshore area outside of active work areas. The city would consider allowing beach access during periods of construction that do not require active work or equipment use on the beach. In addition, as explained in Response RE-1 in Section 11.8, Recreation, the EIR has been revised to clarify that during

construction, the city would post signage at the Sloat Boulevard/Great Highway intersection notifying the public of alternative beach access, parking, and restroom locations along Ocean Beach.

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## Comment PD-8: Project Operations and Maintenance

This response addresses the following comments, which are quoted below:

A-GGNRA.11, O-CNPS.6, I-Louie.7, I-O'Neil.3

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### **“Chapter 2. Project Description, 2.6 Project Operations and Maintenance and Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.5. Recreation, p 4.5-15 Beach Access and Recreation**

**Resources:** Include the new beach access stairway in the list of facilities and clearly note that maintenance would be conducted by the city, not GGNRA.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.11])

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**“Trash and Waste Management From Project Description, Section 2.6.1 Public Access, Parking, and Restrooms** Rec and Park would maintain the [new] multi-use trail, restroom, and Skyline coastal parking lot. ... The multi-use trail would have posted open hours of 5 a.m. to 12 a.m. daily. Trash collection and restroom cleaning would be administered by Rec and Park. ...

Because of increased access via the concrete stairs to be constructed, further analysis of possible environmental impacts should be done to (a) establish the frequency with which trash cans will need to be emptied to prevent overflowing, and to not invite rodents and corvids, and (b) evaluate the impact of humans and off-leash dogs, bonfires and fireworks on plants and wildlife in the project area. Also, recognizing that educational outreach is important to preserve and enhance coastal habitat at South Ocean Beach, the value of local native plants, habitat restoration and biodiversity should be included on sign boards or via digital methods.” (California Native Plant Society, Yerba Buena Chapter: Eddie Bartley; Paul Bouscal; Sophie Constantinou; Bob Hall; Jake Sigg; Noreen Weeden; Susan Karasoff; Beth Cataldo; Libby Ingalls; Elliot Goliger [O-CNPS.6])

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“Because of increased access via the concrete stairs to be constructed, the EIR should (a) ensure that trash cans will be more regularly emptied to prevent overflowing and designed not invite rodents and corvids, (b) evaluate the impact of humans and dogs on plants and wildlife in the project area and (c) require educational outreach. Educational outreach is important to "preserve and enhance coastal...habitat...at South Ocean Beach". Litter, bonfires and fireworks are detrimental. The value of local native plants, habitat restoration and biodiversity should at a minimum be included on sign boards.” (Denise Louie [I-Louie.7])

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“Additionally, it would be useful if the EIR stated how long the proposed project is expected to protect the critical wastewater infrastructure in the executive summary or introduction.” (Hazel O’Neil [I-O’Neil.3])

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## RESPONSE PD-8

The comments above recommend revisions or additions to the draft EIR discussion of project operations and maintenance. Regarding the request in Comment A-GGNRA.11 that the EIR clearly note that maintenance of the beach access stairway would be conducted by the city, and not by GGNRA, the first paragraph on draft EIR page 2-37 has been revised as follows:

~~Rec and Park~~ The city would maintain the multi-use trail, restroom, beach access stairway, and Skyline coastal parking lot. The Skyline coastal parking lot would be accessible between 5 a.m. and 12 a.m. daily. The multi-use trail would have posted open hours of 5 a.m. to 12 a.m. daily. Trash collection and restroom cleaning would be administered by ~~Rec and Park~~ the city. Occasionally, as conditions warrant, sand would be removed from the multi-use trail and service road using a front loader or vacuum. ~~Rec and Park~~ The city would provide temporary irrigation to plants during the plant establishment period, and conduct some replanting as needed.

Draft EIR Impact RE-1 discusses whether the project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Because existing facilities (not new facilities) are the focus of the impact analysis, no edits have been made to draft EIR Section 4.5, Recreation, in response to Comment A-GGNRA.11.

Comments O-CNPS.6 and I-Louie.7 state that the EIR should further evaluate impacts of humans and off-leash dogs, bonfires, and fireworks on plants and wildlife in the area due to the beach access stairs. As noted in draft EIR Section 4.5, Recreation, South Ocean Beach is currently publicly accessible. However, the bluffs in the vicinity of the proposed beach access stairs are steep, eroding, and inaccessible under current conditions. As discussed in draft EIR Impact BI-2, the wildlife habitat in this area is generally limited to bank swallow habitat. The project would remove the bank swallow habitat, a significant and unavoidable impact discussed in draft EIR Impact BI-2, and therefore such habitat would not be made accessible by presence of the stairs. As shown on draft EIR Figure 2-7, the stairs would have barriers on either side, preventing users from entering the vegetated areas surrounding the stairs.

The other issues raised in Comments O-CNPS.6 and I-Louie.7 (that the EIR should establish the frequency with which trash cans will need to be emptied and should describe sign boards or digital information regarding the value of local native plants, habitat restoration and biodiversity) are noted. As explained in the draft EIR (pp. 2-37 and 4.2-23), trash collection would be administered by the city in a manner similar to that which occurs under existing conditions within the project area and adjacent areas along Ocean Beach. As discussed in draft EIR Section 2.4.3 and Section 9.1.1 of this RTC document, the project would restore and enhance native vegetation along the reshaped bluff once wall and slope stabilization construction is complete. As further explained in Section 9.1.1, the city would install signs along the multi-use trail, between the beach access stairs and sand ramp, educating visitors about the restoration area and its habitat values, and directing people to use designated beach accessways. To further discourage public access through the restoration plan area, the city would install a low-profile post and cable fence west of the seat wall. Draft EIR Section 4.6, Biological Resources, evaluates the project's impacts on plants and wildlife. The comments will be transmitted to city decision-makers for consideration in their deliberations on whether to approve the project.

Comment I-O'Neil.3, recommending that the executive summary or introduction of the draft EIR state how long the proposed project is expected to protect the critical wastewater infrastructure, is noted. Draft EIR Chapter 2, Project Description (p. 2-14) states that the buried wall would be designed to accommodate sea level rise and storm events with a nominal service life of 50 years (until approximately 2075), but with the proposed beach nourishment it is expected to last until 2100. The city anticipates that reevaluation of the performance of the buried wall and beach nourishment program would be conducted around 2060 to provide sufficient time to plan and implement additional adaptation measures, if determined necessary.

In response to Comment I-O'Neil.3, draft EIR Section S.3.3, Buried Wall (p. S-7), has been revised to include a new third paragraph, as follows:

The buried wall would be designed to accommodate sea level rise and storm events with a nominal service life of 50 years (until approximately 2075), but with the proposed beach nourishment it is expected to last until 2100. The city anticipates that reevaluation of the performance of the buried wall and beach nourishment program would be conducted around 2060 to provide sufficient time to plan and implement additional adaptation measures, if determined necessary.

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## **Comment PD-9: Other Project Elements (Sandbag Use and Service Road)**

This response addresses the following comments, which are quoted below:

A-CCC.23, O-SURF.8

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**“Sandbag Use.** The phase of the project outlined in Section 2.5.1.3 (Phase 3) the DEIR provides this measure: “Remove revetments and rubble, place sand on beach” (page 2-30). Please note that the City is already required to place the sand from the existing sandbags onto the beach (per CDP 2-15-1357), and this needs to be made clear. It should also be made clear that such sand is already mitigation for past activities and cannot be assessed as added mitigation value here. In addition, the City is also required to remove degraded sandbags and pieces of sandbags as part of such sand freeing activities.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.23])

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**“The Service Road is a New Feature of the Plan that Takes Away Beach Space**

This feature was not located in the coastal restoration area outlined in the OBMP. The EIR Project features a road that has been placed directly alongside the multi-use path, thus adding new infrastructure and covering more habitat in an area that was intended to be mostly dune. Currently, SFPUC accesses the Wastewater Pumpstation from the Zoo Parking lot, located behind the coastal berm. Surfrider recommends that any service road keep to this more inland route.” (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.8])

## RESPONSE PD-9

As noted in Comment A-CCC.23, draft EIR section 2.5.1.3 describes the third phase of construction during which existing revetments and rubble would be removed, and sand placed on the beach. The majority of sand placed on the beach during this phase either would have been stockpiled during excavation or would be obtained from North Ocean Beach, as discussed in Section 9.1.5, Placement of North Ocean Beach Sand Over Slope Stabilization Layer During Construction. The SFPUC is aware of the requirement to return sand from the sandbags to the beach prior to their removal, and this detail has been added to draft EIR Section 2.5.1.3 as shown in text revisions in Section 9.1.5. The comment concerning the mitigation value is noted and not relied upon in the EIR for such purposes.

Comment O-SURF.8, recommending that the service road keep to an inland route near or through the zoo parking lot, is noted. Similar to the discussion in Response AL-1, in Section 11.10, Alternatives, routing the service road through the zoo parking lot or alternative inland route would not result in a reduction of significant environmental impacts identified in the draft EIR (transportation and noise impacts) relative to the project or alternatives identified in the draft EIR. The recommendation has, nevertheless, been noted here and may be considered and weighed by the decision-makers before they make a final decision to approve, modify, or disapprove the project. The SFPUC's zoo pump station is located within the zoo parking lot and has access through the zoo parking lot. The SFPUC Westside Pump Station, however, is located on the Great Highway and has access solely from the Great Highway, and thus access to this facility, as well as the Oceanside Treatment Plant, would be maintained by access along the proposed service road. The new service road would be situated in the same location as the existing farthest landward traffic lane of the Great Highway, so it would not result in new hardscape and would not displace any existing habitat.

As discussed in Section 1.4.5.2 of the draft EIR, the Ocean Beach Open Space Landscape Design Summary<sup>26</sup> was prepared to further refine the concepts in the Ocean Beach Master Plan. Pages 52 and 53 of the Ocean Beach Open Space Landscape Design Summary show the service road and coastal trail with three possible layout options. Option 1, a service road combined with bicycle access, and a separate coastal trail for pedestrians, is the option presented as the proposed project in the draft EIR.

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## Comment PD-10: Permits/Approvals/Regulatory Compliance

This response addresses the following comments, which are quoted below:

A-CDFW.3, A-CPC-1.4

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**“Issue 3:** Without additional Project mitigation, significant impacts to Bank swallow breeding habitat may reduce the carrying capacity of the bluffs to support Bank swallow colonies. Bank swallows are protected under CESA and the Migratory Bird Protection Act.

Removal of important Bank swallow nesting habitat is expected to result in take of Bank swallows indirectly and possibly directly. Direct take could occur if construction timing is not strictly limited. In the event of a

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<sup>26</sup> SPUR and AECOM, 2017. Ocean Beach Landscape Design Summary. February 2017. Available at: <https://www.spur.org/sites/default/files/2017-03/Ocean%20Beach%20Open%20Space%20Design%20Summary.pdf>. Accessed January 2, 2023.

sudden collapse of any occupied nest or hole from Project activities, potential exists for Bank swallow individuals to be killed. Recontouring and coating of the bluff are activities that can directly injure, kill, or displace established Bank swallow colonies, resulting in direct take of chicks, eggs and/or adults.

Under section 2.5.1 Construction Activities and Phasing, the Project will be conducted in (5) five phases. Phase 2, phase 3, and phase 4, all have activities that can cause significant impacts to Bank swallows.

- Phase 2 includes the removal of the Great Highway southbound lanes, construction of the buried wall, and stabilizing the slope. This activity is expected to begin in 2024 and end in 2026.
- Phase 3 includes removal of the revetments and rubble from beach and placing sand along the beach. These activities are expected to begin in 2024 and end in 2026.
- Phase 4 includes removing or repurposing the Great Highway northbound lanes; install the multi-use trail and service road; construct Skyline coastal parking lot, new restroom, and beach access stairways, install multi-use trail landscaping; and restripe the Great Highway/Skyline Boulevard intersection. These activities are expected to begin in 2025 and end in 2026.

**Evidence:** Previous actions at the Project location conducted by the San Francisco Department of Public Works have resulted in take of Bank swallow. NPS monitoring data demonstrates a reduction in Bank swallow colony numbers in recent years.

California courts have held that take includes incidental take and is not limited to hunting and fishing and other activities that are specifically intended to kill protected fish and wildlife “The broad definition of “take” in Fish and Game Code section 86 ensures that CDFW can maintain legal control over actions interfering with threatened, endangered and fully protected animals even where actions may not have been intended to kill or hurt the animal” (Affirming California’s Protections for Migratory Birds 2018). Under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian (Fish and Game Code § 2000);
- Take, possess, or needlessly destroy the nest or eggs of any bird (Fish and Game Code § 3503);
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird (Fish and Game Code § 3503.5);
- Take or possess any of the thirteen fully protected bird species listed in Fish and Game Code section 3511;
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird) (Fish and Game Code § 3800);
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the Secretary of the Interior under the MBTA (Fish and Game Code § 3513);
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the California Endangered Species Act unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW (Fish and Game Code § 2050 et seq.).

**Recommendation:** CDFW strongly recommends the Project obtain a CESA ITP for Bank swallows (pursuant to Fish and Game Code Section 2080 et seq.) in advance of Project implementation. The ITP process would allow CDFW to continue to work with the Project applicant to avoid, minimize and fully mitigate Project impacts to Bank swallows that can occur from the Project.

Issuance of a CESA Permit is subject to CEQA documentation; therefore, the CEQA document should consult with CDFW, specify impacts and mitigation, and should fully describe a mitigation, monitoring and reporting program. More information on the CESA permitting process and protocol survey procedures can be found on the CDFW website at:

<https://www.wildlife.ca.gov/Conservation/CESA> or

<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>

(Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.3])

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“And then finally on page 2-39, section 2.7.3, there's a line that describes the role of this commission and it says it's got two purposes.

One is certification of the EIR, which is self-evident.

The other there's a note that says General Plan referral.

I think it would be helpful if you could explain in more detail what exactly it is we're doing with respect to General Plan referral, what is the subject, what part of the general plan, when does that take place, I think more explanation would be helpful in demonstrating to all of the readers of the Draft EIR and the final EIR what the role of the commission is with respect to this EIR” (Sue Diamond, Commissioner, San Francisco Planning Commission [A-CPC.1.4])

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## RESPONSE PD-10

With respect to A-CDFW.3, the possibility that a California Department of Fish and Game Code Section 2081 incidental take permit could be required for the project is presented in draft EIR Section 2.7 (p. 2-38).

Regarding A-CPC-1.4, pursuant to San Francisco Charter section 4.105 and sections 2A.52 and 2A.53 of the San Francisco Administrative Code, a general plan referral is required for certain Board of Supervisors' actions to evaluate whether a project subject to that action would be consistent with the city's general plan objectives and policies. Among the various types of projects that require general plan referral are those involving the construction, improvement of, or demolition of city-owned buildings or structures within the city and county. Once an application is submitted to the planning department, staff performs analysis to evaluate whether the proposed project and action are, on balance, in conformity with the General Plan. In most cases, staff prepares the findings and the planning department issues the general plan referral letters. If staff were to find a general plan referral not in conformity, or if it is particularly controversial and/or complex, staff would refer the general plan referral to the planning commission for their action. The planning commission would provide a recommendation for consideration by the Board of Supervisors regarding whether the proposed project would be in conformity with the general plan. A finding of non-conformity can only be made by the planning commission, but may be overruled by a two-thirds vote of the board of supervisors. Additional information regarding the general plan referral process is available on the planning department's website at [https://sfplanning.org/sites/default/files/forms/GPR\\_InfoPacket.pdf](https://sfplanning.org/sites/default/files/forms/GPR_InfoPacket.pdf).

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## 11.3 Plans and Policies

The comments and corresponding responses in this section cover topics in draft EIR Chapter 3, Plans and Policies.

### Comment PP-1: Consistency with Local Plans and Policies

This response addresses the following individual comments, which are quoted below:

A-CCC.12, A-GGNRA.12, O-SURF.1, I-Holl-1.2, I-Pirolli.1

Response PP-1 also addresses the following comments that are similar or identical to the representative comment quoted on pp. 11.3-5 and are not individually listed to avoid repetition:

I-Aguilar.1, I-Akin.1, I-Anderson.1, I-Antell.1, I-Argaman.1, I-Atkind-1.1, I-Atkind-2.1, I-Barzano.1, I-Basso.1, I-Beale.1, I-Bekkerman.1, I-Bense-Kang.1, I-Block.1, I-Boccia.1, I-Bocharova.1, I-Brinner.1, I-Bruchman.1, I-Burke.1, I-Busse.1, I-Chen.1, I-D.1, I-Damon.1, I-Davies.1, I-Deanna.1, I-Derbin.1, I-Devore.1, I-Dillingham.1, I-Doolittle.1, I-Dorazio.1, I-Dow.1, I-Dumanovsky.1, I-Eberspächer.1, I-Ernst.1, I-Flack.1, I-Foo.1, I-Fowler.1, I-Fu.1, I-Garneau.1, IGates.1, I-Gill.1, I-Giovara.1, I-Gold.1, I-Gorski.1, I-Greer.1, I-Hall.1, I-Hanley.1, I-Hansen.1, I-Hardcastle.1, IHardison.1, I-Haslam.1, I-Holstad.1, I-Honan.1, I-Howell.1, I-Huang\_L.1, I-Huang-P.1, I-Huckins.1, I-Hunt.1, I-Ingram.1, I-Ininns.1, I-Jaffee.1, I-Jca.1, I-Jo.1, I-Kagel.1, I-Kelly\_B.1, I-Ketchum.1.1, I-Kwong.1, I-Laharty.1, I-Latham.1, I-Lenahan.1, I-Liu.1, I-Lyford.1, I-Mach.1, IMadsen.1, I-Malone.1, I-Marshall.1, I-Martin.1, I-Matt.1, I-Matt\_R.1, I-McCubbin.1, I-McLaughlin.1, I-Meyerowitz.1, I-Miller.1, I-Montgomery.1, I-Musselman.1, INeaser.1, I-Nelissen.1, I-Niffenegger.1, I-Olsen.1, I-Page.1, I-Perry.1, I-Peshkin.1.1, I-Pielock.1, I-Place.1, I-Polesky-.1, I-Raimondi.1, I-Rasmussen.1, I-Reckas.1, I-Richardson-1.1, I-Richardson-2.1, I-Rife.1, I-Robertson.1, I-Royer-1.1, I-Royer-2.1, I-San Francisco Events.1, I-Segal.1, ISilverstein.1, I-Simonian.1, I-Solmssen.1, I-Sowalsky.1, I-Spector-1.1, I-Spector-2.1, I-Stanfield.1, I-Stevens.1, I-Strader.1, I-Stuebe.1, I-Sugino.1, I-Sullivan.1, I-Surin.1, I-Taputuarai.1, I-Thompson.1, I-Ting.1, I-Tull-2.1, I-Veraldi.1, I-Wahn.1, I-Wang.1, I-Ward.1, I-Weinberger.1, I-Weiss.1, I-Weyland.1, I-Whitworth.1, I-Wittenmeier.1

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**“Access Infrastructure.** While there is some discussion of LCP [Local Coastal Program] provisions related to recreational access development (in Section 4.5.3.3 “Local”), there should be further review and discussion on how the proposed public recreational access facilities align with the policies outlined in the LCP, and especially Sections 1 and 2 of Policy 12.4, which states (in part):

*Public recreational access facilities (e.g., public parks, restroom facilities, parking, bicycle facilities, trails, and paths), public infrastructure (e.g., public roads, sidewalks, and public utilities), and coastal-dependent development shall be sited and designed in such a way as to limit potential impacts to coastal resources over the structure's lifetime. As appropriate, such development may be allowed within the immediate shoreline area only if it meets all of the following criteria:*

*1. The development is required to serve public recreational access and/or public trust needs and cannot be feasibly sited in an alternative area that avoids current and future hazards.*

- 2. The development will not require a new or expanded shoreline protective device and the development shall be sited and designed to be easy to relocated [sic] and/or removed, without significant damage to shoreline and/or bluff areas, when it can no longer serve its intended purpose due to coastal hazards.*
- 3. The development shall only be allowed when it will not cause, expand, or accelerate instability of a bluff.*

Specifically, these LCP tests will need to be met by any such proposed development, and the DEIR should explore the ways in which that is the case. Of particular import is the concept of avoiding armoring and allowing for easy relocation in the face of potential hazards, and the DEIR needs to explain how that is accomplished by project siting and design.” (Peter Benham, Coastal Planner, California Coastal Commission [A-CCC.12])

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**“Chapter 3. Plans and Policy, Section 3.6.1 National Park Service Management Policies and 3.6.2 Golden Gate National Recreation Area General Management Plan and Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.1.2 Format of Environmental Analysis:** As described in these related sections, in particular the subsection, **Regulatory Framework, p 4.1-2**, in order to satisfy the ... “federal ... requirements that are directly applicable to the environmental topic being analyzed,” update each appropriate environmental topic section in Chapter 4 to include analysis and a determination whether the proposed action elements, directly and indirectly impacting park lands and resources, would impair park resources, and would each of them be consistent with GGNRA’s GMP.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.12])

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“In evaluating the Draft Program EIR (EIR) for the Ocean Beach Climate Change Adaptation Project, our comments are focused on the context of the beach in this area, which is being narrowed by sea level rise and erosion. Our primary concern is that the alternative studied in this project does not accurately analyze inconsistencies with other land use plans — in particular the Ocean Beach Master Plan — as required by CEQA. In particular, plans and policies explicitly intended to limit the use of hard armoring and preserve the public beach as sea levels rise are not accurately considered.

The San Francisco Public Utilities Commission (SFPUC) considers the EIR’s preferred project to be an updated version of a design concept that was originally considered and widely accepted in the OBMP in 2012 and then further analyzed by SFPUC in 2015. Surfrider disagrees with this assessment due to substantial differences amongst the two project designs. The proposed project will impact beach width, will decrease sediment accumulation and will result in a narrowed beach. Due to the significant divergence from the OBMP and related goals to limit shoreline armoring, we find that the EIR has failed to identify an environmentally preferable alternative with large implications for many resources.

In general, the relatively low adaptive capacity of the selected EIR alternative also means that SFPUC has not properly analyzed or mitigated for resource impacts related to the existence of a walkable beach; including minerals, public access, and public recreation.

### Land Use Impacts Have Not Been Properly Analyzed

The related problems of sea level rise and erosion in South Ocean Beach have been extensively considered by SFPUC and many other entities for decades. Considerable planning has been done to acknowledge an environmental setting that has been known to be evolving; where sea level rise will exacerbate the erosion issues that the beach south of Sloat already experiences. The EIR points to a number of planning processes that have addressed the challenge of protecting infrastructure and maintaining a beach in the last ten years, and makes the following finding that the project would not cause significant impacts:

“The project would not cause a significant physical environmental impact due to a conflict with any 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.” (EIR, S-28)

Surfrider strongly disagrees with this analysis. We maintain that the policy and planning context is very clear about the need to limit shoreline armoring in this area due to the negative impacts that armoring has on beach space and a wide variety of coastal resources.

#### A Long Planning History Seeks to Limit Armoring In This Area

In 2012, the Ocean Beach Master Plan sought to balance environmental protection needs with the need to protect infrastructure in South Ocean Beach:

“The Ocean Beach Master Plan is an effort to develop a sustainable long-term vision for Ocean Beach, addressing public access, environmental protection and infrastructure needs in the context of erosion and climate-related sea level rise.” (Ocean Beach Master Plan, I-10).

While the OBMP was generally a visioning process, clear priorities for the beach South of Sloat were put forth to limit armoring and protect the natural capacity of the beach to rebuild itself under conditions of extreme erosion and wave runoff. This was memorialized best in two plans that intentionally built off the OBMP — the 2015 Coastal Protection Measures and Strategies for South Ocean Beach<sup>1</sup> framework and the Western Shoreline Area Plan LCP Amendment in 2017<sup>2</sup>.

The 2015 framework was an SFPUC-commissioned effort to more technically evaluate the Lake Merced Tunnel protection device recommended in the OBMP for the area South of Sloat Boulevard. The preferred concept that emerged from that effort was intended to incorporate new information related to sea level rise and was ultimately designed to “emphasize the use of low impact technologies inland of the current shoreline that provide multiple benefits and opportunities for integrated management (e.g. protect critical infrastructure and provide for the protection and enhancement of natural resources).” (Alternatives Analysis, page 1))

The Western Shoreline Area Plan Update in 2017 also explicitly sought to limit hard armoring strategies for the area:

“Western Shoreline Area Plan Objective 6: Maintain and enhance the recreational use of San Francisco’s Ocean Beach Shoreline” (Western Shoreline Area Plan, Chapter 1)

“Shoreline protection devices such as rock revetments and seawalls can negatively impact coastal resources... Because of these impacts, **shoreline protection devices shall be avoided and only implemented where less environmentally damaging alternatives are not feasible.** Shoreline protection devices such as rock revetments and seawalls shall be permitted only where necessary to

protect existing critical infrastructure and existing development from a substantial risk of loss or major damage due to erosion and only where less environmentally damaging alternatives such as beach nourishment, dune restoration and managed retreat are determined to be infeasible.” (Western Shoreline Area Plan, Chapter 12)

The broad impacts of hard armoring to environmental resources such as coastal access, coastal recreation, and habitats are summarized in the Coastal Commission’s 2018 Sea Level Rise Policy Guidance<sup>3</sup>:

“Hard armoring refers to engineered structures that...can result in serious negative impacts to coastal resources, particularly as sea level rises. Most significantly, hard structures form barriers that impede the ability of natural beaches and habitats to migrate inland over time. If they are unable to move inland, public recreational beaches, wetlands, and other habitats will be lost as sea level continues to rise.. Other detrimental impacts may include interference with other ecosystem services. (Sea Level Rise Guidance, page 123)

The Coastal Commission has made exceedingly clear that hard armoring harms beaches. Most recently, the Commission’s 2021 “Sea Level Rise Guidance for Critical Infrastructure<sup>4</sup>” emphasizes the need to protect coastal resources when hard armoring is used:

“Prioritize siting infrastructure to avoid hazards, and where hazard avoidance is not feasible, prioritize nature-based adaptation strategies over hard shoreline armoring. When hard shoreline armoring is used, require mitigation for adverse coastal resource impacts and long-term planning to identify a long-term solution that is most protective of coastal resources.” (Critical Infrastructure Guidance, 136)

Finally, intentions to limit hard armoring in this project have explicitly been memorialized in the Coastal Commission Staff Report<sup>5</sup> for Phase 1 of this project:

“During the initial up to 6-year term of this permit, existing rock revetments and sandbags along much of the project area south of Sloat Boulevard would be allowed to remain in place, as they are required to help assure short-term structural stability and protection of existing significant public infrastructure in danger from erosion. The long-term project, due to be implemented beginning in 2021, would likely include removal of these revetments and sandbags and a series of managed retreat measures designed to avoid hard armoring as much as possible in favor of instead managing the shoreline more naturally (with sand dunes, for example) and facilitating enhanced public recreational access in the area.” (page 2, 2018 Coastal Commission Staff Report)

In summary, there is a long history — in both the statewide regulatory context and local planning documents — which anticipates sea level rise and intends to limit hard armoring in South Ocean Beach.

#### The Described Project Departs from Regulatory Recommendations

The project described in the draft EIR includes a 3,200 [sic] seawall covered by a 3:1 sloped sand layer that is stabilized by a four foot layer of “cementitious” material. The seawall is massive in scale, the back of the beach has been set by a series of concrete designs (the coastal trail and access road; in addition to the sloped sand layer and buried sea wall), and the enforced slope is steep and requires steady maintenance. All of these characteristics together mean that the project has very low ability to replenish itself and relies on high impact and costly artificial sand replenishment. Without steady maintenance, the cementitious layer and the seawall

will both contribute to further erosion of the beach which does not have the ability to migrate or build itself back. A cement shoreline, when unearthed, also puts recreation and access at high risk.

Surfrider fundamentally cannot characterize this design as an attempt to limit shoreline armoring or as a necessary use of shoreline armoring that is most protective of coastal resources.

Surfrider therefore believes that the EIR project conflicts with the land use policies described in the Ocean Beach Master Plan and the Western Shoreline Area Plan and with important Sea Level Rise Guidance approved by the Coastal Commission. Our conviction is formed by practical questions surrounding the need for such a large seawall and the feasibility of a sediment management program that will mitigate all armoring-caused erosion, which is discussed in a later section.” (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.1])

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<sup>1</sup> [https://www.spur.org/sites/default/files/2015-08/OB\\_Coastal\\_Protection\\_Mgmt\\_Final\\_20150424.pdf](https://www.spur.org/sites/default/files/2015-08/OB_Coastal_Protection_Mgmt_Final_20150424.pdf)

<sup>2</sup> [https://generalplan.sfplanning.org/Western\\_Shoreline.htm](https://generalplan.sfplanning.org/Western_Shoreline.htm)

<sup>3</sup> [https://documents.coastal.ca.gov/assets/slr/guidance/2018/0\\_Full\\_2018AdoptedSLRGuidanceUpdate.pdf](https://documents.coastal.ca.gov/assets/slr/guidance/2018/0_Full_2018AdoptedSLRGuidanceUpdate.pdf)

<sup>4</sup> [https://documents.coastal.ca.gov/assets/slr/SLR%20Guidance\\_Critical%20Infrastructure\\_8.16.21\\_FINAL\\_FullPDF.pdf](https://documents.coastal.ca.gov/assets/slr/SLR%20Guidance_Critical%20Infrastructure_8.16.21_FINAL_FullPDF.pdf)

<sup>5</sup> [Th10a-5-2018-exhibits.pdf](#)

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“It is totally contrary to the western shoreline plan that was adopted that forbids new armoring at the shoreline.” (Dennis Holl [I-Holl-1.2])

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“First and foremost I believe that the proposed plans and design for the GH south of Sloat are inconsistent with the spirit of the Ocean Beach Master Plan and contrary to the managed retreat proposal that have been championed by Surfrider.” (Peter Pirolli [I-Pirolli.1])

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“I would like to align my comments with those of the San Francisco Surfrider Foundation. South Ocean Beach is a highly valuable section of beach used for running, surfing, fishing and general enjoyment. The EIR is proposing a project that threatens a long history of planning intended to preserve a wide, natural beach in the area near Sloat Boulevard. SFPUC should address its inconsistencies with the Ocean Beach Master Plan, as outlined by the Surfrider letter. SFPUC should also re-convene the public, including beach stakeholders, to troubleshoot areas of difficulty.” (This comment is representative of the comments listed on page 11.3-1, which are similar or identical to the representative comment.)

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## RESPONSE PP-1

### **CEQA REQUIREMENTS FOR PLAN CONSISTENCY ANALYSIS**

Comment O-SURF.1 and other comments assert that the draft EIR does not accurately analyze the project’s inconsistencies with land use plans, and question the draft EIR’s conclusions regarding significant

environmental effects related to project conflicts with such plans. The planning documents referenced in Comment O-SURF.1 are the Western Shoreline Area Plan, the Ocean Beach Master Plan, the California Coastal Commission's Sea Level Rise Policy Guidance and Guidance for Critical Infrastructure, a Coastal Commission staff report, and an SFPUC technical report.

Pursuant to CEQA Guidelines Section 15125(d), an EIR is required to consider inconsistencies with applicable plans, specific plans, and regional plans. With respect to land use specifically, the CEQA Guidelines Appendix G environmental checklist form and the city's initial study checklist questions focus on land use plans, policies, or regulations of an agency with jurisdiction over the project that were adopted for the purpose of avoiding or mitigating an environmental effect. A project's inconsistency with an applicable plan does not necessarily mean the project would have a significant environmental impact, as such determinations are based on assessments of potential project effects on the physical environment when compared to baseline conditions.

The Western Shoreline Area Plan is an applicable plan, and draft EIR Chapter 3, Plans and Policies, addresses potential project inconsistencies with Western Shoreline Area Plan policies. Please also refer to the discussion under *Project Consistency with Western Shoreline Area Plan Policies*, below.

The other documents cited in Comment O-SURF.1 are not applicable plans requiring consistency analysis under CEQA. The Ocean Beach Master Plan was not adopted by the city or any other public agency. Rather, the document states on p. VI-2:<sup>1</sup>

As a nonregulatory plan, the Ocean Beach Master Plan does not have the force of policy or law. Rather, it lays out a vision based on the extensive participation of all stakeholders and responsible agencies and serves as a guidance document for future actions. Implementation of these recommendations depends on each agency initiating projects, conducting technical studies, and undertaking environmental review according to its own planning processes.

The Coastal Commission's sea level rise guidance documents explicitly state they are advisory and not intended to be regulatory or legal standards. The Sea Level Rise Policy Guidance states, for example, "This Guidance is advisory and not a regulatory document or legal standard of review for the actions that the Commission or local governments may take under the Coastal Act."<sup>2</sup> The Sea Level Rise Guidance for Critical Infrastructure similarly states, "This Guidance is advisory. It provides the Commission's recommendations for how local governments can address sea level rise issues in Local Coastal Programs (LCPs) consistent with the Coastal Act. The Guidance is not a regulatory document or legal standard of review for the actions that the Commission or local governments may take under the Coastal Act."<sup>3</sup> Similarly, the 2018 Coastal Commission staff report and 2015 Coastal Protection Measures and Strategies for South Ocean Beach are not plans in and of themselves or within the meaning of the CEQA regulations. Nevertheless, as discussed in *Consideration for*

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<sup>1</sup> SPUR, ESA PWA, Moffatt & Nichol, McMillen Jacobs Associates, and AGS, Inc., Coastal Protection Measures & Management Strategy for South Ocean Beach, Ocean Beach Master Plan: Coastal Management Framework, Prepared for San Francisco Public Utilities Commission, April 24, 2015.

<sup>2</sup> California Coastal Commission, Sea Level Rise Policy Guidance. Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits, originally adopted August 2015, updated November 2018.

<sup>3</sup> California Coastal Commission, Critical Infrastructure at Risk – Sea Level Rise Planning Guidance for California's Coastal Zone, November 2021 Draft.

*Ocean Beach Master Plan and Other Guidance Documents*, below, the draft EIR does consider these other documents or the concepts represented therein.

### **PROJECT CONSISTENCY WITH WESTERN SHORELINE AREA PLAN POLICIES**

The project's consistency with the Western Shoreline Area Plan, which is the city's local coastal program (LCP), is discussed in draft EIR Chapter 3, Plans and Policies, and in EIR Impact BI-10 (in Section 4.6, Biological Resources) as modified in Response BI-7 of this RTC document. As stated in draft EIR Chapter 3, overall the project would not conflict with the Western Shoreline Area Plan; however, the project would not entirely avoid or mitigate impacts on bank swallow habitat, which is a potential conflict with Policy 12.6. The policy states: "Shoreline protection devices shall be designed to blend visually with the natural shoreline, provide for public recreational access, and include proportional mitigation for unavoidable coastal resource and environmentally sensitive habitat impacts." For the reasons presented below, the comments do not identify a deficiency in the draft EIR's analysis of project consistency with the Western Shoreline Area Plan policies.

Comments O-SURF.1 and I-Holl-1.2 correctly state that Objective 12 of the Western Shoreline Area Plan restricts the use of shore protection structures to circumstances in which the structure is needed to protect "existing critical wastewater system infrastructure" from a substantial risk of loss or major damage due to erosion, and only where less environmentally damaging alternatives are determined to be infeasible. As discussed throughout the draft EIR, the project meets each of these criteria. First, the project is necessary to protect critical wastewater system infrastructure. In reference to the project area, the draft EIR's first paragraph (p. 1-1) states, "This stretch of shoreline is experiencing substantial beach and bluff erosion, which has undermined the Great Highway and stormwater conveyance facilities and threatens critical wastewater system infrastructure essential for protecting coastal water quality." Draft EIR Section 2.3 (p. 2-6) lists as a primary project objective "Protect the Lake Merced Tunnel and related wastewater system infrastructure from damage due to shoreline erosion, storm and wave hazards, and sea level rise in order to maintain current operational capacity and meet regulatory permit requirements."

Second, and as stated in Section 6.1, the draft EIR evaluated a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives but would avoid or substantially lessen any identified significant adverse environmental effects of the project. Section 6.5 (pp. 6-34 through 6-44) concludes that, other than the No Project Alternative (Alternative A), the feasible alternatives evaluated would either result in similar or new significant environmental effects relative to the project (Alternatives C and D) or would lessen environmental effects relative to the project but would not fully meet the basic project objectives, particularly the objective of the protection of critical wastewater system infrastructure (Alternative B, the environmentally superior alternative). Alternatives considered but eliminated from further analysis, including a dune restoration alternative, are presented in draft EIR Section 6.6. Therefore, as outlined in the draft EIR and consistent with the Western Shoreline Area Plan policy cited in Comment O-SURF.1 (Policy 12.5), the project is needed to protect existing critical infrastructure from major damage due to erosion, and there are no feasible less environmentally damaging alternatives. Please also refer to Section 11.10, Alternatives, for additional responses to comments concerning alternatives, and Section 11.2, Project Description, for responses to comments concerning the project elements, including the buried wall and slope stabilization layer. The latter (Response PD-3) addresses the design rationale for the slope stabilization layer instead of the cobblestone plating concept featured in the Ocean Beach Master Plan and 2015 Coastal Protection Measures and Strategies for South Ocean Beach technical report.

With regard to Comment A-CCC.12, the project's recreational facilities are proposed to serve public recreational access needs within an area where lateral access along the shore is constrained or non-existent, and where restroom and parking facilities would be removed under the project. As discussed below, these project elements (1) are necessary to provide public access, (2) have been sited and designed to limit potential coastal resources impacts over their lifetime and would not require shoreline protection, (3) would not affect bluff stability, and (4) could be removed without significant damage to shoreline and/or bluff areas when these project elements can no longer serve their intended purpose due to coastal hazards.

**Parking Lot, Multi-Use Trail, and Restroom.** The Skyline coastal parking lot would provide continued beach access parking for South Ocean Beach visitors when the NPS parking lot is removed. The multi-use trail would provide new bicycle and pedestrian access along the shore between Sloat and Skyline boulevards where none currently exists. The proposed restroom would provide continued restroom access to beach visitors when the NPS restroom is removed. None of these facilities would be located within the immediate shoreline area; rather, they would be located on a bluff, within the existing Great Highway right-of-way, between 100 and 500 feet inland of the shoreline. Given the existing land uses and development bounding the Great Highway to the east, there is no feasible alternative location for the multi-use trail or parking lot that would provide comparable access. The city considered six potential alternative restroom locations and determined none was feasible due to public safety or vandalism concerns.<sup>4</sup>

As stated in draft EIR Appendix B, Initial Study (p. 102), none of the landward or upland portions of the project area—where the multi-use trail, restroom, and parking lot would be sited—are within a special flood hazard area as identified on the Federal Emergency Management Agency's flood hazard map for the project area. None of these facilities would be placed in a location that is currently subject to erosion hazards such that a new or expanded seawall is required.<sup>5</sup> If the multi-use trail or parking lot were to become exposed to flood or erosion hazards in the future, they would be easy to remove or relocate. Similarly, the SFPUC has stated that it would remove or relocate the restroom structure, if it were to become threatened by coastal hazards.<sup>6</sup> Should such exposure occur, given the types and locations of these upland public recreational facilities (i.e., paving and small structure, located on a bluff within the existing road right-of-way), they could be removed or relocated without damaging the shoreline or bluff areas. None of these upland facilities would affect coastal bluffs.

**Beach Access Stairway.** The beach access stairway is the only public recreational access development proposed within the shoreline area; the existing sand ramp to the north would be maintained under the project but is not considered a new public recreational access facility. The beach access stairway would serve public recreational access needs at the south end of South Ocean Beach, closer to the proposed Skyline coastal parking lot, and in a location where there currently is no safe vertical beach access (i.e., between the top of bluff and beach); there is no alternative location that could accomplish this. The stairway would be constructed in a manner capable of withstanding wave forces (drilled piers and foundation), and so would not require a new or expanded shoreline protection device. Similarly, because it would be constructed on piles and have a relatively small footprint, the stairway would not be expected to reflect wave energy or shore processes such that it would cause, expand, or accelerate bluff erosion. The beach access stairway would be expected to

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<sup>4</sup> SFPUC, letter from JT Mates-Muchin (SFPUC) to Peter Benham (CCC), Subject: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaption Project – Future Bathroom Location Rationale, June 16, 2021.

<sup>5</sup> ESA, Ocean Beach Climate Change Adaptation Project, Short-term Improvements, Erosion Protection Measures: 2021-2022 Monitoring Report, Prepared for San Francisco Public Utilities Commission, October 2022.

<sup>6</sup> SFPUC, letter from JT Mates-Muchin (SFPUC) to Peter Benham (CCC), Subject: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaption Project – Future Bathroom Location Rationale, June 16, 2021.

reduce the potential for the development of informal trails through restoration areas between the multi-use trail and beach, thereby protecting the vegetation communities and minimizing future erosion. The stairway would be constructed in a manner such that it could be removed without destabilizing the bluff and beach. This is because the stairway would be constructed on piers, as opposed to integrated into the bluff or slope stabilization. If necessary, the stairway could be removed by cutting the piers and removing the stairway flights and landings.

### **CONSIDERATION OF OCEAN BEACH MASTER PLAN AND OTHER GUIDANCE DOCUMENTS**

As noted in Comment O-SURF.1, the Ocean Beach Master Plan, 2015 Coastal Protection Measures and Strategies for South Ocean Beach technical report (“2015 technical report”), 2015 coastal development permit (No. 2-15-1537), and the California Coastal Commission’s sea level rise guidance are important planning documents that provide vision and guidance for orderly development along the coast. While they are not applicable plans within the CEQA context—none has legal applicability to the project—they were considered in the project’s design and analysis, and the project is, on balance, consistent with the recommendations in these documents.

The role of the Ocean Beach Master Plan, the 2015 technical report, and the 2015 coastal development permit in the project’s planning process is described in draft EIR Section 1.4, Project Background (pp. 1-4 to 1-14). In that section, the draft EIR explains that the Ocean Beach Master Plan concepts provided the basis for the project design and were refined based upon subsequent engineering investigation and analysis, including the 2015 technical report.

Coastal Commission sea level rise guidance documents provide recommendations for project planning for sea level rise, such as analyzing the medium-high and extreme/H++ sea level rise scenarios and using managed retreat and phased adaptation as appropriate to address long-term sea level rise impacts.<sup>7</sup> While the documents are not specifically identified by name, the project design and draft EIR consider the recommendations from these documents. For example, draft EIR Section 1.1, Introduction (p. 1-1) states:

Consistent with state and local coastal management policies and existing permit requirements,<sup>1</sup> the project would enact a combination of *managed retreat*,<sup>2</sup> *beach nourishment*,<sup>3</sup> and *shoreline protection*<sup>4</sup> strategies intended to protect critical wastewater system infrastructure from damage due to these hazards, while also preserving and enhancing coastal public access, scenic quality, and coastal habitat.

Section 2.4.5, Beach Nourishment (pp. 2-19 to 2-26), explains that the project includes an adaptive beach nourishment program, based on regular monitoring. As stated in that section (p. 2-25), the modeling used to estimate the amount and frequency of sand placement required to maintain a sandy beach considered both the medium-high and extreme/H++ risk scenarios. Consistent with these guidance documents, the project also includes use of native plantings to establish vegetative stabilization zones along the shoreline to help stabilize and retain the sand (draft EIR p. 2-26; RTC Section 9.1.1, pp. 9-2 and 9-3).

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<sup>7</sup> California Coastal Commission, 2021. Critical Infrastructure at Risk – Sea Level Rise Planning Guidance for California’s Coastal Zone, November 2021 Draft.

### ***IMPAIRMENT ANALYSIS AND CONSISTENCY WITH GGNRA GENERAL MANAGEMENT PLAN***

In response to Comment A-GGNRA.12, the EIR addresses for each environmental topic the potential for the project to result in a direct, indirect, or cumulatively significant adverse environmental effect. This includes all portions of the project area, both within and outside the NPS boundary. In addition to those addressed within the topical sections of the EIR, additional discussion of the project's consistency with applicable plans, policies, and regulations is provided in Chapter 3, Plans and Policies. As explained in Section 3.6, Federal Plans and Policies (p. 3-12), the project would not conflict with the NPS Management Policies or the General Management Plan. Moreover, the city has consulted with NPS staff extensively throughout project design and environmental review process. The planning department recognizes that final determinations of consistency are ultimately made by the agency with jurisdiction. As noted in draft EIR Section 2.7, Intended Uses of this EIR and Required Actions and Approvals (p. 2-37), the project will require approval from the NPS and associated National Environmental Policy Act compliance which will provide opportunity for the NPS to further consider project consistency with specific agency plans and regulations.

### ***ANALYSIS OF IMPACTS RELATED TO MINERALS, PUBLIC ACCESS, AND PUBLIC RECREATION***

Comment O-SURF.1 asserts that the proposed project has low adaptive capacity and therefore the draft EIR does not properly analyze or mitigate for resource impacts, including impacts on mineral resources, public access, and public recreation. As discussed in draft EIR Section 2.4.5.1 (p. 2-21), the SFPUC – in consultation with NPS and the Coastal Commission – would develop a shoreline monitoring program that includes monitoring and adaptive management of sand supply in response to observed shore conditions in order to maintain a sandy beach. The draft EIR evaluates potential project effects on mineral resources in Appendix B, Initial Study (pp. 121 through 122); beach width (an indication of public access along the beach) in Appendix B, Initial Study (pp. 81 through 94); and public access and recreation in Section 4.5, Recreation (pp. 4.5-1 through 4.5-20). Similarly, the draft EIR evaluates the potential effects of project alternatives on these resources in Section 6.3, CEQA Alternatives and Potential Environmental Effects (pp. 6-4 through 6-33). Project implications for public access, namely beach width, are also addressed in responses PD-2 (p. 11.2-7) and PD-6 (pp. 11.2-28 through 30). As discussed in responses PD-2 and PD-6, the average width of South Ocean Beach under project conditions is estimated to be greater than 50 feet wide about 90 percent of the time on average over the life of the project. While not anticipated for extended periods, even if severe storm conditions were to result in the periodic elimination of passable beach, lateral access along the shore would be available via the sand ramp and proposed coastal access stairway. For these reasons, relative to baseline conditions, the project would not be expected to result in significant impacts related to public access along the shore. As explained in Section 11.2, Project Description, Response PD-3 (pp. 11.2-9 through 11.2-11), the alternative concepts identified in the early planning documents referenced in the comment were found to be technically infeasible. The comment does not identify any feasible alternatives with greater adaptive capacity, nor does it identify any technical deficiency with the environmental analysis for the specific topics referenced. For these reasons, the planning department concludes that the draft EIR's analysis of project effects related to mineral resources, public access, and public recreation is sound, and no revisions are required.

### ***ADDITIONAL STAKEHOLDER MEETINGS***

Multiple comments request the SFPUC meet with members of the public and stakeholders to further discuss the project design details compared to those in the Ocean Beach Master Plan. While not required under CEQA, the city has held multiple meetings with members of the public during the CEQA process to discuss the

project's elements and potential environmental effects, including the September 30, 2020 scoping meeting and the January 6, 2022 draft EIR planning commission hearing. The city held additional project-related public meetings, as well as individual stakeholder meetings outside of the CEQA process, between 2018 and 2022. Furthermore, the SFPUC has staffed tables with project information at various public events and shared project information with people who live, work, or own property in the project area. CEQA does not require, and at this time the planning department does not anticipate scheduling any further public meetings to discuss project description details. However, these comments are noted and will be considered by decision-makers in the course of their review of the project.

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## 11.4 Aesthetics

The comments and corresponding responses in this section cover topics in draft EIR Section 4.2, Aesthetics.

### Comment AE-1: Aesthetics Impacts

This response addresses the following comments, which are quoted below:

A-CCC.13, A-GGNRA.9

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“Visual Impacts. Impact AE-4 states: “Project operation would not substantially adversely affect a scenic vista, degrade the existing visual character or quality of public views of the site or its surroundings, or damage scenic resources. (Less than Significant)” (page 4.2-21). This analysis discusses the potential visual impacts of the exposure of the seawall. However, there does not seem to be a discussion of the visual impacts of potential dune degradation, exposure of the slope stabilization layer (SSL), or any suggested mitigation of these impacts, such as plans to increase the speed at which the City can place sand in response to exposure events or perform proactive nourishment. A scenario where the seawall or SSL is exposed yearly and remains exposed for a large portion of the year would constitute a significant visual impact and should be evaluated, and mitigation for such impacts should be proposed” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.13])

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“SUMMARY, S.3.3 Buried Wall and Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.2 Aesthetics: Add more details and specifications, including color, texture, etc. for the cementitious materials described in S.3.3 and provide an impact analysis to aesthetics in 4.2 of the visual appearance of the cementitious layer since it will likely be exposed for long durations during the lifetime of the buried wall.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.9])

### RESPONSE AE-1

Under CEQA Guidelines section 15126.2(a), an EIR’s examination of the potential effects of a project on the environment should normally be limited to changes in existing physical conditions in the affected area as they exist at the time the notice of preparation (NOP) of the EIR is published. Such conditions are referred to generally as the “baseline” conditions for the environmental impact analysis. Accordingly, Impact AE-4 on draft EIR page 4.2-23 compares the conditions existent at the time of NOP publication with those under project conditions (refer to draft EIR Section 4.2, Aesthetics, for figures showing existing conditions). Impact AE-4 evaluates whether the project would substantially affect a scenic vista, degrade the existing visual character or quality of public views of the site or its surroundings, or damage scenic resources. As shown in draft EIR Figures 4.2-2, 4.2-5, and 4.2-6, under existing conditions approximately 1,200 feet of the site’s 3,200-foot shoreline is protected by rock and sandbag revetments. The majority of the remainder is backed by substantial amounts of rubble and debris from legacy shoreline development and erosion

prevention efforts. The project would remove the rock and sandbag revetments, rubble, and debris, along with the Great Highway and the National Park Service (NPS) public restroom and parking lot. In place of these features, the city would reestablish a native dune landscape and sandy beach.

Impact AE-4 evaluates the aesthetic effects of the buried wall—the seaward-most feature of the proposed project elements—becoming exposed due to shoreline erosion by comparing the appearance and position of the buried wall with that of the existing shoreline. The analysis explains the potential extent, duration, and frequency of buried wall exposure, along with the project mechanisms to detect and respond to such exposure through beach nourishment (draft EIR p. 4.2-23). The buried wall would be uniform in appearance, unlike the rubble and debris on the beach under existing conditions, and similar in appearance to existing periodically exposed walls nearby such as the Taraval Seawall. The slope stabilization layer would begin at the top of the proposed buried wall and continue to higher elevations, landward of the wall. Given the higher elevations and the vegetated stabilization zone overlying the slope stabilization layer, this layer would be exposed for significantly shorter durations, and less frequently, than the buried wall. As explained in Response PD-3, Slope Stabilization Layer, the slope stabilization layer would be composed primarily of native soils and additives to control color, mixed with weak cement. As a result, the exposed slope stabilization layer would have a color and texture similar to that of the Colma geologic formation that comprises most of the bluffs to the south. However, unlike the bluffs that have a vertical face, the slope stabilization layer would appear terraced and have a more gradual slope capable of supporting dune vegetation. **Figure 11.4-1** shows photographs of slope stabilization layers created for other projects as examples of the appearance and texture of the type of slope stabilization proposed.

Compared with existing conditions, temporary exposure of the buried wall or slope stabilization layer would not degrade the existing visual character or quality of public views of the site or its surroundings, or adversely affect an existing scenic vista, for multiple reasons. Response PD-2 discusses the anticipated frequency of wall exposure in greater detail. As discussed in draft EIR Impact AE-4, the existing rock revetments and rubble along the beach, and fencing and railing along the highway, detract from the area's overall scenic quality. Furthermore, the buried wall would be lower than the existing revetments, and the wall and slope stabilization would be set back relative to the revetments (illustrated in **Figure 11.4-2**; also shown in draft EIR Figures 4.2-8a and 4.2-8b), providing wide views of the surrounding scenic vistas (views of the Pacific Ocean and Ocean Beach). Thus, the existing revetments appear more prominently than the buried wall would during periods when it may be exposed. The slope stabilization would incorporate local sand and would have a color and texture similar to that of the local geology. Relative to the current revetments, which are exposed most of the time, 500-foot-long or longer portions of the wall and slope stabilization layer would be exposed less frequently (every four years, on average), due to their position, and the slope stabilization layer would contrast less with the surrounding bluffs and beach. Over an 80-year period, the full length of the wall could be exposed three to four times. Refer also to Response PD-2 for additional discussion of buried wall exposure.

The discussion in Impact AE-4 (draft EIR p. 4.2-23) also considers whether dunes (north of the project site) or bluffs (south of the project site)—scenic resources that contribute to the project area's visual character and quality—would be degraded by the project and concludes that the project would not change these surrounding features. Within the project area, disturbed dune mat vegetation—which is largely composed of ice plant and confined to the Great Highway margins and median—is not a meaningful contributor to the area's visual character or quality. Therefore, the EIR's analysis of potential project effects does not focus on changes to this habitat community as a potentially significant effect. The analysis does note, however, that impacts on vegetation within the Great Highway median (near the proposed new parking lot) would be

visible from Skyline Boulevard. Moreover, the EIR concludes on pages 4.2-22 through 4.2-23 that under the project “new landscape elements would be similar in appearance to those under current conditions, and changes noted above would appear subordinate to the other existing scenic resources that define the area’s visual quality (i.e., the steep, vegetated coastal bluffs and Lake Merced).”

For these reasons, as stated in draft EIR Impact AE-4, the project would not substantially adversely affect a scenic vista, degrade the existing visual character or quality of public views of the site or its surroundings, or damage scenic resources. The project would also create new scenic vista viewing opportunities from the publicly accessible multi-use trail, adjacent seating areas, and stair landing areas.



Cheney Dam, Kansas

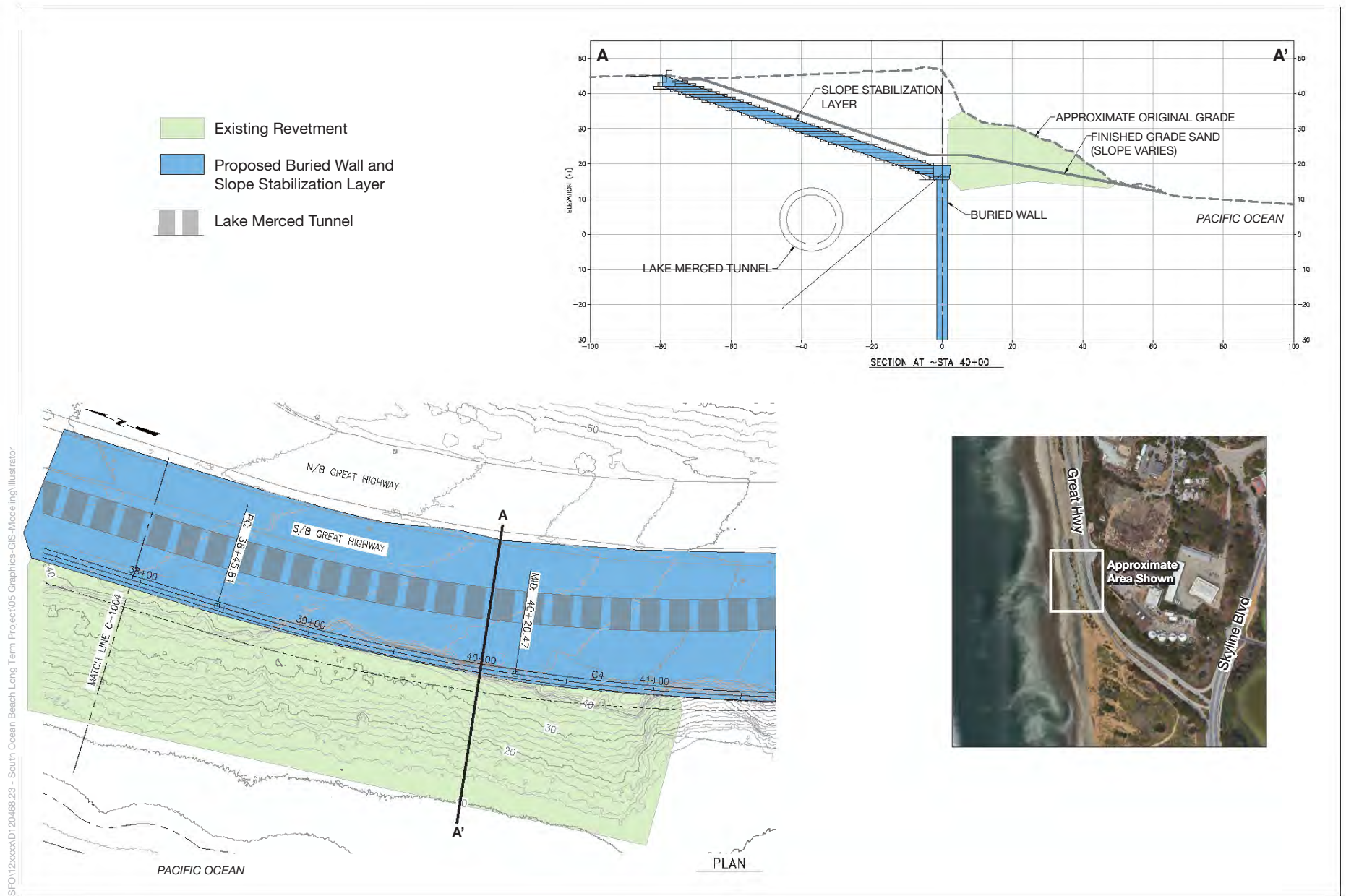


Bonny Reservoir, Colorado

SOURCE: ESA, 2022

Ocean Beach Climate Change Adaptation Project

**Figure 11.4-1**  
Examples of Slope Stabilization Layer



SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021; ESA, 2022

Ocean Beach Climate Change Adaptation Project

**Figure 11.4-2**  
Comparison of Existing and Proposed Bluff Profiles

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## 11.5 Tribal Cultural Resources

The comments and corresponding responses in this section cover topics in draft EIR Appendix B, Section E.5, Tribal Cultural Resources.

### Comment TC-1: Tribal Consultation

This response addresses the following comments, which are quoted below:

A-CCC.29

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**“Tribal Cultural Resources.** According to Impact TC-1 outlined in Appendix B, “The project would not result in a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074. (Less than Significant)” As outlined in Appendix B, “Initial Study”, the last time the City reached out to tribal authorities was in 2019. Please indicate if there has been any additional contact since then, or if there is any plan for follow-up communication now that the project is in its final stages of environmental review. The State Native American Heritage Commission needs to be contacted, and full Tribal Consultation with affected Tribes must occur, and be documented. Where modifications sought by Tribes are not implemented, justification and analysis needs to also be provided.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.29])

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### RESPONSE TC-1

In response to Comment A-CCC.29, the recommendation for additional tribal consultation is noted. As explained in draft EIR Appendix B, Initial Study (Section E.5, Tribal Cultural Resources [p. 23]), on October 30, 2019, the San Francisco Planning Department (planning department) contacted Native American individuals and organizations for the San Francisco area that had requested such notifications, providing a description of the project and requesting comments on the identification, presence, and significance of tribal cultural resources in the project vicinity. Pursuant to CEQA section 21080.3.1(d), within 14 days of a determination that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency is required to contact the Native American tribes that are culturally or traditionally affiliated with the geographic area in which the project is located. Notified tribes have 30 days to request consultation with the lead agency to discuss potential impacts on tribal cultural resources and measures for addressing those impacts. The planning department received no response from Native American tribal representatives requesting consultation or identifying tribal cultural resources and there has been no additional contact or communication between the planning department and tribal representatives since 2019. As part of the project’s Clean Water Act section 404 permitting process, the U.S. Army Corps of Engineers contacted Native American tribal representatives on September 22, 2022, regarding the project. To date the U.S. Army Corps of Engineers has received no response regarding the project.<sup>1</sup> The U.S. Environmental Protection Agency will also conduct Native American tribal outreach as part of its review of the SFPUC’s pending application for

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<sup>1</sup> Email correspondence between Ashley Longrie (Corps), Sara Firestone (Corps) and Jonathan Mates-Muchin (SFPUC) RE: SPN-2021-00432 Ocean Beach Long-term project tribal consultation, November 9, 2022.

project funding under the Water Infrastructure Finance and Innovation Act (WIFIA). In addition, the Golden Gate National Recreation Area, a unit of the National Park Service, owns and manages the land west of the Great Highway and would be responsible for approving and overseeing the project components within their jurisdiction and may conduct tribal outreach as the landowner for these project components.

While no tribal cultural resources were identified in the project site, any archeological resource that may be encountered could be identified as a tribal cultural resource at the time of discovery or at a later date. SFPUC Standard Construction Measures: Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring) set forth procedures for identification, protection, and treatment of archeological resources, which may also be tribal cultural resources. These measures include development and implementation of an archeological monitoring program, including requirements for notification and coordination with local Native American tribal representatives upon discovery of Native American archeological resources, which are considered to be tribal cultural resources. As discussed in draft EIR Appendix B (p. 24), these procedures would be implemented under the project and would ensure that any potential tribal cultural resources encountered during construction excavation are promptly recognized, appropriately treated in consultation with associated Native American tribal representatives and, if applicable, subject to an interpretive program developed in consultation with the associated Native American tribal representatives.

## 11.6 Transportation and Circulation

The comments and corresponding responses in this section cover topics in draft EIR Section 4.3, Transportation and Circulation. The comment topics are related to:

- TR-1: Baseline and Cumulative Assumptions for Transportation Impact Analysis
- TR-2: Transportation Safety Impacts
- TR-3: Emergency Access Impacts
- TR-4: Vehicle Miles Traveled (VMT) Impacts
- TR-5: Parking Impacts

### Comment TR-1: Baseline and Cumulative Assumptions for Transportation Impact Analysis

This response addresses the following comment, which is quoted below:

I-O'Neil.2

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“Given that the proposed project would close public through-traffic on the southern portion of the Great Highway, therefore reducing the usefulness of the rest of the single access segment of the Great Highway; that the Great Highway was built on interfered sand (section 1.4.3) and is therefore potentially more susceptible to sea level rise; and that the popularity of the Great Highway’s closure due to pandemic public health orders has put the road’s future in question, I believe this EIR needs to include transportation analysis using a baseline in which the upper Great Highway from Sloat to Lincoln is closed to vehicular traffic. That baseline could yield different transportation impacts that could be mitigated to less than significant through roadway changes elsewhere in the western neighborhoods.” (Hazel O’Neil [I-O’Neil.2])

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### RESPONSE TR-1

#### ***BASELINE ASSUMPTIONS***

The baseline for the transportation impact analysis reflects conditions prior to the onset of changes to travel behavior and transportation facilities resulting from the COVID-19 pandemic in March 2020 and is consistent with CEQA. As described on draft EIR page 4.3-1, the setting for the impact analysis reflects transportation conditions prior to the closure of the Great Highway between Lincoln Way and Sloat Boulevard to vehicles, reduction in public transit service, and reduction in peak period travel by all modes.

CEQA Guidelines section 15125 states that the “environmental setting will normally constitute the baseline physical conditions.” The section further states that the “lead agency should describe the physical environmental conditions at the time the notice of preparation is published.” Here, the project’s notice of preparation was issued in September 2020, a few months after the start of the COVID-19 pandemic and the emergency closure of the Great Highway. In September 2020, it was clear that the COVID-19 pandemic had

disrupted the city and region travel patterns. However, the future of such disruption is unknown and speculative to assume. Thus, the draft EIR presents the best available information at the time.

The comment also suggests the use of projected future conditions as the sole baseline, which CEQA allows under certain limited conditions. Those conditions do not apply here, as the potential closure of the Great Highway between Sloat Boulevard and Lincoln Way (referred to as the Potential Upper Great Highway Closure in the draft EIR) included multiple options, the outcome of which was unknown at the time the draft EIR was published.

Following the publication of the draft EIR, the City and County of San Francisco decided to carry out or approve the Great Highway Pilot Project on December 22, 2022. The Great Highway Pilot Project will implement a pilot program to create a car-free bicycle and pedestrian promenade on weekends, holidays, and a portion of Fridays by restricting private vehicle access to the Upper Great Highway between Lincoln Way and Sloat Boulevard (2.0 miles). When closed to private vehicles, the roadway will become a separated right-of-way promenade for the exclusive use of pedestrians, bicyclists, emergency vehicles, and other permitted vehicles. The roadway will continue to operate as a four-lane vehicular roadway on weekdays from Monday to the Friday closure time. The pilot would end on December 31, 2025, unless extended by ordinance.<sup>1</sup> The approval of the Great Highway Pilot Project does not require recirculation per CEQA Guidelines section 15088.5 because it does not represent significant new information added to the EIR. As further discussed in the Cumulative Assumptions section below, the draft EIR cumulative analysis already conservatively accounted for the closure of the Great Highway between Lincoln Way and Sloat Boulevard. Consequently, the approval of the Great Highway Pilot Project does not represent new information that may alter the draft EIR analysis.

### **CUMULATIVE ASSUMPTIONS**

As described on draft EIR page 4.3-30 (also see Section 4.1.5, Approach to Cumulative Impact Analysis and Cumulative Projects, on draft EIR pp. 4.1-5 through 4.1-6), the cumulative transportation impact analysis presented in Impacts C-TR-1 through C-TR-6 includes two possible future scenarios: a cumulative analysis with and without the Potential Upper Great Highway Closure. For purposes of the analysis, the San Francisco Planning Department (planning department) conservatively assumed the full promenade closure configuration full time for the second cumulative scenario. Thus, the transportation analysis considers whether, with the addition of the Potential Upper Great Highway Closure (i.e., a scenario in which the Upper Great Highway between Sloat Boulevard and Lincoln Way is closed to vehicular traffic), the cumulative impact conclusions would change. The city's approval of The Great Highway Pilot Project on December 22, 2022, does not change the draft EIR's cumulative impact conclusions because the draft EIR's cumulative analysis under the "Potential Upper Great Highway Closure" accounted for a full closure (i.e., everyday) beyond that considered under the pilot approved in the Great Highway Pilot Project.

As discussed on draft EIR pp. 4.3-49 through 4.3-55, cumulative transportation impacts that would occur if the Upper Great Highway were closed would be similar to cumulative conditions without the Potential Upper Great Highway Closure, with one exception. Under cumulative conditions with and without the Potential Upper Great Highway Closure, construction-related transportation impacts and operational impacts related to potentially hazardous conditions, accessibility, transit delay (for all routes except the 29 Sunset), and

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<sup>1</sup> The San Francisco Planning Department determined The Great Highway Pilot Project was statutorily exempt from CEQA review (September 28, 2022, Planning Department Case No. 2022-007356ENV, Board of Supervisors File No. 220875).

loading would be less than significant, while cumulative vehicle miles traveled (VMT) impacts would be significant and unavoidable.

Under the Potential Upper Great Highway Closure scenario, the draft EIR conservatively assumed a significant cumulative transit delay impact on the 29 Sunset route. The draft EIR found that the project's contribution to the significant cumulative transit delay impact on the 29 Sunset route would not be cumulatively considerable. That draft EIR conclusion does not change with the city's approval of the Great Highway Pilot Project since the draft EIR's cumulative analysis under the "Potential Upper Great Highway Closure" accounted for a full closure (i.e., everyday) beyond that considered under the pilot approved in the Great Highway Pilot Project. For informational purposes, the SFMTA is studying improvements to reduce delays and improve travel time to the 29 Sunset route. Construction for improvements is expected to begin in 2023.<sup>2</sup> Such improvements may eliminate the draft EIR's conservatively assumed significant cumulative transit delay impact on the 29 Sunset route.

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## Comment TR-2: Transportation Safety Impacts

This response addresses the following comments, which are quoted below:

A-GGNRA.14, I-Petterson-2.2

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"Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.3 Transportation, p. 4.3.3.3: Impacts to Walking and Bicycling: Consider mitigations such as signage that could encourage use of the path on the east side of Skyline. The park has concerns about the potential increase in southbound bicyclists riding on the west side of Skyline south of the intersection with the Great Highway. Shoulder conditions for bicyclists are less than ideal in that segment." (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.14])

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"And over the last 35 years plus, intersection [at Sloat Boulevard and Skyline Boulevard] has seen pedestrians killed, and fatal car collisions. And if, as a last resort you need to route traffic through there, then I would recommend a roundabout because signals and stop signs don't work. A lot of the drivers just blow through them." (Paul Petterson [I-Petterson-2.2])

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## RESPONSE TR-2

The draft EIR did not identify any significant impacts related to potentially hazardous transportation conditions (refer to draft EIR pp. 4.3-35 through 4.3-40), for reasons further explained below. Thus, no mitigation can be required of the project for this impact.

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<sup>2</sup> SFMTA, 29 Sunset Improvement Project, <https://www.sfmta.com/projects/29-sunset-improvement-project>, accessed March 2, 2023.

## **BICYCLE TRAVEL ON SKYLINE BOULEVARD**

It is not anticipated the project would substantially increase southbound bicyclists riding on the west side of Skyline Boulevard south of the intersection with the Great Highway. As described on draft EIR pages 4.1-9 and 4.3-37, Caltrans would, as part of a separate project, reconfigure and signalize the intersection of Skyline Boulevard/Great Highway in advance of the project's proposed Great Highway closure. Signalization of this intersection would provide a signalized pedestrian and bicyclist crossing to the path around Lake Merced on the east side of Skyline Boulevard. Later, the Ocean Beach Climate Change Adaptation Project would include supplemental striping and signal timing changes, as necessary, to connect its new pedestrian and bicycle facilities (the multi-use trail) with the existing path around Lake Merced on the east side of Skyline Boulevard (refer to draft EIR p. 2-13 and pp. 4.3-36 through 4.3-37). Wayfinding signage directing people walking and bicycling to cross Skyline Boulevard and connect to the path around Lake Merced would be part of the project's improvements at this location. Further, the CEQA analysis only assesses changes to physical environmental impacts. CEQA does not require mitigation of impacts for conditions that may be poor under existing conditions.

In response to this comment, in the EIR's Project Description, EIR Section 2.4.1.3, Skyline Boulevard and Great Highway (p. 2-13), has been revised as follows:

### **SKYLINE BOULEVARD AND GREAT HIGHWAY**

As part of a separate project, the California Department of Transportation (Caltrans) – which owns the segment of Skyline Boulevard (also known as State Route 35) at its Great Highway intersection – plans to signalize the intersection prior to construction of the proposed project to address ongoing safety concerns. After Caltrans completes this work, restriping pavement, adding a crosswalk, or altering signal timing at the Great Highway/Skyline Boulevard intersection would be implemented as part of the project (i.e., the Ocean Beach Climate Change Adaptation Project evaluated in this environmental impact report [EIR]). In addition, the city would install wayfinding signage along the multi-use trail near the intersection directing people walking and bicycling to cross Skyline Boulevard at the designated crosswalk to connect with the existing path around Lake Merced. Figure 2-5 shows preliminary designs for roadway and access modifications at the Skyline Boulevard intersection with the Great Highway.

## **INTERSECTION OF SKYLINE BOULEVARD/SLOAT BOULEVARD**

As described on draft EIR page 4.3-37, the project would not modify the configuration of the intersection of Skyline and Sloat boulevards and would not create potentially hazardous conditions. As described on draft EIR page 4.1-9, the San Francisco Municipal Transportation Agency (SFMTA) plans to reconfigure the intersection of Skyline and Sloat boulevards with a traffic signal to improve safety for all road users, increase visibility of people walking, and improve or maintain transit and vehicle circulation at the intersection.<sup>3</sup>

In response to this comment, in Impact C-TR-4, discussion of the improvements at the intersection of Skyline Boulevard and Sloat Boulevard (p. 4.3-53), has been revised as follows:

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<sup>3</sup> SFMTA, Sloat Boulevard Quick Build Project, <https://www.sfmta.com/projects/sloat-blvd-quick-build-project>, accessed September 7, 2023.

Proposed transportation network improvements at the intersection of Skyline Boulevard/Sloat Boulevard include installation of traffic signals at all three approaches to the intersection, and these changes in the form of either signalization of a roundabout would be designed to accommodate the three Muni bus routes currently traveling through this intersection (i.e., the 18 46<sup>th</sup> Avenue, 23 Monterey, and 57 Parkmerced). These improvements would reduce vehicle delays at this intersection and transit travel times compared to project conditions presented in Impact TR-4 above. The signalization by Caltrans and subsequent project modifications at the intersection of Skyline Boulevard/Great Highway would not substantially change intersection operations or transit travel times on Skyline Boulevard.

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### **Comment TR-3: Emergency Access Impacts**

This response addresses the following comments, which are quoted below:

I-Hill-2.1, I-Regan.2, I-Unidentified.2

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“I'm a 25-year resident of the Outer Sunset. I don't think your EIR is acceptable. It seems like you have not -- you've taken a very narrow view of the environment and you haven't looked at what is the impact of a road closure on the people of the west side of San Francisco. This road is a major commute route. It's a way that the people of the west side have to evacuate during emergencies and it -- none of that appears, as far as I can tell, in your EIR.” (Steven Hill [I-Hill-2.1])

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“This is a major commuter road and needs to be maintained. In fact this road is part of an Emergency Evacuation route as laid out in the San Francisco's emergency evacuation plan.” (Mike Regan [I-Regan.2])

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“This is major commuter route that needs to be maintained. The fact is it's part of the emergency evacuation route as laid out in San Francisco evacuation plan.” (Unidentified Speaker [I-Unidentified.2])

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### **RESPONSE TR-3**

The draft EIR did not identify any significant impacts for accessibility, including inadequate emergency access (refer to draft EIR pp. 4.3-40 through 4.3-41).

Multiple commenters state that the Great Highway is part of an emergency evacuation route. There is no city document that identifies evacuation routes. The city has identified a policy in its recently updated safety and resilience element of the general plan to map evacuation routes.<sup>4</sup> However, in the vicinity of the project, the

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<sup>4</sup> The San Francisco Planning Department's 2022 safety and resilience element of the general plan includes Policy 4.1.3 that would create a consolidated website linking all of the city's disaster-related information for the general public and ensure distribution of the information through offline outreach that is accessible and equitable in the delivery to all people: <https://sfplanning.org/project/safety-and-resilience-element#about>. Accessed March 2, 2023.

Great Highway, Sloat Boulevard, and Skyline Boulevard south of the Great Highway are included in the San Francisco Public Works (Public Works) Emergency Priority Route Map. This priority route network designates streets to assist Public Works and other city agencies in conducting damage assessment and maintaining critical facilities and services following a disaster, such as a major earthquake.<sup>5</sup> While not designated emergency evacuation routes, these roadways could also be used as evacuation routes.

The project is a multi-agency initiative that includes Public Works. Therefore, Public Works would be responsible for updating the Emergency Priority Routes plan and other plans such as the Debris Management Plan, as necessary, to replace the segment of the Great Highway between Sloat and Skyline boulevards, which would be closed as part of the project, with the segment of Skyline Boulevard between Sloat Boulevard and the Great Highway.

Because this segment of Skyline Boulevard contains two travel lanes in each direction similar to the segment south of the Great Highway that is currently included as an emergency priority route, this change would not substantially affect the ability of the roadway network in the area to support emergency response activities or the potential use of Skyline Boulevard between Sloat Boulevard and the Great Highway as an evacuation route. Therefore, no inadequate emergency access would occur. Furthermore, as described in Impact TR-3 on draft EIR page 4.3-41, the project's proposed new service road and multi-use trail along the same segment between Sloat and Skyline boulevards would be designed in accordance with applicable regulatory requirements and design guidelines to allow for continued service vehicle and emergency vehicle access to public facilities in this segment.

The project includes the permanent closure of the portion of the Great Highway between Sloat and Skyline boulevards, and not the complete closure of the Great Highway between Lincoln Way and Skyline Boulevard on weekdays to commuters. As noted on draft EIR page 4.3-24, with this closure, drivers would reroute to Sloat Boulevard between the Great Highway and Skyline Boulevard and to Skyline Boulevard between Sloat Boulevard and the Great Highway. Considering the peak hour traffic volumes that would be diverted and because the segments of the roadway onto which drivers would reroute provide the same number of travel lanes in each direction (i.e., two travel lanes in each direction) as the segment of the Great Highway between Sloat and Skyline boulevards, the rerouted vehicles would be accommodated without substantially changing conditions on these roadways. As described in Impact TR-2 on draft EIR pages 4.3-35 through 4.3-40, operation of the project would not create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations.

Please also refer to Response GC-6 for additional information about traffic congestion under CEQA.

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## **Comment TR-4: Vehicle Miles Traveled (VMT) Impacts**

This response addresses the following comments, which are quoted below:

A-SFBOS.1, I-Cawthon-1.1, I-Cawthon-2.1, I-Moore.11

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<sup>5</sup> San Francisco Public Works, *Emergency Priority Routes Project*, 2019, <https://www.onesanfrancisco.org/sites/default/files/2019-06/DPW%20Priority%20Route%20Program.pdf>, accessed July 19, 2021.

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“I am submitting this letter to provide written comments in response to the Notice of Preparation of an Environmental Impact Report (EIR) for the Ocean Beach Climate Adaptation Project, Ocean Beach and the Great Highway between Sloat and Skyline Boulevards, and Ocean Beach north of Lincoln Way. The extension of Great Highway also known as South Ocean Beach is a treasured part of urban recreation, not only for westside residents, but for visitors all over the region. As this project is managing challenges of ongoing shoreline erosion, the closure of an essential roadway in District 7 provides the project with a unique opportunity to diminish the traffic impacts and travel patterns that the community will have to endure. I am delighted to see that there are many critical infrastructure ideas in the project that address the climate crisis issues of coastal erosion and sand management. However, I also feel that there are elements that can be further explored.

As such, I recommend that the Environmental Impact analysis include the following:

**Adequate Evaluation of Traffic and Circulation Mitigation**

The San Francisco Public Utilities Commission (SFPUC) acknowledges that the impact of closing the Great Highway extension will cause increased traffic on other roads throughout District 7, and they state that this impact is significant and unavoidable. They then go on to say that there is no proposed mitigation and do not adequately justify why.

The SFPUC must propose a mitigation plan, as is their responsibility, or justify in the EIR why they are not proposing mitigation. In this Draft EIR, it asserts that there is no feasible plan to minimize traffic impacts in Vehicle Miles Traveled (VMT), however, we know that the San Francisco Municipal Transportation Agency (SFMTA) has identified mitigation methods to minimize impact.

To ensure an expansive analysis, the Draft EIR should propose mitigation as is the SFPUC’s responsibility under their project. If they cannot propose mitigation they must provide ample explanation and justify why they cannot complete mitigation measures that have been identified by the SFMTA. The Draft EIR should also analyze the best possible locations for reducing impacts to surrounding roadway. The unavoidable impact to traffic congestion and roadway travel patterns in District 7 must be captured under SFPUCs preview as is their responsibility to mitigate impacts the project creates. The responsibility to mitigate the impact of the project falls under the SFPUC and not the SFMTA. Under CEQA the SFPUC has not met its responsibility with this current Draft EIR.” (Myrna Melgar, Supervisor, District 7, San Francisco Board of Supervisors [A-SFBOS.1])

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“First, calculation of the additional vehicle miles traveled from the operations of the project, estimating in the draft plan at 2.5 million miles per year is understated. VMT calculated using 73 percent of the current traffic volume which is expected to use Sloat Boulevard to reach Skyline however the calculation ignores the additional VMT that will absolutely result from the other 27 percent of the current traffic volume that will use even longer routes such as Sunset Boulevard or 19<sup>th</sup> Avenue. This is additional VMT that will result from the operations of the project should be added to the total in the Final EIR.” (Michael Cawthon [I-Cawthon-1.1])

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“The Draft EIR did not adequately calculate the additional vehicle miles traveled (VMT) caused by the proposed closure of the Great Highway Extension. The report should be corrected to include the additional VMT that will result from all vehicles that will be diverted by the proposed closure of the extension.

The Draft EIR estimated that 20,000 vehicles used the Great Highway Extension daily. The report estimated that 73% of the traffic diverted from the closure of the Great Highway Extension would use the Sloat-to-Skyline route east of the zoo and the wastewater treatment plant. The report estimated that the remaining 27% of the diverted traffic would reroute to other parallel streets (e.g., Sunset Boulevard).

When calculating the additional VMT from the closure of the Great Highway Extension, the report only used the 73% of vehicles diverting to the Sloat-to-Skyline alternative. The report estimated that these 14,600 vehicles/day would travel an additional distance of 0.46 miles each trip. This would result in additional VMT of 2.45 million miles per year, which is the figure included in the draft report.

The report, however, did not calculate the additional VMT from the other 5,400 vehicles/day rerouting to Sunset Boulevard or other parallel streets. These other diversions would also generate additional VMT from the closure of the Great Highway Extension. For example, a vehicle starting at the intersection of the Great Highway and Lincoln Way would likely head east on Lincoln to Sunset Boulevard, and travel south on Sunset before eventually connecting to Skyline Boulevard and traveling further south to the intersection with the Great Highway Extension. This route would be nearly one mile longer than the original route incorporating the extension, and about one half mile longer than the Sloat-to-Skyline alternative described above.

The 5,400 other daily diversions would result in nearly 2.0 million additional VMT per year. The project would therefore result in a total of about 4.4 million of increased VMT annually. This figure should be properly reflected and explained in the Final EIR.” (Michael Cawthon [I-Cawthon-2.1])

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“The circular logic underpinning the Project is then underscored further below this discussion, as transit options are considered. The DEIR states: “Development of such new intercounty transit service would be beyond SFPUC’s control and would require coordination and participation between multiple jurisdictions and transit agencies. In addition, such a new transit service would require funding commitments well beyond the fair share of this project’s impact.” Translation – we know that transit is a big issue, and we know there will be negative impacts, but we just can’t be responsible for coordinating it, nor paying for it, and so the project should just proceed without this significant impact being addressed properly.” Further below in the report, this twisted logic is applied again in the discussion of pricing strategies, which includes an acknowledgement that neighborhood roadways and local streets could be affected, but without any plan to do anything about that acknowledged impact.” (Goffrey Moore [I-Moore.11])

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## **RESPONSE TR-4**

The draft EIR identified a significant and unavoidable vehicle miles traveled (VMT) impact for the project (refer to draft EIR pp. 4.3-43 through 4.3-49). The draft EIR identified no feasible mitigation related to this significant impact.

## **ASSESSMENT OF POTENTIAL VMT MITIGATION MEASURES**

VMT is a measure of the amount and distance of automobile travel. Generally, higher VMT corresponds to increased vehicle tailpipe, including greenhouse gas, emissions, while lower VMT corresponds to lower vehicle tailpipe, including greenhouse gas, emissions. Thus, a project will have a significant effect on the environment if it would cause substantial additional VMT. Consistent with CEQA section 21099(b)(1), the planning department shall not use automobile delay or traffic congestion, by itself, to determine whether a project would have a significant effect on the environment. Therefore, the draft EIR does not identify significant and unavoidable transportation impacts related to traffic congestion, by itself. Please also refer to Response NO-1 (Section 11.7) regarding traffic-related noise impacts, Response GHG-1 (Section 11.11) regarding traffic-related greenhouse gas impacts, and Response GC-6 (Section 11.14) for additional information about traffic congestion under CEQA.

The planning department is responsible for preparing the EIR, including the identification of significant impacts and feasible mitigation measures. The SFPUC and San Francisco Recreation and Park Department (Rec and Park), as the project sponsors, would be responsible for adopting and implementing any adopted mitigation measures upon project approval.

During preparation of the draft EIR, the planning department coordinated with the SFMTA to identify the potential for feasible mitigation strategies to reduce the project's VMT impacts. Through this coordination, the planning department identified no feasible mitigation measures. Mitigation measures must have an essential nexus (i.e., connection) to the impact: in this case, the mitigation must reduce VMT, not traffic congestion. Mitigation measures must also have rough proportionality in terms of time and extent of the impact: in this case, the mitigation can only require the SFPUC to reduce impacts from 2.45 million new VMT per year to below the threshold of significance of approximately 2 million VMT per year, and in a feasible way (e.g., financial, legal factors).

Draft EIR pages 4.3-47 through 4.3-49 describe strategies that can be applied to reduce VMT increases from transportation projects and an assessment of each mitigation strategy's feasibility in reducing project-related VMT increases. Potential strategies identified and thoroughly evaluated include walking/bicycling-related, transit-related, carpooling, and pricing strategies. However, as detailed in the draft EIR, these strategies were found to be infeasible and therefore the project's VMT impact remained significant and unavoidable.

One strategy discussed in the draft EIR is implementation of a new regional transit service, but it found it infeasible for this project. Since publication of the draft EIR, the San Francisco County Transportation Authority published its final District 4 [Sunset neighborhood] Mobility Study.<sup>6</sup> The mobility study states that further planning and coordination of transit agencies needs to be scoped for a new regional "Richmond-Sunset-Northern Peninsula Express Bus" to provide an estimated cost range for such a service. Thus, the draft EIR's statement that a "new intercounty service would be beyond SFPUC's control and would require coordination and participation between multiple jurisdictions and transit agencies" is supported by the mobility study.

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<sup>6</sup> San Francisco County Transportation Authority, 2022. District 4 Mobility Study. Final Report, September 2022.

## **CALCULATION OF PROJECT VMT**

Regarding the calculation of VMT, the EIR determined that the project's closure of the Great Highway between Sloat and Skyline boulevards (i.e., the Great Highway Extension) would result in an addition of approximately 2.45 million VMT per year. This estimate accounts for the additional miles that would result from all vehicles that would be affected by the closure of the Great Highway Extension, including vehicles rerouting to Sunset Boulevard or other parallel streets.

As described on draft EIR page 4.3-46, the VMT calculation assumes that, with the project, 27 percent of drivers would be diverted to nearby roadways while 73 percent of drivers would remain on the Great Highway north of Sloat Boulevard and reroute using Sloat Boulevard between the Great Highway and Skyline Boulevard and Skyline Boulevard between Sloat Boulevard and the Great Highway. The 73 percent and 27 percent split is based on an assessment of traffic volumes at three study intersections (i.e., Upper Great Highway/Sloat Boulevard, Sloat Boulevard/Skyline Boulevard, and Skyline Boulevard/Great Highway) when the Great Highway was closed between Sloat and Skyline boulevards due to sand buildup.

The trip routes of the 27 percent of drivers who would be diverted to nearby roadways would depend on the driver's origin, or starting point, and destination, or end point, of their trip. These rerouted trips could be shorter, the same distance, or longer than the current route via the Great Highway. For example, for a trip starting on 42nd Avenue, a route that follows 42nd Avenue to Sloat Boulevard to Skyline Boulevard would be a similar distance as traveling via the Great Highway to Skyline Boulevard under existing conditions. Due to the high number of variables in route choices and origin and destinations, the draft EIR analysis did not determine what portion of the approximately 5,000 daily vehicle trips that would be diverted from the Great Highway would be shorter and what portion would be longer. However, even if the draft EIR had attempted to quantify these diversions, the miles traveled from these daily vehicle trips would not result in a substantial increase in the severity of the identified VMT impact. This is substantiated by modeling analysis conducted by the San Francisco County Transportation Authority (SFCTA) for the Great Highway Concepts Evaluation Report.<sup>7</sup>

The Great Highway Concepts Evaluation Report assessed various closure scenarios of the Great Highway, including closure of the Great Highway Extension. The report found that many drivers that used the Upper Great Highway in 2019 traveled somewhat out of their way or less direct route to get to the Upper Great Highway.<sup>8</sup> Drivers could have traveled out of their way to the Upper Great Highway for a variety of reasons, including it could have reduced total travel times due to faster vehicle travel speeds on that route compared to other routes. The report also found that closure of the Great Highway Extension would decrease vehicle volumes on Upper Great Highway by approximately 25 percent, which is similar to the 27 percent decrease assumed in the EIR, and that these diverted vehicles would use parallel roadways such as Chain-of-Lakes/Sunset Boulevard and Crossover Drive/19<sup>th</sup> Avenue instead. The report found that most of that diverted traffic rerouting would occur north of Upper Great Highway and Fulton Avenue.<sup>9</sup> Thus, with the Ocean Beach Climate Adaption Project's proposed closure of the Great Highway Extension, it is possible that most of the approximately 25 to 27 percent of drivers who would be diverted to other roadways would

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<sup>7</sup> San Francisco County Transportation Authority. *Great Highway Concepts Evaluation Report*. June 2021.

<sup>8</sup> *Ibid*, p. 14-15.

<sup>9</sup> *Ibid*, p. 15-16. Further, the Report found that with closure of the Great Highway Extension there would be less people driving along Lincoln Boulevard between Upper Great Highway and Sunset Boulevard, not more. Thus, the example from the commenter of increased VMT along this example roadway segment from the Great Highway Extension is not supported.

choose a route closer to their origin and destination, thereby reducing their vehicle trip distance and associated total VMT with the Ocean Beach Climate Adaption Project.

For these reasons, the additional 2.45 million VMT per day estimate identified in the draft EIR is a conservative but reasonable approximation of the additional miles that drivers would travel due to the closure of the Great Highway between Sloat and Skyline boulevards. The VMT estimate identified in the EIR is supported by substantial evidence and no further quantification or revisions to the draft EIR are required.

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## **Comment TR-5: Parking Impacts**

This response addresses the following comments, which are quoted below:

A-CCC.10, O-SURF.7

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“Paid Parking. In Section 2.4.4.3 (“Parking Improvements” on page 2-19) the DEIR indicates that the parking at the proposed Skyline Coastal Parking Lot may be paid parking. Two things are noted here. First it will be important for the City to first identify public parking that will be lost due to the project, including temporary losses during construction, and then at a minimum ensure that such parking be replaced. Second, we recommend that parking facilities be provided free of charge to the public, including accommodating electric vehicle charging and ADA needs. These types of facilities are the type that can serve as replacement parking and, once that need is satisfied, as additional mitigation for other project impacts. However, if any of the parking is going to be paid parking, then that parking cannot be considered mitigation, and it will need to be evaluated differently, including ways in which free or low-cost parking options can be provided for those unable or unwilling to pay such parking fees, how impacts for the loss of free access will be mitigated, and where revenues will be directed. The Commission has some experience in evaluating these types of programs and can provide relevant examples that could prove useful as the DEIR is further developed on this point.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.10])

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### **“Parking Conclusions Are Woefully Inadequate**

Most of the coastal access parking in this area has been lost due to erosion since the late 1990s. When new wastewater infrastructure at south Ocean Beach was originally installed, more than 200 spaces existed in two parking lots south of Sloat. Now, only a single 35-space parking lot at the Sloat intersection remains. The 2015 Design Concept earmarked two parking lots for restoration — one at the end of Zoo Road, slated to replace the primary access parking lot at Sloat and another near the Skyline intersection. The Zoo road site would have constituted the primary coastal access lot and would have included a restroom, shower, bike rack and trash/recycling facilities. The current project appears to only confirm the Skyline parking lot, which would provide for 65 spaces. This is a serious diminution of parking. The lack of a better plan for parking is particularly disappointing when one takes into account the enormous increase in visitation to Ocean Beach that has been evident to locals in recent years.” (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.7])

## **RESPONSE TR-5**

As noted on draft EIR page 4.3-14, the planning department's transportation impact analysis guidelines include screening criteria for projects that would not result in a substantial parking deficit. The project qualifies as an active transportation/rightsizing project and other minor transportation project, indicating that the project would not result in a substantial parking deficit and thus would not result in secondary effects related to potentially hazardous conditions or interfere with accessibility for people walking, bicycling, or inadequate access for emergency vehicles, or substantial delay to public transit. Therefore, as noted in the draft EIR, the transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA.

### ***SKYLINE COASTAL PARKING LOT***

For informational purposes, the draft EIR describes the proposed removal of the 35-space public parking lot near the intersection of the Great Highway/Sloat Boulevard and the proposed new surface parking lot to be constructed as part of the project near the intersection of Skyline Boulevard/Great Highway (referred to in the draft EIR as the Skyline coastal parking lot). The proposed new Skyline coastal parking lot would be free parking (i.e., would not be a paid parking lot), and therefore the comments related to impacts of paid parking are no longer applicable to the project. A revision to the EIR's project description has been made to reflect this change (see Chapter 12, Draft EIR Revisions). As noted on draft EIR page 2-19, the hours of operation would be consistent with the rules in city parks.

### ***BASELINE CONDITIONS FOR ANALYSIS***

As discussed in draft EIR Section 1.4.5, Background Technical Studies, the SFPUC has undertaken several technical studies over the years to inform the design of the project. Through the course of those studies, the project has evolved from a planning concept into the project that is the subject of this EIR. CEQA requires the EIR to evaluate the potential physical environmental effects of the project relative to baseline conditions—that is, generally, conditions existing at the time the lead agency publishes the notice of preparation or commences the environmental review. As described in Response TR-1, the baseline for analyzing the proposed project transportation impacts reflects conditions prior to the onset of the COVID-19 pandemic.

The draft EIR analysis accurately reflects the net change in parking supply within the project area (i.e., loss of 35 spaces near the intersection of Great Highway/Sloat Boulevard and the construction of a new Skyline coastal parking lot with approximately 60 vehicle parking spaces). Additional CEQA analysis that considers changes to the parking supply since the late 1990s is not appropriate as it is not a change to the baseline conditions.

## 11.7 Noise and Vibration

The comments and corresponding responses in this section cover topics in draft EIR Section 4.4, Noise and Vibration.

### Comment NO-1: Noise Impacts

This response addresses the following comments, which are quoted below:

A-CPC-1.2, I-Moore.12

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“Secondly, on page S-20, in the summary of the mitigation measures relating to noise, there is a sentence that refers to compliance with the 90 dBA and 10 dBA standards. And I think more explanation is necessary as to what would trigger or what the consequence is of being greater than 90 dBA or more than nine -- excuse me, more than 10 dBA relative to existing sounds.

So I just think a couple more sentences of explanation might help clarify the point that's being -- trying to be made there.” (Sue Diamond, Commissioner, San Francisco Planning Commission [A-CPC-1.2])

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“Likewise, there is no material review of noise pollution and its effects on habitat, endangered species, and residents from increased usage and congested traffic. Noise levels will certainly increase, but there is once again a concept of operating in an information vacuum alongside the UGH project. How can local residents know that resulting noise levels will not be material when there has been no EIR with respect to proposed changes with the UGH?” (Goffrey Moore [I-Moore.12])

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### RESPONSE NO-1

#### **CONSTRUCTION NOISE IMPACTS**

Comment A-CPC-1.2 requests more clarity regarding the two separate performance targets identified in Mitigation Measure M-C-NO-1: Cumulative Construction Noise Control Measures. This mitigation measure is required to reduce construction noise impacts resulting from cumulative projects in the project vicinity. As explained on draft EIR page 4.4-15, the San Francisco Planning Department (planning department) evaluates construction noise using the Federal Transit Administration (FTA) methodology and its criterion of 90 A-weighted decibels (dBA) at residential receptors at any time, as well as by assessing whether the construction noise would result in an increase of 10 dBA over existing noise levels (“ambient + 10 dBA”) at sensitive receptors on average throughout the day. These quantitative criteria are only part of the construction noise evaluation, which also considers the duration and intensity of any construction noise level exceeding these numeric criteria. Mitigation Measure M-C-NO-1 requires implementation of a noise construction plan that includes noise control measures to reduce construction noise levels.

As the analysis on draft EIR page 4.4-19 (Impact NO-1) shows, the project's construction noise levels would not exceed FTA's 90 dBA criteria for daytime construction noise at any sensitive receptors (i.e., residences, hospitals, schools) and may exceed the ambient + 10 dBA threshold occasionally but for less than two weeks out of the total 48-month construction period. The analysis concludes that given the short duration that construction noise would exceed these numerical criteria, the impact would be less than significant, and no mitigation for project construction noise is required. However, for the reasons discussed on draft EIR pages 4.4-29 through 4.4-32 (Impact C-NO-1), the draft EIR conservatively assumes project construction noise could combine with that from other cumulative projects to produce cumulative construction noise levels that would be considered significant. As explained in the cumulative discussion, implementation of Mitigation Measure M-C-NO-1 would reduce the combined noise effect to a less-than-significant level (i.e., below the thresholds). In response to the comment, this mitigation measure has been revised as follows to provide more clarity on the applicable performance standard:

#### **Mitigation Measure M-C-NO-1: Cumulative Construction Noise Control Measures**

If exterior construction of the northern end of the buried wall for the proposed project is determined to overlap with that of nearby adjacent project(s) (2700 Sloat Boulevard Project, the Westside Pump Station Reliability Improvements Project, or the Westside Force Main Reliability Project), the SFPUC or contractor shall submit a project-specific construction noise control plan to the ERO or the ERO's designee for approval. Exterior construction for purposes of the proposed project and the nearby cumulative projects includes construction including the following activities: heavy-duty construction equipment for excavation, grading, foundation and shoring, and construction of building shells. The construction noise control plan shall be prepared by a qualified acoustical engineer, with input from the construction contractor, and include all feasible measures to reduce construction noise. The construction noise control plan shall identify noise control measures to meet a performance target of construction activities not resulting in a noise level greater than ~~90 dBA and~~ 10 dBA above the ambient noise level at noise sensitive receptors (daytime ambient noise levels at the time construction begins + 10 dBA performance target). The SFPUC shall ensure that requirements of the construction noise control plan are included in contract specifications. If nighttime construction is required, the plan shall include specific measures to reduce nighttime construction noise. The plan shall also include measures for notifying the public of construction activities, complaint procedures, and a plan for monitoring construction noise levels in the event complaints are received. The construction noise control plan shall include the following measures to the degree feasible, or other effective measures, to reduce construction noise levels:

- Use construction equipment that is in good working order, and inspect mufflers for proper functionality
- Select "quiet" construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures)
- Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors
- Prohibit the idling of inactive construction equipment to no more than five minutes
- Locate stationary noise sources (such as compressors) as far from nearby noise sensitive receptors as possible, muffle such noise sources, and/or construct barriers around such sources and/or the construction site

- Avoid placing stationary noise-generating equipment (e.g., generators, compressors) within noise-sensitive buffer areas (as determined by the acoustical engineer) immediately adjacent to neighbors or other noise-sensitive properties
- Enclose or shield stationary noise sources from neighboring noise-sensitive properties with noise barriers to the extent feasible. To further reduce noise, locate stationary equipment in pit areas or excavated areas, if feasible
- Install temporary barriers, barrier-backed sound curtains and/or acoustical panels around working powered impact equipment and, if necessary, around the project site perimeter. When temporary barrier units are joined together, the mating surfaces shall be flush with each other. Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that completely closes the gaps, and dense enough to attenuate noise

The construction noise control plan shall include the following measures for notifying the public of construction activities, complaint procedures and monitoring of construction noise levels:

- Designation of an on-site construction noise manager for the project
- Notification to neighboring noise sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pier drilling, pile driving, and other activities that may generate noise levels greater than ~~90~~ 10 dBA above the ambient noise level at noise sensitive receptors) about the estimated duration of the activity
- A sign posted on-site describing noise complaint procedures and a complaint hotline number that shall always be answered during construction
- A procedure for notifying the planning department of any noise complaints within one week of receiving a complaint
- A list of measures for responding to and tracking complaints pertaining to construction noise. Such measures may include the evaluation and implementation of additional noise controls at sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels, and sensitive wildlife habitat)
- Conduct noise monitoring (measurements) at the beginning of major construction phases (e.g., demolition, grading, excavation) and during high-intensity construction activities to determine the effectiveness of noise attenuation measures and, if necessary, implement additional noise control measures

### ***NOISE IMPACTS ON HABITAT, ENDANGERED SPECIES, AND RESIDENTS***

Comment I-Moore.12 raises concern that the draft EIR does not sufficiently address noise pollution and its effects on habitat, endangered species, and residents from increased usage and congested traffic nor does it consider the resulting noise levels with the Potential Upper Great Highway Closure (a cumulative project listed in draft EIR Table 4.1-3). Noise impacts of the project are addressed on draft EIR pages 4.4-17 through 4.4-35. Specifically, the impacts of redistributed traffic are addressed on draft EIR pages 4.4-24 through 4.4-28. The draft EIR found that the redistribution of traffic from the Great Highway to portions of Sloat and Skyline boulevards would result in a significant and unavoidable noise impact even with adoption of mitigation measures. The cumulative traffic noise impact assessment, which considered the project's closure of the

Great Highway between Sloat and Skyline boulevards along with the Potential Upper Great Highway Closure and other cumulative projects, is discussed on draft EIR pages 4.4-34 and 4.4-35. While the Potential Upper Great Highway Closure would alleviate some of the traffic noise increases along some portions of Sloat and Skyline boulevards, the draft EIR found that the noise impact would remain significant and unavoidable even with the adoption of all feasible mitigation.

Noise impacts on wildlife due to both project construction and operation are addressed in draft EIR Section 4.6, Biological Resources. Specifically, construction impacts on nesting bank swallow are discussed on draft EIR pages 4.6-42 through 4.6-44, and Mitigation Measure M-BI-2a: Nesting Bank Swallow Protection Measures and Mitigation Measure M-BI-2b: Worker Environmental Awareness Program Training are identified to reduce these noise impacts to a less-than-significant level. Construction and operational noise impacts on other special-status or sensitive birds and nesting birds are discussed on draft EIR page 4.6-49 and draft EIR pages 4.6-62 through 4.6-64, respectively and were found to be less than significant. Construction impacts on marine species are addressed on draft EIR page 4.6-50 and were found to be less than significant. Operational noise impacts on nesting bank swallow are discussed on draft EIR page 4.6-47. That analysis identified the same nesting bank swallow mitigation measures that were identified for construction impacts to reduce the operational noise impact to a less-than-significant level.

## 11.8 Recreation

The comments and corresponding responses in this section cover topics in draft EIR Section 4.5, Recreation.

### Comment RE-1: Recreation Impacts

This response addresses the following comments, which are quoted below:

A-CCC.3, A-CCC.7, A-CCC.11, A-CCC.20

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#### “Mitigation for Impacts on Coastal Resources

Another piece of critical information that is currently lacking is a comprehensive assessment of the impacts the project has on coastal resources and an appropriate mitigation package that accounts for each of these impacts. While this is partially addressed in Chapter 4: “Environmental Setting, Impacts and Mitigation Measures,” several key impacts and mitigation for said impacts are missing, including impacts to public access and recreation during construction, impacts to lateral access during the operational life of the project, impacts to sand supply and beach dynamics, and impacts to biological resources, among others.

Specific comments on some of these impacts are included below, but generally the City should re-evaluate the impacts involved in closing access to a heavily used parking lot and portion of the Ocean Beach for 4 years or more during the construction phase, and clearly outline how the City plans to mitigate for these impacts. In addition, the City should consider what impacts on recreation, lateral access, safe beach access, and coastal dynamics will occur in years where the buried seawall is exposed, and propose mitigation for such impacts.” (Peter Benham, Coastal Planner, North Central Coast District, California Coastal Commission [A-CCC.3])

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“We would also suggest that the complete loss of such access in this area [South Ocean Beach] for 4 years is not a “less than significant” impact, as is noted in the DEIR. In addition, this requires its own mitigation component, which the DEIR should identify in order to commensurately mitigate for this impact.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.7])

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“Construction. The Sloat Boulevard parking lot and restroom facilities are currently used by surfers, recreational fishers, and other beachgoers, but will be closed for an estimated 4 years, once construction begins. The DEIR states in the “Construction Impacts” analysis (in Section 4.5.4.2 “Impact Evaluation” on page 4.5-13) that there are sufficient facilities and access points along the Great Highway to manage the overflow of the public to open beach access points when these facilities are closed. However, this parking area will most likely still be used by the public despite the closure, given the proximity of this parking area to the beach, which is obviously preferred by such user groups. In addition, aside from these restrooms, the nearest restroom facility from this parking lot is about a half-mile away and would most certainly experience increased usage over the 4-year construction timeline before any new facilities are available at the new

proposed location. As such, please evaluate possibility of installing temporary restroom and trash facilities, as well as safe, clearly indicated access points adjacent to the construction, to offset these expected public access impacts. In addition, strong ocean currents often carry surfers south in the project area, and this may lead to inadvertent interactions between beach users and construction areas. Please evaluate the addition of a safe corridor for surfers to walk north out of the construction zone.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.11])

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“In addition, please add beach volleyball and ultimate frisbee to the list of recreational uses in Table 4.5-1. These recreational uses will need to be considered in the analysis for impacts to North Ocean Beach if sand will be excavated from that location.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.20])

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## **RESPONSE RE-1**

This response addresses comments related to public access and recreation. Please refer to Section 11.12 for discussion of impacts on sand supply and beach dynamics, and Section 11.9 for discussion of impacts on biological resources.

### **CONSTRUCTION IMPACTS**

The criteria for determining the significance of recreation impacts are listed in draft EIR Section 4.5.4.1 and are consistent with the environmental checklist in Appendix G of the CEQA Guidelines, as modified by the San Francisco Planning Department. As stated in draft EIR Section 4.5.4.1, the project would result in a significant impact if the temporary closures of South Ocean Beach during project construction and during beach nourishment would cause increased use of other nearby recreational facilities (e.g., Central and North Ocean Beach) such that substantial physical deterioration of those facilities would occur or be accelerated. As further discussed in that section, effects on recreational opportunities or experience are discussed only in the context of being caused by the physical degradation of recreational facilities or resources. The loss of use for public recreation is not considered an impact on the physical environment under CEQA.

Comment A-CCC.11 asserts the parking area near the Sloat Boulevard/Great Highway intersection “will most likely still be used by the public despite the closure.” As a point of clarification, for public safety and security, the city would install exclusionary fencing around the parking lot for the duration of construction. Furthermore, during Phase 1 of construction the parking lot and restroom would be demolished. As a result, the parking lot would not be accessible to or useable by the public during construction. Draft EIR Impact RE-1 evaluates the recreation impact resulting from closure of the beach and restroom during construction and acknowledges that receiving parks and recreational areas could see increases in visitation, which could result in accelerated wear and more frequent maintenance of recreational support facilities, including trails, parking areas, and restrooms (draft EIR p. 4.5-14). The document explains that this increase would be temporary and would not result in such physical degradation that new or replacement facilities would be required. Draft EIR Impact RE-1 also notes that more than a dozen public access points to Middle Ocean Beach and North Ocean Beach, which constitute approximately 3 miles of the 3.5-mile-long Ocean Beach, are available to the public from the Great Highway multi-use trail, the Outer Sunset neighborhood, nearby public transit, and adjacent public parking areas.

The analysis in draft EIR Impact RE-1 assumes that during construction surfers and swimmers would choose to recreate in other locations and evaluates the associated impacts on nearby facilities as discussed above (draft EIR p. 4.5-13). While the project's beach closure during construction would affect surfers' ability to walk on South Ocean Beach, the draft EIR does not consider this a significant impact because it would not cause physical degradation of recreational facilities or resources such that new facilities would be needed.

However, it may be possible to allow beach access (1) during portions of project construction that do not involve or require equipment on the beach, or (2) in areas where there is not active construction provided such access is safe, such as during periods when no equipment would be operating on the beach. These allowances would reduce the duration of closure to approximately 6 months of each year of construction. The city would not preclude lateral egress along the beach from the water; however, the egress would be restricted to the nearshore area outside of active work areas. In addition, during construction the city would post signage at the Sloat Boulevard/Great Highway intersection notifying the public of alternative beach access, parking, and restroom locations to the north along Ocean Beach. In response to Comments A-CCC.3, A-CCC.7 and A-CCC.11, draft EIR Chapter 2, Project Description, Section 2.5.1, Construction Activities and Phasing (p. 2-27), has been revised as follows:

Prior to commencement of construction, subsurface investigations (e.g., utilities exploration, geotechnical investigation) might be necessary to support final designs. This work could include cutting and restoring pavement, obtaining soil samples through coring or auguring, and/or vacuum excavation. This work would occur within developed, landscaped or disturbed areas, and would be limited to one week per location. Depending upon the nature of the investigation, some nighttime work might be required. Any nighttime lighting required for pre-construction or construction activities would be directed downward and toward the active work, and would use shields or baffles to ensure light is not directed above the horizon. During construction, the city would post signage at the Sloat Boulevard/Great Highway intersection notifying the public of alternative beach access, parking, and restroom locations along Ocean Beach. Temporary restrooms and trash facilities would be placed in a publicly accessible area near the Sloat Boulevard/Great Highway intersection. To the extent it could be done safely, the city would also allow beach access during periods of construction that do not require active work or equipment use on the beach.

## **OPERATIONS IMPACTS**

Comment A-CCC.3 requests the EIR further consider the potential for lateral access effects during the project's operational life. Under current conditions, no pedestrian lateral access is available at South Ocean Beach except along the beach (the bluff top is a roadway with no sidewalk or shoulder). At times lateral beach access is not available for extended periods during winter due to narrow beach and the prominence of the rock revetments and rubble. As discussed in draft EIR Section 2.4.5.6, Beach Widths with Sand Placement (p. 2-26), under the project South Ocean Beach would be wider than 50 feet at least 90 percent of the time over the lifetime of the project (modeled as 80 years). During the remaining 10 percent of the time that average beach width is estimated to be 50 feet or narrower, the project's beach access stairway and multi-use trail would provide continued lateral public access along the shoreline. Notably, conditions that would result in a narrow beach within the project area would similarly result in narrow beaches along the Fort Funston shoreline to the south, where there are periods of little to no dry sandy beach regularly under current conditions. Sand placements would occur in the late spring following the previous summer monitoring and associated recommendations made in accordance with the monitoring and adaptive management program. For these reasons, lateral access would be expected to improve under the project, and would not result in displacement

of recreationists to other sites such that substantial physical degradation of recreational facilities or resources would result.

In response to Comment A-CCC.20, the first row of draft EIR **Table 4.5-1** has been revised as follows:

**Table 4.5-1 Recreational Resources in the Project Area**

Resource	Location	Activities / Facilities	Jurisdiction
<b>RECREATIONAL FACILITIES</b>			
Ocean Beach	The Great Highway between Point Lobos Avenue and Sloat Boulevard.	Walking, picnicking, sunbathing, jogging, swimming, surfing, fishing, restrooms, parking facilities, <u>beach volleyball, ultimate frisbee</u>	GGNRA

As discussed in draft EIR Impact RE-1 (pp. 4.5-14 through 4.5-15), under existing conditions sand placements at Ocean Beach have occurred every one to three years since 2013. During these sand placements, the city temporarily closes portions of North Ocean Beach and South Ocean Beach for periods of roughly two to three weeks. Similar temporary closures of North Ocean Beach would occur during proposed small sand placements. Due to their short duration and the fact that they occur under existing conditions, the temporary closures of North Ocean Beach would have less-than-significant impacts on beach recreation, including beach volleyball and ultimate frisbee.

## 11.9 Biological Resources

The comments and corresponding responses in this section cover subjects in draft EIR Section 4.6, Biological Resources. The comment topics are related to:

- BI-1: Bank Swallow Habitat Impacts
- BI-2: Dune Ecosystem Impacts
- BI-3: Special-Status Plant Impacts
- BI-4: Marine Biological Resources Impact
- BI-5: Benthic Community Impacts
- BI-6: Other Wildlife or Habitat Impacts
- BI-7: Conflicts with Local Policies or Ordinances

### Comment BI-1: Bank Swallow Habitat Impacts

This response addresses the following comments, which are quoted below:

A-CCC.30, A-CDFW.1, A-CDFW.2, A-CDFW.4, A-NPS.17, A-NPS.18, A-CPC-2.1, O-CNPS.8, O-GGAS.2, I-Louie.4

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**“Bank Swallow Impacts.** Impact BI-2 states: “Construction of the project would, but the operation of the project would not, have a substantial adverse effect on bank swallows. (Significant and Unavoidable with Mitigation)” (page 4.6-41). Bank swallows are a state special-status protected species, and their habitat generally constitutes environmentally sensitive habitat area (ESHA). Please note that CEQA and the Coastal Act/LCP [Local Coastal Program] work differently as it relates to such habitat. CEQA can allow for any number of uses in such habitats and can seek to mitigate for impacts as a means of finding consistency. The Coastal Act/LCP, however, operate much differently. Namely, under the Coastal Act/LCP the only use and development allowed in ESHA is resource-dependent uses, and only provided that such uses do not significantly disrupt the resource. It is not clear to us that the impacts identified can be found consistent with these Coastal Act/LCP requirements. Please evaluate means to avoid impacts to such habitat, and, if unavoidable as suggested in the DEIR, please identify potential compensatory mitigation with this Coastal Act/LCP framework in mind.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.30])

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#### “COMMENT 1: Bank Swallows

**Issue 1:** The DEIR does not adequately identify suitable Bank swallow nesting habitat within the Project area, does not adequately evaluate impacts from the Project to Bank swallows, and fails to consider cumulative impacts from recent past impacts.

**Evidence:** The DEIR provides an over simplified evaluation of impacts to suitable Bank swallow habitat based on a linear footage assessment. The evaluation does not sufficiently account for non-uniform site use

or define assumptions or parameters used to quantify the amount of suitable nesting area within the cliffs vertically (spatially) throughout the Project area.

The Bank swallow is listed as a Threatened species under CESA. According to California Partners in Flight Riparian Bird Conservation Plan, Bank swallows are typically located in tall, vertical banks in friable soils along rivers, lakes, and ocean coasts. In California, (64%) of Bank swallow colonies were located within sandy loam soils (Garrison unpublished data). Burrow density decreases from top to bottom (Sieber 1980). Burrows placed in the upper third of the bank are less susceptible to many ground predators (Sieber 1980). Burrows in loose sand were deeper than those in compact sand, and deeper burrows had greater breeding success than shallow burrows (Sieber 1980, Garrison 1998). Heights of the vertical banks and cliffs at nesting Bank swallow colonies averages 3.3 meters high in California (Humphrey and Garrison 1987). On average, new Bank swallow burrows are dug each year, especially if the bank or cliff face used the previous year collapsed from erosions or human disturbance and no old burrows remain (Hickman 1979, Cramp 1988). Some Bank swallow burrows are reused, and burrows are enlarged and depended on excavation activities that are part of pair bond (Petersen 1955, Garrison 1998). Old nests are removed from reused burrows and new nests are constructed (Petersen 1955, Garrison 1998). Bank Swallow nests are generally lacking vegetation along the bluff or cliff face where the Bank swallow nests are located. This is usually because of the reoccurring and needed erosion and steepness of the cliff or bank (Garrison 1998). Vegetation on the top of the bank or cliff, however, is extremely variable depending on the colonies location. This variation occurs in nearly all measures including vegetative cover, height, and species composition. The primary factors for selected Bank swallow nesting locations depend on soil type, height, and slope (Garrison 1998). Colonies at coastal locations are generally located under coastal grassland and coastal scrub communities (Garrison 1998). Bank Swallows need a slope of 70 degrees or more for suitable nesting habitat according to the Environment and Climate change Canada. Lack or [sic] erosion results in banks and bluffs becoming more gently sloped and unsuitable for nesting. Bank swallows prefer banks or cliffs that are vertical (90 degrees) or slightly inclined (75 degrees) (Hejertaas 1984).

On November 16, 2021, CDFW, along with the National Park Service (NPS) observed and examined the Bank swallow nesting area from Sloat Boulevard to Phillip Burton Memorial Beach. On this date, CDFW and the NPS observed numerous Bank swallow nests along the southern end of the Project. From the southern end of the Project, south towards Phillip Burton Memorial Beach, CDFW and the NPS did not observe nearly as many Bank swallow nests as observed in the southern end of the Project. Areas observed in 2021 are consistent with scientific documentation of Bank swallow habitat usage described above. Bank swallows within the Project area appear to nest under a hardpan soil layer, typically under an overhang or where the bank or cliff has a subtle c-like curve, appropriate slopes, sandy soils, and a few meters distance from the ground.

The southern section of the Project overlaps with the northern extent of cliffs used by the Bank swallow colony. This area of cliff has been impacted without benefit of previous environmental analysis from recent past events. In 2013, San Francisco Public Works proceeded without CESA authorization and dumped sand over the edge of Highway 1 to address erosion and buried nesting Bank swallows in the same section of cliff. Resulting documentation showed a total of 43 Bank swallow deaths. In 2021, a large sand nourishment project took place which resulted in sand being pushed up against the top of the rock revetment, further altering the conditions of the cliffs within historic Bank swallow nesting habitat.

Bank swallow nesting habitat is ephemeral due to the interaction between the friable soils need [sic] for nest burrow excavation and the cliff or bluff that is suitable (Garrison 1998). Burrows are not found to occupy all suitable locations within an individual colony site (Garrison 1998).

Furthermore, there is considerable turnover in colony sites year to year. Along the Sacramento River, Bank swallows generally nest in 40-60% of the total number of banks that are suitable for nesting in a given year (Garrison 1998). Bank swallow populations require habitat surplus in order to remain viable over the long-term. In other words, Bank swallows will not nest within a portion of their suitable habitat for a certain amount of time in order for that area to erode and become more viable. The recent absence of nesting along the southern end of the Project is common and expected, and as long as this area is kept suitable for Bank swallows to nest, CDFW believes the Bank swallows will return to the southern end of the Project consistent with their life history.

As stated in the 1987 statewide survey, human harassment is one of the leading causes for the decline in Bank swallows. Continued human activity, as well as other human related harassment such as off-leash dogs, and people digging, sliding, and camping along the Bank swallow nesting area has undoubtedly contributed to decreased populations at this location.

**Recommendation:** CDFW recommends the EIR provide additional spatial analysis to accurately quantify the amount of suitable nesting habitat within the Project area. As part of the analysis, recent past impacts to Bank swallows should be disclosed and evaluated in the EIR. Additional analysis should also include areas south of the Project site that may inform additional mitigation opportunities. A complete impact analysis should not only include the amount of suitable nesting habitat that currently exists but also the cumulative amount lost within the Project area due to recent past events. A similar analysis should be developed for determining the potential quantity of habitat that may be “enhanced,” in nearby cliffs to provide mitigation for lost nesting habitat. For example, removing invasive plants such as ice-plant, where suitable nesting conditions occur may be a feasible action that can provide increased Bank swallow nesting opportunities immediately south of the Project location.

Lastly, the additional analysis should account for non-uniform Bank swallow nesting distribution and define assumptions and parameters used when quantifying Bank swallow nesting habitat that includes slope, soil density, thickness and length of the overhang, and height from ground level. Any field surveys should be conducted in close coordination with qualified biologists. The lead agency should consult with CDFW on a revised analysis methodology for review and acceptance prior to conducting additional analysis. A final analysis methodology should be included as part of the EIR to allow public review and commenting.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.1])

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**“Issue 2:** CDFW concurs with the DEIR that the Project will result in significant impacts to Bank swallow breeding habitat. CDFW does not agree that the proposed mitigation to add signage will be sufficient to reduce Project impacts to less than significant.

**Evidence:** Bank swallow habitat along the California coastline is extremely limited. In Southern California, Bank swallows are now extirpated and no longer breed in the region (CDFW 1992). Their entire California range is estimated to have been reduced by as much as 50% (Zeiner et al. 1988). CDFW concluded in the 1987 statewide survey that, “Bank swallow nesting habitats in all regions are threatened by riprapping, various

water development projects, and human harassment” (CDFG 1992). The activities proposed by the Project are similar to activities in Southern California that have extirpated Bank swallow populations there.

Since 1905, Bank swallows have been known to nest along the cliffs of Ocean Beach (Laymon et al. 1987) located in the southern of the Project. The colony is known to move around from Ocean Beach to Fort Funston. Fort Funston is located roughly one (1) mile south of Ocean Beach. In between Ocean Beach and Fort Funston is an area of steep vertical cliff bluffs that have not shown high numbers of nesting Bank swallows. Hard soils, low erosion rates, or the slope of the cliff bluff may be limiting factors for nest building.

Bank swallows at the Project site are known to nest along the ocean cliff bluffs and forage at Lake Merced, less than a mile to the east of the Project. Lake Merced does not have suitable nesting habitat for Bank swallows. Bank swallows return to the Project location each year around March to April and immediately begin building their nests. Bank swallows will typically fledge in July and between August and September Bank swallows begin making their 5,000-mile journey to South America.

Burrow counts between 1993 – 2006 for the Ocean Beach and Fort Funston (all one colony) ranged from 140 to almost 1,000 (National Park Service 2007). Bank swallows have occurred at the southern end of the Project boundaries since the National Park Service (NPS) began surveying the colony annually in 1993. Data from the NPS shows Bank swallows predominately use the southern portion of the Project area, especially in 2008, and 2009 when this area was the only area where Bank swallows nested. 2007 was a similar year with burrow counts of nearly 300 with just a few burrows located at Fort Funston. Activities listed in the 1987 statewide survey include riprapping, and human harassment, has contributed to the extirpation of Bank swallows in southern California. Similar activities being proposed by the Project are similar to activities that caused the extirpation in southern California.

**Recommendation:** Based on further analysis consistent with recommendations above, CDFW recommends additional on-site avoidance, minimization and mitigation measures be developed in consultation with CDFW to reduce Project impacts to less than significant. Project impacts to Bank swallows that cannot be mitigated on-site may necessitate off-site mitigation to reduce the impacts to less than significant. In order to reduce the impacts to less than significant, demonstration of successful mitigation is needed to be implemented and proven successful prior to the start of construction. CDFW recommends the following on-site mitigation be incorporated into the EIR:

- Fencing be installed above all the cliffs from Ocean Beach to Thorton [sic] State Beach, including Fort Funston and Phillip Memorial, to protect the unique habitat that Bank swallows need to create nesting burrows. Incorporate signage and fencing at the same location between the beach and cliff face to keep people and dogs from approaching the cliff's face.
- A habitat enhancement and management plan be developed in close coordination with CDFW and the NPS for the area between Sloat Boulevard to Phillip Burton Memorial Beach which includes success criteria to be met prior to Project construction. Potential enhancement activities include the removal of ice plant and other plant species that have overgrown the cliff tops. CDFW believes that this will allow more opportunity for Bank swallows to nest.
- An off-site mitigation plan be developed with CDFW and the Bank Swallow Technical Advisory Committee (BANS-TAC) if on site mitigation cannot fully mitigate the Project's impacts. Mitigation opportunities may include removing rock along the Sacramento River and/or enhancing habitat at another Bank swallow colonies along the coast. Note, this mitigation approach is considered “out of kind” and will not directly benefit the coastal colony.” (Erin Chappell, Regional Manager, Bay Delta

Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.2])

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**“COMMENT 2: Pertains to Section 2.4.4.1 Public Access, Parking, and Restroom Improvements**

**Issue:** The Project includes the construction of a new beach access stairway connecting the trail and beach at the southern end of the Project area. This beach access stairway is located in a section of beach where Bank swallows nesting has been observed from 2003 to 2019 according to National Park Service surveys. This beach access will eliminate suitable and historic Bank swallow nesting habitat, facilitate additional human disturbances near Bank swallow nesting habitat, and will likely contribute to continued decline of the colony Bank swallow population

**Evidence:** Human disturbances, especially off-leash dogs, are known to hunt birds. Data collected by the NPS on people and dog use of the site was collected from 2000-2006 during the same time Bank swallow surveys were being conducted. The NPS concluded that there were about 2 people for every dog observed and over 90% of the dogs in all the years were unleashed (NPS 2007). Dogs were observed pursuing and attempting to catch, capture, and kill birds during surveys in 4 of the 7 years.

**Recommendation:** CDFW recommends the beach stairway access be relocate [sic] farther to the north and away from potential nesting Bank swallows in order to reduce human disturbance.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.4])

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**“Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.6 Biological Resources, Bank Swallow Nesting Areas – Fort Funston Colony, Bank Swallow Nesting Areas - Fort Funston Colony, pp 4.6-23 thru 26:** GGNRA requests SFPUC and the CDFW to collaborate with the park to jointly consult with the U.S. Fish and Wildlife Service (USFWS) to determine what, if any, additional feasible mitigations may be possible, including what joint state and federal permitting and/or compensatory measures may be required for the proposed action’s impacts on bank swallows and its critical habitat in the project area. Per NPS Management Policies (2006), Section 4.4.2.3, the NPS is required to take all management actions for the protection and perpetuation of federally, state, or locally listed species through park management planning processes, including consultation with lead federal [USFWS] and state agencies [SFPUC and CDFW] as appropriate.

As park biologists currently understand, the proposed action would result in the permanent loss of up to 700 linear feet of bluff face that is suitable nesting habitat for bank swallows, a Threatened Species under the California ESA. Under NPS Management Policies (2006), Section 4.4.2.3, the park is required to provide state listed species with the same management protections as federally listed species to the greatest extent possible. The park requests SFPUC to consult with CDFW to calculate the total area of habitat lost in addition to the linear feet.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-NPS.17])

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“Moreover, the location of nesting habitat that would be lost was the preferred nesting location for bank swallows from 2010-2019. The Fort Funston bank swallow population is one of only two extant breeding

coastal colonies of bank swallows remaining in California and based on NPS long-term monitoring data, this population appears to be in decline over the last decade or more. The park considers this loss of breeding habitat for this population a significant adverse impact.

Although park biologists understand there is no way to fully mitigate the loss of nesting habitat (methods to create new bank swallow nesting habitat are not known), the park recommends additional mitigations to increase outreach and public awareness, reduce disturbance at breeding sites, and to restore foraging habitat on site to the greatest extent feasible. While these suggested mitigations may enhance the bank swallow population, they would not likely fully make up for the loss of nesting habitat. Since the loss of nesting habitat cannot likely be fully mitigated, the project would have unavoidable adverse impacts to bank swallows and significant adverse impacts to its critical habitat.” (Laura Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A NPS.18])

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“The natural environmental description and future ways to restore protected [sic] seems to be not as conclusive as I would like to see. Plant material, additional planting, including knowing a little bit more about a sand burrowing bird I did not have any idea about. And there's no description of what this animal looks like and what it actually does. I'm fascinated by realizing this is a unique habitat on the coast of California and I think it deserves a little bit more in-depth description if at all possible.” (Kathrin Moore, Commissioner, San Francisco Planning Commission [A-CPC-2.1])

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#### **“Bank Swallow Habitat**

The Draft EIR concludes that disruption of bank swallow habitat is significant and unavoidable and that mitigation measures taken on inland riverbank areas were expensive and has had a high failure rate. While we’re not an avian protection organization, we do recognize the inter-connected nature of all biodiversity. Bank Swallows almost exclusively eat flying or jumping insects, such as bees, wasps, ants, butterflies, and moths, many of which depend on our native plants for sustenance. We ask that you go back to the drawing board and come up with a better solution, even if the solution involves buying and protecting another coastal piece of bank swallow habitat. Either mitigate or replace. Don’t destroy and walk away from this responsibility.” (California Native Plant Society, Yerba Buena Chapter: Eddie Bartley; Paul Bouscal; Sophie Constantinou; Bob Hall; Jake Sigg; Noreen Weeden; Susan Karasoff; Beth Cataldo; Libby Ingalls; Elliot Goliger [O-CNPS.8])

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“The assessment of significant and unavoidable impact to the Bank Swallow breeding habitat is unacceptable. While the reasons for the habitat removal are clear, and the potential impact to habitat south of the project area with the implementation of any alternative projects is certainly a factor to consider, we ask for a more satisfactory solution for the Bank Swallow breeding habitat.

Our California population of Bank Swallows are in serious decline, and designated threatened. The Fort Funston colony is only one of two remaining coastal colonies in California. As stewards of habitat for birds, we cannot watch this habitat accelerate its disappearance due to human impact. We understand the importance of protecting the water treatment facility and the potential dangers climate change pose to its integrity. However, after more than 100 years of breeding in the same location, missing just two years of data

in 2020 and 2021 is not sufficient to decide to eliminate this habitat and permanently change the breeding habits of this threatened bird. We would ask for further observation and suspension of that aspect of the project to ensure the birds have permanently vacated this area for breeding. Further study and research into alternative mitigation strategies are needed.

We appreciate your efforts in respecting the need for biologists on site during breeding season, and recommending training of personnel to recognize breeding birds and empowering them to halt activity on the project for the protection of the Bank Swallows. Any efforts toward public education are worthwhile, and we appreciate your recommendations.

If this project moves forward as described, with bluff removal, we would expect considerable resources to be deployed to protect the remaining habitat south of Fort Funston. Thank you for your attention to this critical habitat for a species in decline.” (Whitney Grover, Golden Gate Audubon Society San Francisco Conservation Committee [O-GGAS.2])

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“The EIR concludes that disruption of bank swallow habitat is significant and unavoidable and claims signage is the only mitigation because one other attempt to protect a riparian nesting site elsewhere failed. This is too easy and hasty a conclusion.

“[T]he potential impact on bank swallows from construction of the buried wall and bluff reshaping would eliminate [approximately 500 feet of historical] bank swallow breeding habitat within the project site, the ability of mitigation to fully offset the habitat loss is uncertain, and implementing the identified mitigation relies on outside parties. For these reasons, the project impact would be significant and unavoidable with mitigation.” [Draft EIR] p. 4.6-48” (Denise Louie [I-Louie.4])

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## RESPONSE BI-1

**Impact from Proposed Stairway.** Regarding Comment A-CDFW.4, bluff modification in the vicinity of the bank swallow habitat would be required for construction of the buried wall, not the beach access stairs. Thus, irrespective of the location of the beach access stairs, the subject bluff segment would be impacted. The beach access stairway would be built at the southern end of the buried wall, but grading for the wall and slope stabilization would extend an additional 150 feet to the south of the beach access stairway, resulting in an approximately 150-foot buffer between the stairway and the nearest bluffs in which bank swallow could attempt to nest following project implementation. Under existing conditions within the project area, people and dogs traverse the beach in front of the bluff face where bank swallows were observed to nest from 2011 to 2019.<sup>1</sup> During this period, the extent of the existing rock revetment on the beach acted as an accessibility buffer of approximately 75 feet between the beach and bluff face. Because the proposed beach access stairway would be approximately 150 feet north of bluff habitat, twice the distance at which human activity occurs proximate to bluff habitat under existing conditions, siting or use of the beach access stairway would not result in potentially significant impacts on bank swallows.

**Environmentally Sensitive Habitat Areas (ESHA).** Regarding Comment A-CCC.30, environmentally sensitive habitat areas (ESHA) as defined by the California Coastal Act are discussed on draft EIR pp. 4.6-23

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<sup>1</sup> National Park Service, 2019. Bank Swallow Monitoring at Fort Funston, Golden Gate National Recreation Area, 2019 NPS Report.

through 4.6-26 in relation to the Fort Funston bank swallow colony. As noted on p. 4.6-26, the EIR “...conservatively considers the bluffs above Ocean Beach within the project area, where bank swallow have historically nested, to be a potential ESHA.” EIR Impact BI-2 (pp. 4.6-44 through 4.6-46) evaluates potential project construction effects on bank swallow habitat, concludes that the effect would be significant and unavoidable, and explains why no feasible mitigation – including compensatory mitigation – exists that could reduce the impact to a less-than-significant level.

The draft EIR’s conclusion regarding the project’s potential effects and availability of feasible and effective mitigation is consistent with California Department of Fish and Wildlife (CDFW) comments submitted to the planning department during the EIR’s scoping phase. In its letter, CDFW staff states, “Removal of pavement, rock, and sandbag revetments, rubble and debris; recontouring the bluff; and installation of a four-foot thick layer of cementitious material on the bluff face would cause significant impacts to listed species, including bank swallow. Recontouring and coating of the bluff face in areas with existing bank swallow nesting activities could directly injure, kill, or displace established bank swallow colonies, resulting in direct take of chicks and adults....**CDFW is not aware of feasible mitigation that would offset such an impact**” (emphasis added).<sup>2</sup> Nevertheless, the EIR includes Mitigation Measure M-BI-2c, which calls for bank swallow signage and fencing to protect nearby suitable habitat areas.

The EIR also addresses potential project conflicts with Coastal Act and local coastal program policies governing developments affecting ESHAs. For example, the EIR explains on p. 3-11, “...project construction could conflict with the Coastal Act’s ESHA policy if the bank swallow habitat is determined to be ESHA through the coastal permit process.” Similarly, the EIR acknowledges the project could conflict with LCP policy related to ESHA, explaining on p. 3-4 the project “...would not entirely avoid or mitigate impacts on bank swallow habitat which potentially conflicts with [LCP] Policy 12.6.”

Based upon comments received on the draft EIR, the planning department has undertaken additional assessment of bank swallow habitat in the project area and nearby areas. It has also further investigated the feasibility and efficacy of additional mitigation approaches. The results of this assessment, and additional mitigation to address impacts to bank swallow, are presented in subsections *Adequacy of Habitat Description* and *Additional Mitigation*, below.

**Adequacy of Habitat Description.** Comment A-CDFW.1 questions the adequacy of the draft EIR’s identification and analysis of project effects on bank swallow nesting habitat. The EIR’s description of bank swallow nesting habitat in the project area, as well as potential project and cumulative effects on bank swallows, meets the requirements of CEQA. For example, CEQA Guidelines section 15125(a) states in relevant part:

*An EIR must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. **The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed project and its alternatives** (emphasis added).*

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<sup>2</sup> California Department of Fish and Wildlife (CDFW), 2020. Letter from Greg Erickson (CDFW) to Julie Moore (San Francisco Planning Department), Subject: Ocean Beach Climate Change Adaptation Project, Notice of Preparation, SCH No. 2020090171, City and County of San Francisco

The bank swallow's Fort Funston breeding colony, which encompasses portions of the project area, is described at length in EIR pp. 4.6-23 through 4.6-26. Bank swallow and its habitat within the project area are further described in EIR Appendix F-1 (pp. F-40 and F-41), and the EIR and appendix are supported by site-specific technical studies and monitoring reports. Additional spatial assessment and inventory of existing and potential bank swallow habitat in the project area and vicinity beyond what was included in the draft EIR exceeds the level of detail required by the CEQA guidelines referenced above, because it is not required to understand whether the effects of the project or its alternatives would be significant. Nevertheless, in response to Comment A-CDFW.1, the city undertook an additional study that evaluated and quantified potential bank swallow habitat within a 2.9-mile-long study area extending from Sloat Boulevard in the north to Thornton State Beach in the south, inclusive of the project area.<sup>3</sup> The results of this study are discussed below and do not alter the EIR conclusions regarding habitat effects. The study is presented as **Attachment D**. The EIR quantified the project's removal of approximately 500 linear feet of bank swallow habitat as impacting 15 percent of bluffs historically used by the colony for nesting (approximately 3,290 linear feet total). The additional study results substantiate the EIR characterization of project impacts on bank swallow habitat, which concludes the project would impact approximately 16 percent of active or historic bank swallow habitat or remove 1,421 square feet (522 square feet active habitat and 899 square feet of historic habitat) of a combined total 8,887 square feet active and historic habitat inventoried within the study area.

Potential project and cumulative effects on bank swallow and its habitat associated with project construction are addressed in EIR Impacts BI-2 and C-BI-1, respectively. As discussed in Impact BI-2 (pp. 4.6-44 through 4.6-47), the project's construction effect related to bank swallow habitat would be significant and unavoidable. The draft EIR's Mitigation Measure M-BI-2c would reduce impacts on bank swallow and its remaining habitat by educating the public about bank swallow and its nesting habitat, and by limiting public access to suitable habitat areas. However, the mitigation measure is not presented or intended as compensatory mitigation such that it would completely offset the significant and unavoidable impacts of the project. Rather, the EIR concludes that Mitigation Measure M-BI-2c would not effectively reduce the impact to a less-than-significant level, contrary to the statement in comment A-CDFW.1. As an additional point of clarification, camping is not allowed on Ocean Beach; the project does not propose camping and the project would have no camping-related impacts on bank swallow or its habitat.

Activities that have occurred in the past which may have affected physical conditions within the project area, such as past sand placement activities, are considered as part of the baseline condition against which project effects and the project's cumulative effects are evaluated. None of the cumulative projects evaluated in the EIR or added in this responses to comments document (refer to Response GC-4.1 in Section 11.14, General Comments regarding the addition of the Corps' 2021 beach nourishment project) would adversely affect bank swallow habitat, and the EIR concludes that the cumulative effect on bank swallow nesting would be less than significant.

As introduced above, in response to these comments (A-CPC-2.1, A-NPS.17, A-NPS.18, O-CNPS.8, O-GGAS.2, I-Louie.4), and for the benefit of the general public and decisionmakers, the planning department has undertaken additional study of potential bank swallow habitat in the project vicinity, conducted additional analysis of project effects relative to this potential habitat, and further assessed the feasibility and efficacy of mitigation in the form of habitat enhancements and habitat creation. This additional study was developed in coordination with the CDFW and National Park Service (NPS) and a memorandum documenting the study's

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<sup>3</sup> ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, revised January 31, 2023.

findings is presented as Attachment D. The EIR has been revised based upon the additional information generated from this assessment.

Draft EIR page 4.6-45 has been revised to include a new second paragraph, as follows:

The planning department, in consultation with CDFW and NPS biologists, conducted a bank swallow habitat assessment in spring 2022 to quantify the amount of suitable bank swallow nesting habitat within the project area and a greater 2.9-mile-long study area that extends from Sloat Boulevard through Fort Funston to Thornton State Beach. The objectives of the habitat assessment were to: 1) identify, describe, and delineate potentially suitable nesting habitat used by the Fort Funston bank swallow colony; 2) identify and delineate cliff sites that could be enhanced through vegetation management or other means to provide potentially suitable bank swallow nesting habitat; and 3) quantify potential bank swallow nesting areas to provide a baseline of available habitat in the region. The study documented a total of 1,924 square feet of active bank swallow habitat within the study area and 6,963 square feet of historic habitat. The study concluded that the project construction would result in potential impacts to 27 percent of documented active bank swallow habitat (522 square feet of impacts) and 13 percent of historic habitat (899 square feet of impacts) or combined impacts to 16 percent of active and historical habitat (1,421 square feet). The study identified an additional 24,029 square feet of potential bank swallow nesting habitat within the study area. The memorandum describing the study's findings is included as Attachment D. The memorandum concludes by identifying five enhancement actions to improve potential bank swallow habitat quality and possibly promote recolonization in parts of the study area. These include bluff face ice plant removal, reducing recreational pressure around active and potential nest sites, native plant restoration to improve bank swallow foraging habitat quality, performing mechanical improvements (e.g., sand removal), and the use of engineered nesting structures. These recommendations, along with those contained in letters from CDFW and NPS commenting on the draft memorandum (also in Attachment D), were considered in developing the project mitigation discussed below.

**Additional Mitigation.** The planning department has considered the draft EIR comments above and the additional CDFW and NPS comments on the bank swallow habitat assessment memorandum recommendations in the context of CEQA. Specifically, the following CEQA regulations guided the evaluation of mitigation options in terms of their feasibility, efficacy, and rough proportionality to the impacts of the project:

*Section 15126.4 (a)(1), "An EIR shall describe feasible measures which could minimize significant adverse impacts..."*

*Section 15126.4 (a)(1)(A), "The discussion of mitigation measures shall distinguish between the measures which are proposed by the project proponents to be included in the project and other measures...the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project."*

*Section 15126.4 (a)(1)(B), "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified..."*

*Section 15126.4 (a)(4), "Mitigation measure must be consistent with all applicable constitutional requirements, including the following:*

- (A) There must be an essential nexus (i.e., connection) between the mitigation measure and a legitimate governmental interest*

*(B) The mitigation measure must be “roughly proportional” to the impacts of the project.”*

*Section 15364, Feasible. ““Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”*

*Section 15370, “Mitigation” includes:*

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.*
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.*
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.*
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.*
- (e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.*

Because the project requires removal of the 2010 emergency riprap revetment and reshaping of the remnant bluff at a location within a portion of the historic nesting location, the project cannot feasibly avoid or minimize impacts on bank swallow habitat; therefore, mitigation concepts focus on reducing or compensating for project impacts. The EIR has been revised to include a summary of each mitigation concept recommended in the bank swallow habitat assessment memorandum and by CDFW or NPS. For each, a brief discussion of implementation feasibility and efficacy in offsetting the project’s impacts on bank swallow habitat from habitat removal is provided, along with the rationale as to whether the concept is incorporated into project mitigation.

In response to comments presented above, and based upon the results of the habitat assessment and further consultation with CDFW and NPS, the EIR has been revised as follows, beginning on page 4.6-45, paragraph 3.

Creation of bank swallow habitat in both natural and artificial substrate has had limited success in California and is generally considered cost prohibitive as a mitigation strategy due to the ongoing maintenance necessary to provide the required habitat elements for this species in the long term (e.g., vertical or near-vertical banks/bluffs of sufficient heights to deter predators).<sup>99</sup> Examples of habitat enhancement or creation as a mitigation strategy for impacts on this species’ habitat in California are documented for riverine colonies rather than coastal colonies. Experimental nesting sites constructed on the Sacramento River between 1987 and 1989 to determine if created sites were effective and feasible mitigation for affected bank swallow breeding habitat proved difficult to maintain at the regularity needed to ensure that suitable habitat characteristics were present year after year. While these enhanced bank sites were used by swallows for nesting, once maintenance of the habitat (annual contouring the bank face to a vertical or near-vertical slope, clear of vegetation and with fresh soils) stopped, swallows no longer selected the sites for breeding.<sup>100,101</sup> Similar challenges would be expected in maintaining enhanced coastal bluff sites to attract bank swallows; however, the additional influence of natural coastal processes eroding the bluff face further complicates the situation at the project site.

Artificial sites constructed above the river bank consisting of soil mounds were never well used, and those that were occupied experienced heavy predation by herons and egrets; ~~therefore, artificial sites are not recommended mitigation for impacts on natural habitat.~~<sup>102</sup> Another example of created habitat along the Sacramento River consisted of 100 burrows mechanically drilled into the river bank in 1986; however, this site failed to attract bank swallows to nest.<sup>103</sup> The inefficacy of this attempt at habitat creation was attributed to bank swallows not previously occupying that bank location.<sup>104</sup>

<sup>99</sup> California Department of Fish and Game, 1992. Recovery Plan: Bank Swallow (*Riparia riparia*). Prepared by Nongame Bird and Mammal Section, Wildlife Management Division, Section Report 93.02. December 1992.

<sup>100</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (*Riparian riparia*) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>101</sup> Garrison, B. A. 1998. Bank Swallow (*Riparia riparia*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpif/html/docs/riparian\\_v-2.html](http://www.prbo.org/calpif/html/docs/riparian_v-2.html).

<sup>102</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (*Riparian riparia*) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>103</sup> Garrison, B. A. 1998. Bank Swallow (*Riparia riparia*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpif/html/docs/riparian\\_v-2.html](http://www.prbo.org/calpif/html/docs/riparian_v-2.html).

<sup>104</sup> Ibid.

Following the 2022 habitat assessment, the planning department met with CDFW and NPS biologists to discuss the findings and identify possible mitigation approaches for impacts to bank swallow habitat. At this meeting, CDFW shared a recent study which demonstrated that artificial habitat creation has had some recent success in Québec, Canada with bank swallow readily occupying artificial habitat composed of concrete walls backed with compacted sand (the “Quebec Study”).<sup>104a</sup> CDFW staff suggested further evaluation of this concept, acknowledging the different conditions of the Québec site from Ocean Beach. The general consensus of the biologists was that no single mitigation measure alone would be sufficient and that a suite of measures should be implemented, some of which may be more feasible or have greater conservation value than others.

The planning department considered all of the mitigation concepts identified in the habitat study and in CDFW and NPS comment letters on the study. The following sections describe each concept, evaluate their implementation feasibility and efficacy in offsetting the project’s impacts on bank swallow from habitat removal, and indicate whether the concept has been included in the revised mitigation measures for the project.

1. **Fund a biological monitor to educate and inform beachgoers about bank swallows and patrol the area to keep human disturbance to a minimum.** This concept was suggested by NPS and would provide immediate benefits to the bank swallow population during nesting season. The biological monitor could be a full-time or part-time position during the bank swallow breeding and nesting season (April 1 to August 1) and focus on public education, monitoring and deterring visitor activity near potential and occupied habitat. For example, the monitor could request beach goers keep dogs on leash during the nesting period in nesting areas, ask people and their dogs not to climb on or near bank swallow habitat or use unauthorized trails to navigate the bluff face, and assist with monitoring the bank swallow colony. This concept is feasible to implement and would require an agreement between the SFPUC and NPS for partial funding of the NPS staff person. The efficacy of one designated biological monitor is uncertain.

but is expected to be moderate.<sup>104b</sup> This concept is included as Mitigation Measure M-BI-2d, Public Engagement Specialist, below.

2. **Fund construction and long-term maintenance of an artificial nesting habitat enhancement and/or creation within the project area, or at an offsite location between the project area and Phillip Burton Memorial Beach.**

Several design options and locations were considered for artificial habitat enhancement or creation based on the design criteria set forth in the Québec Study, other studies conducted in Canada and the United Kingdom, and scientific literature.<sup>104c</sup> As summarized here and described further in Attachment E, concepts for artificial habitat creation included constructing a concrete or deep soil mixing wall backed with compacted sand, wooden nest boxes, and drilled nesting holes.

**Concrete Wall.** The wall could either be freestanding or integrated into the project's slope stabilization layer or beach access stairs. The efficacy of such experimental concepts is uncertain, but offers the most direct compensatory mitigation option for project impacts on nesting habitat. While artificial habitat enhancement has been successful in Canada, construction of such permanent concrete structures in the project area or incorporated into the project design was determined not to be technically or legally feasible. As discussed in Attachment E, several of the concrete wall concepts evaluated would not meet the design criteria established for bank swallow habitat. The city and Coastal Commission have concluded that the remaining technically feasible concrete wall concepts would conflict with Coastal Act and Western Shoreline Area Plan policies designed to restrict such developments along the shore.<sup>104d,104e,104f</sup> Further, if such a structure did not succeed in hosting bank swallow nests, decommissioning or removing it from the project area would require additional activities that could have additional environmental impacts. For these reasons, the artificial nesting habitat mitigation concepts involving a concrete wall were rejected.

**Wooden Nest Box.** A similar, but less permanent structural concept for artificial habitat creation involves constructing a wooden nest box "bank," which resembles a small shed. In this concept, swallows can access a grid of individual nest boxes through holes drilled into wooden planks on one side of the structure. The nest boxes are composed of waterproofed medium-density fiberboard painted with a sand coating. The empty cavity can be lined with nesting material (e.g., grass, rootlets, weed stems or feathers) collected by the swallows. Nest boxes can be monitored and cleaned between uses (once nesting has concluded for the season) with entry to the bank structure through a door for access to the rear of the nest boxes. The experimental nest box bank(s) could be temporarily installed at different locations in the project vicinity (e.g., Fort Funston or Lake Merced) during the nesting season and easily decommissioned if bank swallow did not use the boxes to nest. This concept may be feasible to implement because it does not conflict with the Coastal Act or Western Shoreline Area Plan policies related to shoreline structures in the way a permanent concrete wall does. This concept would require an agreement between the SFPUC and NPS, is experimental, and its efficacy in mitigating for loss of bank swallow habitat is uncertain. Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, includes a study to evaluate the feasibility and efficacy of this mitigation concept, and requires the SFPUC to implement and monitor the effectiveness of one or more of the experimental concepts discussed in this section.

**Burrows Drilled into Existing Bluff.** As noted above, attempts at non-structural bank swallow habitat enhancement and creation implemented in California's Central Valley have either failed or experienced limited success, including burrows mechanically drilled into the Sacramento River bank.<sup>104g,104h</sup> The ineffectiveness of these attempts at habitat creation was attributed to bank swallows

not previously occupying the bank location where burrows had been drilled and inadequate (and cost-prohibitive) maintenance needed to sustain the habitat characteristics required for the species over the long term (e.g., vertical or near-vertical banks/bluffs of sufficient heights to deter predators and relatively free of vegetation).<sup>104i,104j</sup> In the case of the Fort Funston bank swallow colony, because burrows could be drilled within existing bluff habitat near active nesting areas, therefore maintaining consistency in location, substrate, and natural erosive processes required to sustain preferred habitat conditions, NPS staff have expressed optimism that such habitat enhancements could be successful. In 2023, NPS staff undertook a pilot study to evaluate the effectiveness of this method. Based upon the 2023 study results, which documented bank swallow activity in one of 50 burrows drilled into the Fort Funston bluffs, implementing this habitat enhancement appears feasible.<sup>104k</sup> However, the concept remains experimental and has unproven efficacy in a broader coastal environment. Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, includes a study to evaluate the feasibility and effectiveness of this mitigation concept, and requires the SFPUC to implement and monitor the effectiveness of one or more of the experimental concepts discussed in this section.

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<sup>104a</sup> Québec Port Authority (OPA). 2018. Port Activity and Endangered Species: Possible Bank Swallow, Cohabitation Challenge Overcome (informational flier).

<sup>104b</sup> Donovan, Emily, et al., 2018. Improving Compliance with Leash Laws in Rock Creek Park, prepared for the National Park Service and Faculty of Worcester Polytechnic Institute, December 13, 2018.

<sup>104c</sup> Several recent Canadian projects implemented by the Quebec Port Authority and Montreal Port Authority which installed precast concrete walls backed by compacted sand have demonstrated some success as an effective low maintenance approach to creating bank swallow nesting habitat. Québec Port Authority (OPA). 2018. Port Activity and Endangered Species: Possible Bank Swallow, Cohabitation Challenge Overcome (informational flier); Montreal Port Authority (MPA). 2020. Online article: "Bank Swallows are Back in Great Numbers!" June 1, 2020. <https://www.port-montreal.com/en/the-port-of-montreal/news/news/bank-swallows>.

<sup>104</sup> Coastal Act Section 30235 states: "Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply." A free-standing concrete wall constructed along the coast near existing habitat would not serve a coastal-dependent use or protect existing structures or beaches and therefore would likely not receive permit approval by the Coastal Commission.

Coastal Act Section 30251 states: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance." A free-standing concrete wall would likely not receive permit approval from the Commission for such visual/aesthetic conflicts.

Coastal Act Section 30251 states: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance." A free-standing concrete wall would likely not receive permit approval from the Commission for such visual/aesthetic conflicts.

<sup>104e</sup> The Western Shoreline Area Plan Policies 12.1, *Adopt Managed Retreat Adaptation Measures between Sloat Boulevard and Skyline Drive*, 12.2, *Develop and Implement Sea Level Rise Adaptation Plans*, and 12.5, *Limit Shoreline Protection Devices*, each preference limiting installation of new structural shoreline protection devices in favor of non-structural options. Although the purpose of the artificial habitat structure would not be for shoreline protection, the intent of these policies to limit additional hardscape installed along the coast is applicable, and would likely make this mitigation concept difficult for the Commission to permit.

<sup>104f</sup> California Coastal Commission (CCC), 2023. Email from Julia KoppmanNorton (CCC) to Julie Moore (Planning Department). Subject: RE: Ocean Beach BANS Habitat Assessment FINAL and Artificial Structures Design Memo. February 22, 2023.

<sup>104g</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (Riparian riparia) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>104h</sup> Garrison, B. A. 1998. Bank Swallow (Riparia riparia). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpif/html/docs/riparian\\_v-2.html](http://www.prbo.org/calpif/html/docs/riparian_v-2.html).

<sup>104i</sup> Ibid.

<sup>104j</sup> California Department of Fish and Game, 1992. Recovery Plan: Bank Swallow (*Riparia riparia*). Prepared by Nongame Bird and Mammal Section, Wildlife Management Division, Section Report 93.02. December 1992.

<sup>104k</sup> National Park Service, 2023. Bank swallow (*Riparia riparia*) monitoring at Golden Gate National Recreation Area [poster]. Aiko Goldston (she/her), Golden Gate National Recreation Area, National Park Service Internship Program.

3. **Fund or conduct a study on bank swallow movement, population dynamics and coastal habitat use at Fort Funston and Año Nuevo to inform future habitat protection and/or enhancement.** Research would augment existing NPS monitoring data to quantify survivorship and movement patterns of bank swallows between these two coastal colonies, better understand the populations' habitat selection, and identify their key threats. Additionally, research could include a geological component to better determine what constitutes suitable nesting habitat in different geological strata within occupied bluffs. The SFPUC would fund research related to the Fort Funston bank swallow population dynamics, movement, and nesting habitat preference under Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research. Study of geologic conditions at active nesting areas is incorporated into the artificial nesting habitat feasibility study under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation.
4. **Fund research on existing protections at Philip Burton Memorial Beach, if any, and identify and fund closure of conservation gaps and long-term management planning and implementation of protection measures at such areas.** Through an existing lease with the Olympic Club, NPS can implement conservation measures within the Phillip Burton Memorial Beach bluffs, including installation of sensitive habitat signs, protective fencing, and blufftop restoration above bank swallow nesting areas. Similar to locations where these measures are proposed within Fort Funston, these protections are feasible to implement and indirectly effective in reducing project impacts by protecting active nesting areas from public disturbance. These protections could be implemented at Phillip Burton Memorial Beach under Mitigation Measure M-BI-2c, Bank Swallow Signage and Protective Fencing, and Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, at NPS discretion.
5. **Remove ice plant from bluff faces at locations identified in the bank swallow assessment memorandum (Attachment D) between the project area and Thornton State Beach.** This beneficial action would enhance existing habitat areas and may expand the area of bluffs suitable for establishing burrow nests by allowing for the natural bluff erosion required for bank swallow nesting and reducing predator accessibility and risk. This action is feasible to implement and indirectly effective in reducing project impacts by enhancing and expanding suitable habitat; Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, includes bluff face ice plant removal.
6. **Fund procurement and installation of temporary signage and fencing at active nesting locations annually to alleviate recreational pressure on nesting areas.** This mitigation concept would be indirectly effective in reducing project impacts by reducing human disturbance on bank swallow habitat. This concept is included in draft EIR Mitigation Measure M-BI-2c, Bank Swallow Signage and Protective Fencing.
7. **Remove ice plant and revegetate blufftops above occupied nesting areas with native plants, and install removable protective fencing and sensitive habitat signage at the edge of**

**restoration planting areas.** The native planting areas would create a visual and physical buffer between the blufftop edge and publicly accessible areas, decommission unauthorized trails down the bluff face near or through nesting habitat, reduce erosion, and improve bank swallow foraging habitat. This concept would be indirectly effective in reducing project impacts on remaining habitat by focusing protection measures on suitable nesting habitat areas. This concept is included in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration.

8. **Remove accumulated sand below bank swallow habitat to reduce recreational pressure and predator accessibility.** This concept would indirectly reduce project impacts by improving/expanding suitable coastal bluff nesting habitat through removing from the bluff toe accumulated sediments that bury burrows or make them accessible to pedestrians and predators. However, mechanical improvements to bluff habitat could destabilize bluffs and create public safety hazards for people recreating on the beach and on the bluffs above. And for sustained effect, this concept would require ongoing action due to natural sloughing and eolian processes that cause sand transport and deposition at the toe of the bluff. Therefore, this concept was rejected as infeasible.
9. **Restore and enhance existing upland dune habitat on blufftops proximate to bank swallow nesting areas to improve and expand bank swallow foraging habitat.** NPS has recommended the SFPUC undertake two acres of native dune habitat restoration within an approximately eight-acre portion of northwest Fort Funston. Although the efficacy of foraging habitat restoration as compensation for habitat removal is uncertain, this concept could indirectly reduce project impacts by improving or expanding available foraging habitat for the nesting bank swallow population. This concept is included in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration.

Regardless of whether bank swallows would actively nest within the boundaries of Fort Funston and coastal areas farther south of the project area, because the project requires removal of the 2010 emergency riprap revetment and reshaping of the remnant bluff at a location within a portion of the historic nesting location, and because For the reasons presented above, there are no feasible and proven mitigation strategies or opportunities to replace or otherwise fully compensate for lost local bank swallow breeding habitat. Moreover, of the feasible and effective options that could indirectly reduce bank swallow habitat impacts, most would require action by a third party (NPS), outside of the city's control. As a result, the project's resulting permanent impact on bank swallow breeding habitat at this location would be significant and unavoidable.

While no feasible mitigation exists to fully address the direct project effect on bank swallow habitat, **Mitigation Measure M-BI-2c, Bank Swallow Educational Signage and Protective Fencing; Mitigation Measure M-BI-2d, Public Engagement Specialist; Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research; Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration; Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement; and Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation** would avoid or minimize future disturbance or impact on the remaining suitable bluff habitat for nesting bank swallow; contribute to research and understanding of population dynamics, movement, and coastal habitat preference; improve foraging habitat within Fort Funston through removal of invasive vegetation and restoration of native dune plants; enhance or expand

nesting habitat through removal of ice plant from the bluff face; and explore the feasibility and efficacy of artificial habitat concepts by studying and implementing such concepts.

Mitigation Measure M-BI-2c, Bank Swallow Educational Signage and Protective Fencing, would require the SFPUC, in coordination with Rec and Park and the National Park Service, to develop, produce, and install educational sensitive habitat signs informing the public of the bank swallow colony. The measure calls for one educational kiosk or signs describing the history of the bank swallow colony and uniqueness of the coastal bluff habitat that supports annual nesting to be permanently installed within the Skyline coastal parking lot or along the multi-use trail. In addition, under the mitigation measure, the SFPUC would produce removable semi-permanent educational sensitive habitat signs that could be located near the active nesting locations annually to inform the public of the sensitive nesting area. Semi-permanent Removable fencing installed at a setback from the bluff edge above nesting locations (on National Park Service managed lands) would also be required under this measure. This fencing would restrict public access to the bluff top immediately above remaining suitable habitat at Fort Funston and/or active nesting locations in a given year. Restricting public access to the bluff top above suitable habitat ~~top~~ would avoid or minimize blufftop erosion of remaining bluff habitat from vegetation trampling above active nesting areas and other disturbance resulting from attempts to access the beach through a known nesting area. Implementation of the measure would require the SFPUC to coordinate with Rec and Park regarding a kiosk and signage proposed on lands under its management, and enter into an agreement with the park service NPS to implement the signage and fencing on lands under its management. As a condition of this agreement between the SFPUC and NPS, placement of the removable signage and fencing in a given year would be informed by NPS monitoring data and the identification of active nesting locations in need of protection, including those nesting areas south of Fort Funston and within the conservation easement areas above Phillip Burton Memorial Beach.

Mitigation Measure M-BI-2d, Public Engagement Specialist, would complement the physical installations included in M-BI-2c, Bank Swallow Signage and Protective Fencing, by requiring the funding of a public engagement specialist for five bank swallow nesting seasons, as requested by NPS. The public engagement specialist would focus on public outreach related to protecting the nesting bank swallow population and documentation of how and whether protective and conservation measures implemented as mitigation are effectively benefiting the Fort Funston bank swallow colony.

Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research, would promote continued research related to the species broadly, and the Fort Funston colony, by funding research on bank swallow movement, population dynamics, and habitat preferences in coastal environments for up to five years. This mitigation measure would indirectly reduce the project's impact on bank swallow breeding habitat.

Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, would improve and expand native foraging habitat for the Fort Funston bank swallow colony through restoration, thereby indirectly reducing the project's impact on breeding habitat. The foraging habitat restoration area would be in the northwestern portion of Fort Funston, within or adjacent to areas of ongoing restoration activities (Figure 4.6-3a). Foraging habitat restoration may include removal of non-native, invasive ice plant and planting native dune plants. Additionally, this measure would fund the preparation,



Ocean Beach Climate Change Adaptation Project

**New Figure 4.6-3a**  
Bank Swallow Foraging Habitat Restoration Area

implementation, and monitoring of blufftop restoration above known nesting areas that would benefit bank swallow nesting habitat by restricting access to the blufftop edge and decommissioning trails down the bluff face. Ice plant would be removed at these locations and replaced with native dune plants. Where the foraging habitat restoration areas are near both public use areas and bank swallow habitat, signage and fencing required by M-BI-2c, Bank Swallow Signage and Protective Fencing, would be installed to increase the effectiveness of these actions at alleviating recreational pressure on suitable nesting habitat while bank swallow are present.

Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, would reduce the project's impact on bank swallow breeding habitat by removing ice plant from the bluff face at active nesting locations. Preliminary locations for this work are identified in the bank swallow habitat assessment.<sup>104l</sup> Such enhancement directly benefits the Fort Funston bank swallow colony by improving the quality of existing bluff habitat for nesting.

Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, would fund or implement a feasibility study and subsequent pilot project to test the efficacy of artificial bank swallow habitat concepts to be installed in the project vicinity as an experimental replacement for habitat removed under the project. The installation would be monitored for use by bank swallows during the nesting season (April 1 – August 1) for five years to document efficacy of the artificially created habitat and for comparison with historical nesting data of habitat removed under the project.<sup>105</sup> At the conclusion of the study, a publicly available report would be prepared documenting the findings of the artificial habitat experiment. This report would contribute to the scientific understanding of whether and how bank swallow respond to such concepts.

<sup>104l</sup> ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 31, 2023.

<sup>105</sup> NPS monitoring data (1993 – 2019) documents that colony use of suitable habitat areas for nesting shift every four to seven years. (NPS, 2007. Bank Swallow Monitoring at Fort Funston, Golden Gate National Recreation Area 1993-2006; NPS, 2019. Bank Swallow Summary Information for Coastal Planning). Thus, the pilot project specifies a five-year monitoring period to evaluate whether bank swallow find the artificial habitat to be suitable for nesting.

Although these measures would inform and caution the public as to sensitive nesting areas and restrict public access with the intent to protect bank swallow habitat, improve foraging habitat within Fort Funston through native plant restoration, enhance nesting areas through ice plant removal, further scientific understanding of the species to support conservation efforts, and install experimental artificial nesting habitat in the project vicinity, the project impact on bank swallow habitat is considered **significant and unavoidable with mitigation** because of the uncertainty of sufficient impact offset and because the implementation of these mitigation measures relies on an agreement with a third party (NPS) and is not fully within the project sponsors' control.

#### **Mitigation Measure M-BI-2c: Bank Swallow Educational Signage and Protective Fencing**

During the construction period and prior to project completion, the SFPUC, with the oversight of the planning department, shall implement the following:

- a. Educational Kiosk or Signs. Develop and produce one, permanent educational kiosk or signage to be installed in the Skyline coastal parking lot or along the multi-use trail. Educational content, sign design and structure shall be coordinated with the San Francisco Recreation and Parks Department and the National Park Service (NPS).

- b. Sensitive Habitat Signs. Develop and produce ~~semi-permanent~~ removable educational sensitive habitat signs that shall be installed on NPS property along bluff top access points at Fort Funston and within the conservation easement with the Olympic Club above Phillip Burton Memorial beach near the bank swallow nesting locations to alert the public of the sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-time development and production of the ~~semi-permanent~~ removable signs that the NPS shall install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands or within the boundaries of its conservation easement.
- c. Sensitive Habitat Fencing. Install ~~semi-permanent~~ removable fencing at a setback from the bluff edge above suitable nesting habitat to restrict public access above sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-time development and production of the ~~semi-permanent~~ removable fencing that the NPS shall design and install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands or within the boundaries of its conservation easement with the Olympic Club.

**Mitigation Measure M-BI-2d: Public Engagement Specialist**

The SFPUC shall enter an agreement with NPS requiring SFPUC to fund bank swallow public engagement work by a seasonal, part-time, public engagement specialist for five bank swallow nesting seasons (April 1 to August 1). The role of the public engagement specialist shall be determined by NPS, and may include visual monitoring of the public's compliance with physical deterrents, supporting ongoing NPS bank swallow monitoring, development of educational materials, and public engagement and education related to bank swallow and their nesting habitat. The public engagement specialist shall prepare a final report for submission to NPS and the ERO at the end of the five nesting seasons documenting lessons learned and recommendations for future habitat protection and management actions.

**Mitigation Measure M-BI-2e: Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research.**

The SFPUC shall fund up to five years of research related to bank swallow movement, population dynamics, and coastal habitat selection. The research scope shall be developed in coordination with NPS and approved by the ERO, and research shall be conducted by a qualified biologist with relevant expertise. Research supported by this measure would augment existing NPS monitoring data to quantify survivorship and movement patterns of bank swallows in coastal California, specifically the Fort Funston population, to better understand the populations' habitat selection, and identify its key threats. The funding agreement shall stipulate that the findings of the research funded under this measure shall be documented in a final report and made publicly available, to increase the body of knowledge around the species' habitat conservation and management.

**Mitigation Measure M-BI-2f: Blufftop Foraging Habitat Restoration**

Prior to construction, the SFPUC shall submit to the NPS and the Environmental Review Officer (ERO) a detailed restoration plan and schedule for implementing this measure. The schedule shall provide for completion of the restoration prior to completion of project construction. If any element of the restoration plan cannot be completed prior to

completion of project construction, the SFPUC shall provide an explanation and an alternative completion date. The plan shall also include a proposed monitoring and reporting schedule. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to NPS and the ERO a final report describing the types, dates, and locations of work performed.

The SFPUC, with oversight from the planning department and in coordination with the NPS, shall implement or fund restoration of: 1) approximately 2 acres of blufftop foraging habitat within the approximately 8-acre portion of Fort Funston identified for habitat restoration in Figure 4.6-3a; and 2) an additional approximately 200 linear feet of blufftop dune habitat at locations above active nesting habitat identified and mapped in the bank swallow habitat assessment memorandum where safe and effective at limiting human disturbance (ESA, 2023, Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 31, 2023). Restoration activities may include removing non-native and/or invasive vegetation and planting native dune plants using hand tools, an NPS-approved herbicide, and mechanical equipment (e.g., small backhoe or excavator), or combination thereof, and in combination with installation of sensitive habitat signage and removable fencing provided in M-BI-2c. All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.

The SFPUC shall prepare and implement or fund a bank swallow foraging habitat revegetation and restoration plan which sets forth the basis of restoration design, planting plan, and monitoring and reporting requirements for the restoration areas. The plan shall be coordinated with and approved by NPS and shall inform restoration design plans developed by the SFPUC in coordination with NPS. The restoration monitoring plan shall be prepared by a qualified restoration ecologist and shall include or provide for the following:

- Restoration methods for selected areas, including site preparation, such as removal of existing vegetation and soil preparation, seed material and application, vegetative plant material harvest (if any), and plant specimen sourcing and planting methods;
- Schedule to guide seed and/or vegetative material collection/harvest or procurement, and seeding and/or planting within the restoration areas;
- Quantitative monitoring methods to evaluate performance of restored areas, including characterizing species richness, vegetative composition and cover;
- Identification of appropriate reference sites to implement monitoring methods and compare results with restoration areas regarding species richness, vegetative composition and cover;
- Photo points located at each restoration site and reference area(s) to document conditions during the monitoring period;
- Performance criteria and measures to control/remove target invasive plants according to NPS policies. Control species shall include those ranked by Cal-IPC as high or moderately invasive. The performance standard for target invasive weeds shall be no more than 10 percent absolute cover during the five-year performance period;

- Performance criteria for native plantings, appropriate for species and quantities planted at the 2-acre restoration site and the blufftop restoration sites (criteria may differ depending on site design);
- Adaptive management schedule and actions (maintenance weeding or replanting) to address underperformance throughout the monitoring period;
- Restoration areas shall be monitored to assess plant establishment for five years or until the sites meet the success criteria determined in the plan. At a minimum, total native vegetation cover, composition, and species richness in the restored areas shall be monitored and maintained until comparable with suitable reference sites.

#### **Mitigation Measure M-BI-2g: Bank Swallow Habitat Enhancement**

The SFPUC shall implement or fund ice plant removal from the bluff face within suitable nesting habitat areas (i.e., active and historic nest sites), as identified in the bank swallow habitat assessment memorandum (ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 31, 2023). The ice plant removal shall be completed prior to completion of project construction. If the removal work cannot be completed prior to project completion, the SFPUC shall provide the NPS and the ERO an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the NPS and the ERO a report describing the types, dates, and locations of work performed.

#### **Mitigation Measure M-BI-2h: Bank Swallow Artificial Habitat Creation**

Prior to construction, the SFPUC shall submit to the NPS and the ERO a detailed plan and schedule for implementing this measure. The schedule shall provide for completion of the feasibility study described in paragraph 1, below, prior to completion of project construction, and installation of the pilot project described in paragraph 2, below, prior to the first nesting season that follows project removal of bank swallow habitat. If any element of the plan cannot be completed on schedule, the SFPUC shall provide an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the ERO a final report as described in paragraph 2(c) of this mitigation measure.

1. **Feasibility Study.** The SFPUC shall fund development and implementation of a study to explore the feasibility, efficacy, and logistics of installing artificial habitat creation concepts within the project vicinity to support the local nesting bank swallow population. These concepts may include drilling artificial burrows into the bluff face, or installing wooden nest box “bank” habitats along the bluff top, among other concepts that have documented success supporting other nesting bank swallow populations and would not conflict with Coastal Act or other applicable laws or policies. The feasibility study shall be developed in coordination with NPS and analyze how each concept would be implemented along the Fort Funston blufftop or other nearby locations, including design, siting and other locational considerations, and geotechnical considerations. Feasible artificial habitat creation shall avoid disrupting scenic resources, cultural resources, or sensitive habitat. The feasibility study shall be completed in time to ensure the pilot project would be installed prior to the first nesting season after habitat removal by the project and identify at least one concept for implementation as an artificial habitat pilot

project, though multiple concepts may be determined feasible and incorporated into the pilot project.

2. **Pilot Project.** The SFPUC shall fund development and implementation of an artificial habitat pilot project. The pilot project shall include implementing and monitoring the effectiveness of the selected experimental concept(s) identified in the feasibility study (e.g., drilling artificial burrows into the bluff face or installing several wooden nest box banks along the Fort Funston blufftop or other nearby locations). The artificial habitat should be constructed on a schedule that allows for bank swallow use ahead of the first nesting season following project removal of existing bluff habitat.
  - a) Once installed, the artificial habitat(s) shall be surveyed for nesting activity monthly by a qualified biologist in April, and August, and twice a month in May, June, and July, for five consecutive years to document bank swallow use.
  - b) An annual monitoring report shall be prepared that summarizes seasonal use observations at the artificial habitat(s). This report shall be provided to the NPS and the ERO within 90 days of the end of the annual monitoring period. The artificial habitat shall be considered successful if bank swallow nest or attempt to nest (repeatedly visit the habitat[s]) during the nesting season within the five-year monitoring period.
  - c) Upon completion of the five-year monitoring period, a final report shall be prepared which compiles results of the artificial habitat pilot project. If the artificial habitat(s) was successful, the report shall include recommendations for potential funding mechanisms and partnerships for continued maintenance. This report shall be made publicly available.

All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.

### ***Impacts of Mitigation Measures***

CEQA Guidelines section 15126.4 states that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed, but in less detail than the significant effects of the project as proposed." This section identifies potential effects associated with the implementation of Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, M-BI-2g, Bank Swallow Habitat Enhancements, and Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation.

**Special Status Plants and Sensitive Natural Communities:** The proposed blufftop restoration area identified in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, within Fort Funston is located immediately south of the project area's buried wall terminus in a location of the park managed for native plant restoration (see Figure 4.6-3a). Field surveys supporting the project's Biological Resources Assessment (Appendix F2) documented San Francisco spineflower plants and the yellow sand verbena – beach burr dune mat sensitive vegetation alliance in this general area and ongoing NPS restoration efforts at this location have cultivated concentrations of native dune plants, including San Francisco lessingia (*Lessingia germanorum*), blue thimble flower (*Gilia capitata* spp. *Chamissonis*), and San Francisco wallflower (*Erysimum franciscanum*).<sup>104l, 104m</sup> Restoration and maintenance activities within this area funded by the SFPUC would include removal of non-native species (primarily ice plant) and planting native dune species, which would be implemented with

hand tools, an NPS-approved herbicide, and mechanical equipment (e.g., small backhoe or excavator), or combination thereof, by people qualified in restoration ecology and botanical species identification. Similar activities would be implemented at the other M-BI-2f blufftop restoration sites near bank swallow habitat. The M-BI-2f, Blufftop Foraging Habitat Restoration, blufftop restoration sites were not included in protocol-level botanical surveys conducted for the project but are expected to support a similar combination of native and non-native dune species, likely dominated by ice plant. These foraging habitat restoration areas would likely be considered environmentally sensitive habitat (ESHA) because they comprise dune habitat that supports or is suitable for special-status plant species.

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<sup>104l</sup> BioMaAS, 2021. Ocean Beach Climate Change Adaptation Project Biological Resources Assessment, prepared for the San Francisco Public Utilities Commission, November 2021.

<sup>104m</sup> National Park Service, Golden Gate National Recreation Area, Fort Funston Special Status Plant Species, NPS data 2002-2023.

As the purpose of the work in these areas is native plant restoration and would be conducted in accordance with standard construction measure 7, any existing individual or groupings of special-status or sensitive plant species or alliances would be identified, protected, and avoided throughout restoration activities such that direct impacts on these resources is not expected. Once complete, the restored dune habitat would provide enhanced bank swallow foraging habitat, minimize human disturbance near bank swallow nesting habitat, and benefit the continued existence of San Francisco spineflower, San Francisco lessingia, blue thimble flower, San Francisco wallflower, and the yellow sand verbena – beach burr dune mat alliance, among other native and special-status dune plants and alliances. For these reasons, the restoration activities identified in M-BI-2f, Blufftop Foraging Habitat Restoration, would be consistent with Coastal Act and local coastal program policies governing development in ESHA, and would have a less-than-significant effect on special-status plants and sensitive natural communities. Removal of ice plant from the bluff face at active and historic nesting areas as described under Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, would not impact special-status plants or sensitive natural communities because these locations are characterized and identified for mitigation by the near exclusive presence of ice plant. Direct impacts on special-status plants and sensitive natural communities are not expected from implementation of M-BI-2g.

**Nesting Birds:** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, and M-BI-2g, Bank Swallow Habitat Enhancement, would generate noise from mechanized equipment and visual disturbance from workers and equipment. For example, small mechanical equipment may be used to collect and off-haul ice plant from the foraging habitat restoration area. Installation of artificial habitat concepts during the pilot project described under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, could also introduce noise and visual disturbance above baseline conditions. For example, burrow excavation into the Fort Funston bluff face would utilize small mechanical drills. The required burrow elevation would be reached through use of a ladder placed on the beach below areas of suitable bank swallow habitat. These areas on the bluff face could also be accessed by persons repelling down the face to the selected elevation where burrows would be drilled. If these activities were to be conducted during the bird nesting season, they could adversely affect bank swallow and other nesting birds. However, this work would be

required to comply with standard construction measure 7 and Mitigation Measure M-BI-2a, Nesting Bank Swallow Protection Measures, which would protect against significant impacts on nesting birds through seasonal avoidance or pre-construction surveys and establishment of no-disturbance buffers. With implementation of these measures, the restoration and enhancement activities identified in M-BI-2f and M-BI-2g and implementation of artificial habitat concepts under M-BI-2h would have a less-than-significant effect on nesting birds.

**Cultural and Tribal Cultural Resources:** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, and M-BI-2g, Bank Swallow Habitat Enhancement, would occur in locations that were not evaluated in the EIR for cultural or tribal cultural resources. To assess potential impacts on cultural resources within the restoration and enhancement areas, records from the Northwest Information Center and historic maps/aerial imagery were reviewed. No site visit was conducted. There are no known archeological sites, human remains, or tribal cultural resources within the mitigation work areas. However, archeological analysis indicates that there is the potential for Native American resources to be present. While unlikely, ground disturbance associated with the blufftop restoration could uncover previously undiscovered archeological sites, human remains, or other tribal cultural resources, and any inadvertent damage to these resources would be considered a significant impact. However, as set forth in Mitigation Measures M-BI-2f and M-BI-2g, the standard cultural resources construction measures for the project, including SFPUC Standard Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring), would be implemented during restoration and enhancement activities. These measures would be implemented in the same manner described in the EIR for the South Ocean Beach portion of the C-APE. With implementation of SFPUC standard construction measure 9 (Archeological Measures I and II), restoration activities identified in M-BI-2f and M-BI-2g would have a less-than-significant impact on cultural and tribal cultural resources.

**Geologic Hazards:** If drilling artificial bank swallow burrows is selected for the Pilot Project as a feasible artificial habitat concept, Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, would involve drilling burrows into the Fort Funston bluffs. If this work were to occur in areas that are not stable, it could result in direct or indirect substantial adverse effects on public safety due to landslide or other geologic hazards. As required in M-BI-2h, implementation of the measure would be subject to SFPUC's standard construction measure 1, which requires characterization of the soil types and potential for geologic hazards, including landslide. As a component of the feasibility study specified in M-BI-2h, this concept shall occur only in areas where, in the opinion of a geotechnical expert or other qualified person, drilling would not result in a public safety hazard due to increased risk of bluff failure. With implementation of standard construction measure 1, implementation of this artificial habitat concept would have a less-than-significant effect related to geologic hazards.

**Hazards and Hazardous Materials.** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, M-BI-2g, Bank Swallow Habitat Enhancement, and possibly M-BI-2h, Bank Swallow Artificial Habitat Creation, (if drilling artificial burrows in the bluff face is selected for the Pilot Project) would occur in locations near a site associated with the Department of Toxic Substances Control (DTSC) Cortese List. The DTSC cleanup status for Fort Funston is "Inactive-Action Required" due to the discovery of munitions on the Fort Funston beach.<sup>104n</sup> The restoration provided for in M-BI-2f would occur on a coastal bluff approximately 150 feet above and inland of the beach or above the beach on the bluff face (M-BI-2g and M-BI-2h). Furthermore, any unidentified hazardous

materials encountered during construction would be characterized and appropriately treated, contained, or removed, in accordance with SFPUC standard construction measure 6, Hazardous Materials. Therefore, implementation of M-BI-2f, M-BI-2g, and M-BI-2h would have a less-than-significant impact related to hazards and hazardous materials.

**Aesthetics.** One of the artificial habitat concepts that may be included in the feasibility study under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, involves installing removable wooden nest box “bank” habitats within Fort Funston or other nearby areas for use during the bank swallow nesting season. If determined feasible to implement, at least one of the wooden nest box bank habitats, approximately the size of a small shed, could be introduced to the Fort Funston blufftop. As discussed above in Mitigation Measure M-BI-2h, feasible artificial habitat creation shall avoid disrupting scenic resources, cultural resources, or sensitive habitat. A small shed-sized nest box bank placed along the blufftop or other nearby areas, could be visible to park visitors from publicly accessible trails. Due to its small size relative to the scale of the natural and scenic landscape features contributing to the park’s aesthetic character, the artificial nest box banks would not result in a substantial aesthetic or scenic resource impact. Further, lighting would not be installed as part of the artificial habitat. Construction activities associated with the artificial habitat concept which involves drilling burrows into the bluff face would be visible from the beach; however, once installed, the artificially created burrows on the bluff face would resemble those excavated by bank swallows and therefore would not result in a substantial aesthetic or scenic resource impact. Similarly, removing ice plant from the bluff face under Mitigation Measure M-BI-2g: Bank Swallow Habitat Enhancement, and planting native dune plants to improve bank swallow foraging habitat within Fort Funston and along the bluff top under Mitigation Measure BI-2f, Blufftop Foraging Habitat Restoration, would temporarily be visible while restoration work is occurring. Once complete, the aesthetics of these formerly degraded areas would be improved with the removal of non-native species and/or introduction of native vegetation. Therefore, implementation of mitigation measures M-BI-2f, M-BI-2g, and M-BI-2h would have less-than-significant impacts related to aesthetics.

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<sup>104n</sup> Department of Toxic Substances Control (DTSC), EnviroStor database search, Available online at: [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=80001046](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80001046), accessed on August 25, 2022.

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## Comment BI-2: Dune Ecosystem Impacts

This response addresses the following comment, which is quoted below:

A-CCC.33

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**“Dune Impacts.** Impact BI-6 states: “Construction and operation of the project would not have a substantial adverse effect on the California Department of Fish and Wildlife-designated sensitive natural communities or jurisdictional wetlands or waters. (Less than Significant)” (page 4.6-55). This section appears to only contain a qualitative analysis of potentially sensitive plant habitats, including “locally significant plants.” Please include more details of what locally significant plants are present. In addition Section 4.6.2.2 Project Setting (Pg. 4.6-3) states: “...while these fragmented areas contain sandy soils with disturbed dune mat vegetation,

they are not part of an evolved, complex and dynamic dune system that meets the criteria of an ESHA.” Please note that as a general rule, dune habitat, regardless of condition, is considered ESHA under the Coastal Act/LCP. Please completely update the dune habitat analysis, accordingly, including in terms of avoidance alternatives and mitigations.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.33])

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## RESPONSE BI-2

The presence of rare plants and locally significant plants in the project area is discussed on draft EIR p. 4.6-20, under the topic of *Special-Status Plants*. Potential project effects on San Francisco spineflower are addressed in draft EIR Section 4.6.4.3 (Impact BI-1), and comments concerning spineflower are addressed in response BI-3, below. As stated in the draft EIR, several locally significant plant species were documented in low abundance where the dune habitats of the project area contained concentrations of native species and ice plant was less dominant. These included yellow sand verbena (*Abronia latifolia*), beach burr (*Ambrosia c*), Heermann’s bird’s-foot trefoil (*Acmispon heermannii* var. *orbicularis*), spike bent grass (*Agrostis exarata*), silver dune lupine (*Lupinus chamissonis*), and Pacific seaside plantain (*Plantago maritima*). EIR Impact BI-6 addresses impacts on sensitive natural communities, such as the yellow-sand verbena – beach burr dune mat alliance, which is composed of two locally significant species. The Yerba Buena Chapter of the California Native Plant Society (CNPS), which maintains the regional list of locally significant plant species within the City and County of San Francisco and North San Mateo County, notes that both yellow sand-verbena and beach burr are common species but are designated as “locally significant” because they are restricted to sand habitats. As the draft EIR states, these two species are not abundant in the project area, but where present the alliance often supports other locally significant plants. These areas are present in the southern portion of the project area near Fort Funston where ice plant is less dominant. Even with the local CNPS chapter designation, project impacts on such plants are not considered significant under CEQA because they are not considered rare, endangered, or threatened, or assigned a state listing that indicates they may become endangered or threatened in the foreseeable future throughout all or a significant portion of their range. For this reason, as stated on draft EIR p. 4.6-21, impacts on locally significant plant species were not discussed in the impact analysis.

Comment A-CCC.33 states, “...as a general rule, dune habitat, regardless of condition, is considered ESHA under the Coastal Act/LCP,” and requests that the analysis be updated. The EIR evaluates whether the dune habitat in the project area constitutes ESHA (pp. 4.6-23, 4.6-27 and 4.6-28). The EIR’s ESHA analysis centers on the three qualities represented in the Coastal Act definition of environmentally sensitive habitat. These criteria include rarity, value, and vulnerability. The approach set forth in the EIR is consistent with that presented in memoranda prepared by Coastal Commission staff and upon which the Coastal Commission has based past permit decisions.<sup>4,5,6</sup> Two of these staff memoranda describe the multistep processes presented below for

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<sup>4</sup> Dixon, John, Ph.D. – Ecologist / Wetland Coordinator. Memorandum: Designation of ESHA (Environmentally Sensitive Habitat Area) in the Santa Monica Mountains. California Coastal Commission. March 25, 2003.

<sup>5</sup> Garske-Garcia, Lauren, Ph.D. – Ecologist. Memorandum: MBARI Field Expedition Staging Facility (APN 133-252-001): Ecological Resources. California Coastal Commission. July 20, 2018.

<sup>6</sup> Engel, Joanna, Ph.D. – Environmental Program Manager, Laurie Koteen, Ph.D. – Senior Ecologist, and Lauren Garske-Garcia, Ph.D. – Senior Ecologist. Ecological Significance of Oceano Dunes. California Coastal Commission. February 16, 2021.

determining whether a resource is ESHA and which guide the evaluation of dune habitat within the project area:

*The first step involves verifying whether a particular site supports habitat or species that are either rare or especially valuable because of their special nature or role in an ecosystem. The second step is to ascertain if the respective species or habitat is easily disturbed by human activities or development.<sup>7</sup>*

*1a. Is the habitat rare or does the habitat support rare plants or animals? ... 1b. Is the habitat, or the plant or animal species in the habitat, especially valuable because of their 'special nature' or because they play an 'especially valuable' role in a habitat or ecosystem? ... 2. Lastly, is the habitat, or rare plant or animal species in the habitat, easily disturbed or degraded?<sup>8</sup>*

As explained on EIR p. 4.6-23, the LCP briefly describes ESHA as being associated with bluffs, dunes, beaches, and intertidal areas, in the context of policy 12.5, Limit Shoreline Protection Devices.

Following publication of the draft EIR and in response to this comment, the planning department engaged a coastal dune expert to further assess dune habitat within the project area using the Coastal Act and LCP, along with the above-referenced Coastal Commission guidance, to further evaluate the potential for dune ESHA ("dune delineation"). Criteria for identifying, documenting, and distinguishing coastal dunes from non-dune sand deposits (mounds) created by non-dune processes (such as mechanical placement of sand cleared from the Great Highway) was developed and applied during a field survey to delineate dune boundaries within the project area. The assessment then evaluated whether dune habitat qualified as potential ESHA. The memorandum documenting the dune delineation findings is included as **Attachment F**. Based upon this comment and the results of the dune delineation, the draft EIR's ESHA and dune habitat discussions have been revised.

Draft EIR page 4.6-23, paragraph 4 has been revised as follows:

### **ENVIRONMENTALLY SENSITIVE HABITAT AREAS**

California Coastal Act section 30107.5 defines an environmentally sensitive habitat as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." For a resource to be determined an ESHA, it must retain three qualities: (1) the area contains rare species or habitat, which may include globally rare but locally abundant resources that have experienced historical decline; or (2) the species or habitat is especially valuable, such as being unusually pristine, supporting species at the edge of their range, or otherwise special nature; and (3) the species or habitat in question is vulnerable to human disturbance or degradation.

The City and County of San Francisco's local coastal program briefly addresses ESHAs in the Western Shoreline Area Plan. The plan notes that ESHAs may be associated with coastal bluffs, dunes, beach, and intertidal areas, but does not identify specific locations or resources as ESHA. Within the marine

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<sup>7</sup> Garske-Garcia, Lauren, Ph.D. – Ecologist. Memorandum: MBARI Field Expedition Staging Facility (APN 133-252-001): Ecological Resources. California Coastal Commission. July 20, 2018.

<sup>8</sup> Engel, Joanna, Ph.D. – Environmental Program Manager, Laurie Koteen, Ph.D. – Senior Ecologist, and Lauren Garske-Garcia, Ph.D. – Senior Ecologist. Ecological Significance of Oceano Dunes. California Coastal Commission. February 16, 2021.

and terrestrial study areas, coastal bluffs that provide bank swallow nesting habitat, dunes ~~foredunes, and~~ beach and intertidal areas, ~~and areas with vegetation characterized as disturbed dune mat~~ are discussed below as to whether they may constitute ESHA. The final determination of whether the project area contains ESHA will be made by the ~~planning commission or the~~ coastal commission through consideration of the coastal development permit required for the project and may differ from the conclusion presented here.

Draft EIR pages 4.6-27 through 28 have been revised as follows:

## DUNE HABITAT

Dune habitat occurs throughout the terrestrial study area inland of the intertidal zone and beach habitats where exposed sandy soils crest at the limit of wave reach and transition into mats of dune vegetation. Traditional foredune habitat contains undulating, varied topography which forms parallel to the shoreline as windblown sand accumulates among low-growing vegetation adapted to the harsh coastal environment.<sup>72</sup> Within the study area, topography at the transition from beach to dune habitat is varied and includes areas with gradual sandy slopes, riprap revetments, or steeply sloped, near vertical bluff. Most of the study area's dune habitat can be characterized as a narrow band of highly constrained, plateaued foredunes with disturbed dune mat vegetation between the beach, riprap or bluff edge and the Great Highway infrastructure. The vegetation community within these areas is described as disturbed because of the characteristic barren patches of sand among predominant mats of invasive ice plant with some other common, native dune associates. This same assemblage of dune plants is present among developed portions of the study area, including the roadway medians and shoulders of the Great Highway and Sloat Boulevard; ~~however, these areas cannot be characterized as traditional dune habitat because they do not contain dune characteristics beyond sandy soil and vegetation associates.~~

Unrestricted pedestrian access through areas supporting disturbed dune mat vegetation in the study area allows for continual disturbance from trampling. This vegetation community is composed of two, intermixed alliances, including ice plant mat (*Mesembryanthemum* spp. – *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) and yellow sand verbena – beach burr dune mat (*Abronia latifolia* – *Ambrosia chamissonis* Herbaceous Alliance). *Abronia latifolia* – *Ambrosia chamissonis* Herbaceous Alliance is identified as a sensitive natural community by California Department of Fish and Wildlife. The yellow sand verbena – beach burr dune mat alliance, in the absence of invasive ice plant, is more likely to support special-status dune plants within the study area, such as San Francisco spineflower. This alliance, with its greater abundance of native dune flora is concentrated near the project area boundary with Fort Funston where foredunes are broader at the Great Highway curve east toward Skyline Boulevard (see Figure 4.6-2d). As discussed, San Francisco spineflower has not been documented within the project area but has potential to occur within this dune community where higher concentrations of other native dune flora are present.

Dynamic and evolved coastal dunes are generally rare in the state, are vulnerable to human disturbance, and can support unique or rare flora and fauna. An advanced coastal dune system contains many geomorphic expressions of wind velocity and sand deposition. These systems are broad enough to contain established foredunes with sparse to moderate, low-growing salt-tolerant vegetation, and secondary dunes which occur at relatively higher elevations landward of foredunes. Secondary dunes may include unvegetated *blowouts*<sup>73</sup> or parabolic (“u” or “v”-shaped) dunes and

transgressive (mobile or migratory) dune fields and sand drifts. Secondary dunes, where vegetated, typically support a higher diversity of plant species (including some shrubs) with greater vegetative cover because of the distance from shore, muted wave and wind influence, and greater organic soil depth and quality. Because of the existing infrastructure within the study area, dunes landward of Ocean Beach are prevented from evolving beyond foredunes and consequently provide limited habitat opportunity for dune associated plant and animal species endemic to coastal California.

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<sup>72</sup> Newkirk, Sarah, et al., 2018. *Toward Natural Shoreline Infrastructure to Manage Coastal Change in California*. Prepared for California's Fourth Climate Change Assessment, August.

<sup>73</sup> Blowouts are depressions, typically caused by wind erosion of bare sand.

The city engaged a coastal dune expert to assess and delineate dune habitat within the South Ocean Beach terrestrial study area using the Coastal Act and LCP policies, along with Coastal Commission memoranda and precedent decisions regarding ESHA, to evaluate the potential for dune ESHA within the study area ("dune delineation"). Criteria for identifying, documenting, and distinguishing coastal dunes from non-dune sand deposits (mounds) created by non-dune processes (such as mechanical placement of sand cleared from the Great Highway) were developed and applied during a field survey to delineate dune boundaries within the project area. The assessment then evaluated whether dune habitat qualified as potential ESHA. The memorandum documenting the dune delineation findings is included as new Attachment F.

In summary, the dune delineation identified within the study area 2.12 acres of dunes as potential ESHA, 2.11 acres of mixed composite (non-ESHA) dunes, and 1.72 acres of non-dune (non-ESHA) sand deposits. The distinction between the potential ESHA dunes and non-ESHA mixed composite dunes was based on the following three characteristics: substrate origin (e.g., dune sand [beach or placed sand], or mixed composite silt, gravel or shell fragments); circumstances influencing the feature (e.g., wind transport, roadside clearing activities, or sand backpass activities); and landscape context (e.g., whether the feature is connected to other similar dune habitat or isolated or constrained by existing development, thereby limited in dune ecosystem functions).<sup>73a</sup>

The dunes classified as potential ESHA in the memorandum have substrate originating primarily from beach or placed sand (i.e., low silt content and minimal gravel/shell fragments) and are formed by natural eolian processes of wind transport and deposition of dune sand, typically over several seasons. Beach nourishment activities undoubtedly influence dune habitat in the study area by providing source material to create and sustain naturally formed dunes. The homogenous dune sand substrate indicates minimal external interference from roadside clearing and stockpiling that might affect the substrate composition as well as the feature shape and thickness (height above grade). Dunes that have accumulated over several seasons also indicate they are minimally influenced by external actions, and their growth and evolution may not be restricted by existing development (e.g., pavement). These multi-season dunes were often observed to support perennial dune plants (with both native and non-native species) and had thickness ranging from 0.4 to 10 meters. Homogeneous dune sand dunes in the project area as well as Colma formation dunes (located in the southern portion of the project area and derived from modern wind deflation of Pleistocene raised beaches and dunes) (both types classified as potential ESHA) are not restricted by the built environment in their ability to grow and evolve overtime, are generally connected to other dune habitat, and support dune associates. Additionally, the Colma formation dunes are unique and valuable geological

features and may also support special-status dune plants. For these reasons, homogeneous dune sand dunes and the Colma formation dunes are identified as potential ESHA.

In contrast, the memorandum states that shallow sand accumulation along the Great Highway median may result from natural processes but these features do not qualify as ESHA dunes because of the mixed composite substrate (that includes degraded road base), and influence of routine, necessary roadside clearing. This influence prevents the growth, evolution, and connectivity of the median dunes with other dune habitat, that might otherwise occur in the absence of the surrounding built environment. These non-ESHA dunes are neither rare nor especially valuable, because of their ephemeral state, resulting from the routine cycles of sand accretion and collection associated with maintenance clearing sand from the Great Highway. They are innately inhibited from evolving into mature dunes because of these actions and therefore generally do not support dune associates (plant or animal) and lack habitat connectivity. As a result, the dune delineation does not classify mixed composite dunes as potential ESHA.<sup>73b</sup> The extents of dunes mapped as potential ESHA and not ESHA are presented in Attachment F, Figure 6.

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<sup>73a</sup> ESA, 2022. Memorandum: Ocean Beach Climate Change Adaptation Project – Dune Delineation. December 28, 2022.

<sup>73b</sup> Ibid

Rare dune fauna, such as the globose dune beetle (*Coelus globosus*), is not supported by dune habitat of the study area.<sup>74</sup> Concentrations of native dune flora in the study area may support the special-status plant San Francisco spineflower, but this species is not extant within the project area. Ice plant mats (*Mesembryanthemum* spp. — *Carpobrotus* spp. Herbaceous Semi Natural Alliance) which dominate the disturbed dune mat community within the study area is not a vegetation alliance recognized as a sensitive natural community by CDFW.<sup>75</sup> As shown in Appendix F-2 Figures 3A–3I, disturbed dune mat vegetation of the study area is sparse between the beach and Great Highway and largely disconnected and patchy among existing development inland of the Great Highway. Although these areas contain dune vegetation, they do not function as part of a large, dynamic, dune system which provides high habitat value to a diversity of plant and animal species.

Dune habitat of the study area is not vulnerable to human disturbance or especially valuable as it is already significantly degraded by existing development and uses, is of largely disconnected and patchy distribution and stunted development, is dominated by invasive ice plant, and not known to support rare dune flora or fauna. For these reasons, this EIR does not consider dune habitat within the terrestrial study areas to constitute an ESHA.

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<sup>74</sup> — This species' distribution consists of foredune and sand hummocks immediately bordering the coast from Bodega Head, Sonoma County south to the vicinity of Ensenada, Baja California Norte, including all the channel islands except San Clemente. Globose dune beetle is erratically distributed within this range, especially within the north. Populations are recorded from the west of the Point Reyes Peninsula, Marin County, Santa Cruz County, several localities at Monterey Bay, Monterey County, and Pismo Beach, and San Luis Obispo County. Intensive collecting has not yielded specimens from intermediate points, including San Francisco County. Doyen, John T., 1976. Biology and Systems of the Genus *Coelus* (Coleoptera: Tentyriidae), Journal of the Kansas Entomological Society, Vol. 49, No. 4 (Oct., 1976), pp 595–624.

<sup>75</sup> — California Department of Fish and Wildlife, 2020. California Natural Community List. September 9, 2020. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline>

Draft EIR pages 4.6-55 through 56 have been revised as follows:

### **Sensitive Dune Vegetation and Dune Habitat**

Project implementation would not substantially affect sensitive dune vegetation. The disturbed dune mat vegetation community of the terrestrial study area contains small assemblages of native dune plants elemental to the sensitive natural community yellow sand verbena – beach burr dune mat alliance. This sensitive dune vegetation alliance has a state rarity ranking of S3 due to its limited distribution in the state and the diversity of special-status plant species that often occur there. Within the study area (i.e., the project construction and operations areas with an additional 15- to 50-foot buffer), these areas support common native dune flora and, to a varying degree depending on presence of invasive or nonnative species, locally significant plant species. Within disturbed dune mat vegetation of the study area there is great variation in the abundance and diversity of native plants among nonnative and invasive species which consist primarily of ice plant, sea fig and annual grasses. While portions of the disturbed dune mat community within the terrestrial study area may contain areas where native dune plants are dominant, or even host a few locally significant plants, the vast majority of this vegetation community is comprised of ice plant mats among bare sandy areas.

Ice plant and sea fig are the two dominant species within the disturbed dune mat vegetation community of the project area. The California Invasive Plant Council identifies ice plant and sea fig to be highly and moderately invasive species, respectively, known to rapidly occupy dune environments and displace native vegetation. The northern portion of the South Ocean Beach project site where the disturbed dune mat community occurs is in a highly degraded state as a result of regular foot traffic and the abundance of ice plant mats, whereas the southern portion of the project site near Fort Funston is less disturbed and contains a higher abundance and diversity of the native dune flora associated with the yellow sand verbena – beach burr dune mat alliance. Farther south, the proposed Fort Funston propagation site would be located in areas currently covered in ice plant mats. Yellow sand verbena is generally uncommon in the study area, but it was observed in the northern part of Fort Funston. This area is also adjacent to (north of) active Fort Funston restoration sites that contain naturally occurring and planted native dune flora.<sup>132</sup> The northern-most portion of Fort Funston, closest to the South Ocean Beach project area, contains some of the highest quality dune habitat within the park as a result of extensive nonnative and invasive plant removal, propagation and planting of native dune plants, and restrictions on pedestrian access within restored areas.<sup>132</sup>

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<sup>132</sup> BioMaAS, 2021. Ocean Beach Climate Change Adaptation Project Biological Resources Assessment, prepared for the San Francisco Public Utilities Commission, November 2021.

<sup>133</sup> Russell, Will, et. al., Evaluating Wildlife Response to Coastal Dune Habitat Restoration in San Francisco, California. Ecological Restoration, Vol. 27, No. 4, 2009.

Repaving the existing multi-use trail between Taraval Street and Sloat Boulevard would occur within the limits of existing pavement bounded by non-native ice plant or ornamental landscaping and would not result in impacts to native dune vegetation. The installation of mobi-mats similarly would not result in a new impact on biological resources. The areas where these mats would be deployed consist of bare sand which does not support dune vegetation, sensitive or otherwise, because this is the primary access path to the beach from Taraval Street. Project construction along South Ocean Beach would permanently disturb large areas of the disturbed dune mat community bordering the Great Highway and within highway medians, bordering the NPS parking lot, and among the rock

revetments. As described in the Environmental Setting discussion of Environmentally Sensitive Habitat Areas (Section 4.6.2.2), while these fragmented areas contain sandy soils with disturbed dune mat vegetation, they are not part of an evolved, complex and dynamic dune system that meets the criteria of an ESHA. These areas are small and generally flat, lacking the dynamic topography and variation in dune structure (e.g., blowouts, parabolic or transgressive secondary dunes) typical of an advanced dune system that would consequently be more likely to support native dune flora and fauna, such as the sensitive yellow sand verbena – beach burr dune mat alliance. Although the disturbed dune mat vegetation community within the study area contains some small areas of native dune flora, these areas are not characteristic of the sensitive yellow sand verbena - beach burr dune mat alliance because most of them are densely populated with invasive ice plant and sea fig, and lacking other native dune ecosystem qualities or benefits that makes this alliance sensitive.

Small and large sand placement events during project operation would not adversely affect the sensitive yellow sand verbena – beach burr dune mat alliance, as sand excavation activities on North Ocean Beach and sand placement activities on South Ocean Beach would occur in areas of Ocean Beach with little or no dune vegetation. The access route from the Great Highway to the North Ocean Beach excavation area at Lincoln Way traverses some disturbed dune mat vegetation that is dominated by ice plant and does not have the presence or diversity of native species characteristic of this sensitive dune alliance and is not characterized as dune habitat qualifying as ESHA. Therefore, project construction and operation would have a **less-than-significant** impact on the sensitive natural community yellow sand verbena – beach burr dune mat alliance.

Within the South Ocean Beach project area, project construction would impact up to 1.13 acre of dunes classified as potential ESHA and up to 1.76 acres of non-ESHA dunes (Figure 4.6-3b). Within this area, the city would implement a habitat restoration and enhancement plan (restoration plan), as described in Section 9.1.1, and shown in Figure 2-6a, which would restore a total of 9.36 acres of coastal dune habitat. The restoration plan area would comprise three zones, and its vegetation would vary with elevation but would be composed of native dune associates. The farthest landward zone would be the stable backdunes zone (approximately 1.25 acres), located between the service road and the multi-use trail. This area would support relatively continuous vegetative cover composed of native annual and perennial forbs, perennial grasses, and shrubs, with integrated stormwater infiltration basins (dune depressions). Next would be the native vegetative stabilization zone (4.48 acres), west of the multi-use trail, above the slope stabilization layer and low-profile wall. Vegetation in this zone would primarily consist of beach wildrye (*Elymus mollis*) to intercept, trap, and stabilize onshore wind-blown sand. Dune nourishment would be expected to occur naturally from sand blown over the vegetative stabilization zone during windy conditions. The farthest seaward zone would be the sacrificial zone (3.63 acres), which would be expected to erode periodically from wave runup and be replenished by natural sand accretion and beach nourishment. This zone comprises a landward, vegetated foredune with beach wildrye and perennial forbs, and a naturally unvegetated, dry beach zone. The concentration and distribution of vegetation within the landward portion of the sacrificial zone would be variable in a given year depending on the wave activity and beach nourishment. The vegetative stabilization and sacrificial zones would provide 8.11 acres of contiguous dune habitat. Implementation of the project would therefore substantially increase the quantity of dune habitat in the project area while improving habitat connectivity and habitat quality compared to existing conditions, through sustained, expanded dune system function and introduction of native dune plants. Additionally, implementation of Mitigation Measure BI-2f

would restore approximately 2 acres of dune habitat within Fort Funston (see Figure 4.6-3a) through non-native vegetation removal and restoration with native dune plants to improve bank swallow foraging habitat. As the collective restoration areas that would be implemented under the project are substantially larger than the area of potential ESHA dunes impacted (1.13 acres), no additional compensatory mitigation is proposed to offset project impacts on this resource. If the California Coastal Commission determines through the permitting process that project impacts on ESHA dunes require compensatory mitigation in exceedance of the 9.36 acres dune restoration proposed within the project area, and 2 acres dune restoration proposed within Fort Funston, additional dune habitat in the project vicinity could be restored or enhanced to fulfil the compensatory mitigation requirements. Potential impacts of implementing the additional mitigation would be similar to those described above in Response BI-1.

Draft EIR Section 3.5.1, California Coastal Act (p. 3-11) has been revised as follows:

Section 30240 requires that *environmentally sensitive habitat areas* (ESHA) be protected against significant disruption of habitat value, and limits allowable uses within and adjoining such areas to those dependent upon and compatible with the continuance of the habitat. Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, Section 4.6, Biological Resources, includes an assessment of whether the project area contains ESHA. Specifically, within Section 4.6.2.2, under the subheading *Environmentally Sensitive Habitat Areas*, each of the project area's bluff, intertidal, beach, and dune habitats is evaluated for its ESHA potential.

While determinations regarding ESHA are ultimately made through the coastal development permit process, this EIR considers the bluffs historically inhabited by the breeding colony of the state-listed as threatened bank swallow and selected coastal dune habitat along South Ocean Beach to be potential ESHA because of ~~its~~ their rarity and limited habitat areas. As it would require modification of the bluff and roadside areas that contains a portion of ~~this~~ these habitats, project construction could conflict with the Coastal Act's ESHA policy if the bank swallow or coastal dune habitat is determined to be ESHA through the coastal permit process. The other habitats considered (intertidal, and beach, dune) were found not to be potential ESHAs, but also would be evaluated through the coastal development permit process. Refer to Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, Section 4.6, Biological Resources, for additional discussion of the project's effects related to potential ESHA.

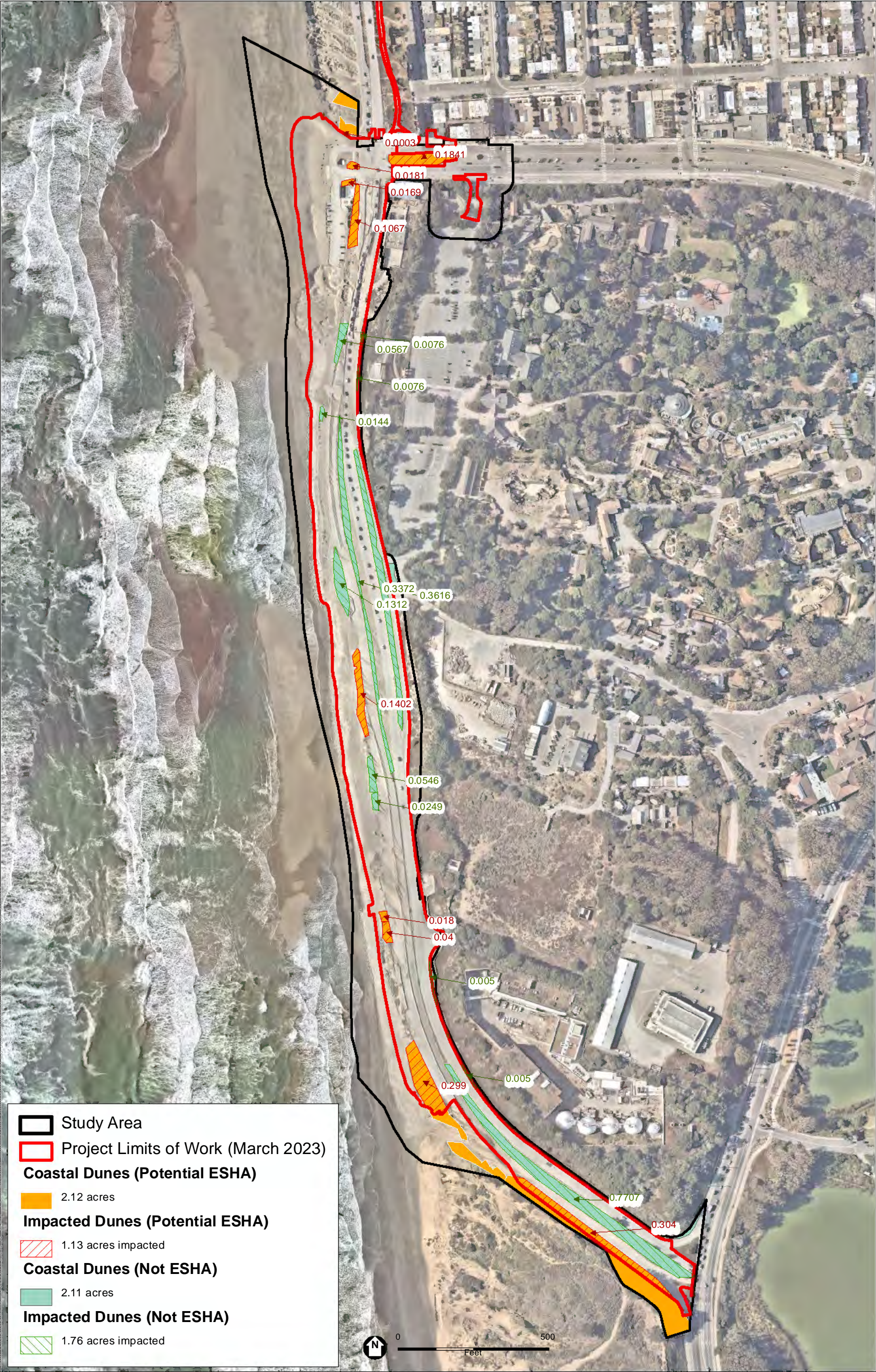
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### **Comment BI-3: Special-Status Plant Impacts**

This response addresses the following comments, which are quoted below:

A-CDFW.6, O-CNPS.4, O-CNPS.5

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SOURCE: ESA 2022

Notes: Project limits of work extend beyond the study area and figure boundary to the north and consist of repaving a pedestrian trail.

Ocean Beach Climate Change Adaptation Project

**New Figure 4.6-3b**

Location and Extent of Coastal Dunes and Impacts within the South Ocean Beach Project Area

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#### **“COMMENT 4: State Threatened, Endangered, or Rare Plant Species**

**Issue:** State threatened, endangered or rare plant species may occur within the Project area. Without appropriate mitigation measures, the Project could potentially have a significant impact on these species. Potential impacts to special-status plants include inability to reproduce and direct mortality. Unauthorized take of plant species listed as threatened, endangered, or rare pursuant to CESA or the Native Plant Protection Act is a violation of Fish and Game Code.

Special-status plants are typically narrowly distributed endemic species. These species are susceptible to habitat loss and habitat fragmentation resulting from development, vehicle and foot traffic, and introduction of non-native plant species.

**Recommendations:** The Project area should be surveyed for State-listed plant species by a qualified biologist following protocol-level surveys. Protocol-level surveys, which are intended to maximize detectability, may include identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. For more information on protocol-level surveys please see <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>. Special-status plant species should be avoided through delineation and establishment of a no- disturbance buffer of at least 50 feet from the outer edge of the plant population or specific habitat type required by special-status plant species.

If State-listed plant species are identified during surveys and full avoidance of take is not feasible, take authorization through CDFW issuance of an ITP would be required.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.6])

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#### **“Rare Plant Habitat**

The document states that construction and operation will have a less than significant impact on the rare San Francisco Spine Flower (*Chorizanthe cuspidata* var. *cuspidata*), Yellow Sand Verbena (*Abronia latifolia*), and Beach Burr (*Ambrosia chamissonis*), and that no mitigation is required. This is based on findings that these plants do not occur in the project area. They do however, occur at the very nearby Fort Funston, and note is made of the possibility that those plants could possibly be disturbed. We ask for a mitigation requiring replacement and enhancement areas for plants sacrificed at Fort Funston.” (California Native Plant Society, Yerba Buena Chapter, board members: Eddie Bartley, President; Paul Bouscal, V.P.; Sophie Constantinou, Secretary; Bob Hall, Treasurer; Jake Sigg, Conservation; Noreen Weeden, Field Trips, Speaker Programs; Susan Karasoff, Outreach; Beth Cataldo, Volunteering; Libby Ingalls, Newsletter Production; Elliot Goliger, Horticulture [O-CNPS.4])

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“The document also states that off-trail plant trampling along the new multi-use trail will have a less than significant impact. Please mitigate for that with barriers (manmade or with shrubs) and educational signage.” (California Native Plant Society, Yerba Buena Chapter, board members: Eddie Bartley, President; Paul Bouscal, V.P.; Sophie Constantinou, Secretary; Bob Hall, Treasurer; Jake Sigg, Conservation; Noreen Weeden, Field Trips, Speaker Programs; Susan Karasoff, Outreach; Beth Cataldo, Volunteering; Libby Ingalls, Newsletter Production; Elliot Goliger, Horticulture [O-CNPS.5])

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## RESPONSE BI-3

As discussed in the draft EIR, botanical surveys conducted in accordance with applicable California Department of Fish and Wildlife, California Native Plant Society, and U.S. Fish and Wildlife Service protocols during 2019 and 2020 did not identify any special-status plants in the portion of the study area that would be directly disturbed during project construction (pp. 4.6-20 and 4.6-21). Although San Francisco spineflower is present within Fort Funston, near the South Ocean Beach project area limits, bluff topography and high quantities of sand accretion create conditions that do not support San Francisco spineflower within the South Ocean Beach project area. Results of the plant surveys and current habitat conditions indicate project-related direct impacts on this species are “not expected” (p. 4.6-41).

As discussed in draft EIR Impact BI-1 (pp. 4.6-40 through 4.6-41), no direct disturbance of rare plants at Fort Funston is anticipated since those plants are outside of the work area; this includes direct impacts from trampling. Indirect impacts on rare plants nearby the southern project area boundary could result from introduction of nonnative or invasive species which could degrade suitable habitat. Nonnative and invasive seed could be introduced by equipment, access or worker foot traffic at the project limits. These indirect impacts would be avoided with implementation of SFPUC standard construction measure 7, Biological Resources, through placement of exclusion fencing, under supervision of a qualified biologist or botanist, at the project disturbance limits. A qualified biologist or botanist would oversee the fence installation to ensure no disturbance occurs outside of the project area limits during construction. With the possible exception of habitat restoration activities identified in M-BI-2d and discussed further below, access to Fort Funston from the upland portions of the South Ocean Beach project area (e.g., from the Great Highway) would be precluded during construction, and incidental introduction of non-native species would be prevented with placement of fencing at the project limits.

The new plant propagation site would be located in dune flats generally dominated by ice plant mats; therefore, no direct impacts on special-status plants are expected. See Chapter 9, Section 9.1.4 for a complete description of the proposed propagation site. As discussed in Response BI-1, field surveys supporting the project’s Biological Resources Assessment (Appendix F2) documented San Francisco spineflower plants and the yellow sand verbena – beach burr dune mat sensitive vegetation alliance in the general area identified for restoration in M-BI-2d. As also explained in Response BI-1, the purpose of the work in these areas is native plant establishment and restoration and would be conducted in accordance with standard construction measure 7. This measure would ensure that any special-status plants are identified and avoided, if present, through pre-construction surveys and establishing exclusion fencing around the work area. With this measure, the EIR concludes the potential project effect on special-status plants would be less than significant.

The draft EIR states in Impact BI-1 (p. 4.6-61) that the project effects on spineflower from operations, including in association with the multi-use trail, are not expected because such plants are not expected to occur within the project areas. The draft EIR also discusses the potential for cumulative effects on special-status plants in Impact C-BI-2 (p. 4.6-73). In that discussion, the draft EIR explains that one of the cumulative projects – the National Park Service’s Fort Funston Trail Connection – could result in trampling of special-status or rare plants associated with public use of the cumulative project if trail users were to enter undeveloped park areas beyond the designated trail. The project would not result in a cumulatively considerable contribution to any impacts on special-status and rare plants that may result from the Fort

Funston Trail Connection. Therefore, as determined in the EIR, no mitigation is required for potential trampling of special-status plants.

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## Comment BI-4: Marine Biological Resources Impact

This response addresses the following comments, which are quoted below:

A-CCC.31, A-CDFW.5

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**“Marine Resource Impacts.** Impact BI-5 states: “The construction and operation of the project would not have a substantial adverse effect on special-status marine species. (Less than Significant)” (page 4.6-41). As with the bank swallow discussion above, the DEIR needs to first establish whether such species and their habitats constitute ESHA, to which the same framework would apply. Past that, it is not clear to us from the information provided thus far that project impacts on these species would be either unsubstantial or less than significant, as stated in the DEIR. Please provide further information on these points, including characterizing the impacts of sand placements on special-status marine species and habitat, especially regarding the impacts of introducing differing grain sizes on benthic habitat.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.31])

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### “Comment 3: Beach Nourishment

The DEIR includes two beach nourishment options. The first option is to excavate and truck sand from the north end of Ocean Beach to the south end of the beach and is the current method of delivering sand to eroding portions of the beach. The second option is to pump sand onto the beach from a dredge. The pumping of dredged sand poses additional potential impacts beyond just the temporary impacts to the beach and intertidal areas during sand placement. As described within the DEIR, water would need to be added into the dredged sand to create the sand/water slurry making it possible to pump the material onto the beach. It is CDFW’s understanding that the water needed is usually pumped from the dredge, a barge, or some additional remote location for this to happen. The pumping of water in areas where listed fish species are present to maintain the sand/water slurry poses the risk of entrainment and/or impingement to listed species and other marine organisms.

**Recommendation 1:** CDFW recommends the EIR (FEIR) include discussion on the impacts from pumping water from the nearshore environment where state and federally listed fish species may be present and discuss mitigation and minimization measures that could avoid significant impacts. The discussion should include the following:

- Additional information to describe the process in which the sand would be pumped to the beach, including whether the slurry water will come strictly from the dredge or if there will be a separate remote pump along the pipeline to help deliver sand to the beach.
- A description of the type of dredge, and specific vessel if known, that would be used by the U.S Army Corps of Engineers to conduct the large-scale sand placement.

- The type and size of screens that may be utilized on all water intake structures.
- The volume of water needed to pump 575,000 cubic yards of sand onto the beach.
- The water intake velocity to create the slurry.

**Recommendation 2:** CDFW recommends the Project consult with CDFW regarding beach nourishment activities utilizing an offshore dredge to pump sand onto the beach in order to assess if an ITP would be recommended to cover potential take of state listed species during beach nourishment activities utilizing an offshore dredge to pump sand onto the beach.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.5])

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## RESPONSE BI-4

### **MARINE ESHA**

On p. 4.6-27, the draft EIR establishes that the intertidal zone and beach habitat of the marine and terrestrial study area is not considered ESHA (special-status marine species and protected marine habitats are discussed beginning on p. 4.6-21). The factors for determining whether a resource can be considered ESHA include rarity, value, and vulnerability (see draft EIR p. 4.6-23). As discussed on draft EIR p. 4.6-27, these habitats in the study area are not rare, valuable, or particularly vulnerable to human disturbance (such as nesting or spawning areas of special-status species). For marine systems within California, the habitat types typically afforded ESHA designation include kelp forests, surfgrasses or other native aquatic vegetation, bedrock or rocky outcrops, and regions already designated as state or federal marine protected areas.<sup>9</sup> None of these habitat types are located within the impact area offshore Ocean Beach. The intertidal and beach environment of Ocean Beach does not contain rocky outcrops, support aquatic vegetation, or possess state or federal marine protected area designation. Nor does the offshore environment where pumping would occur. Furthermore, the marine habitat where the dredge would operate is regionally abundant and not vulnerable to impact from project operation. As such, marine habitat within the study area is not considered ESHA. Please see Response BI-5 for a discussion of grain size and associated effects on benthic organisms.

### **DREDGED SAND PLACEMENT**

Potential impacts from dredged sand placement on jurisdictional waters and biological resources are discussed on p. 4.6-57 of the draft EIR. As noted in comment A-CDFW.5, during the transfer of dredged sand to the beach, sea water intake from the nearshore area is sometimes required to create a sand/water slurry to facilitate pumping. It is not known at this time whether the project would require sea water intake during transfer or if the slurry water would come entirely from the dredge – another common practice. Similarly, the amount of water needed is also uncertain. Pumping of the sand/water slurry in 2021 as part of the U.S. Army Corps of Engineers Ocean Beach Storm Damage Beach Nourishment Project did not require seawater intake at the dredge pump ashore location; all water used to make the slurry was brought in from the dredge site through the dragheads while dredging. While it is unclear whether water would need to be pumped to facilitate the transfer of the sand slurry to the beach, it is unlikely that pumping would result in adverse

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<sup>9</sup> California Coastal Commission, 2014. Agenda Item 17a, Thursday, December 11, 2014, Coastal Development Permit 4- 12-043 (Broad Beach Geologic Hazard Abatement District).

effects on marine life. Any pumps used to support slurry creation would be designed to meet National Marine Fisheries Service standards for fish screens to prevent juvenile impingement, entrainment, or mortality. For example, screen openings would not exceed 0.094 inches (2.38 mm) and approach velocity (water velocity perpendicular to the screens face) would not exceed 0.33 feet/second.<sup>10</sup>

Recommendation 2 in comment A-CDFW.5 regarding consultation is noted. As presented in the draft EIR (Section 2.4.5.2, p. 2-21), the large sand placements would be implemented by the U.S. Army Corps of Engineers. Accordingly, it is expected that the Corps would be responsible for leading any required consultations. Nevertheless, in response to this comment, the fourth bullet in draft EIR Section 2.7.2 (p. 2-38) has been revised as follows:

California Department of Fish and Wildlife: Fish and Game Code section 2081 permit for potential effects on bank swallow or State-listed marine species

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## Comment BI-5: Benthic Community Impacts

This response addresses the following comments, which are quoted below:

A-CCC.32, A-NPS.16, A-NPS.20, I-Tull-1.1

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**“Impacts on Benthic Community.** Impact BI-5 States “The construction and operation of the project would not have a substantial adverse effect on special-status marine species.” In the operation impacts on page 4.6-52, many of the papers cited to support the argument that beach nourishment has a less than significant impact on benthic invertebrates and sandy beach invertebrate communities are from the Netherlands and other geographies with little studies based in California. The selective use of studies effectively minimizes the concern of sand placement on these communities and misrepresents the state of knowledge in California. Please provide further analysis on this topic that includes a review of studies performed in California, of which there are several.<sup>5</sup> This analysis should also include the impacts of grain size on these communities.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.32])

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<sup>5</sup> This includes: “Wooldridge, T., H.J. Henter, and J.R. Kohn, 2016. Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study. *Estuarine Coastal, and Shelf Science*. 175: 24-33.”, as well as Jenifer Dugan’s work on California beach ecology.

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**“Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.6 Biological Resources, Marine Communities, p 4.6-10:** Reference pre-and post-placement benthic studies in this section that are being prepared as part of the 2021 and future USACE beach nourishment operations and include appropriate monitoring planning/mitigation measures and adaptive management strategies when the

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<sup>10</sup> National Marine Fisheries Service, 1997. Fish Screening Criteria for Anadromous Salmonids. National Marine Fisheries Service Southwest Region. January 1997.

studies and reports are completed.” (Laura Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-NPS.16])

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**“Chapter 4. Environmental Setting, Impacts, and Mitigation Measures, 4.6 Biological Resources, Marine Communities, p 4.6-10:** Include pre-and post-placement benthic study references in this section are currently being prepared as part of the 2021 and future USACE sand nourishment and sand placement operations, and that an appropriate monitoring plan, with mitigation measures, would also be prepared following completion of the studies and reports.” (Laura Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-NPS.20])

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“I’m horrified by the amount of sealife that was scooped up off the sea floor and smooshed into tons of sand when the berm was built last fall. I’ll include a few pictures below and can send more.

Surely, y’all know about the large, significant, ancient - and contemporary - colony of sand dollars that live off shore near the southern part of Ocean Beach? You can find their mineralized tests embedded in sandstone as fossils around here, too.

The pics below are bonkers - so many sand dollars! I’ve been finding little ones, too; first I was stoked cause they are soooooo cute but then I realized that the dredging must have effected sand dollars at all stages of development.

As you consider future building around Sloat, please consider even the smallest residents of this stretch of coastline.” (Katy Jane Tull [I-Tull-1.1]).

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## RESPONSE BI-5

Impact BI-5 (draft EIR pp. 4.6-50 through 4.6-54) includes a discussion of the impacts of beach nourishment actions on benthic invertebrates and specifically addresses how these impacts may affect shorebird and benthic fish foraging success prior to recolonization of the benthic community following beach nourishment. These conclusions are consistent with experimental studies within California, including a recent analysis of beach nourishment programs at eight beaches in San Diego County. This study (“San Diego study”) observed initial declines in intertidal invertebrate abundance immediately following nourishment, followed by variable recovery times depending on the invertebrate taxa.<sup>11</sup> Variability in recovery time across beach location and in response to nourishment actions has been the dominant theme across beach replenishment studies. A summary of nourishment effects and recovery rates for different invertebrate groups from peer-reviewed beach replenishment studies are shown below in **Table 11.9-1**.

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<sup>11</sup> Wooldridge, T., Henter, H., and J. Kohn, 2016. Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study, Estuarine, Coastal, and Shelf Science, 175, 24-33, 2016.

**Table 11.9-1 Summary of Recovery Rates by Invertebrate Taxa from Beach Nourishment**

Citation	Amphipods		Isopods		Emerita spp.		Donax spp.		Scolelepis squamata		Other Polychaetes	
	R	T	R	T	R	T	R	T	R	T	R	T
Fanini et al. 2009	=	NA										
Gorzeland & Nelson 1987							=	NA				
Hayden & Dolan 1974					-	2 wk.						
Leewis et al. 2012	-	1 yr.			-	1 yr.	-	1 yr.	+	1 yr.		
Jones et al. 2008	-	1 yr.										
Manning et al. 2014	=, -	>1 yr.			=, -	>1 yr.	=, -	>1 yr.	=, +	>8 mo.		
Menn et al. 2003	=	NA							+	>4 mo.	+	>4 mo.
Peterson et al. 2000					-	>10 wk.	-	>10 wk.				
Peterson et al. 2006	-	>9 mo.			-	4-5 mo.	-	>9 mo.	=	NA	=	NA
Peterson et al. 2014	-	>3 yr.			-	1 yr.	-	>3 yr.	=	NA	=	NA
Schlacher et al. 2012	-	5 mo.	-	>5 mo.							-	5 mo.

SOURCE: Wooldridge, T., Henter, H., and J. Kohn, 2016. Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study, Estuarine, Coastal, and Shelf Science, 175, 24-33, 2016.

NOTE: Initial response (R) and time until replenishment effects are no longer observed (T) are listed when available.

A “-” indicates reduced abundance, a “+” indicates increased abundance, and “=” indicates no significant different.

A “>” indicates that nourishment effects (reductions or increases) were observable at the end of the study.

The limited number of published studies show considerable variation in results. Although certain taxa have been repeatedly investigated, no single study has addressed the responses of all core intertidal invertebrate taxa. For most taxa, overall initial responses to nourishment are uniform; amphipods, mole crabs (*Emerita* sp.), and bean clams (*Donax* sp.) tend to respond negatively, while polychaetes appear to respond positively or are unaffected by nourishment. Most of the differences between studies are found in the time it took organisms to completely recover, which ranged from approximately five months to three years, with significant variation in recovery time between studies.

Even with the variation in recovery rates outlined above, there are reasons to think the San Diego study may be a helpful predictor for intertidal invertebrate responses at Ocean Beach. There is substantial overlap in community composition between San Francisco’s Ocean Beach and the San Diego County beaches, and individual nourishment programs within the study used similar volumes of sand as proposed for placement at Ocean Beach. In both locations, ample, adjacent unaffected beach habitat is available.

Importantly, the San Diego study represents one response of intertidal invertebrates to beach nourishment, and there is much research suggesting that invertebrate responses to beach nourishment are highly variable and often site-specific.<sup>12</sup> Other studies on invertebrate responses to nourishment have documented small, positive responses (i.e., increases in abundance) to beach nourishment for certain taxa (see Table 11.9-1, in

<sup>12</sup> Rosov, B., Bush, S., Briggs, T., and N. Elko, 2016. The State of Understanding the Impacts of Beach Nourishment Activities on Infaunal Communities, Shore and Beach, 84 No.3, 2016.

particular Leewis et al. 2012 and Menn et al. 2003).<sup>13,14</sup> Additionally, the San Diego study showed variability of impact between beach sites, suggesting that certain communities may be more resilient than others.<sup>15</sup> Recovery rates of the benthic communities cited in this study varied by taxa but were generally slower than rates commonly established for nourishment programs of a similar size and frequency.

As noted in comment I-Tull-1.1, the offshore habitat of South Ocean Beach is home to an abundant population of sand dollars (*Dendraster excentricus*). Dr. Rich Mooi, Curator of Invertebrate Zoology and Geology at the California Academy of Sciences, referenced the “untold millions” of sand dollars offshore of Ocean Beach when responding to concerns about the large volume of sand dollar skeletons, or “tests”, commonly washed ashore.<sup>16</sup> While construction of sand berms, or “toe berms”, may result in the disturbance of benthic organisms including sand dollars given the overall abundance of the species at Ocean Beach it is unlikely to have an adverse effect on the overall population. Additionally, the large local population size suggests that recolonization would occur fairly rapidly. Additionally, berm construction would occur at the higher/shallower end of the intertidal environment, affecting a very small portion of sand dollar habitat, because the greatest population densities and largest individuals live in water 4 to 12 meters deep.<sup>17</sup>

As noted in Comments A-NPS-16 and A-NPS.20, the city is studying the benthic community response to the September 2021 U.S. Army Corps of Engineers Ocean Beach Storm Damage Reduction Beach Nourishment Project as a means to better understand the recovery rates of the benthic communities at Ocean Beach after large sand placements. The following text has been added to draft EIR p. 4.6-11 after the second complete paragraph to reflect information collected during the 2021 pre-construction benthic study and the 2022 year 1 post-construction benthic survey:

On June 12 and 13, 2021, Applied Marine Sciences (AMS) conducted a benthic invertebrate survey to characterize conditions at South Ocean Beach and a Fort Funston beach reference site to establish a baseline to assess potential changes in ecological values through space and time associated with beach nourishment activities. The study examined beach ecology at South Ocean Beach prior to a 2021 U.S. Army Corps of Engineers beach nourishment project, relative to that of a nearby reference beach where nourishment would not occur (Fort Funston). The Corps project involved placement of approximately 380,000 cubic yards of sand along South Ocean Beach. The AMS survey focused on the organisms that live within the beach (e.g., sand crabs, amphipods, and worms), as they represent the biological resources that are most at risk of disturbance from beach nourishment activities, and they are the prey utilized by shorebirds that feed on the beach.

The baseline survey provided strong evidence that the benthic community at South Ocean Beach is similar to that at the nearby reference area where beach nourishment activities have not been conducted. Furthermore, the benthic organism distributions of both beaches are characterized by the low species richness and high degree of variation in densities, where both beach areas are

<sup>13</sup> Leewis, L., van Bodegom, P.M., Rozema, J., and G.M. Janssen, 2012. Does beach nourishment have long-term effects on intertidal microinvertebrate species abundance? *Estuarine, Coastal, and Shelf Science*, 113, 172-181, 2012.

<sup>14</sup> Manning, L., Peterson, C., and M. Bishop, 2014. Dominant microbenthic populations experience sustained impacts from annual disposal of fine sediments on sandy beaches, *Marine Ecology Progress Series*, 508, 1-15, 2014.

<sup>15</sup> Woolridge, T., Henter, H., and J. Kohn, 2016. Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study, *Estuarine, Coastal, and Shelf Science*, 175, 24-33, 2016.

<sup>16</sup> Kushing, J, 2021. Seeing millions of years of history while beachcombing in San Francisco – sand dollar skeletons and fossils turn Ocean Beach into a living lab – perfect for a family day trip. *National Geographic*. Published May 11, 2021.

<sup>17</sup> Mooi, R, 1997. Sand Dollars of the Genus *Dendraster* (Echinoidea: Clypeasteroidea): Phylogenetic Systematics, Heterochrony, and Distribution of Extant Species. *Bulletin of Marine Science*, 61/2: 343-375.

dominated by the genus *Emerita* (mole crabs). The physical characteristics of the beaches are also very similar, indicated by >95% sand content and low total organic carbon. Given that Ocean Beach has undergone many small sand placements in its history, the similarity in the physical structure and benthic biota between the two sites suggests that Ocean Beach possesses the capacity for recovery following placement events.

Approximately 10 months following completion of the Corps' 2021 South Ocean Beach nourishment project, AMS conducted a second survey (year 1 post-nourishment survey) of the South Ocean Beach nourishment area and the Fort Funston beach reference site. Similar to the baseline survey, the year 1 post-nourishment survey focused on the organisms that live within the beach (e.g., sand crabs, amphipods, and worms), as they represent the biological resources that are most at risk of disturbance from beach nourishment activities. The survey also analyzed potential changes in grain size and composition.

The year 1 post-nourishment survey provided some evidence that the benthic community at South Ocean Beach had been altered. Species presence/absence and species acquisition at South Ocean Beach appeared to differ relative to the Fort Funston beach reference site. Similarly, a common crustacean taxon, *Eohaustorius washingtonianus*, was found to differ in distribution between surveys. However, these changes could not be associated with concurrent changes in physical variables (e.g., beach width, beach slope, etc.).<sup>27a</sup> Changes in mean grain size were observed from the baseline to year 1 surveys at both South Ocean Beach and Fort Funston beach, but corresponded to a narrow range; from 0.29 (+/- 0.004) mm to 0.27 (+/- 0.006) mm at South Ocean Beach and from 0.29 (+/- 0.006) mm to 0.31 (+/- 0.005) at Funston Beach. It is unlikely that changes of this magnitude would result in adverse effects on the benthic community since there were no significant changes in total abundance, *Emerita* density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area.<sup>27b</sup> Following the first year of post-nourishment assessment, AMS concluded that there was not sufficient evidence, based on the monitoring results, that the benthic community at South Ocean Beach was similar to baseline survey conditions. The authors concluded that additional surveys are needed to be confident that the observed changes reflect stability of the benthic community of South Ocean Beach compared to baseline and reference conditions.<sup>27c</sup>

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<sup>27a</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 3, 2023.

<sup>27b</sup> Species acquisition depicts the relationship between the number of new taxa observed with increased sampling effort. It is a helpful metric for understanding how benthic communities change over time or in response to disturbance.

<sup>27c</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 3, 2023.

To facilitate a rapid recovery of the benthic community in response to nourishment, the project is designed to avoid common management missteps that have been shown to exacerbate impacts. For example, small sand placements (approximately 85,000 cubic yards over 6 weeks every 4 years) would occur prior to the summer peak invertebrate recruitment period, which should allow recolonization of the sand placement area from the adjacent benthic environment. Large sand placements (approximately 500,000 cubic yards over 12 weeks every 10 years) would occur in the summer but should still allow for recruitment following nourishment actions. Importantly, the area of benthic habitat anticipated to be affected by the project is abundant in the vicinity both north and south of the project site. Furthermore, the intertidal and nearshore

benthic habitat of Ocean Beach is subject to frequent disturbance from the natural movement of sand, both seasonally and episodically.

Additionally, the grain size of the sediment proposed for placement matches closely to the native grain size of Ocean Beach such that it should still be hospitable to invertebrate species. The potential for impacts from differing grain sizes between the native substrate of Ocean Beach and the sand proposed for nourishment is discussed in detail under Impact BI-6 (draft EIR pp. 4.6-57 and 4.6-58). As discussed there, comparing the San Francisco main ship channel grain size distribution to the South Ocean Beach median grain sizes indicates that grain size is similar between the two environments except that the ship channel material is slightly finer than the material within the swash zone of the South Ocean Beach site.<sup>18</sup> Sediment sampling by the U.S. Geological Survey indicated that the mean grain size in most of the San Francisco main ship channel falls in the fine-sand range (0.15 to 0.21 millimeters [mm]) with fine to medium sand (0.25 to 0.35 mm) for the majority of sand occurring along Ocean Beach. This observation is consistent with a recent U.S. Army Corps of Engineers conclusion on this topic, stating that, “the MSC [Main Shipping Channel] material is generally consistent with or slightly finer than the grain size range of material reported along Ocean Beach by the U.S. Geological Survey.”<sup>19</sup> It is noted that sediments in the swash zone tend to be coarser than a composite across the active beach profile through the surf zone; therefore, the native sediment grain size at the project location may be finer than available Ocean Beach data suggest. Mean grain size at South Ocean Beach as documented during the baseline and year 1 benthic survey was 0.29 and 0.27 mm, respectively.

Poor matching in grain size between donor and nourishment sites may result in increased erosion rates, elevated turbidity levels, and longer recovery times for benthic invertebrates.<sup>20,21</sup> These impacts are felt most acutely when donor sediments contain large amounts of silt and clay, relative to the nourishment site.<sup>22,23</sup> Importantly, a 2018 Corps analysis of the sediment composition within main ship channel found that the material is comprised of over 95 percent sand (and therefore very little silt or clay). Similar results were recorded during 2002 and 2010 sampling events, which found the channel material to be 98 percent and 97 percent sand, respectively.<sup>24</sup> It should be noted that the San Francisco main ship channel is a high-energy environment, with continual wave action creating a dynamic environment, which prohibits the sustained settlement of fine-grained material – which limits the proportion of silt in the overall dredge sediment composition. It is not anticipated that the slight difference in sand grain size between the donor material and placement location would result in depressed recovery rates for benthic invertebrates.

None of the information provided in this response changes the conclusions of the EIR regarding potential effects on benthic communities, which is that the impact would be less than significant.

As described in draft EIR section 2.4.5.1 (p. 2-1), the SFPUC would develop a shoreline monitoring and adaptive management program in coordination with the California Coastal Commission and NPS, and its

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<sup>18</sup> The swash zone is the region of the shore that is intermittently wet or dry from the action of wave run-up.

<sup>19</sup> USACE, 2020. Environmental Assessment for Ocean Beach Storm Damage Reduction Beach Nourishment Project, San Francisco, San Francisco County, California. December 2020.

<sup>20</sup> Rakocinski, C.F., Heard, R.W., LeCroy, S.E., McLelland, J.A. and T. Simons, 1996. Responses by macrobenthic assemblages to extensive beach restoration at Perdido Key, Florida, U.S.A. *Journal of Coastal Research* 12: 326-353.

<sup>21</sup> McLachlan, A. and A.C. Brown, 2006. *The Ecology of Sandy Shores*. 2006.

<sup>22</sup> Grain size affects interstitial space in beach sediments, which in turn affects the amount of water and oxygen available to benthic invertebrates.

<sup>23</sup> Atlantic States Marine Fisheries Commission, 2002. *Beach Nourishment: A Review of the Biological and Physical Impacts*. ASMFC Habitat Management Series #7. November 2002.

<sup>24</sup> Edward Keller, U.S. Army Corps of Engineers, 2021. Personal email communication, April 5, 2021.

implementation could be a condition of their respective project authorizations. The monitoring program would likely identify performance objectives for the nourishment program, specify criteria against which performance would be evaluated, outline both qualitative and quantitative monitoring methods, and establish an implementation and reporting schedule. In addition, as stated in draft EIR Section 2.7 (p. 2-37), Intended Uses of this EIR and Required Actions and Approvals, the California Coastal Commission and NPS each have discretionary project approvals. These approvals could be conditioned to require specific monitoring, mitigation, and adaptive management measures beyond those described in the draft EIR or otherwise found necessary under CEQA.

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## **Comment BI-6: Other Wildlife or Habitat Impacts**

This response addresses the following comments, which are quoted below:

A-CDFW.7, A-CDFW.8

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### **“COMMENT 5: Nesting Birds**

**Issue:** If ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February through early-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or Fish and Game Code.

**Recommendations:** CDFW recommends that a qualified avian biologist conduct pre-activity surveys for active nests no more than seven (7) days prior to the start of ground or vegetation disturbance and every fourteen (14) days during Project activities to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. Prior to initiation of ground or vegetation disturbance, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once Project activities begins, CDFW recommends having the qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures. If continuous monitoring of identified nests by a qualified avian biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project site would be concealed from a nest site by topography. CDFW recommends that a qualified avian biologist advise and support any variance from these buffers.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.7])

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#### **“Comment 6: Pertains to Section 4.2.2.5 Lighting**

**Issue:** Portions of the Project area do not contain overhead artificial light sources and CDFW is unable to determine if the Project proposes the installation of new or replacement light sources in or around nesting or potential nesting Bank swallow habitat. CDFW strongly recommends that no new artificial lighting is installed as part of the Project. New lighting, especially in areas where no lighting currently exists, has potential for significant impacts to nesting Bank swallows and other wildlife. Artificial light spillage into natural areas where Bank swallows may nest could result in a potentially significant impacts through substantial degradation of the quality of the environment. Unlike the natural brightness created by the monthly cycle of the moon, the permanent and continuously powered lighting fixtures create an unnatural light regime that produces a constant light output. Continuous light output for 365 days a year can also have cumulatively significant impacts on fish and wildlife populations.

**Evidence the impact would be significant:** Artificial night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). For nocturnally migrating birds, direct mortality as a result of collisions with anthropogenic structures due to attraction to light (Gauthreux, 2006) is another direct effect of artificial light pollution. There are also more subtle effects, such as disrupted orientation (Poot et al. 2008) and changes in habitat selection (McLaren et al. 2018). There is also growing evidence that light pollution alters behavior at regional scales, with migrants occupying urban centers at higher-than-expected rates as a function of urban illumination (La Sorte et al. 2021). While artificial light pollution can act as an attractant at both regional (La Sorte et al. 2021) and local (Van Doren et al. 2017) scales, there is also evidence of migrating birds avoiding strongly lit areas when selecting critical resting sites needed to rebuild energy stores (McLaren et al. 2018). Due to the high potential for Bank swallows and special status species such as American badger, CDFW recommends no new or replacement lighting is installed as part of the Project.

**Recommended Mitigation Measure 1 – Light Impacts:** If new and replacement lighting is proposed for the Project, CDFW recommends Isolux Diagrams showing pre-Project and post- Project lighting conditions be included in the EIR. Any Increase in post-project lighting should be discussed with CDFW and mitigated as appropriate. Potential minimization measures include:

- All installed lighting shall be rated to emit or produce light at or under 2700 kelvin that results in the output of a warm white color spectrum.
- Solid barriers at a minimum height of 3.5 feet should be installed in areas where there is the potential to reduce illumination from vehicles in natural areas. Barriers should only be utilized if they do not create a significant barrier to wildlife movement. Privacy slats installed into the spacing of cyclone fencing to create light barriers can also be used.
- Implement retro reflectivity of signs and road striping to reduce the need for lighting.
- Shielding of new and replacement light poles and other light sources and the modification of light pole arm length and mast heights to reduce excessive light spillage into natural habitats. In areas with sensitive natural habitats the light poles can be placed at non-standard intervals.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.8])

## RESPONSE BI-6

**Nesting Birds.** Under Impacts BI-3, BI-4 and BI-8, the draft EIR acknowledges and analyzes the project's potential impacts on nesting birds protected by the Migratory Bird Treaty Act and/or California Fish and Game Code. Avoidance and minimization of impacts on western snowy plover and burrowing owl, which are documented to use Ocean Beach only during the non-breeding season, are addressed under Impacts BI-3 and BI-4. Impact BI-8 addresses impacts on protected species of nesting birds in general. As discussed in the draft EIR, the SFPUC's standard construction measure 7, Biological Resources, requires that a qualified biologist survey the project site and immediately surrounding areas prior to construction to determine whether nesting birds may be affected, and would identify additional protection measures necessary to comply with applicable local, state, and federal requirements (e.g., exclusion fencing, work buffer zones, monitoring). Buffer zones would be determined by considering the bird species, physical distance, visual line of sight between the active nest and project activities, and the type of work being conducted. Based on these factors, while the nesting bird buffers for the project may be larger or smaller than those recommended by CDFW, because a qualified biologist would monitor the active nest to confirm the buffer is sufficient to avoid impacts and would increase or decrease the buffer as needed, the project would result in less-than-significant impacts on nesting birds.

**Lighting Impacts.** As discussed under Impact BI-7, the project would install new lighting for users of the multi-use trail and the service road (along the approximate alignment of the current Great Highway's eastern-most lane), but the new lighting would be offset by the project's decreases in other sources of nighttime light, such as the removal of street lights along the west side of the Great Highway near Sloat Boulevard and the closure of the Great Highway to public vehicle traffic. Up to approximately 150 vehicles per day would use the service road, which is the eastern-most lane of the current Great Highway. Under existing conditions, approximately 14,000 vehicles drive through the area on the Great Highway, and in lanes that are farther west of the proposed service road, and therefore the changes in vehicle traffic and fixed lighting resulting from the project would not adversely affect the existing nighttime light environment. As stated in the draft EIR on page 2-17, the proposed lighting would incorporate NPS best management practices for lighting, including only adding lighting where it is needed, shielding lights and directing them downward, and using lamps with warmer colors. For these reasons the draft EIR concluded that night lighting during project operations would not interfere substantially with the movement of native resident or migratory birds. As stated in the draft EIR on page 4.6-59, few terrestrial mammals and no migratory animals other than birds and marine species occur in the project area because of the lack of cover. Therefore, night lighting during project operations would also not substantially affect the movement of common, urban wildlife, when present in the project area. With respect to the potential for American badger occurrence, the draft EIR states in Appendix F1, on Table F-2 (p. F-27), that there is no potential for occurrence within the project area due to the lack of suitable habitat.

Since publication of the draft EIR, the SFPUC has refined its nighttime lighting plan for the project. Details of the plan are presented in Section 9.1.2. As explained in Section 9.2.5, the refined nighttime lighting plan provides greater detail regarding the types and locations of nighttime lighting but is consistent with the concept evaluated in the draft EIR. As noted, the project's nighttime lighting would comply with NPS best management practices for lighting, as discussed in the draft EIR, and therefore would not result in any new or more severe impacts on native resident or migratory birds or other wildlife using the project area during project operation.

## Comment BI-7: Conflicts with Local Policies or Ordinances

This response addresses the following comment, which is quoted below:

A-CCC.28

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**“Impact BI-10.** The DEIR asserts that construction and operation of the project would not conflict with any local policies or ordinances protecting biological resources. And in the discussion of Impact BI-10 (page 4.6-67), LCP Policy 6.2 of the Western Shoreline Plan is cited as the only policy that relates to biological resources in Ocean Beach. This is inaccurate. In fact, LCP Policies 12.2(e), 12.2(f), and 12.6 of the Western Shoreline Plan also include sections on biological resources at Ocean Beach. These policies, and a discussion of how the project will be consistent with their requirements, should be included in this discussion. In addition, since these policies include measures on preserving, enhancing, and restoring dunes and natural resources, this section should clarify that measures should be focused on maintaining the planned dune system, not solely on preventing sand displacement.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.28])

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### RESPONSE BI-7

Consistency with LCP Policy 12.6 is discussed in draft EIR Section 3.2.1.2; as stated, the project would not entirely avoid or mitigate impacts on bank swallow habitat. As also discussed in Response BI-2, the project would also remove dune habitat which may constitute ESHA. These project effects potentially conflict with Policy 12.6. The physical environmental effects of these potential conflicts are the same effects discussed in Impacts BI-2 and BI-6 (as revised in Response BI-2, above). However, Comment A-CCC.28 is correct that consistency with other policies in the Western Shoreline Area Plan is not discussed in Impact BI-10. The second paragraph of Impact BI-10 (draft EIR p. 4.6-67) has been revised and text added to the discussion regarding consistency with policies of the Western Shoreline Area Plan as follows:

One of the Western Shoreline Area Plan includes one policy policies related to the protection of biological resources of Ocean Beach is: Policy 6.2, Improve and stabilize the sand dunes where necessary with natural materials to control erosion. Under the project, the reshaped bluff face above the buried wall would include measures to prevent wind erosion displacement of the introduced sand. As discussed in Chapter 2, Project Description, Section 2.4.3, Debris and Revetment Removal, and Sand Placement and Revegetation, these measures may include wooden slat, plastic, or fabric sand fencing to prevent sand displacement and shape additional dune berms, and placement of a layer of coarse sand over the finer sand used within the reshaped bluff. Plantings on the bluff face would be native, climate-appropriate, locally adaptive, and non-invasive, and would require little water. As the policy specifies use of natural materials to prevent dune erosion, the use of coarse sand or native plantings to stabilize the reshaped bluff face would not be in conflict with the plan. Furthermore, the project includes stormwater controls (infiltration basins) which would limit erosion by preventing stormwater from adjacent paved areas from flowing over the reshaped bluff.

The Western Shoreline Area Plan policies 12.2(e) and 12.2(f) call for the development and implementation of sea level rise adaptation plans for the city's western shoreline that preserve,

enhance, or restore the sandy beach, dunes, and natural and scenic resources (e.g., beach nourishment and dune restoration); prioritize managed retreat over shoreline protection devices; and consider the recommendations of the Ocean Beach Master Plan.

Consistent with Policies 12.2(e) and 12.2(f), the project involves several managed retreat elements, many of which are recommended in the Ocean Beach Master Plan, including removing existing revetments and debris from the beach and bluff, removing the existing restroom and parking lot at the Sloat Boulevard/Great Highway intersection and relocating them landward, and removing the Great Highway to accommodate a trail, park and service road. To enable this retreat and to protect existing critical infrastructure, the city would construct a buried wall at a location inland of the existing revetments and rubble, and would also stabilize and reshape the bluff to a gentler slope, and place sand atop and revegetate the reshaped bluff with native plants. As discussed in Section 2.4.3 and consistent with Ocean Beach Master Plan recommendations, the habitat restoration and enhancement plan (restoration plan) would incorporate native dune plantings into the landscape design, including 8.11 acres of contiguous dune habitat, composed of the vegetative stabilization zone (4.48 acres) and the sacrificial zone (3.63 acres). Even with sand fencing and vegetation, dune nourishment would be expected to occur naturally from sand blown from the beach over the vegetative stabilization zone during windy conditions and further landward into the stable backdune zone (1.25 acres).

The sacrificial zone would be expected to erode periodically and be replenished by natural sand accretion and beach nourishment. The project also includes a beach nourishment program intended to maintain a sandy beach and minimize exposure of the buried wall. Removal of the revetments and rubble, and beach nourishment and plantings, would enhance scenic resources and widen the beach for recreational access, and improve its overall ecological value with the increased quantity and quality of contiguous dune habitat created in the restoration plan area compared to existing conditions. Although the project would impact 1.13 acres of dunes identified as potential ESHA, implementation of the restoration plan would more than offset the ecological loss of the existing dunes. As discussed in draft EIR Section 1.4.4, Relationship to Ocean Beach Planning Initiatives, and Section 2.1, Project Overview, the guiding principles of the Ocean Beach Master Plan are incorporated in the project's objectives and elements and the project design.

Policy 12.6 directs that shoreline protection devices be designed to avoid, minimize, and mitigate impacts on coastal resources, including ESHAs. While the project would improve scenic quality, public recreation, coastal dune habitat, and coastal access, as discussed in Section 3.2.1.2, Western Shoreline Area Plan (Local Coastal Program), the project would not entirely avoid or mitigate impacts on bank swallow habitat (potential ESHA). The project would also require removal of 1.13 acres of coastal dune habitat (potential ESHA), an impact which would be offset through implementation of the project's restoration plan. While impacts on bank swallow habitat and coastal dune habitat may be inconsistent with Policy 12.6, on balance, the project as a whole is consistent with Policy 12.6 and the Western Shoreline Area Plan. The physical environmental effects of these potential inconsistencies are discussed in Impact BI-2 for bank swallow habitat and Impact BI-6 for coastal dune habitat, along with mitigation measures recommended to avoid or minimize those effects (e.g., habitat creation and enhancement, among others).

These text revisions do not alter the draft EIR's conclusion that Impact BI-2 would be significant and unavoidable and Impacts BI-6 and BI-10 would be less than significant.

## 11.10 Alternatives

The comments and corresponding responses in this section cover topics in draft EIR Chapter 6, Alternatives. The comment topics are related to:

- AL-1: Range of Alternatives
  - AL-1.1 No Armoring Alternative
  - AL-1.2 Conventional Seawall (Alternative C)
  - AL-1.3 Relocate Infrastructure Inland
  - AL-1.4 Alternatives to Full Closure of the Great Highway Extension
  - AL-1.5 Bolster Existing Revetments
- AL-2: Alternatives Analysis

### Comment AL-1: Range of Alternatives

Multiple commenters assert that the EIR should consider alternatives to the project and provide recommendations for further analysis. Most of the alternatives recommended are substantively the same as alternatives evaluated in the draft EIR, as described below.

#### AL-1.1 NO ARMORING ALTERNATIVE

This section of Response AL-1 addresses the following comments, which are quoted below:

A-CCC.1, A-CCC.2, I-Holl-2.1

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#### “Alternatives Analysis

A robust analysis of alternatives is perhaps the most critical information need for a project of this sort when it is ultimately considered for a CDP by the Commission. In particular, the DEIR should explain and evaluate both non-armoring and armoring options, as well as potential permutations, across similar evaluation factors and to a similar level of detail. The DEIR alternatives do not provide for an adequate range of a non-armoring alternatives. In fact, the “No Project” alternative (i.e., “Alternative A: No Project” as described in Section 6.3.1) indicates that none of the revetments, rubble, sand bags and related development currently in place would be removed as a part of this project alternative. For one thing, that makes that an armoring alternative. For another, that would require its own CDP authorization as such development was only authorized on a temporary basis and is required to be removed and the area restored by June 30, 2022 (CDP 2-15-1357-A1). In other words, this is not a true ‘no project’ alternative,<sup>1</sup> and it needs to be framed and explored differently by the DEIR, including in terms of an evaluation of maintaining such armoring’s impacts on coastal resources (e.g., in terms of direct coverage, passive erosion, recreation, views, etc.). This is also not, as the DEIR represents, an alternative without impacts, and cannot be considered the “environmentally superior” alternative, at least not without further analysis and comparison of impacts associated with that alternative.” (Peter Benham, Coastal Planner California Coastal Commission, North Central Coast District [A-CCC.1])

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<sup>1</sup> And at the least the DEIR needs to be supplemented on this point with a true ‘no project’ alternative that explores what that project alternative would actually look like, including after all of the temporarily allowed armoring-related development were removed and the area restored to natural conditions

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“Similarly, the other alleged non-armoring alternative (i.e., “Alternative B: Protect Critical Infrastructure with Increased Beach Nourishment” as also described in Section 6.3.2), while including removal of the temporary features described above, does not consider the use of dune vegetation to prevent erosion, or the creation of a dune system to increase the resilience of the shoreline to sea level rise. In addition, this alternative considers the emergency placement of sandbags or revetment in the event of substantial erosion, which the Commission would not support.

It will be critical for the DEIR to provide an explanation of non-armoring alternatives, and these need to be explained and evaluated on a co-equal footing as other alternatives, even if the City does not ultimately find them feasible or preferred.<sup>2</sup> It is important that decision-makers have a full knowledge of the various potential alternatives and permutations, evaluated to similar levels of detail and against the same evaluation criteria, so that thoughtful decisions about them can be rendered, and the CEQA process is the place where that is intended to come together.

Conversely, it is also appropriate to evaluate armoring alternatives, including the proposed project, in the DEIR. Importantly, and as alluded to above, costs and benefits of these alternatives and others, including non-armoring alternatives, need to be evaluated at a similar level of detail to allow for direct comparisons to be made. This includes identifying the types of impacts that accrue from armoring in these coastal settings, including as it relates to loss of beach and beach recreational resources. We would be happy to work with you as you structure your alternatives analysis, including providing you examples of, and assistance in, applying the Commission’s methodology as it relates to armoring.” (Peter Benham, Coastal Planner, California Coastal Commission, North Central Coast District [A-CCC.2])

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<sup>2</sup> For example, in addition to the ‘no project’ alternative described, other non-armoring alternatives that should at a minimum be evaluated include dune creation, beach nourishment, relocation of threatened development, and combinations and permutations of all of these.

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“I was shocked when I read this report. Years ago, at a public outreach event, I asked one of the planners why don’t we just do sand nourishment instead of managed retreat, I was told that sand nourishment would be too expensive. Then the Ocean Beach Master Plan came out and guess what? After doing managed retreat and building a seawall, regular sand nourishment would be required in order to maintain a sandy beach at South Ocean Beach! So there is no benefit to managed retreat.

I was told that the rocks at South Ocean Beach had to be removed because the CCC would not approve them. At that time the OBMP included the use of tons of cobblestones to combat erosion, a softer solution than the existing rocks, supplemented with sand nourishment. There is no mention of cobblestones in the Draft EIR. I told the Planning Commission in emails and meetings that the OBMP as written would not protect the Oceanside Wastewater Treatment Plant from erosion by winter waves. Well I guess they heard me finally because the new Draft EIR details a plan to build a huge concrete seawall on top of the low seawall built to protect the Lake Merced Transport tunnel.

How is this an improvement over the existing rocks? This is a harder structure than the rocks that are to be removed.” (Dennis Holl [I-Holl-2.1])

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### **RESPONSE AL-1.1**

**No Armoring Alternatives.** Comment A-CCC.1 states that the EIR does not provide an adequate range of non-armoring alternatives, and that the EIR needs a no project alternative that includes removal of the revetments and restoration of the area to natural conditions. The city considered this alternative, but as discussed in draft EIR Section 6.6.1 (p. 6-43), this alternative would not meet most project objectives and would likely result in other adverse environmental impacts. The draft EIR considers two feasible non-armoring alternatives: Alternatives B (Protect Critical Infrastructure with Increased Beach Nourishment) and D (Replace Lake Merced Tunnel with Inland Infrastructure). Alternative B, which is substantially similar to the “true ‘no project’” alternative recommended in the comment, would remove the revetments and rubble, increase beach nourishment, and not install a wall. As discussed in draft EIR Chapter 6, alternatives considered in an EIR must reduce or avoid significant impacts of the project. For example, a version of Alternative B that removes the Great Highway and returns the area to natural conditions would not reduce environmental impacts relative to the current Alternative B, as it would result in the same types of significant transportation and noise impacts as described for the project from removal of the Great Highway. Furthermore, an EIR is not required to consider infeasible alternatives, as discussed in draft EIR Chapter 6 (p. 6-1); and the draft EIR (p. 6-43) explains that the alternative proposed by the commenter—removing all the temporarily authorized armoring and restoring the beach to natural conditions—is considered infeasible by the city due to the elevated risk to wastewater treatment infrastructure posed by removing the revetments without other protections in place and because it would not meet the project objective of protecting the Lake Merced Tunnel. Alternative D, Replace Lake Merced Tunnel with Inland Infrastructure, also would not require shoreline armoring. However, as discussed in draft EIR Section 6.5, with continued erosion in the long term other landward wastewater infrastructure, vehicle access, and public recreational access could be exposed to coastal hazards and require closure under Alternative D. Additionally, Alternative D would have the same significant and unavoidable noise and vehicle miles traveled (VMT) impacts as the proposed project and would have greater impacts on special-status plants, air quality, and cultural resources than the proposed project.

Comment A-CCC.2 states that a more detailed range of non-armoring alternatives including beach nourishment scenarios, relocation of threatened development, and dune-only restoration is necessary. Consistent with CEQA Guidelines section 15126.6(c), the draft EIR includes a reasonable range of alternatives. Pursuant to CEQA Guidelines section 15126.6(a), an EIR need not consider every conceivable alternative to a project but 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 that are infeasible. The range of alternatives discussed in the draft EIR includes the types of alternatives specified in the comment. Beach nourishment is evaluated in Alternative B, Protect Critical Infrastructure with Increased Beach Nourishment, and relocation of threatened development is evaluated in Alternative D, Replace Lake Merced Tunnel with Inland Infrastructure. Creation of a dune system was considered in the draft EIR as a potential alternative but was rejected because it would not meet the project objective of protecting the Lake Merced Tunnel (draft EIR pp. 6-45 and 6-46).

CEQA does not require that alternatives be described or evaluated at the same level of detail as is expected for the proposed project. As stated in CEQA Guidelines section 15126.6(d), an EIR should include “sufficient

information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.” CEQA Guidelines section 15126.6(d) states further that such comparison may be completed in the form of a matrix, noting that significant environmental effects of an alternative in addition to those of the project “...shall be discussed, but in less detail than the significant effects of the project as proposed.”

The draft EIR’s Alternatives B and D, both of which are non-armoring alternatives, are evaluated at a sufficient level of detail to make direct comparisons for purposes of CEQA. As shown in draft EIR Table 6-1 (p. 6-6), such detail includes, for each alternative, the volume and frequency of sand placement needed to maintain the same area of sandy beach as the project (beach width of at least 50 feet 90 percent of the time). Draft EIR Chapter 6 discusses the recreational impacts of each alternative.

**No Project Alternative with No Armoring.** Comment A-CCC.1 asserts that the No Project Alternative is not a true no project alternative, and that a no project alternative should envision the removal of existing revetments pursued under Coastal Development Permit 2-15-1537. However, CEQA requirements for the no project alternative differ from the commenter’s expectations of a future without the project. As discussed in draft EIR Chapter 6, CEQA requires that the lead agency evaluate a no project alternative. As provided in CEQA Guidelines section 15126.6(e)(2), “The ‘no project’ analysis shall discuss the existing conditions at the time the notice of preparation is published... as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based upon current plans...” Alternative A, the No Project Alternative, represents existing conditions and what would reasonably be expected to occur in the foreseeable future if the project were not approved. For the purposes of the No Project Alternative analysis, the EIR assumes that emergency armoring would be approved to protect existing infrastructure in danger from erosion. As noted above, the city considered an alternative that would remove the existing revetments and otherwise not alter the existing shoreline (draft EIR Section 6.6.1, Remove Shoreline Structures), but as discussed in draft EIR Section 6.6, Alternatives Considered but Eliminated from Further Analysis (p. 6-43), this alternative would not meet most project objectives and would likely result in other adverse environmental impacts.

**Environmentally Superior Alternative.** Consistent with CEQA Guidelines Section 15126.6(e)(2), the draft EIR identifies Alternative A (no project, with retention of the existing revetments) as the environmentally superior alternative because it reduces or avoids the significant and unavoidable impacts of the project; however, the draft EIR acknowledges that Alternative A would diminish the scenic quality of the shoreline and in the long term could result in impacts on water quality, adjacent shore erosion and bank swallow habitat, and other resources (refer to draft EIR p. 6-34). Furthermore, as stated in draft EIR Table 6-3, Alternative A does not represent a long-term solution that reflects the city’s local coastal program policies and would not meet the terms of the coastal development permit. If it is determined that the no project alternative would be the environmentally superior alternative, then the EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines section 15126.6[e][2]). Alternative B is the environmentally superior alternative among the other alternatives because it would avoid the significant and unavoidable effects identified for the project related to bank swallow habitat, VMT, and traffic noise without resulting in other potentially significant impacts (refer to draft EIR p. 6-42).

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## AL-1.2 CONVENTIONAL SEAWALL (ALTERNATIVE C)

This section of Response AL-1 addresses the following comments, which are quoted below:

A-GGNRA.23, I-Holl-2.2, I-Petterson-1.2

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**“Chapter 6 Alternatives, 6.3.3 Alternative C Protect Critical Infrastructure with Conventional Seawall:** Per the descriptions for *feasible alternatives* provided in section **6.1 Introduction** and earlier in the **Summary** section, e.g., **6.1 Introduction** and **S.5 Alternatives to the Project**, “... potentially feasible alternatives that could avoid or substantially lessen the significant impacts identified for the project while still meeting most of the project objectives,” The park does not consider Alternative C feasible because it is not clear in the description and in **Fig. 6-2** how much of the Conventional Seawall would be within park lands and how much would be on city property. This section needs a more detailed description and map clearing [sic] indicating the location of the Conventional Seawall with respect to city and park boundaries. As it is, the description in section **6.3.3.1**, “... the city would construct a conventional seawall along the South Ocean Beach shoreline, from Sloat Boulevard to the Fort Funston bluffs” is inadequate for the park to determine. Moreover, construction of a new conventional seawall in a national park is inconsistent with GGNRA’s GMP/EIS and NPS policy. The adverse impacts of its construction and operation would likely be more severe (approaching impairment) than the proposed project or Alternative A (No Project). It is highly unlikely the Ocean Beach site would be made available for a Conventional Seawall as proposed in Alternative C. Therefore, described as it currently is in the DEIR, Alternative C would not be feasible.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.23])

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“If they would approve a concrete structure from Sloat Boulevard to Fort Funston, then why not build it where the existing rocks are? That would provide better protection from future sea level rise than having it right in front of the Treatment Plant with the added bonus of saving the Great Highway and the natural bluffs under it. Again, there is no benefit from managed retreat.” (Dennis Holl [I-Holl-2.2])

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“The project should include at least one lane open each way on the Great Highway from Skyline to Sloat and the upper Great Highway from Sloat to Lincoln Way should stay open all the time. Also on the beach from Sloat Sout [sic] to the sewer plant A sea wall such as the one by Playland and also the middle of the Great Highway from Noriega st. to Quintara st. should be built. Those sea wall designs have withstood the test of time and stabilized the beach for decades.. thats what works!! I hope you make adjustments to the plan.” (Paul Petterson [I-Petterson-1.2])

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### RESPONSE AL-1.2

Comment A-GGNRA.23 states that Alternative C would not be feasible because construction of a new conventional seawall in a national park is inconsistent with GGNRA’s General Management Plan (GMP/EIS) and NPS policy, and NPS approval of a conventional seawall is highly unlikely. When selecting alternatives for consideration in an EIR, the lead agency must identify a reasonable range of “potentially feasible”

alternatives that meet most of the project objectives while reducing significant environmental impacts of the proposed project (CEQA Guidelines section 15126.6(a)). Pursuant to CEQA Guidelines section 15126.6(f), factors to be considered include site suitability, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional considerations, among others. At the time of the draft EIR's preparation, the planning department determined that Alternative C was a potentially feasible alternative, as explained further below. However, at the end of the CEQA process, in its consideration of whether to approve the project or an alternative, the city would weigh the environmental impacts of the project and alternatives together with the wider range of legal and policy considerations relevant to the project and make a final determination regarding feasibility in accordance with CEQA section 21081(a)(3). Thus, the subject comment concerning feasibility would be factored into the city's decision regarding whether to approve the project but does not necessitate revision of the draft EIR.

Additionally, the comment raises the issue of whether it would be possible to avoid constructing the Conventional Seawall in Alternative C on NPS lands, and requests further detail on the extent of the proposed wall on NPS lands. According to the city's design consultant for the project, NPS lands could not be entirely avoided in Alternative C due to the proximity of the Lake Merced Tunnel to the shoreline. Although the wall could be potentially moved in some areas, it is not possible to avoid NPS lands entirely in Alternative C. Accordingly, implementation of Alternative C would require a boundary adjustment with NPS or a land swap to build the entire conventional wall. As discussed above, the CEQA Guidelines require only that the EIR examine alternatives that are "potentially feasible." If the city were to select this alternative, additional legal scrutiny of feasibility would be required, and options such as a land swap or boundary adjustments would be considered prior to approval.

Comment I-Petterson-1.2 and Comment I-Holl-2.2 both propose a conventional seawall. Comment I-Petterson-1.2 suggests that the project keep one lane in each direction of the Great Highway Extension, and that a wall similar to the Noriega Seawall be built. Comment I-Holl-2.2 suggests building the wall in the same alignment as the existing revetments. The draft EIR considers these configurations in Alternative C, Protect Critical Infrastructure with Conventional Seawall (pp. 6-19 through 6-26). As discussed in the draft EIR (p. 6-42), Alternative C was not selected as the environmentally superior alternative because, while it would avoid the significant and unavoidable project effects, it would also result in new potentially significant effects related to geologic stability at adjacent Fort Funston, unique geologic features, adjacent bank swallow habitat, and aesthetic resources.

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### **AL-1.3 RELOCATE INFRASTRUCTURE INLAND**

This section of Response AL-1 addresses the following comment, which is quoted below:

O-SFB.2

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"We encourage you to analyze and pursue an alternative that more closely aligns with the vision established in the 2012 Ocean Beach Master Plan.<sup>5</sup> Although not an essential feature of the 2021 [sic] Master Plan, Baykeeper urges the city to recognize the eventual need to relocate wastewater and stormwater infrastructure. We understand this represents a high-cost alternative, though the DEIR itself recognizes the project itself will fail to protect this infrastructure after 2075 to 2100. San Francisco must consider relocating

critical infrastructure out of harm's way for a more extended period to avoid more complicated decisions for future generations.” (Ian Wren, San Francisco Baykeeper [O-SFB.2])

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<sup>5</sup> SPUR. 2012. Ocean Beach Master Plan. Available at <https://www.spur.org/publications/spur-report/2012-05-21/oceanbeach-master-plan>

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### **RESPONSE AL-1.3**

Comment O-SFB.2 recommends the city consider relocating the critical infrastructure away from the shoreline. This possibility is evaluated in the draft EIR as Alternative D, Replace Lake Merced Tunnel with Inland Infrastructure (pp. 6-26 through 6-33). Additionally, the Ocean Beach Master Plan acknowledges that relocating the infrastructure was not a preferred design alternative due to several factors including environmental and regulatory challenges, cost, the limited benefits of relocation, and environmental justice considerations.<sup>1</sup> The role of the Ocean Beach Master Plan in the development of the project is discussed in greater detail in Section 11.3, Response PP-1, Consistency with Local Plans and Policies.

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### **AL-1.4 ALTERNATIVES TO FULL CLOSURE OF THE GREAT HIGHWAY EXTENSION**

This section of Response AL-1 addresses the following comments, which are quoted below:

I-Colvin.2, I-Hill-1.2, I-Hill-2.3, I-Petterson-2.3, I-Priolli.4

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“There are other options rather than closure to be able to protect the sewage plant and the needs of transportation.

We believe it is possible to redesign the area by moving the roadway closer to the sewerage treatment plant, and having only a single lane north and southbound, in order to preserve this important westside highway.

Or another solution would be to reroute the Great Highway Extension so that it connects to the access road that currently runs just south of the San Francisco Zoo and intersects with Herbst Road. This access road used to be the road that connected San Franciscans living on the west side to Route 35. It could be again. Why aren't either of these two options being considered?

Please keep the Great HiWay open from Sloat blvd to Hiway 35. Do not Close the Great Hiway extension.” (Lucy Colvin [I-Colvin.2])

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“We believe it is possible to redesign the area by moving the roadway closer to the sewerage treatment plant, and having only a single lane north and southbound, in order to preserve this important westside highway. Another possible redesign could include rerouting the Great Highway Extension so that it connects

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<sup>1</sup> SPUR, AECOM, ESA PWA, Nelson\Nygaard, Sherwood Design Engineers, Phil D. King, PhD, Ocean Beach Master Plan, 2012. Prepared for State of California Coastal Conservancy, San Francisco Public Utilities Commission, and National Park Service, pp. III-25 to III-26.

to the access road that currently runs just south of the San Francisco Zoo and intersects with Herbst Road, close to the Pomeroy Recreation and Rehabilitation Center. Historically speaking, apparently this access road used to be the road that connected San Franciscans living on the west side to Route 35. Why aren't either of these two options being considered?

Instead, the "conventional wisdom" says that the roadway for automobiles will be replaced by a bicycle path and another parking lot. If coastal erosion is such a threat to a redesigned Great Highway Extension to the point where this roadway must be shut down, why is it not also a threat to a bicycle path and a parking lot?" (Steven Hill [I-Hill-1.2])

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"There are other options available to you. For example, you could -- instead of having two lanes north and southbound, you could have one lane north and southbound and move it in closer to the treatment plants. At the current rate of erosion that buy us at least another 25 years of usage of that road. Why isn't that being explored?

Also in looking at your aerial overhead, that access road that is in the middle, that also could be used as the road that connects to Skyline and that way you wouldn't have automobiles going so far out on that point. Instead, they could cut more through the middle. Why isn't that being explored?

Why is it that somehow the needs of bicyclists and pedestrians to have a trail just take precedence over working people that need that road and people who need that road to -- in case of emergency.

Why wouldn't a bike path also be threatened by coastal erosion?

And yet you're talking about putting in a bicycle path instead of maintaining the road that you have where you could put a bicycle path next to the road by redesigning that with a little bit of creativity." (Steven Hill [I-Hill-2.3])

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"As an alternative, when I was a kid, the traffic from Skyline used to go up through -- between Funston and the zoo there, well actually now where the sewer plant treatment facility is, and the handicapped center, I believe the street is call Herbst Street and it went up and it came out between Fleishhacker Pool, which is now the zoo parking lot, and the sewer plant.

So, that's just one option. You could reroute the traffic through there. Or at least keep one lane each way of the Great Highway open.

In addition to that, I can't understand why over the years that the City of San Francisco and the Park Service has not built an O'Shaughnessy style seawall such as the one in the middle of the Great Highway and the one up by Playland from the Cliff House from Lincoln Way.

We were starting to lose the Great Highway in the '80s. And the O'Shaughnessy seawall, there's a -- Mother Nature takes its cycles." (Paul Petterson [I-Petterson-2.3])

“We believe it is possible to redesign the area by moving the roadway closer to the sewerage treatment plant, and having only a single lane north and southbound, in order to preserve this important westside highway. Another possible redesign could include rerouting the Great Highway Extension so that it connects to the access road that currently runs just south of the San Francisco Zoo and intersects with Herbst Road, close to the Pomeroy Recreation and Rehabilitation Center. Historically speaking, apparently this access road used to be the road that connected San Franciscans living on the west side to Route 35. Why aren’t either of these two options being considered?

Instead, the “conventional wisdom” says that the roadway for automobiles will be replaced by a bicycle path and another parking lot. If coastal erosion is such a threat to a redesigned Great Highway Extension to the point where this roadway must be shut down, why is it not also a threat to a bicycle path and a parking lot?” (Peter Pirolli [I-Pirolli.4])

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#### **RESPONSE AL-1.4**

Comments I-Colvin.2, I-Hill-1.2, I-Hill-2.3, I-Petterson-2.3, and I-Pirolli.4 suggest keeping the Great Highway Extension open by reducing lanes to a single lane in each direction, or by connecting to Herbst Road. Draft EIR Alternatives B and C (pp. 6-11 through 6-26) both include retaining at least one Great Highway travel lane open in each direction. Routing traffic through the zoo via Herbst Road would not result in greater reduction of transportation and noise impacts relative to the project or Alternatives B or C, and therefore is not considered in the draft EIR.

With respect to comments concerning the multi-use path (I-Hill-1.2, I-Hill-2.3, and I-Pirolli.4), this feature is identified in the city’s local coastal program as a key policy priority of the city. The plan’s policy 12.1(e) states “(e) Extend the coastal trail to Fort Funston and Lake Merced by constructing a multi-use public access pathway along the shoreline from Sloat Boulevard to Skyline Boulevard.” As discussed further in Section 11.3, Response PP-1, if the multi-use trail were to become exposed to flood or erosion hazards in the future, it would be easy to remove or relocate, as required under Western Shoreline Area Plan Policy 12.4. Please refer to Section 11.6, Response TR-3, Emergency Access Impacts for responses to comments concerning project effects related to emergency access. Regarding the comment concerning a conventional seawall (I-Petterson-2.3), the draft EIR’s Chapter 6 evaluated the impacts of such an alternative (Alternative C) and concluded that it would not reduce impacts relative to the proposed project (p. 6-42).

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#### **AL-1.5 BOLSTER EXISTING REVETMENTS**

This section of Response AL-1 addresses the following comments, which are quoted below:

I-Holl-1.3, I-Holl-2.6, I-Lawrence-1.1, I-Lawrence-2.1

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“It seems they finally realized that the cobblestones would not protect the Treatment Plant.

They should just reconfigure the existing concrete revetments and then pile cobblestones on top. Then place sand on top of that. We keep the road and the land it sits on. Forget managed retreat, there is no benefit from it only huge additional costs.

The whole thing is BS. In reality, what the plan describes is Option 4, they are proposing to build Option 4.” (Dennis Holl [I-Holl-1.3])

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“The only prudent thing to do is to leave the existing rocks, reconfigure them to a more natural profile, and add tons of cobblestones in front of and on top of them. Then sand nourishment can be done in front of this barrier. This will result in a much softer structure than the massive concrete seawall called for in the Draft EIR that does not comply with the recently approved Local Coastal Plan. It will save at least \$150 million that will be needed to protect the shore from seas level rise.” (Dennis Holl, December 23, 2021 [I-Holl-2.6])

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“Options being considered are insufficient. Consider leaving rock revetments in place, keeping them covered with sand as best possible. This saves \$180 million, plus environmental impacts of the proposed construction. Especially saved is the risk that nesting birds vacate permanently. There is little practical difference between a wall and the rock now in place. Both are ugly and unnatural. Cover them up. That's the plan, anyway. The 2012 goal of removing the rock is obsolete and unnecessary; rethink it, and discard it.” (Steve Lawrence [I-Lawrence-1.1])

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“To best avoid the possibility of permanently terminating nesting of threatened bird species, and to avoid pollution and other adverse environmental effects of using much concrete, cancel the project to build a low-profile wall, and rely instead on existing rock revetments, and future, annual sand placements to retreat in a managed way per the Ocean Beach Master Plan.” (Steve Lawrence [I-Lawrence-2.1])

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### **RESPONSE AL-1.5**

Comments I-Holl-1.3, I-Lawrence-1.1, and I-Lawrence-2.1 suggest leaving the existing revetments in place and continuing beach nourishment. The draft EIR (pp. 6-5 through 6-11) considers this alternative as Alternative A, the No Project Alternative. As discussed in the draft EIR, Alternative A would not meet the project objectives because it does not represent a long-term solution that reflects the city’s local coastal program policies and would not meet the terms of the coastal development permit.

Comment I-Holl-2.6 suggests reconfiguring the existing revetment rocks into a more natural slope and adding cobblestones and sand on top, and suggests this would be a softer structure than the proposed buried wall. Reconfiguring the revetment rocks into a lower slope would extend the revetment toe to the west and could cause the beach to narrow even further than occurs under current conditions. Draft EIR Alternatives B and C would eliminate the same significant and unavoidable impacts as this concept but would likely result in fewer impacts. Therefore, the recommended alternative does not warrant further consideration in the EIR.

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## Comment AL-2: Alternatives Analysis

This response addresses the following comments, which are quoted below:

A-GGNRA.21, A-GGNRA.22

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**“Chapter 6 Alternatives, 6.3.1 and 6.3.2, Alternatives A & B:** It is likely that coastal dynamics will continue to adversely impact park facilities south of Sloat. GGNRA has already removed most of its parking because of undercutting. Under Alternatives A and B, it may not be feasible to retain the remaining parking lot, restroom, or MUNI turnaround/layover. Removal of these facilities would have adverse impacts on transportation and recreation. Consider revisions to the text and figures.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.21])

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“In addition, per p 6-5 for Alternative A, “If required to protect public safety and/or wastewater infrastructure from damage due to sudden risk of exposure (e.g., resulting from an unusually strong storm season causing accelerated shoreline erosion), the city would implement temporary emergency shoreline protection measures which could include placement of additional sand, sandbags, revetment rock, and/or longer-term measures if authorized by the environmental regulatory agencies with jurisdiction (e.g., California Coastal Commission).” NPS notes here that the city’s temporary emergency protection measures would likely adversely impact bank swallow habitat at least as much as the proposed action.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.22])

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## RESPONSE AL-2

### **COASTAL EROSION IMPACTS UNDER ALTERNATIVES A AND B**

Comment A-GGNRA.21 states that eventual loss of the existing NPS parking lot, restroom, and Muni turnaround/layover would have adverse impacts on transportation and recreation. The draft EIR acknowledged the eventuality of losing these facilities in the descriptions of Alternatives A and B (including in the figures), but for purposes of impact analysis did not assume the facilities would be lost or removed, since the likelihood and timing of an adequately erosive event are uncertain. However, the following sentences have been added to the draft EIR discussions of transportation and recreation impacts of Alternatives A and B on draft EIR pages 6-9, 6-11, 6-16, and 6-18 respectively:

#### **TRANSPORTATION AND CIRCULATION**

Alternative A would avoid the significant and unavoidable VMT impact caused by the project because the Great Highway between Sloat and Skyline boulevards would remain open. If continued erosion were to require further Great Highway lane closures, increased VMT would result due to rerouted vehicular traffic along Sloat and Skyline boulevards. Continued erosion could also result in the relocation of the Muni 23 Monterey turnaround/layover, which could cause similar impacts as the project.

## **RECREATION**

Alternative A would not displace recreational beach users to other areas such that physical degradation of facilities would result because during ongoing shoreline management activities ample beach surrounding the project site would remain available for recreationists, resulting in less-than-significant impacts related to recreation. If continued erosion were to require closure of the NPS parking lot and restroom, increased use from recreationists displaced by the project could accelerate deterioration of the public restrooms at Taraval Street and at Judah Street.

## **TRANSPORTATION AND CIRCULATION**

Alternative B would avoid the significant and unavoidable VMT impact caused by the project because the Great Highway between Sloat and Skyline boulevards would remain open. If continued erosion were to require further Great Highway lane closures, increased VMT would occur due to rerouted traffic along Sloat and Skyline boulevards. Continued erosion could also result in the relocation of the Muni 23 Monterey turnaround/layover, which could cause similar impacts as the project.

## **RECREATION**

During construction and beach nourishment, ample beach surrounding the project site would remain available for recreationists. Owing to the larger beach nourishment volumes, beach widths would be expected to remain similar to or wider than those under the project. As noted above, Alternative B would result in similar or slightly larger changes to sand bars than the project. Given the dynamic nature of the system, it is expected that bar characteristics would continue to vary seasonally. A change in sand bar geometry may result in enhanced or degraded wave breaking conditions for surfing, as a function of wave conditions and skill level, with resulting changes in wave conditions likely being more attractive to some users and less to others. However, given the anticipated range of sediment dispersion, the extent of such changes relative to inherent variability would not be substantial – discernable on the order of about 1,000 feet to 3,000 feet from the project site to the north and likely an equal distance to the south. For these reasons, and given the amount of adjacent and nearby coastline available for surfing, the changes under Alternative B would not be expected to result in the displacement of substantial numbers of visitors such that other beach park facilities experienced substantial physical deterioration. If continued erosion were to require closure of the NPS parking lot and restroom, increased use could accelerate deterioration of the public restrooms at Taraval Street and at Judah Street.

## **NO PROJECT ALTERNATIVE'S IMPACTS ON BANK SWALLOW HABITAT**

Comment A-GGNRA.22 states that the city's temporary emergency protection measures under Alternative A would likely adversely affect bank swallow habitat at least as much as the proposed project. The draft EIR's discussion of impacts of the No Project Alternative on biological resources (p. 6-9) notes that emergency shoreline protection measures (such as sandbags or revetment rock) could accelerate erosion in adjacent areas, and thereby could indirectly affect nearby bank swallow habitat. However, this does not necessarily mean that bank swallow habitat within the project area would be adversely affected, given that bank swallows first occupied the bluff face within the project area after sudden bluff erosion and associated emergency placement of the southern revetment in 2010 (as discussed on draft EIR p. 4.6-24). The draft EIR analysis of the No Project Alternative incorporates this uncertainty into the relative impact conclusion in draft EIR Table 6-4 (p. 6-37).

## 11.11 Greenhouse Gas Emissions

The comments and corresponding responses in this section cover topics in draft EIR Appendix B, Initial Study, Section E.9 Greenhouse Gas Emissions.

### Comment GHG-1: Greenhouse Gas Emissions Impacts

This response addresses the following comments, which are quoted below:

I-Cawthon-1.2, I-Cawthon-2.2

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“Second, even though the plan concludes that there will be a significant increase in VMT it also concludes that the project will not generate greenhouse gas emissions that will significantly impact the environment.

That does not seem plausible that a project could generate additional VMT without also generating significant greenhouse gas emissions. This should be addressed in the final EIR.

Thank you commissioners for your time and consideration.” (Michael Cawthon [I-Cawthon-1.2])

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#### “Greenhouse Gas Emissions

The analysis of greenhouse gas emissions (GHG) in the Draft EIR should be updated to reflect the more accurate increase in VMT from the proposed closure of the Great Highway Extension (see Transportation and Circulation above).

This project alone would not result in enough additional GHG emissions to have a noticeable impact on global climate. As such, agencies are not required to perform a quantitative analysis of the project’s additional GHG emissions. Nonetheless, in the interest of accuracy and transparency, the report should be updated to provide a quantitative analysis of GHG emissions from the project.

The report has already concluded that the project would generate significant additional VMT. The volume of GHG emissions from the significant additional traffic generated by this project should also be calculated and included in the report, to provide a more complete and accurate depiction of the impacts of this project. Failure to quantify the amount of additional GHG emissions from this project, simply because it would not have a significant impact on global climate, would be a disservice. The Final EIR should provide an estimate of increased GHG emissions to provide a complete assessment of all environmental impacts of this project.” (Michael Cawthon [I-Cawthon-2.2])

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### RESPONSE GHG-1

Although the Impact C-GG-1 discussion in EIR Appendix B, Initial Study Section E.9, Greenhouse Gas Emissions, indicates that the project would result in an increase in the total daily vehicle miles traveled (VMT) in San Francisco due to the proposed closure of the Great Highway south of Sloat Boulevard, the analysis

does not characterize the VMT increase as a significant greenhouse gas (GHG) emissions impact. This conclusion should not be confused with the significant VMT impact identified in Impact TR-5 in draft EIR Section 4.3, Transportation and Circulation, and discussed in Section 11.6, Response TR-4, in this RTC document.

The commenter requests that the EIR quantify GHG emissions from the increased VMT caused by redirecting traffic around the project site. As stated in Initial Study Section E.9, Greenhouse Gas 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 GHGs and describes the required contents of such a plan. Accordingly, the city has prepared strategies to address GHG emissions, which present a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's qualified GHG Reduction Strategy in compliance with the CEQA Guidelines. Initial Study Section E.9, Greenhouse Gas Emissions, describes the VMT impact that would result from the rerouting of the traffic due to the closure of the Great Highway, stating that the closure would represent a 0.07 percent increase in vehicle miles traveled in San Francisco. Nonetheless, **Attachment G** presents the estimated project-related increase in GHG emissions that would be associated with the increased VMT due to the closure of the Great Highway south of Sloat Boulevard. According to the modeling results shown in Attachment G, such action would be expected to result in an increase of approximately 660 metric tons of carbon dioxide equivalents (CO<sub>2</sub>e) during the first year of closure, with slightly less emission increases occurring during subsequent years due to increased vehicle fuel efficiencies.

The city has many programs in place for reducing transportation related GHG emissions, including a transportation demand management program, the city's bike plan, the transportation sustainability program, and other measures that are designed to reduce reliance on cars and reduce VMT at the citywide level. As explained in draft EIR Appendix B, Initial Study (p. 53), based on the city's latest GHG emissions inventory, these programs have successfully reduced the city's transportation-related emissions by 16 percent from 1990 to 2019.<sup>1</sup> Also, as described in the draft EIR Appendix B, Initial Study (p. 48), by 2019 the city's GHG emissions reduction programs had resulted in a 41 percent reduction in total citywide GHG emissions below 1990 levels. Through these reductions, the city exceeded the year 2020 and 2030 reduction goals outlined in the Bay Area Air Quality Management District's Bay Area 2017 Clean Air Plan, Executive Orders (EO) S-3-05 and B-30-15, and Assembly Bill (AB) 32 (also known as the Global Warming Solutions Act), and the city's 2017 GHG emissions reduction goal. There is no evidence to suggest that the proposed rerouted traffic from the Great Highway would inhibit the city's ability to continue to meet its GHG reduction targets. Because the project was determined to be consistent with the city's GHG Reduction Strategy, the initial study determined that the project would not generate GHG emissions at levels that would result in a significant impact.

The approximately 660 metric tons of CO<sub>2</sub>e per year that would result from the re-routing of traffic due to the closure of the Great Highway would be a minor (0.03 percent) increase in citywide transportation sector GHG emissions, which were reported to be 2.2 million metric tons of CO<sub>2</sub>e per year in 2019.<sup>2</sup>

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<sup>1</sup> San Francisco Department of the Environment, San Francisco's Carbon Footprint, 2021. Available at: <https://sfenvironment.org/carbonfootprint>. Accessed October 20, 2021.

<sup>2</sup> San Francisco Department of the Environment, San Francisco's Carbon Footprint, 2021. Available at: <https://sfenvironment.org/carbonfootprint>. Accessed October 20, 2021.

## 11.12 Geology and Soils

The comments and corresponding responses in this section cover topics in draft EIR Appendix B, Initial Study, Section E.16, Geology and Soils. The comment topics are related to:

- GE-1: Shoreline Erosion Impacts
  - GE-1.1: Uncertainty in Estimating Rates of Sediment Transport and Erosion
  - GE-1.2: Commercial Sand Mining in San Francisco Bay
  - GE-1.3: Project Effects on the Shoreline and Public Safety During Periods of Buried Wall Exposure

### Comment GE-1: Shoreline Erosion Impacts

#### GE-1.1: UNCERTAINTY IN ESTIMATING RATES OF SEDIMENT TRANSPORT AND EROSION

This response addresses the following comments, which are quoted below:

O-SURF.3, O-SFB.1

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“Surfrider agrees with statements made in the draft EIR which equate beach loss with impacts to mineral resources, public access, and public recreation. However, Surfrider does not feel at all confident that the draft EIR mitigates for these potential impacts through its descriptions of an artificial sand replenishment program.

Our primary concern is that the EIR does not properly address or characterize a known area of controversy. It does identify the following statement as an area of known controversy related to erosion on the Southern Reach of the beach:

“Estimating rates of sediment transport and erosion of beaches and bluffs are inherently uncertain because of the highly variable nature of the forcing mechanisms that include ocean swells, storm surges, El Nino events, and other unpredictable natural processes.”

We would like to point out that there is a net average loss of sand over time in parts of the project area<sup>8</sup> and that sea level rise guarantees further net losses of available beach space. The controversy in question is more about the project’s ability to retain sand in light of these established processes. To that end, Surfrider believes the sand management strategy has not properly considered relevant environmental conditions and we are highly skeptical that the sand retention strategy can effectively mitigate for widespread impacts associated with a project that is unable to retain sand effectively. (Holden Hardcastle, Chair, Surfrider Foundation San Francisco Chapter, and Laura Walsh, California Policy Manager, Surfrider Foundation [O-SURF.3])

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<sup>8</sup> “Monthly U.S. Geological Survey (USGS) shoreline data collected at South Ocean Beach between 2004 and 2020 shows an average annual shoreline erosion rate of about 1.7 feet per year, with as much as 4.3 feet per year occurring towards the south end of the project site (i.e., near the Southwest Ocean Outfall).<sup>11,12</sup> For context, the USGS data for the shoreline to the north of the project area (“Middle Ocean Beach”, extending south from Lincoln Boulevard to Sloat Boulevard) shows an average annual accretion (the accumulation of sand) rate of about 4.3 feet per year. Closer to the project site (i.e., within 1,000 feet upcoast of Sloat Boulevard), the average annual accretion rate is

around 0.7 feet per year.<sup>13</sup> In contrast, the USGS data show average annual bluff and backshore erosion along Fort Funston to the south of the project area as roughly 2 to 3 feet per year, and closer to 5 feet per year immediately adjacent to the project site. Revetments slow shoreline retreat by protecting the land from direct exposure to ocean waves.” (EIR, page **14 (I-6)**)”

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“Baykeeper recognizes this plan incorporates an element of managed retreat and removal of existing hardened defenses, including riprap and debris. The preferred alternative will likely result in near-term improvements through widening Ocean Beach and introducing recreational and habitat benefits to the area. Given the fact, however, that south Ocean Beach is experiencing some of the fastest rates of erosion along the West Coast, climate-induced sea level rise is likely to quickly erode any nature-based features established through this project. At that point, the hardened features protecting the Westside Transport Box and Lake Merced Tunnel will become exposed, and an even more costly and environmentally damaging alternative will be required.

Baykeeper is concerned that if the sea wall-based preferred alternative from the DEIR is constructed, the scenario considered in the 2012 Ocean Beach Master Plan becomes an eventuality:<sup>2</sup>

*Depending on its height, a structure might be overtopped by wave runup during storm surges, inundating inland areas. If the coastline recedes until it reaches a hard structure, the beach may be lost, along with the ecological and recreational functions it supports. Reflected wave energy may worsen erosion in adjacent areas. There are nearly 10,000 linear feet of hard structures at Ocean Beach today, in the form of the three existing sea walls and recent revetments. This does not include the Westside Transport Box, which could end up functioning as a sort of seawall if exposed by beach and dune recession. Additional armoring will likely be necessary south of Sloat, but should be placed as part of a proactive and comprehensive strategy to manage coastal dynamics at Ocean Beach. Its placement and design should reflect consideration of ecological and access needs, as well as potential negative secondary erosion effects.*

Baykeeper does not feel the preferred alternative represents a sustainable long-term solution to shoreline management at South Ocean Beach, consistent with the objectives of the 2014 legal settlement agreement<sup>3</sup> and the 2015 California Coastal Commission permit.<sup>4</sup> We share the concerns that Surfrider Foundation and others that the proposed project relies too heavily on grey infrastructure approaches. Any natural features incorporated into the project will quickly erode in the face of modest rates of sea level rise in the coming decades.

The DEIR does not consider the eventual consequences of erosion and how long a beach will exist in the face of gradual sea level rise punctuated by storm surges that have historically resulted in marked increases in coastal erosion along south Ocean Beach. (Ian Wren, Staff Scientist, San Francisco Baykeeper [O-SFB.1])

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<sup>2</sup> SPUR. 2012. Ocean Beach Master Plan. Available at <https://www.spur.org/publications/spur-report/2012-05-21/oceanbeach-master-plan> [sic]

<sup>3</sup> California Coastal Protection Network v. City & County of San Francisco, Case No. CGC-11-513176. California

<sup>4</sup> Coastal Commission, Coastal Development Permit 2-15-1537, Issued November 9, 2015.”

### **RESPONSE GE-1.1: UNCERTAINTY IN ESTIMATING RATES OF SEDIMENT TRANSPORT AND EROSION**

Comments O-SURF.3 and O-SFB.1 question the adequacy of the project design and environmental analysis as it concerns erosion, including with future sea level rise, given the uncertainty in estimating sediment transport and erosion rates.

Comment O-SURF.3 correctly notes that the draft EIR discloses the inherent uncertainty in estimating rates of sediment transport and shoreline erosion (Sections S.7 [p. S-13] and 5.4 [p. 5-5]). Similarly, as evidenced by the comment's inclusion of text excerpted from the draft EIR, the EIR also considered the erosion trends within the project area and factored those environmental conditions into the environmental analysis (e.g., Section 1.4.3 [p. 1-6] and Appendix B, Initial Study, Section E.16 [pp. 92 through 93]). In light of these conditions, similar to concepts that informed the project design (e.g., the Ocean Beach Master Plan), the project relies on a beach nourishment program involving the import of substantial quantities of sand to sustain a sandy beach.

As explained in draft EIR Section 2.4.5.5, the SFPUC prepared a sand management plan<sup>1</sup> which presents a potential range of sand placement regimes under the project, depending upon sand availability and shoreline conditions. As summarized in that section:

...the city used a model to estimate the performance of the small and large sand placements in terms of frequency, among other parameters. The analysis considers a variety of factors, including sea level rise. The sea level rise amounts evaluated are based upon the Ocean Protection Council's (OPC) State of California Sea-Level Rise Guidance 2018 Update, projections for San Francisco by 2100, assuming a high greenhouse gas emissions scenario.<sup>28</sup> Specifically, for each of the 1,000 model runs performed for the small and large sand placements, respectively, a sea level rise projection value was selected. Per the OPC guidance, the values selected ranged between the 50 percent and 0.5 percent probability of occurrence, as well as the extreme H++ scenario (10.2 feet by 2100) which does not have an assigned probability of occurrence.<sup>29</sup>

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<sup>28</sup> Ocean Protection Council, 2018. State of California Sea-Level Rise Guidance. California Ocean Protection Council, 2018 Update.

<sup>29</sup> The OPC guidance includes probabilistic sea level rise projections which associate the likelihood of occurrence (probability) with various sea level rise heights and rates. These projections are based upon a range of greenhouse gas emissions scenarios. The H++ scenario represents an extreme sea level rise projection corresponding with the loss of the West Antarctic ice sheet, the probability of which is unknown.

The modeled beach widths that resulted from this analysis are presented in draft EIR Table 2-2 (p. 2-26). As the table shows, under the project, South Ocean Beach would be wider than 50 feet at least 90 percent of the time over the lifetime of the project (modeled as 80 years).

In addition to the results of the base model runs presented in the draft EIR, the modeling performed for the sand management plan also included a model uncertainty analysis that involved modeling seven additional cases, with the intent of addressing model uncertainty and providing a better understanding of the plan's implementation. The seven additional cases, each of which modeled the small sand placement, addressed

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<sup>1</sup> Moffatt & Nichol Engineers, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, 2020. Sand Management Plan – Ocean Beach Climate Change Adaptation Project, Long-term Improvements. Prepared for San Francisco Public Utilities Commission. July 2020.

greater longshore diffusivity, a nominal increase in offshore wave heights to address the potential for increased storminess, a flatter beach slope, greater background erosion, a greater trigger beach width (80 feet), a mixed replenishment volume scenario, and a wave run-up calculation added to the model. Relative to the results for the base scenario, the additional case model results indicate that the placement frequencies, wall exposures, and beach widths could vary under different scenarios. For example, with greater background erosion, the sand placement frequency could increase, but with a mix of placement volumes, the placement frequency could be reduced. Similarly, a flatter beach slope could result in a reduced average beach width, while an increase in the sand placement trigger distance could result in an increased average beach width.<sup>2</sup> The results of the base runs are those expected to be reasonably foreseeable, and therefore were included in the draft EIR for detailed analysis.

As explained in draft EIR Appendix B, Initial Study, Section E.16 (p. 88), a coastal engineering study was prepared to assess whether project implementation would result in substantial adverse effects on coastal processes beyond the project site, compared to existing conditions (“coastal process analysis”). The coastal process analysis, which is included as draft EIR Appendix H, serves as the basis for this impact discussion. The analysis uses a numerical model and other standard coastal engineering analysis techniques, along with empirical evidence, to assess potential changes to sand bars (*bar effects*) and adjacent shoreline erosion (*end effects*) for baseline and project conditions. The coastal process analysis discloses and outlines key assumptions and uncertainties (see draft EIR Appendix H, Section 2.4 [p. 29]). Specifically, the document addresses model uncertainty, natural uncertainty of environmental systems, and method uncertainty, and explains how each was considered and addressed in the analysis.

The comments do not identify any technical deficiency in the analysis, nor do they offer any evidence of an alternative that would result in greater sand retention or reduced environmental effects. The standards for adequacy of an EIR are outlined in CEQA Guidelines section 15151, which states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers 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, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

The EIR identifies the issue of uncertainty associated with estimating shore erosion; discloses the erosion trends within the project area; explains how the uncertainty was factored into the project design and environmental analysis; and presents conclusions that, based upon the evidence considered, represent the authors’ expert opinion as to the reasonably feasible outcome. Based upon substantial evidence in the record, the EIR concludes that the effects of the project on coastal processes would be less than significant. For these reasons, the EIR adequately addresses the issue of uncertainty in estimating rates of sediment transport and erosion.

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<sup>2</sup> Moffatt & Nichol Engineers, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, 2020. Sand Management Plan – Ocean Beach Climate Adaptation Project, Long-term Improvements. Prepared for San Francisco Public Utilities Commission. July 2020.

For additional responses, refer to Response GE-1.3 regarding project effects on shoreline and public safety during wall exposure.

## **GE-1.2: COMMERCIAL SAND MINING IN SAN FRANCISCO BAY**

This section of Response GE-1 addresses the following comments, which are quoted below:

I-Boken-1.1, I-Boken-2.1

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“This is to follow up on my public comment at the Planning Commission meeting.

The environmental review is inadequate because it fails to analyze the effects on sandmining in San Francisco Bay on erosion at the southern area of Ocean Beach and accretion at the northern area of Ocean Beach.

This has been demonstrated by a US Geological Survey study.

<https://avanan.url-protection.com/v1/url?o=https%3A//www.google.com/amp/s/www.sfgate.com/science/amp/SF-Bay-sand-mining-alarms-conservationists-4121440.php&g=ZWMxMzU4YTYxNzg5ZjllMw==&h=MzE4ZWl0MTZhOGU1NTYyNjM1NzcwYWU1MjcxdjY5OTAwNjBhYzRmYzkwYjlxZTAxZjUzZTp2MTp0Ok4=YQ==&p=YXAzOnNmZHQyOmE6bzo2ZDI5NGMyYjY5OTAwNjBhYzRmYzkwYjlxZTAxZjUzZTp2MTp0Ok4=>

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<https://avanan.url-protection.com/v1/url?o=http%3A//www.allgov.com/usa/ca/news/controversies/stateappellate-court-halts-excessive-sand-mining-in-san-francisco-bay-151120%3Fnews%3D857897&g=ZGVmM2RINDU2M2VkmjEYyG==&h=NjUwNDJjOWYwZmlwNWVhN2RiZDlhNTE4ZmJkYTlmYjJhMzQ1MjM4N2QyYTYyYzkwNDk3MzJmME1ZWU1OTM0Mg==&p=YXAzOnNmZHQyOmE6bzo2ZDI5NGMyYjY5OTAwNjBhYzRmYzkwYjlxZTAxZjUzZTp2MTp0Ok4=>” (Eileen Boken [I-Boken-1.1])

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“Eileen Boken, Coalition for San Francisco Neighborhoods speaking on my own behalf. Regarding sand replenishment as part of this project, the 800-pound gorilla in the room is commercial sand mining in San Francisco Bay with the sand being used for construction purposes. The US Geological Survey in Santa Cruz has conducted modeling of sand coming down from the Sierras, being transported through San Francisco Bay and then out through the Golden Gate. The USGS modeling concluded that sand mining around Angel Island and Alcatraz changes the sand transport patterns. On the south end of Ocean Beach this has exacerbated erosion. On the north end of Ocean Beach, this has caused accretion or buildup. The sand mining issue has been brought to the attention of the SFPUC Commission. Key permitting agencies for commercial sand mining in San Francisco Bay are the State Lands Commission and the Bay Conservation and Development Commission BCDC. I would urge the Planning Commission to conduct an informational hearing on the sand mining issue.” (Eileen Boken [I-Boken-2.1])

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### **RESPONSE GE-1.2: COMMERCIAL SAND MINING IN SAN FRANCISCO BAY**

Comments I-Boken-1.1 and I-Boken-2.1 concern effects related to sand mining in San Francisco Bay. Draft EIR Impact GE-3 (Appendix B, Initial Study, p. 85) acknowledges that coastal processes at Ocean Beach have been substantially altered by human activity, including through main ship channel dredging, shoreline modifications, and conventional shoreline protection, among other interventions both by the city and other government entities. The draft EIR states that sand mining in San Francisco Bay is a primary contributor to alterations of the shoreline's natural sediment supply (Appendix B, p. 85). These altered conditions constitute the baseline against which the draft EIR evaluates the project's potential physical environmental effects. The project does not propose any changes to existing sand mining; therefore, the draft EIR does not analyze the effects of sand mining.

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### **GE-1.3: PROJECT EFFECTS ON THE SHORELINE AND PUBLIC SAFETY DURING WALL EXPOSURE**

This section of Response GE-1 addresses the following comments, which are quoted below:

I-Ciganek.4, I-Holl-2.4, I-Moore.15, and I-Pirolli.2

Response GE-1.3 also addresses the following comments, which are similar or identical to the representative comment quoted on page 11.12-4 and are not individually listed to avoid repetition:

I-Aguilar.2, I-Akin.2, I-Anderson.2, I-Antell.2, I-Argaman.2, I-Atkind-1.2, I-Atkind-2.2, I-Barzano.2, I-Basso.2, I-Beale.2, I-Bekkerman.2, I-Bense-Kang.2, I-Block.2, I-Boccia.2, I-Bocharova.2, I-Brinner.2, I-Bruchman.2, I-Burke.2, I-Busse.2, I-Chen.2, I-D.2, I-Damon.2, I-Davies.2, I-Deanna.2, I-Derbin.2, I-Devore.2, I-Dillingham.2, I-Doolittle.2, I-Dorazio.2, I-Dow.2, I-Dumanovsky.2, I-Eberspächer.2, I-Ernst.2, I-Flack.2, I-Foo.2, I-Fowler.2, I-Fu.2, I-Garneau.2, I-Gates.2, I-Gill.2, I-Giovara.2, I-Gold.2, I-Gorski.2, I-Greer.2, I-Hall.2, I-Hanley.2, I-Hansen.2, I-Hardcastle.2, I-Hardison.2, I-Haslam.2, I-Holstad.2, I-Honan.2, I-Howell.2, I-Huang\_L.2, I-Huang\_P.2, I-Huckins.2, I-Hunt.2, I-Ingram.2, I-Ininns.2, I-Jaffee.2, I-Jca.2, I-Jo.2, I-Kagel.2, I-Kelly\_B.2, I-Ketchum.2, I-Kwong.2, I-Laharty.2, I-Latham.2, I-Lenahan.2, I-Liu.2, I-Lyford.2, I-Mach.2, I-Madsen.2, I-Malone.2, I-Marshall.2, I-Martin.2, I-Matt.2, I-Matt\_R.2, I-McCubbin.2, I-McLaughlin.2, I-Meyerowitz.2, I-Miller.2, I-Montgomery.2, I-Musselman.2, I-Neeser.2, I-Nelissen.2, I-Niffenegger.2, I-Olsen.2, I-Page.2, I-Perry.2, I-Peshkin.2, I-Pielock.2, I-Place.2, I-Polesky.2, I-Raimondi.2, I-Rasmussen.2, I-Reckas.2, I-Richardson-1.2, I-Richardson-2.2, I-Rife.2, I-Robertson.2, I-Royer-1.2, I-Royer-2.2, I-San Francisco Events.2, I-Segal.2, I-Silverstein.2, I-Simonian.2, I-Solmssen.2, I-Sowalsky.2, I-Spector-1.2, I-Spector-2.2, I-Stanfield.2, I-Stevens.2, I-Strader.2, I-Stuebe.2, I-Sugino.2, I-Sullivan.2, I-Surin.2, I-Taputuarai.2, I-Thompson.2, I-Ting.2, I-Tull-2.2, I-Veraldi.2, I-Wahn.2, I-Wang.2, I-Ward.2, I-Weinberger.2, I-Weiss.2, I-Weyland.2, I-Whitworth.2, I-Wittenmeier.2

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“Predicting a need for a seawall due to climate change and then taking the rosy view that the wall won’t cause erosion is clearly an unacceptable juxtaposition with disastrous consequences.” (Matt Ciganek [I-Ciganek.4])

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“Right now, the existing rock revetment not only protects the Lake Merced Tunnel, the Treatment Plant, and the Great Highway from erosion, it separates the Fort Funston area from the very popular sandy beach from Sloat Boulevard northward. If managed retreat is implemented, the shoreline will recede at South Ocean Beach. This will leave the beach north of Sloat more exposed to erosion from the waves especially during the periodic El Nino winters. It won’t be long before the condition of no beach in winter that is south of the revetment to extend northward as it has been doing resulting in a loss of sandy beach at Sloat, Vicente, and Taraval.” (Dennis Holl [I-Holl-2.4])

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“Accelerated erosion due to a vertical wall could threaten the ecosystem, the LMT, and surrounding homes, and backfire versus the intended project. Property owners may have a private cause of action, potentially as a represented class, to the extent that the city fails to adhere to the requirements of the city charter with respect to sand pollution, let alone raw sewage discharge.” (Goffrey Moore [I-Moore.15])

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“The EIR suggests that the proposed seawall will destroy the beach. Currently one can walk from the middle range of Ocean Beach all the way past Funston and Thornton Beach—a remarkable stretch of beach that makes one forget that San Francisco and Daly City are just on the other side of those cliffs. Destroying that beach would be an enormous environmental and recreational sacrifice.” (Peter Pirolli [I-Pirolli.2])

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“In particular, I am concerned about SFPUC’s [sic] ability to maintain a highly artificial, steep slope in front of the proposed wall. An exposed wall will be unsafe and erode the beach. Even in its best form, the proposed project does not include a beach that is very wide and I am concerned that the triggers and sand management strategy proposed are insufficient for ensuring that lateral access and recreational space will exist on the beach.” (This comment is representative of the comments listed on page 11.12-1, which are similar or identical to the representative comment.)

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### ***RESPONSE GE-1.3: PROJECT EFFECTS ON THE SHORELINE AND PUBLIC SAFETY DURING WALL EXPOSURE***

Comments O-SURF.3, O-SFB.1, I-Ciganek.4, I-Holl-2.4, I-Moore.15, and I-Pirolli.2 assert that the project would cause shoreline erosion and that the EIR does not adequately address the eventual consequences of erosion on the shoreline, including with sea level rise. As presented in draft EIR Chapter 2, Project Description, the project proposes to remove the existing rock revetments, construct new structural protection of the wastewater infrastructure farther landward, and periodically place sand to maintain a sandy beach over time. The coastal processes analysis (draft EIR Appendix H) assesses the existing conditions and describes how the existing armoring (revetments) have caused local beach scouring and loss of beach in front of the structures based on coastal engineering literature and as shown by U.S. Geological Survey (USGS) monitoring data. The draft EIR evaluated the effect of the project on shoreline segments north and south of South Ocean Beach in Impact GE-3 (draft EIR Appendix B, Initial Study, pp. 81 through 94). As explained in Impact GE-3, the bathymetry near Ocean Beach (San Francisco Bay Bar and narrow channel at the Golden Gate) refracts wave energy such that sand at Ocean Beach moves in complex ways.

Under existing conditions, long-term beach monitoring by the USGS indicates that Middle Ocean Beach is relatively stable or accreting (widening), and accelerated erosion associated with the existing revetments at South Ocean Beach has not been observed at Middle Ocean Beach. The response of waves to the existing revetments and to a wall were found to be similar; however, the proposed buried wall would be less prominent than the revetments. The project would remove the revetments, relocate the structural protection farther landward, and maintain a wide, sandy beach through periodic beach nourishment. The draft EIR assessed these actions using a combination of modeling, review of literature, and analysis of historical data collected at the site by the USGS, and concluded that the project would not result in accelerated erosion along Middle Ocean Beach. For South Ocean Beach and Fort Funston, the draft EIR concluded that the shoreline erosion rates would not differ substantially under project conditions relative to historical and baseline conditions, and the effect would be less than significant (draft EIR Appendix B, Initial Study, p. 94).

With respect to maintaining a sandy beach within the South Ocean Beach project area, draft EIR Section 2.4.5, Beach Nourishment, explains that the city would implement a shoreline monitoring program and place sand when established triggers are met during annual monitoring. The monitoring program, which is further described in draft EIR Section 2.4.5.1 and Response PD-6 (Section 11.2), would be similar to that which the SFPUC currently conducts along the South Ocean Beach shoreline; it would be developed in coordination with the California Coastal Commission and National Park Service, identify performance objectives for the nourishment program, specify criteria against which performance would be evaluated, outline both qualitative and quantitative monitoring methods, and establish an implementation and reporting schedule. With respect to the triggers for sand placement, draft EIR Section 2.4.5 explains that the first trigger would be reached if the beach width were observed to be less than 50 feet over 500 or more total linear feet of beach. The second trigger would be reached if 500 feet or more total length of the buried wall were observed to be exposed. Sand placements would occur as soon as possible after either trigger is reached, generally within one year.

Because the buried wall would be located farther east (inland) than the existing revetments, sand placements would be needed less frequently to maintain a sandy beach than would be required under a continuation of current conditions for the purpose of protecting the Lake Merced Tunnel. Draft EIR Chapter 6, Alternatives, discusses the placement of sand needed under the project and the No Project Alternative (which would be a continuation of existing conditions). As shown in draft EIR Table 6-1, the project would place sand approximately once every 4 to 10 years, while under continuation of current conditions sand would continue to be placed roughly every 1 to 2 years. Draft EIR Table 1-1 summarizes past sand placements, which were used to estimate the future sand placements needed under the No Project Alternative. Therefore, the project would retain sand for longer periods than occurs under current conditions.

As explained in draft EIR Section 2.4.5.5, Type and Frequency of Sand Placement (p. 2-25), and Impact GE-3 (draft EIR Appendix B, p. 90), the shoreline modeling conducted for the project, which provides the basis for the proposed sand management program and estimated frequency of sand placements, incorporates sea level rise. The sea level rise amounts evaluated in the modeling are based upon the Ocean Protection Council (OPC) State of California Sea-Level Rise Guidance 2018 Update projections for San Francisco by 2100, assuming a high greenhouse gas emissions scenario.<sup>3</sup> Specifically, for each of the 1,000 model runs

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<sup>3</sup> Ocean Protection Council, State of California Sea-Level Rise Guidance. California Ocean Protection Council, 2018 Update.

performed for the small and large sand placements, respectively, a sea level rise projection value was selected. Per the OPC guidance, the values selected ranged between the 50 percent and 0.5 percent probability of occurrence, as well as the extreme H++ scenario (10.2 feet by 2100), which does not have an assigned probability of occurrence.<sup>4</sup>

The draft EIR estimates beach width over the project lifetime, modeled as 80 years, including with sea level rise, and reports this information in Section 2.4.5.6, Beach Widths with Sand Placement (p. 2-26). As discussed there and shown in Table 2-2, the average beach width would be greater than 50 feet at least 90 percent of the time over the lifetime of the project. Refer also to Response PD-6 for additional discussion of beach nourishment. The draft EIR discloses in Impact GE-3 (Appendix B, p. 91) that during temporary periods of wall exposure, there would be opportunity for wave interactions with the hard structure, which could contribute to localized beach scour. According to the city's design consultant for the project, in a "normal storm year,"<sup>5</sup> a portion of the buried wall up to 500 linear feet long and up to 5 feet tall could be exposed between February and April. However, the draft EIR also explains that by setting the shore back and widening the beach, along with providing periodic beach nourishment, the project would substantially reduce or avoid the types of wave interactions that occur under existing conditions with the rock revetment and contribute to beach erosion. For these reasons, the EIR concludes that the project's effects on coastal processes, including the beach, bluffs, and sandbars, would be less than significant.

With respect to multiple commenters' stated concerns regarding beach access safety during periods of wall exposure, the project would add a new beach access stairway at the south end of South Ocean Beach. Under current conditions, when South Ocean Beach is eroded and lateral (along-shore) access is constrained, there is no vertical (inland) access south of the sand ramp (near Sloat Boulevard) due to the presence of steep coastal bluffs and/or revetment rock along the backshore. Under project conditions, if the beach were to erode to the degree that lateral access were impeded, the public would be able to use the new beach access stairway to reach alternative routes along the shore (e.g., the new multi-use path). Therefore, wall exposure is not expected to result in a significant impact related to beach access safety.

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<sup>4</sup> The OPC guidance includes probabilistic sea level rise projections that associate the likelihood of occurrence (probability) with various sea level rise heights and rates. These projections are based upon a range of greenhouse gas emissions scenarios. The H++ scenario represents an extreme sea level rise projection corresponding with the loss of the West Antarctic ice sheet, the probability of which is unknown.

<sup>5</sup> A normal storm year is defined by the U.S. Army Corps of Engineers as a year in which the El Niño Storm Index is -0.5 to +0.5 (i.e., not an El Niño and not a La Niña; USACE, *Littoral Transport Modeling for Ocean Beach and San Francisco Bight, California*. Prepared by: Lihwa Lin, Honghai Li, Frank Wu, and Lisa C. Andes. Coastal Engineering Proceedings 1(33). December 2012).

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## 11.13 Energy Use

The comments and corresponding responses in this section cover topics in draft EIR Appendix B, Initial Study, Section E.20 Energy.

### Comment EN-1: Energy Use Comparison Between Alternatives

This response addresses the following comment, which is quoted below:

O-SURF.6

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“Even if artificial sand replacement were affordable, successful and guaranteed on a schedule which could properly maintain resources in this area, the report acknowledges that a ‘small’ sand placement for the area includes 2,830 truckloads of sand and weeks of the beach being closed to recreationalists. Again we point out that a project alternative with more adaptive capacity that relies on less artificial sand placement would be far more environmentally preferable and would expose the current plans as using “large amounts of fuel in a wasteful manner,” in conflict with the finding related to Impact EN-1, which states that “*The project would not result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner*” is less than significant.” (Holden Hardcastle, Surfrider Foundation San Francisco Chapter; Laura Walsh, Surfrider Foundation [O-SURF.6])

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### RESPONSE EN-1

As noted in Comment O-SURF.6, the draft EIR addresses potential project effects related to energy consumption in Appendix B, Impact EN-1. The analysis concludes that the small and large sand placements would have a less-than-significant effect related to wasteful, inefficient, or unnecessary consumption of energy resources (draft EIR Appendix B. p. 125). The project’s small sand placements would involve placing about 85,000 cubic yards once every four years, while the large placements would involve placing up to 575,000 cubic yards once every 10 years. Draft EIR Table 6-1 (page 6-7) compares the estimated placement regimes for each alternative; as shown there, compared to the project, similar or greater volumes and frequencies of nourishment would be required to maintain a beach under the alternatives.

Draft EIR Section 6.6.6 (pp. 6-45 through 6-46) states that a restored dune-only project with no beach nourishment would be infeasible due to lack of space between the Lake Merced Tunnel and the shoreline. The available space for successful sand dune development should typically allow for a beach width between 100 and 200 feet, in addition to the space required for the constructed dune footprint. At South Ocean Beach, the beach width varies alongshore and seasonally. Along the narrowest stretch, there are periods when there is typically less than 100 feet of beach between the Lake Merced Tunnel and the shoreline. This setback is insufficient to protect the Lake Merced Tunnel and allow dunes to establish.

The design concepts presented in earlier planning initiatives for South Ocean Beach (such as the Ocean Beach Master Plan), assume volumes comparable to those identified for the project and alternatives.<sup>1</sup> The Ocean Beach Master Plan called for placing approximately 500,000 cubic yards of sand along South Ocean Beach once every 10 to 30 years, as explained in the 2015 report outlining the implementation strategy for the plan. Citing the results of subsequent modeling performed by the U.S. Army Corps of Engineers suggesting the sand may not persist at South Ocean Beach as long as previously estimated, the 2015 report recommends an increased nourishment rate of up to 1 million cubic yards every 10 to 20 years, which is similar to the volume estimated for the project. The commenter provides no evidence that a project alternative with more adaptive capacity that relies on less beach nourishment exists.

For these reasons, the EIR adequately addresses the potential effects of the project and alternatives as they relate to energy consumption. Since publication of the draft EIR, the SFPUC has refined the project to include a habitat restoration and enhancement plan (restoration plan). As explained further in Section 9.1.1, the restoration plan would include the creation of coastal dunes along the backshore, which would capture and retain sand within the project area, thereby increasing its adaptive capacity.

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<sup>1</sup> SPUR et al., Coastal Protection Measures & Management Strategy for South Ocean Beach Ocean Beach Master Plan: Coastal Management Framework, April 24, 2015.

## 11.14 General Comments

The comments and corresponding responses in this section cover general topics, some of which are relevant to and addressed in the draft EIR. The comment topics relate to:

- GC-1: Scope of CEQA Review
- GC-2: Support, Opposition, and Opinions Related to the Project
  - GC-2.1 Support for the Project
  - GC-2.2 Opposition to the Project - Great Highway Closure
  - GC-2.3 Opposition to the Project - Buried Wall
  - GC-2.4 Opposition to the Project - General
- GC-3: Clarifications, Multiple Topics
  - GC-3.1 Clarifications
  - GC-3.2 Multiple Topics
- GC-4: Cumulative Impacts
  - GC-4.1 Beach Nourishment
  - GC-4.2 2700 Sloat Boulevard
  - GC-4.3 Upper Great Highway
- GC-5: Public Involvement and Collaboration or Coordination
- GC-6: Traffic Congestion Impacts

### Comment GC-1: Scope of CEQA Review

This response addresses the following comments, which are quoted below:

O-SFB.3, I-Moore.6, I-Moore.14, I-Moore.16

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“Finally, Baykeeper requests that the City of San Francisco become more engaged in managing sand resources in San Francisco Bay, which have a close connection to Ocean Beach. Sand mining in San Francisco Bay has contributed to permanent sediment loss, documented through recent peer-reviewed research published by the USGS and others, indicating sand mining has reduced the available sand supply to open coast beaches along the San Francisco coast. These studies draw a clear connection between sand mining in the Bay and the observed shrinking of the San Francisco Bar and erosion at Ocean Beach. More recent science thoroughly documented in a 2013 special edition of Marine Geology, which established a “causal link” between sand removal in the Bay with “both the widespread erosion of the ebb-tidal delta and extensive erosion of the adjacent south coast shoreline.”<sup>6</sup>

In the absence of sustainable management of sand resources in the region, natural defenses for Ocean Beach cannot form, and unnatural interventions such as costly and environmentally damaging beach replenishment efforts will go on in perpetuity. We encourage the City to engage in a more comprehensive strategy to defend the City from the constant threat of erosion and sea level rise. Such a strategy includes proactive sediment management, innovative nature-based solutions, and necessary engineering

interventions that will last much longer than the 50-75 year time horizon.” (Ian Wren, Staff Scientist, San Francisco Baykeeper [O-SFB.3])

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<sup>6</sup> Hein, J. R., Mizell, K. & Barnard, P. L., 2013. Sand sources and transport pathways for the San Francisco Bay coastal system, based on X-ray diffraction mineralogy. *Marine Geology*, 345, 154-169

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“The very basis for the DEIR and the Project – the assumption that erosion will remove sand on the west side of the WPS and LMT – seems not to be analyzed sufficiently to its obvious conclusion with respect to this critical infrastructure. Unfortunately, the erosion isn’t a “goldilocks” scenario where there is not too little, nor too much, but just the right amount of erosion such that existing roadway infrastructure should be displaced in favor of a new bike path, yet no managed retreat simultaneously undertaken with respect to the LMT and the WPS. *If there is indeed erosion it must necessarily mean that the nearby sewage infrastructure is threatened.* While the concept of beach erosion is a fundamentally sound concern, the extent, pace, and effects of possible erosion have not been fully vetted. No further Project work should proceed on an environmental review when the underlying concern has not been examined sufficiently. It is possible that there are not material erosion threats to the LMT and roadway above it, particularly if the periodic continuation of the sensible and ongoing project to place dredged sand from the Golden Gate shipping channel by the Army Corps of Engineers is successful. Alternatively, if there are indeed material erosion threats (my personal opinion, for what it may be worth) and those threats have been identified, quantified, and validated such that the project area does indeed require threat mitigation, then the analyzed threat should be addressed by relocating the sewage infrastructure consistent with managed retreat principles rather than just engaging in new construction. San Francisco needs to be clear with its citizens what exact erosion threat it is addressing, how it will be addressed, and whether its residents and other environmentally sensitive parts of the ecosystem are or are not exposed to the risk of raw sewage outfall due to a failure of the LMT and/or the WPS. Given the legacy history of mismanagement in this area – we’ve smelled the sewage before, and will undoubtedly encounter the issue again unless a full solution is implemented – there needs to be a deeper and closer review accompanied by a clearly enunciated statement for the community about the intended handling of the sewage infrastructure.

This review also needs to be conducted independent from the City, which simply does not have the stomach nor budgeting resources to come clean with its residents about where the sewage infrastructure will be relocated, and how such relocation will be funded. Exacerbating this political issue, and beyond the fundamental conflict of interest associated with City budgeting, is that a more insidious conflict of interest has infected the local community in the form of special interest needs subverting common sense. Specifically, one or more public servants have been supporting the efforts of special interest groups hoping to restrict certain types of vehicular travel, which has a direct impact on the environment and requires further review before the Project may proceed. The targeted type of vehicular travel has been with respect to some but not all motorized vehicles, including personal and commercial vehicles which emit greenhouse gas, such as typical non-electric automobiles and trucks. Certain special interest groups with “sole source” contracts that rely almost entirely on taxpayer money to fund their existence have been encouraging certain city officials to actively impair certain types of vehicular traffic for purported safety and environmental concerns. None of these conflicts, and the associated impact on environmental analysis and issues, have been addressed sufficiently in the DEIR.

To be clear, my personal view is that vehicular travel that minimizes the reliance on fossil fuel vehicles should be encouraged and achieved wherever reasonably possible. Global warming is a real and existential threat which requires good and careful solutions. However, impairing the efficiency of vehicular traffic flow just to build a bike path or park is not a holistic solution to a complicated problem, and could in fact create more detrimental emissions. This possible outcome has been observed and questioned by many residents, and was a focal point of attention in a July 27, 2021 letter from the Sierra Club to certain City agencies regarding the use of the Upper Great Highway (“UGH”) roadway, and its proposed closure (“UGH Project”). Unfortunately, while the sewage system beneath the roadway is under threat, certain transportation officials have frittered with road closure goals that are misguided and impair efficient traffic flow for all vehicles.

Evidence of conflicted officials, and even the possibility of their corruption, seems sadly obvious and overwhelming, and at minimum the appearance of impropriety impairs the public process and the credibility of the City and those employees and public servants who are working honestly to address significant issues. In fact, the mishandling of the UGH Project has implicated one transportation leader who was being paid *two* separate salaries – one as a publicly elected member of the BART Board, and another simultaneously as an advocate for a special interest group – and who was the subject of a BART Inspector General Investigation regarding their statements about the UGH Project and the communication protocols associated with their public office.<sup>1</sup> Another senior leader of the city, and *the manager for the city agency directly responsible for UGH oversight*, has recently been deemed to have willfully violated the law with respect to the production of public records in relation to the UGH Project.<sup>2</sup> One member of the Board of Supervisors, who has sensibly advocated for neighborhood safety with respect to emergency firefighter water pressure amidst obvious earthquake risks, has inexplicably also advocated for the community’s tsunami and earthquake risk to be increased by ongoing road closures - and despite open comments from the city’s fire personnel that closed streets raise risks and impair emergency response times.<sup>3</sup> Another member of the City’s own Board of Supervisors has publicly advocated in social media that bike protestors purposefully block vehicular traffic on the UGH and violate transportation code requirements to yield lane usage,<sup>4</sup> while the City’s own police force has not enforced the transportation code (by some accounts, directly at the instruction of the Mayor of the City). In fact, the Mayor has taken no action with respect to these issues despite community requests<sup>5</sup>, which is particularly unsettling when a senior public official has willfully and in bad faith withheld relevant documents. Meanwhile, City leadership has been working to undermine CEQA requirements despite opposition from the Sierra Club and other advocates for balanced environmental review processes.<sup>6</sup> The civic duties associated with a project involving an environmentally sensitive area must be managed according to the law and the highest ethical standards of public servants. These willful incursions cannot be tolerated by those of us who advocate for lawful discourse and common sense legislative processes – including those bicycle and environmental enthusiasts who are disgusted by the selfish protests of a few misguided riders, which not only serve ironically to create more emissions in blocked traffic (arguably the same irony demonstrated by area projects generally) but also impair the credibility of the broader and just cause for better vehicle planning and resources.” (Goffrey Moore [I-Moore.6])

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<sup>1</sup> [https://www.bart.gov/sites/default/files/docs/064-2022\\_RPT\\_Public%20Summary\\_Elected%20Official%20Social%20Media%20Best%20Practices\\_Final\\_111221\\_0.pdf](https://www.bart.gov/sites/default/files/docs/064-2022_RPT_Public%20Summary_Elected%20Official%20Social%20Media%20Best%20Practices_Final_111221_0.pdf)

<sup>2</sup> Refer to the **unanimous** finding of the Sunshine Ordinance Task Force on July 5, 2022 [sic] under Administrative Code Section 67.34 that Phil Ginsburg as General Manager of the Recreation and Parks Department committed willful violations of the law, constituting official misconduct.

<sup>3</sup> See e.g., <https://sf-fire.org/files/2021-06/May%2012%202021%20meeting%20minutes.pdf>

<sup>4</sup> Dean Preston social media account on Twitter <https://twitter.com/deanpreston/status/1430661127483002881>

<sup>5</sup> See e.g., comments raised by Supervisor Chan in previous public proceedings asking for greater transparency and review of the City's ongoing decisions to close roads for public access, as well as [https://www.openthegreathighway.com/lettertobreed?fbclid=IwAR0L\\_6xacukD1RUGtQS8\\_wPn-Xu0R90bWJDRre-UTZWzNgt2chCWMXMvLBM](https://www.openthegreathighway.com/lettertobreed?fbclid=IwAR0L_6xacukD1RUGtQS8_wPn-Xu0R90bWJDRre-UTZWzNgt2chCWMXMvLBM)

<sup>6</sup> See e.g., <https://www.sierraclub.org/san-francisco-bay/blog/2021/05/take-action-protect-californiaenvironmental-quality-act-san>

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“The City continues to ignore the possibility that its sewage system may fail due to increased erosion, yet insists it must build a new erosion-inducing vertical wall as the solution.

If City officials are so concerned with the level of erosion that they feel a vertical wall must be built, doesn't that demonstrate that there are significant enough erosion issues in play that the WPS should be moved, or at minimum that a clear and actionable management plan be included in the Project and vetted for approval?” (Goffrey Moore [I-Moore.14])

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“In short, the process has been defective, and the Project as proposed clearly reflects the defect. The Draft EIR admits in writing that sufficient analysis has not been conducted, nor sufficient coordination achieved. The Sunshine Ordinance Task force has voted unanimously that willful violation of the law was committed by a senior public servant directly responsible for project coordination in the area, a removable offense for the public servant. The city attorney is well aware that the project area has historically been, and continues to be, a subject of regulatory findings and litigation, and that prior settlement terms with respect to the management of the area may be in effect.<sup>9</sup> As such the city attorney, and the client that is represented, are on notice of the possibility of significant legal and regulatory risk and taxpayer cost if the project is not handled in accordance with the law. In the event that local public servants cannot follow this basic process, any approvals of this project should be voided by the California Coastal Commission. Deceiving the community, ignoring sand removal requests, failing to maintain and protect critical public sewage and roadway infrastructure, willfully ignoring public records requests, and fiddling with a bike path when a multi-billion dollar time bomb is ticking within the City's sewage system is not what residents and voters want. The City represented that EIRs would be conducted with respect to surrounding projects– there has been no such coordination, and the city has been resisting an EIR related to the UGH Project, and has not done its homework with this Project. The City has impaired its credibility, cannot and should not be trusted, and needs to immediately be subjected to state and federal oversight.

The mismanagement of these collective projects demonstrates at minimum gross negligence on the part of the city of San Francisco, and cannot be permitted to proceed under the theory that “good faith” analysis will eventually be forthcoming from an agency whose leader has been found to have exhibited bad faith and willful misconduct. The credibility of the city is at issue with respect to the mismanagement of traffic that affects a state roadway, and must be reviewed and considered independently and in collaboration with the California Coastal Commission, whose jurisdiction on any approval must be handled unilaterally by that state agency. Environmental reviews should not be subjected to conjecture and assumptions amidst willful violations of public rules, nor should the residents of the area and affected state infrastructure be placed at risk in such a grossly negligent fashion. The obvious inability or unwillingness of all City agencies to fully coordinate, which is noted in the DEIR itself, and the obviously deficient analysis resulting from that failure, all highlight exactly why the city's jurisdiction to approve coastal development should be immediately withdrawn. The San Francisco Planning Commission should have its authority to issue coastal development permits withheld unless and until

the City has demonstrated to state authorities that it is capable of operating pursuant to process rather than good faith assumptions about information vacuums and the proper coordination of all city agencies. Meanwhile, the City should go back to the drawing board, explain to the public why a vertical seawall is necessary if the wastewater treatment plant is somehow not itself at risk, and describe why a managed retreat plan supports the creation of any new infrastructure, particularly infrastructure which could enhance erosion, or which favors certain modes of transportation even though the acknowledged vehicle impacts are again - in the words of the DEIR itself – significant and unavoidable.

The City of San Francisco continues to treat the local area and its residents like a petri dish in an unwelcome experiment of assumptions and conjecture, with insufficient coordination among agencies, admitted deficiencies in information, and reliance upon a “good faith” guess about the handling of area projects despite the clear and obviously purposeful mishandling of civic responsibilities to date. We can all do better than this – this isn’t the Embarcadero. It’s Ocean Beach, and its natural beauty and the safety of its inhabitants hasn’t just been suffering from beach erosion, but from the erosion in public trust and management that our public servants owe to the area.” (Goffrey Moore [I-Moore.16])

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<sup>9</sup> See e.g., <https://www.documentcloud.org/documents/6591934-California-Coastal-Protection-Network-Settlement.html>

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## RESPONSE GC-1

Two comments (I-Moore.6, I-Moore.14) address topics of project need and/or the merits of the project’s approach to addressing erosion challenges at South Ocean Beach. Please refer to Chapter 1, Introduction and Background, which discusses the project need and purpose of the EIR, and summarizes previous studies completed to inform project design.

Regarding the possibility that the sewage system may fail due to increased erosion (Comment I-Moore.13), draft EIR Chapter 1, Introduction and Background, discusses the city’s previous and ongoing efforts to protect wastewater infrastructure at South Ocean Beach, and draft EIR Section 2.3, Project Objectives, lists protecting wastewater system infrastructure as one of the project objectives. The project is designed to protect the city’s wastewater infrastructure from erosion. Potential project effects related to erosion are addressed in draft EIR Appendix B, Initial Study, Section E.16, Geology and Soils and RTC Section 11.12, Response GE-1. The estimated increase in vehicle emissions resulting from the project’s Great Highway Extension closure and traffic rerouting are addressed in draft EIR Appendix B, Initial Study, Sections E.8 Air Quality and E.9 Greenhouse Gas Emissions. Comments concerning documentation of erosion and vulnerability of public infrastructure, including the Great Highway, are also addressed in Section 11.2, Comment PD-1, of this RTC document.

The remaining comments grouped into this topic category recommend a more comprehensive strategy to defend the city from erosion and sea level rise (O-SFB.3); allege the project has not been properly coordinated with other area projects, includes conflicts of interest, and fails to address costs (I-Moore.16); or express concerns regarding city officials’ or staff’s potential conflicts of interest and the influence of special interest groups (I-Moore.6). These comments do not address the adequacy or accuracy of the EIR’s discussion of physical impacts that require a response per CEQA Guidelines section 15088. The comments will be transmitted to city decision-makers for consideration in their deliberations on whether to approve the project.

## **Comment GC-2: Support, Opposition, and Opinions Related to the Project**

### **GC-2.1 SUPPORT FOR THE PROJECT**

This section of Response GC-2 addresses the following comments, which are quoted below:

O-GGAS.1, O-WSF.1, I-Dave.1, I-Day.1, I-Krumm.1, I-Raskin.1, I-Sheffield.1

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This section of Response GC-2 also addresses the following comments that are similar or identical to the representative comment quoted on p. 11.14-8 and are not individually listed to avoid repetition:

I-Belden.1, I-Daniel.1, I-Feeney.1, I-Kelly\_J.1, I-Lux.1, I-Moseson.1, I-O'Neil.1, I-Pace.1, I-Pam.1

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“Thank you for the opportunity to comment on the environmental impact of the Ocean Beach climate change adaptation project. Golden Gate Audubon represents 10,000 members and supporters around the Bay Area who are dedicated to the protection of birds, wildlife, and their habitats. We appreciate your considerable efforts in the Draft EIR to address the questions we put forth in October 2020, and we applaud the city’s efforts to address climate change.” (Whitney Grover, Chair, Golden Gate Audubon Society San Francisco Conservation Committee, Board Member, Golden Gate Audubon Society [O-GGAS.1])

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“Walk San Francisco is in strong support of the certification of the SFPUC Ocean Beach Climate Change Adaptation Project Draft Environmental Impact Report. This project represents a transformative opportunity to create new, accessible space for people walking in a safe, healthy manner along the waterfront.

As the city’s only pedestrian advocacy organization speaking up for the city’s 874,000 residents and 24 million visitors who walk in the city, we believe San Francisco can and should be the safest, most walkable city in the United States, and projects like the Climate Change Adaptation Project will get us closer to that goal.

As shown by the popularity of the temporary people-first space along the Upper Great Highway north of Sloat Boulevard, San Franciscans are desperate for more coastal space to travel by foot. By adding a wide, 15-foot multi-use accessible path with enough space for walking and biking, people of all ages and abilities will be able to enjoy outdoor recreation and travel, as well as enjoying new access to the shore.

While we understand that the project may create impacts from traffic noise from auto traffic that is re-routed, we support the possible methods of mitigation noted, such as speed limit reductions, new traffic signals, and traffic-calming measures. Indeed, all of these options help the project align with other official city goals noted, including the Vision Zero goal to end serious and fatal traffic crashes in San Francisco. Additionally, while the Draft EIR notes a possible increase in vehicle miles traveled, we concur with the likelihood that “the actual increased VMT may be less as that increase may not occur every day over an entire year and numerous studies have shown that projects that reduce the number of through lanes result in less or no changes to VMT due to people taking fewer vehicle trips, among other factors.”

Walk SF firmly believes the Climate Change Adaptation Project will bring important pedestrian access improvements to the western part of San Francisco. We recognize this project as a strong step forward

toward a city with more places for people to safely walk without fear of the dangers of car traffic. For these reasons, we support the certification of the project's Draft Environmental Impact Report." (Jodie Medeiros, Executive Director, Walk San Francisco [O-WSF.1])

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"South Ocean Beach is a highly valuable section of beach used for running, surfing, fishing and general enjoyment. The Surfrider organization is not concerned with anything other than surfing. A wall would allow use by everyone." (Dave [I-Dave.1])

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"I am a resident of San Francisco and wanted to provide public comment on the Draft EIR and general support for the Ocean Beach Climate Change Adaption Project.

I first learned of the project in 2013, so I am happy to finally have the opportunity to see the Draft EIR and hear of the potential to move this essential project forward. It is clear that closing the Great Highway Extension and replacing it with active transport/recreation infrastructure, along with rebuilding the vital sewer infrastructure, is of the utmost importance. I support this wholeheartedly.

Restoring the coast to be resilient, more in tune with its natural state, and hardening our aging infrastructure is overdue. Using this land as a highway was short-sighted and a mistake.

Thank you for working to adapt our coast to the realities of climate change, while also working to provide new, active transit infrastructure that will help San Franciscans mitigate their environmental impact in the process." (Parker Day [I-Day.1])

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"I am E-mailing you to voice my support for the Ocean Beach Climate Change Adaptation Project. As a resident of the Outer Richmond neighborhood, I have greatly enjoyed the new public space that has been created by the closure of the great highway. Being able to access nature in a safe way with my entire family (often via bike) has become an activity that we enjoy multiple times per week. While I do drive my car north-south, I have found that the great highway is often a sub-optimal north-south route, and I typically take Sunset Avenue, as it connects better with my destinations.

I very much look forward to the proposed improvements in the Ocean Beach Master plan, including the multi-use trail, as I often feel unsafe as a pedestrian or biker along ocean beach when the Great Highway is open to cars. The wide 4-lane setup encourages speeding, especially where cars exit the Great Highway onto Lincoln, and I find myself waiting as far from the road as possible due to the extreme speeds.

Thank you for your work on this project, and I look forward to an ocean front space that is accessible, environmentally-conscious, and open for all to enjoy." (Cristoph Krumm [I-Krumm.1])

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A resident at La Playa/Judah. Concerned about living in flood plain. Supports the project and hopes sea level rise and climate change are taken into account. (Adam Raskin [I-Raskin.1])

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“I'm an SF resident and would love to have that space for walking and recreation.” (Sheffield [I-Sheffield.1])

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“Hello,

“I am E-mailing you to voice my support for the Ocean Beach Climate Change Adaptation Project. As a resident of San Francisco, I am fine with using alternative roads to make north south connections by car. I am looking forward to using the multi-use trail. Right now it's impossible to walk and dangerous to bike through this route. I look forward to the improvements that will open up this ocean front space for people to enjoy. Thank you for your hard work helping our city adapt to our changing climate.” (This comment is representative of the comments listed on page 11.14-6, which are similar or identical to this representative comment.)

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### **RESPONSE GC-2.1**

The comments presented above generally express statements of support or opinions concerning the merits of the project and the EIR. Comments expressing support for the project or EIR do not raise specific issues concerning the adequacy or accuracy of the EIR's discussion of physical impacts. However, such comments may be considered and weighed by the decision-makers as part of their decision to approve, modify, or disapprove the project.

Comment O-WSF.1 also notes the possible increase in vehicle miles traveled. For commenters' reference, the EIR presents project description details in Chapter 2, and evaluates potential project effects on transportation and vehicle miles traveled (VMT) in Section 4.3, Transportation and Circulation. Responses to comments related to transportation and circulation are provided in Section 11.6, Transportation and Circulation, of this document.

Comment I-Raskin.1 also expresses concern regarding sea level rise. As discussed in draft EIR Section 2.4.5.5, and in Section 11.12 (Response GE-1) of this RTC document, the shoreline modeling conducted for the project, which provides the basis for the proposed sand management program, incorporates sea level rise.

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### **GC-2.2 OPPOSITION TO THE PROJECT - GREAT HIGHWAY CLOSURE**

This section of Response GC-2 addresses the following comments, which are quoted below:

I-Ciganek.2, I-Colvin.1, Hill-1.3, I-Hill-1.4, I-Hill-2.4, I-Holl-2.5, I-Pirolli.5, I-Pirolli.6, I-Regan.1, I-Regan.3, I-Unidentified.1, I-Unidentified.3

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“The closure of the Upper Great Highway south of Sloat Boulevard, as much as you'd like to paint it that way, is not a foregone conclusion and you'll soon be hearing additional alternatives to that poorly considered option.” (Matt Ciganek [I-Ciganek.2])

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“I have lived in the outer sunset since 1997. I am extremely concerned that you are planning to close the great hiway [sic] extension permanently. For those of us who live out here this roadway which connects to Highway 35 is a main arterial in the same way that Oak Street and other essential SF streets are main arterials.

Up amd [sic] down the Northern California coast, HiWay one often collapses and erodes during storms and there is never a question whether they should fix it again so people can navigate to and from their destinations. It is always repaired. Similarly, San Francisco is a big city and there is no reason that one of our main thoroughfares should not be rebuilt and fortified as often as needed to accommodate the needs of those living in the outer Richmond and outer Sunset to expediently get to and from their destinations, which are often involving work or recreation.” (Lucy Colvin [I-Colvin.1])

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“I am one of six plaintiffs who are currently suing the City and County of San Francisco for shutting down the Upper Great Highway, JFK Drive and MLK Drive during the pandemic, and now trying to permanently keep these roads closed. Those road closures are illegal because state vehicle codes such as Section 21101 prohibit cities from shutting down roadways, except for very explicitly defined reasons. Shutting down the Great Highway Extension because you want to put in a bicycle path is not a reason that is authorized by state or local law. And since you have presented no other rationale for closing down this highway – you have presented no science, research or data that the presence of this highway is contributing to coastal erosion – if you try to shut down the Great Highway Extension and put in a bicycle path, you will be acting illegally. *If you act illegally to shut down the Great Highway Extension, I can promise you that you will be sued.* Money is already being raised, and prospective plaintiffs are ready to file a lawsuit, not against the environmental impacts but because closing this roadway for use by the public will be an illegal act in violation of state vehicle codes. To avoid a lawsuit, I strongly suggest that you consider the two options I outlined above as ways to allow a version of the Great Highway Extension to continue.” (Steven Hill [I-Hill-1.3])

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“Members of our group, the Open the Great Highway Alliance and other allied organizations, are ready and willing to meet with the leaders of this project to figure out if there is a way to compromise and achieve a win-win solution. I truly hope that you are willing to work with us to avoid litigation.” (Steven Hill [I-Hill-1.4])

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“Do not take this road away from people. Thank you.” (Steven Hill [I-Hill-2.4])

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“This whole project is a boondoggle, written by the same engineers whose firm stands to get more contracts to do the work they called for. It is sheer madness to spend \$180 million to appease the CCC while losing the Great Highway and the beach and exposing the Treatment Plant to more erosion.” (Dennis Holl [I-Holl-2.5])

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“I am one of six plaintiffs who are currently suing the City and County of San Francisco for shutting down the Upper Great Highway, JFK Drive and MLK Drive during the pandemic, and now trying to permanently keep these roads closed. Those road closures are illegal because state vehicle codes such as Section 21101 prohibit cities from shutting down roadways, except for very explicitly defined reasons. Shutting down the

Great Highway Extension because you want to put in a bicycle path is not a reason that is authorized by state or local law. And since you have presented no other rationale for closing down this highway – you have presented no science, research or data that the presence of this highway is contributing to coastal erosion – if you try to shut down the great highway extension and put in a bicycle path, you will be acting illegally.

*If you act illegally to shut down the Great Highway Extension, you will be sued.* The lawsuit will be directed, not against the environmental impacts but because closing this roadway for use by the public will be an illegal act in violation of state vehicle codes. To avoid a lawsuit, I strongly suggest that you consider the two options I have outlined above as ways to allow a version of the Great Highway Extension to continue.” (Peter Pirolli [I-Pirolli.5])

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“Members of our group, the Open the Great Highway Alliance and other allied organizations, are ready and willing to meet with the leaders of this project to figure out if there is a way to compromise and achieve a win-win solution. I truly hope that you are willing to work with the public on the westside of SF to avoid litigation.” (Peter Pirolli [I-Pirolli.6])

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“I and many others strongly oppose the adaptation of "managed retreat" regarding the southern reach of the Great Highway.” (Mike Regan [I-Regan.1])

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“There are 20,000 vehicles per day that use the Great Highway and their needs are being ignored by the City. People need this road to get to work and conduct the daily business of living a life in this city. There is absolutely no need to close the roadway down to motorist in fact I would say there is a greater need to protect this road. In fact we have already stating protecting the area by the construction of a buried wall to protect existing wastewater infrastructure, reshaping the bluff and providing long-term beach nourishment (sand replenishment), which was just completed this year and will last between 5 and 10 years. It will be more far expensive to close this road than to protect it.

SF Rec and Park want to use the shutdown of the southern reach as a means to close the central reach of the Great Highway and create yet another park where one already exist. There are numerous recreation venues present in this area. This plan calls for spending 130 million dollars to create a park which includes protecting the area; it cost \$200,000 to replenish the sand for 5-10 years from shipping channel dredging. The 130 million would be better spent on housing Veterans or feeding the hungry. There has been a complete lack of transparency regarding these and other road closures in the city including numerous sunshine ordinance violations.

Over 15,000 people have signed a petition to keep the Great Highway open please do not ignore the needs of working people by closing this stretch of highway.

I am attaching a picture that shows the high lever [sic] of usage that this road way gets. It is unconscionable to shut this road down and severely impact all of these motorist and to use climate change and sea level rise as a reason.” (Mike Regan [I-Regan.3])

“All right. Commissioners, I and many other citizens strongly oppose the adaptation of the managed retreat regarding the southern reach of the Great Highway. Managed retreat is being used as a method for City agencies to perpetuate another landgrab at the cost – at the expense of the motorists in the Bay Area.” (Unidentified Speaker [I-Unidentified.1])

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“There are 20,000 vehicles per day that use the Great Highway and their needs are being ignored by the city. People need this road to get to work and conduct daily business of living a life in the city. At a time when we are attempting to increase densities in the western part of the city, closing roads is the wrong thing to do. There is absolutely no need to close the road down to motorists. In fact, I would say there is a greater need to protect this road. We’ve already started protecting the area by reshaping the glove and providing long-term beach nourishment and sand replenishment just completed and last year and will last another five to ten years. It would be far more expensive to close the road than to protect it. SF Parks and Rec wants you to close down the southern route to the central reach of the Great Highway and create yet another park when one already exists. There are numerous recreational venues present in this area. This plan calls for spending \$130 million to create a park which includes protecting – which includes protecting the area. It costs \$200,000 to replenish the sand from ship channel dredging. The \$130 million would be best spent on housing veterans or feeding the hungry. There’s a complete lack of transparency regarding these and other road closures in the city, including numerous Sunshine Ordinance violations against the head of the city agency. Over 15,000 people have signed a petition to keep the Great Highway open. Please do not ignore the needs of working people by closing this stretch of the highway.” (Unidentified Speaker [I-Unidentified.3])

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## **RESPONSE GC-2.2**

The comments presented above generally express statements of opposition or opinion concerning the merits of closing the Great Highway extension, as well as its effects on motorists. The comments also include statements of preference and opinion regarding use of the Great Highway. These comments do not address the adequacy or accuracy of the EIR’s discussion of physical impacts that require a response per CEQA Guidelines section 15088. However, such comments, including recommendations for project modifications, may be considered and weighed by the decision-makers before they make a final decision to approve, modify, or disapprove the project. With respect to Comment I-Hill-1.3, the draft EIR does not assert that the Great Highway is causing erosion. Please refer to draft EIR Chapter 1, Section 1.4, Project Background (pp. 1-4 to 1-6), for a discussion of the coastal processes at Ocean Beach that drive erosion.

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## **GC-2.3 OPPOSITION TO THE PROJECT – BURIED WALL**

This section of Response GC-2 addresses the following comments, which are quoted below:

I-Dow.3, I-Holl-1.1, I-Holl-3.1, I-Winkleprins.1

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“And on a more personal note - I was the Chair of the SF Surfride [sic] Chapter for a few years starting in 2017. We had a long history of working with local organizations and agencies to push a managed retreat and

gained support from both the scientific community and local citizens. There needs to be a realistic, long-term outlook for Ocean Beach and armoring with a seawall is neither. Do better, and do the right thing.” (Brian Dow [I-Dow.3])

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“I agree with you.

Why would the Coastal Commission ever approve of this plan, it is a giant seawall!

It makes no sense to replace one hard structure (rocks) with a giant seawall.” (Dennis Holl, E-mail, December 14, 2021 [I-Holl-1.1])”

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“Last week in the Chronicle it said that San Francisco could possibly be hit with a 30-foot tsunami. Even the armoring described in the draft EIR would not protect the Treatment Plant as well as the existing rock revetments would.” (Dennis Holl [I-Holl-3.1])

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“I’d like to voice concern for the change in plans for the plans around South Ocean Beach. I agree with statements by the SF Surfrider Foundation... this area is really valuable for recreation and I would like for San Francisco to stay committed to its local ecology, too. A seawall presents risks of driving scour to other areas on the beach, and disconnecting the continuum from sand dune to water beyond what has already taken place.” (Lukas Winkleprins [I-Winkleprins.1])

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### **RESPONSE GC-2.3**

These comments express opposition to or concern regarding the proposed buried wall. Regarding Comments I-Holl-1.1 and I-Holl-1.3, the draft EIR, in Chapter 6, Alternatives, compares the environmental effects of the proposed buried wall to the effects of the existing revetments. For commenters’ reference, the EIR addresses erosion and tsunami in Appendix B, Initial Study, Sections E.16 and E.17. The Ocean Beach Master Plan and other guidance documents developed in coordination with local organizations and agencies, as referenced in Comment I-Dow.3, are important planning documents that provide vision and guidance for orderly development along the coast. While they are not applicable plans within the CEQA context—none has legal applicability to the project—they were considered in the project’s design and analysis, as discussed in greater detail in Response PP-1. These comments, including recommendations for project modifications, may be considered and weighed by the decision-makers before they make a final decision to approve, modify, or disapprove the project.

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## GC-2.4 OPPOSITION TO THE PROJECT – GENERAL

This section of Response GC-2 addresses the following comments, which are quoted below:

I-Ciganek.1, I-Moore.1, I-Moore.2, I-Moore.5

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"As an Outer Sunset Resident and President of the Outer Sunset Safer Streets Neighborhood Association I have come to understand the complexity and with that, the many problems with the current draft proposal. I have discussed this with many members of my association as well as individuals who contributed to your report and project." (Matt Ciganek [I-Ciganek.1])

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"I am writing to both support and object to certain portions of the Draft Environmental Impact Report ("DEIR") for the Ocean Beach Climate Change Adaptation Project ("Project"), and to raise significant questions with respect to the Project framework itself.

While I support the efforts of certain employees of the City of San Francisco (the "City") to consider and address material issues with Ocean Beach, and I also support the broad concepts of providing beach and recreational access amidst important environmental considerations, I cannot support an initiative which continues to demonstrate an insufficient and fundamentally flawed response to the current issues in the area. I am hopeful that my disposition towards support of the DEIR, and the Project itself, is respectfully considered by appropriate regulatory agencies such that additional steps are taken to address material risks and concerns in the region." (Goffrey Moore [I-Moore.1])

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"Specifically, the DEIR has failed to coordinate its analysis with a full review by all necessary City and California state agencies, has been conducted in an information vacuum (which the DEIR itself acknowledges), and demonstrates that one or more city agencies may not be operating in good faith, nor providing sufficient, full, and credible information to the Ocean Beach community about infrastructure needs and risks. As such, I believe that the Project should be rejected and that the California Coastal Commission and other appropriate state agencies should secure and maintain direct oversight of all ongoing project initiatives in the region, and with the City's authority to unilaterally approve construction permits alongside Ocean Beach immediately rescinded." (Goffrey Moore [I-Moore.2])

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"For all of these reasons the Project should be terminated unless and until each of these material issues have been properly addressed in collaboration with and to the satisfaction of all appropriate and necessary federal and state authorities, and consistent with applicable regulation.

The source of all these shortcomings has not only been a negligent failure by the City to properly manage the area, but a purposefully deceptive campaign by one or more city agencies or officials to obfuscate certain risks due to potential conflicts of interest. The City has a direct vested interest in limiting costs associated with proper management of its sewage infrastructure, and has been avoiding its civic responsibilities to analyze the long-term solution and costs to a metastasizing problem: **the sewage treatment infrastructure along Ocean**

**Beach - which by some accounts handles a third of the City's raw sewage - is under assault, and must be relocated.** The very basis for the DEIR and the Project – the assumption that erosion will remove sand on the west side of the WPS and LMT – seems not to be analyzed sufficiently to its obvious conclusion with respect to this critical infrastructure.” (Goffrey Moore [I-Moore.5])

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## **RESPONSE GC-2.4**

These comments express general concerns about the project, recommend that the city's authority to approve projects along Ocean Beach be rescinded, or express concerns regarding city officials' or staff's potential conflicts of interest. These comments do not address the adequacy or accuracy of the EIR's discussion of physical impacts that require a response per CEQA Guidelines section 15088. However, such comments, including recommendations for project modifications, may be considered and weighed by the decision-makers before they make a final decision to approve, modify, or disapprove the project. Refer to Section 11.2, Response PD-1, and Section 11.12, Response GE-1, for additional information regarding erosion at South Ocean Beach. Please also see Response GC-5 for information about the city's public engagement process for the project and additional discussion of the city's engagement with responsible agencies in preparing the draft EIR.

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## **Comment GC-3: Clarifications, Multiple Topics**

### **GC-3.1 CLARIFICATIONS**

This section of Response GC-3 addresses the following comments, which are quoted below:

A-CPC-1.1, A-CPC-1.3, A-GGNRA.2, A-GGNRA.4, A-GGNRA.6, A-GGNRA.7, A-GGNRA.8

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“So with that, I just wanted to have -- I do have a couple of clarification questions that I would hope would be addressed in the response to comments. The first is that I find figure S-3 which is the same as 2.6 which is the same figure Ms. Moore put up at the beginning of her presentation, is somewhat challenging to read, especially in the EIR. It's very faint, it's hard to tell the dash lines from the straight lines. There's not enough labeling. There's a circular symbol which I assume is the tunnel, but it's not labeled as tunnel. Just sort of simple things that would make it easier for the public to understand. That's a very important cross-section.” (Sue Diamond, Commissioner, San Francisco Planning Commission [A-CPC-1.1])

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“In section -- excuse me in figure 2.2, which is on page 2.6, the markers for the trail point to the plazas at both ends and I assume the trail is the green line that goes from one parking plaza to the other one, but there's no legend that would indicate that and so I think if the green line is intended to be the trail, there should be a legend that indicates that.” (Sue Diamond, Commissioner, San Francisco Planning Commission [A-CPC-1.3])

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“Given global climate change and sea level rise, the NPS understands the proposed project’s purpose, need, and goals to address shoreline erosion, severe coastal storm, and wave hazards which threaten city infrastructure, coastal access, recreational facilities, and public safety at Ocean Beach. At the same time, the NPS underscores the importance of natural resources and values in areas directly impacted by project elements on park lands, and indirectly by construction on city property adjacent to park lands. Under its enabling legislation, GGNRA is charged with protecting and preserving coastal natural processes, among other fundamental resources. While this project may be necessary to protect critical infrastructure, it shifts management of a shoreline in a direction away from “natural” conditions. Although admittedly the project area has been previously altered, the project would leave a permanently hardened shoreline, even with the seawall buried. Many of the comments address this tension. This is a complex project, needing to protect resources, but also to respect the jurisdictions of numerous agencies and a highly engaged community. Underlying this, the coastal environment continues to prove powerful and dynamic.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.2])

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“**SUMMARY, S.2 Background:** For clear public disclosure, update second paragraph that elements of the “project” at South Ocean Beach would be on property owned and managed by the GGNRA. This section and other sections throughout the document do not acknowledge that Ocean Beach and its potentially impacted assets and resources are on National Park Service (NPS) land managed by the GGNRA. For example, in first sentence of the first paragraph in **Background**, revise “Ocean Beach comprises a 3.5-mile stretch of sandy beach that forms the western boundary of San Francisco” to read Ocean Beach, **which is owned and managed by the GGNRA, a unit of the National Park Service**, “comprises a 3.5-mile stretch of sandy beach...””(Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.4])

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“**SUMMARY, S.3.1 Proposed Facilities and Project Location:** Same general comment as noted above for **SUMMARY, S.2 Background**. Revise the first paragraph in **S.3.1**, “... (2) constructing a buried wall to protect existing wastewater infrastructure from shoreline erosion;” to read, (2) constructing an approximately 2,000 ft buried wall on City of San Francisco (city) property, with a 1,000 ft segment constructed on NPS property, to protect existing wastewater infrastructure from shoreline erosion;” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.6])

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“**SUMMARY, S.3.1 Proposed Facilities and Project Location:** Add that the park restroom at Sloat Blvd. will also be removed.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.7])

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“**SUMMARY, S.3.1 and S.3.6., Fig S-1b:** Regarding long-term beach nourishment, clarify that sand removal at North Ocean Beach, a federal property managed by GGNRA, will remain at the discretion of GGNRA and continuation will be dependent upon avoiding significant impacts on resources and recreation. Add a note to

Figure S-1b with same clarification.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.8])

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### **RESPONSE GC-3.1**

Comment A-GGNRA.2 broadly clarifies GGNRA concerns and interests in the project area. This comment is acknowledged.

In response to comments discussing text changes to clarify National Park Service property (Comments A-GGNRA.4, A-GGNRA.6, and A-GGNRA.7), the following changes have been made on:

EIR p. S-1:

Ocean Beach, which is owned and managed by the Golden Gate National Recreation Area, a unit of the National Park Service, comprises a 3.5-mile stretch of sandy beach that forms the western boundary of San Francisco. It is influenced by complex coastal processes, including an intense wave climate, strong tidal currents, and irregular offshore underwater features. Chronic erosion of the beach and bluffs by episodic coastal storms occurs at South Ocean Beach. This erosion has undermined and damaged beach parking lots, stormwater drainage facilities and the Great Highway, threatens existing underground wastewater system infrastructure, and has constrained public shoreline access and recreational opportunities.

EIR p. 1-4

#### **1.4.1 Coastal Processes at Ocean Beach**

Ocean Beach, which is owned and managed by the Golden Gate National Recreation Area, a unit of the National Park Service, is a 3.5-mile stretch of sandy beach that forms the western boundary of San Francisco. It is influenced by complex coastal processes, including an intense wave climate, strong tidal currents, and irregular offshore underwater features. The beach is the visible portion of a much larger coastal sand and sediment system, known as the San Francisco Littoral Cell.<sup>8</sup> The littoral cell extends from Fort Point in the north to Point San Pedro in the south. A prominent feature of the littoral cell is a large, semi-circular sandbar (the San Francisco bar) that extends from the Marin Headlands in the north to Ocean Beach in the south.<sup>9</sup> Within this area, sand circulates with the currents and tides, and alternately erodes and nourishes adjacent beaches. Figure 1-2 includes a diagram showing the San Francisco Littoral Cell, the San Francisco bar, and Ocean Beach.

In addition, the following text change has been made to draft EIR p. S-2:

Major project components include: (1) permanently closing the Great Highway between Sloat and Skyline boulevards to public vehicular traffic, reconfiguring affected intersections and San Francisco Zoo parking access, removing the existing restroom, and maintaining a service road to SFPUC facilities; (2) constructing an approximately 3,200-foot-long buried wall (with approximately 2,200 feet of the wall constructed on city property and 1,000 feet constructed on NPS property) to protect existing wastewater infrastructure from shoreline erosion; (3) removing pavement, rock and sandbag revetments,<sup>6</sup> rubble and debris from the beach, reshaping the bluff, and planting native

vegetation; (4) constructing a multi-use trail, beach access stairway, coastal access parking, and restrooms; and (5) providing long-term *beach nourishment* (sand replenishment).<sup>7</sup> **Figures S-1a and S-1b** show the project components, each of which is described in more detail below.

The following text change has been made to draft EIR p. S-9:

The city has identified two primary sand sources and placement methods. The first is the San Francisco Harbor – Main Ship Channel, which is regularly dredged by the Corps as part of that agency’s ongoing federal navigation channels maintenance program.<sup>9</sup> Under this first option – referred to as the “large placement” – a Corps dredge would pump up to 575,000 cubic yards of sand in a *slurry*<sup>10</sup> form onto the beach, rather than disposing of it offshore.<sup>11</sup> The second primary source is North Ocean Beach (i.e., north of Lincoln Way). Under this option – referred to as the “small placement” – at the discretion of the GGNRA, the city would continue its practice of excavating and trucking excess sand from North Ocean Beach to South Ocean Beach (referred to as *sand backpass*).<sup>12</sup> The small placement option would involve trucks dumping up to 85,000 cubic yards of sand onto the beach and reshaped bluff. The city could also obtain a smaller volume of sand from a commercial vendor if necessary.

In response to Comment A-GGNRA.8, footnote 12 on EIR p. S-9 has been revised as follows:

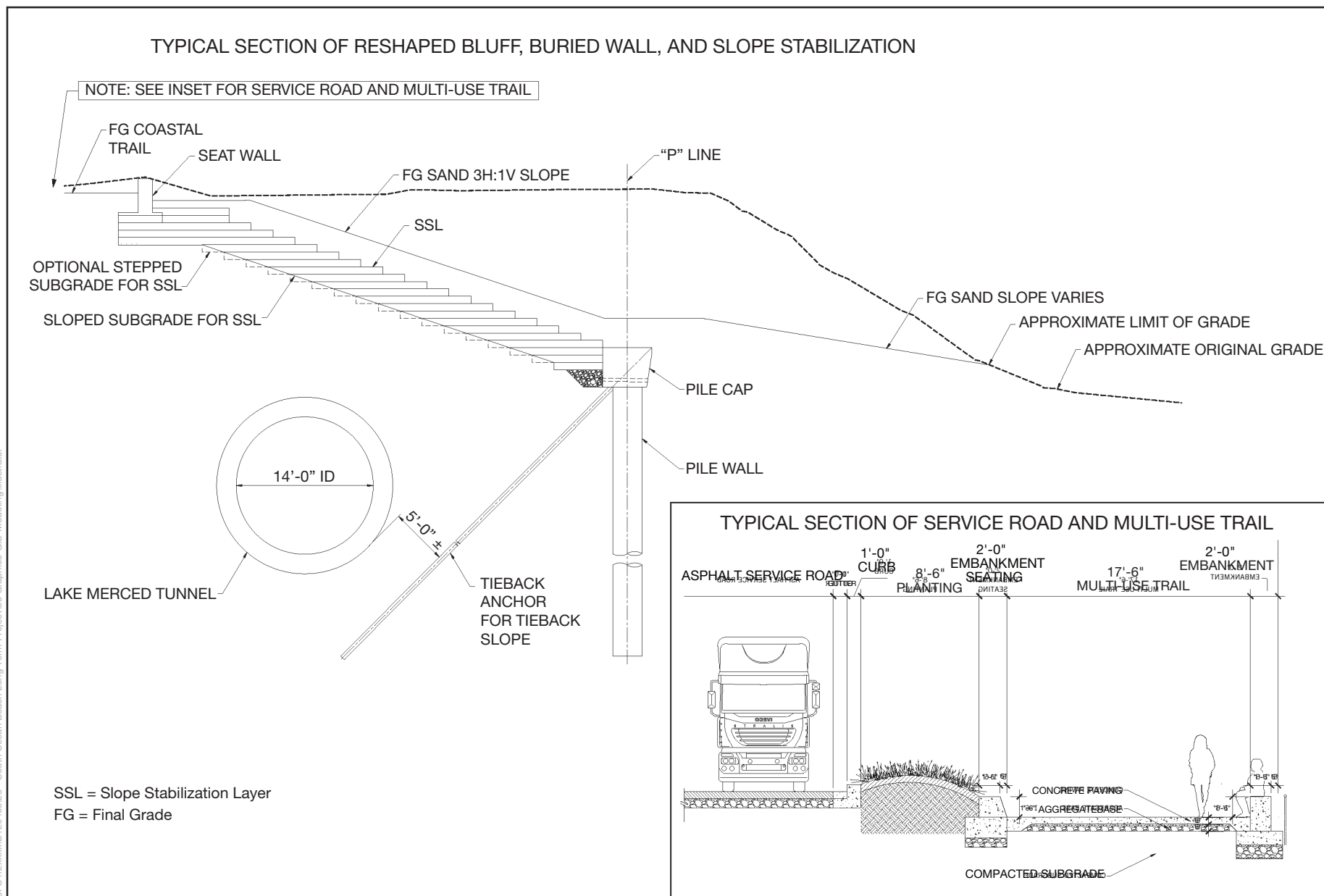
<sup>12</sup> Sand backpassing has been performed at Ocean Beach since 2013 and occurred most recently in 2019. Continued sand backpassing would require GGNRA approval. Refer to Section 2.7, Intended Uses of this EIR and Required Actions and Approvals, for a list of potential approvals needed for project construction and operation.

In addition, the following note has been added to EIR Figures S-1b and 2-1b:

NOTE: Sand removal from North Ocean Beach for beach nourishment at South Ocean Beach would require GGNRA approval.

In response to the comment (A-CPC-1.1) suggesting changes to draft EIR **Figures S-3 and 2-6**, the text in these figures has been enlarged and the tunnel labeled as shown on the following pages. Also, weight has been added to the dashed lines to increase their visibility. Similarly, in response to the comment (A-CPC-1.3) requesting clarification on the green line shown in draft EIR **Figure 2-2**, the figure has been revised as shown below to include a label identifying the green line as a designated bicycle lane along the service road. Revised Figure 2-2 also updates another label to be consistent with project description revisions in Chapter 9.

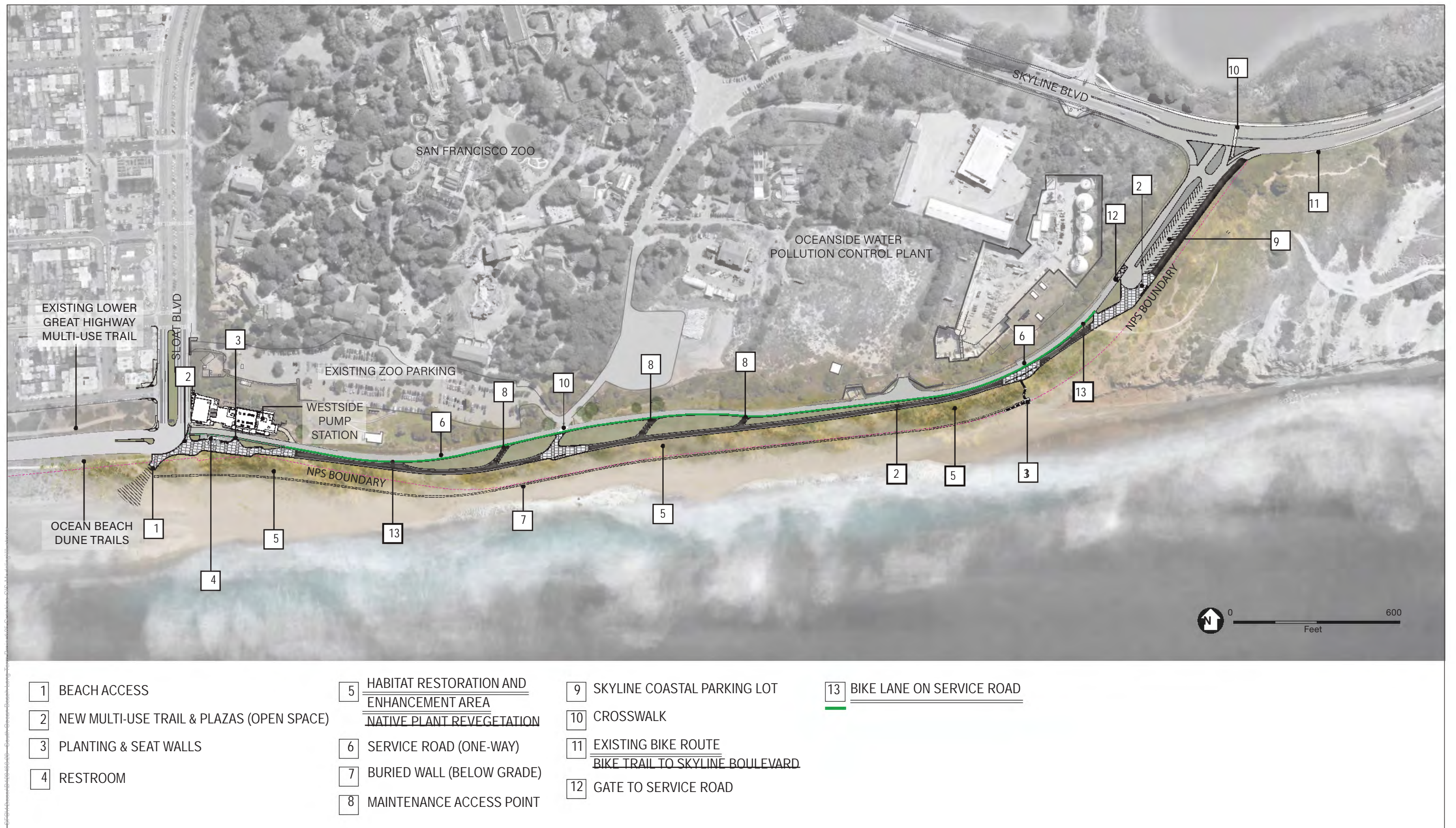
SFO120xxx\DI120468.23 - South Ocean Beach Long Term Project\05 Graphics-GIS-Modeling\Illustrator



SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure S-3**  
Conceptual Cross Sections of Access Improvements  
Proposed for South Ocean Beach



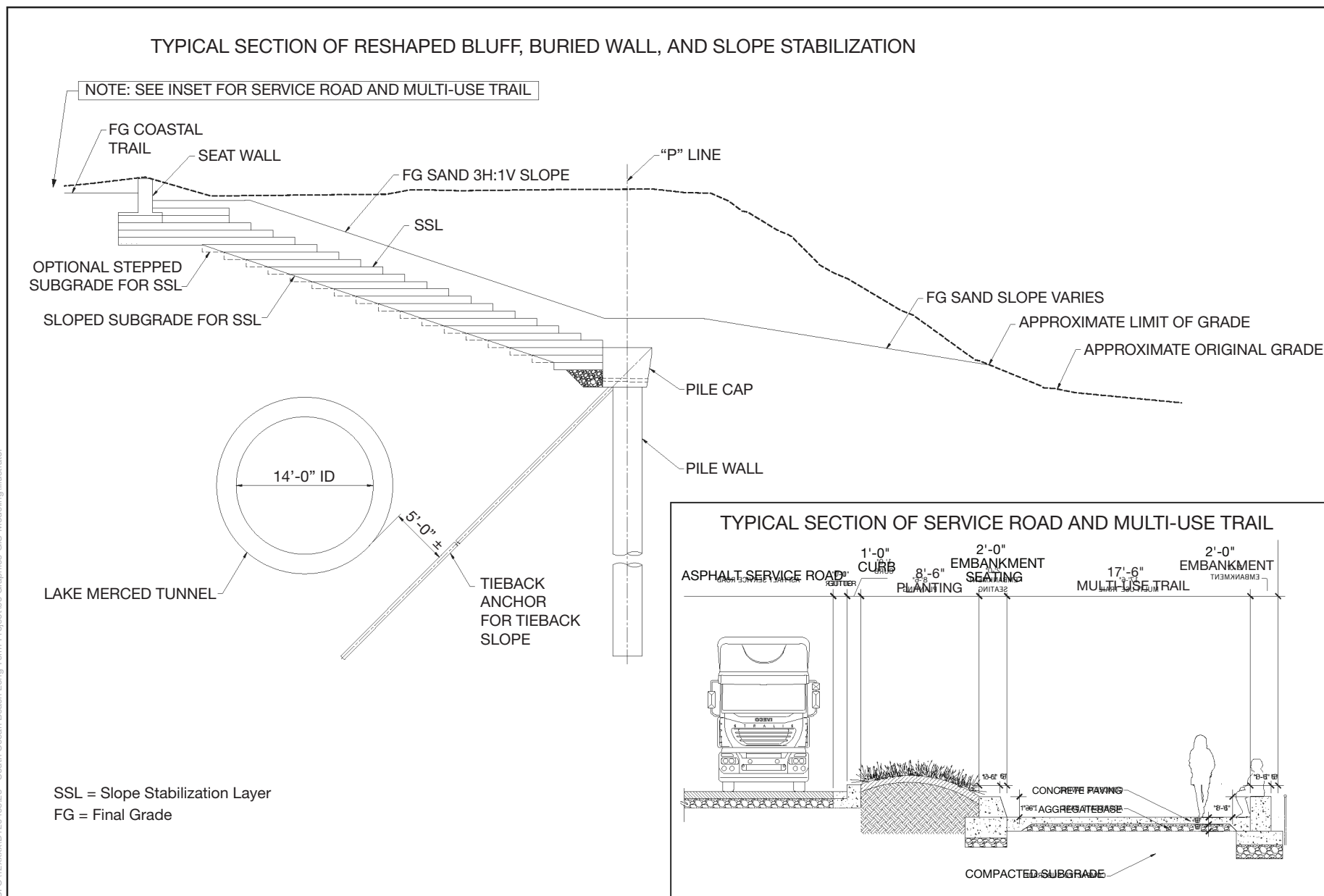
SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-2**  
Conceptual Rendering of Project Elements  
Proposed for South Ocean Beach

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SFO1200001D120468.23 - South Ocean Beach Long Term Project05 Graphics-GIS-Modeling/Illustrator



SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-6**  
Conceptual Cross Sections of Access Improvements  
Proposed for South Ocean Beach

## GC-3.2 MULTIPLE TOPICS

This section of Response GC-3 addresses the following comments, which are quoted below:

O-SURF.5, I-Holl-2.3, I-Moore.3, I-Moore.4, I-Moore.8

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“The associated disappearance of the beach equates to the loss of many resources that are unable to be fully analyzed in the report. A narrow beach means less space for public recreation, including walking, fishing, and swimming. It also increases the likelihood of a ‘pinched’ section of beach, which could destroy lateral access in this area altogether. Any amount of degradation of the vegetated hill would be lost habitats to dune species including the bank swallow. Finally, sand itself is a mineral resource that is becoming increasingly valuable as sea levels rise. The lack of analysis of a project which is better able to maintain sand naturally is a serious oversight.” (Holden Hardcastle, Chair, Surfrider Foundation San Francisco Chapter, and Laura Walsh, California Policy Manager, Surfrider Foundation [O-SURF.5])

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“The OBMP called for a service road from Lake Merced Boulevard to the Treatment Plant entrance and a multi-use trail to the beach. The Draft EIR now has a service road running all the way from Sloat to Lake Merced Boulevard in order to facilitate trucks for sand backpass projects. Might as well forget managed retreat and keep the Great Highway for sand placement operations. And the multi-use trail to the beach? Since the OBMP was concocted, conditions have changed at South Ocean Beach. There is no longer any dry beach south of the Treatment Plant for most of the year. The winter waves eat away at the base of the bluffs at every high tide, causing lots of landslides, one of which killed a young woman on the beach. So the multi-use trail that has been hyped by the Plan leads to nowhere. The Draft EIR includes pictures of a beach access stairwell going down some bluffs but there will be no bluffs, only concrete according to the Plan.” (Dennis Holl [I-Holl-2.3])

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“The Project is fundamentally and materially flawed for several reasons, including:

1. Certain City agencies have not provided sufficient information to the public about possible project considerations and environmental effects and risks, and may be operating in bad faith due to one or more potential conflicts of interest, including with respect to budgeting deficiencies and special interest considerations.
2. The Project has not been properly coordinated amidst other area projects, and contrary to representations made previously to the public that separate environmental reviews would in fact take place.
3. The Project affects state infrastructure and coastal regions amidst the City’s unilateral authority to issue permits.
4. The Project directly contradicts state requirements with respect to “managed retreat” concepts for proper coastal management, including the development of brand new construction which relies upon a vertical seawall that will enhance the pace of erosion near critical local and state infrastructure.

5. The Project does not address the long-term risks and multi-billion-dollar costs associated with the critical sewage management infrastructure in the area, including with respect to material erosion threats to the Lake Merced Tunnel (“LMT”) and Westside Pump Station (“WPS”). (Goffrey Moore [I-Moore.3])
- 

- “6. The Project may create additional environmental impacts in the form of noise and emissions which have not been fully studied, yet are inappropriately assumed to be immaterial without sufficient supporting information.
  7. The Project acknowledges but provides no proposed solution to significant traffic impacts, including increased miles traveled, and increased traffic congestion, which likely will create additional emissions.
  8. The Project could have a material impact on the City’s litigation profile, as well as federal and state environmental regulatory obligations, and jeopardizes city regulatory compliance as well as tax revenue.
  9. The Project may impair the City’s ability to adhere City Charter requirements with respect to sand and pollution management obligations.” (Goffrey Moore [I-Moore.4])
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“Importantly, the environmental effects of multiple road closures are unknown, but there is the possibility that additional road closures will create additional greenhouse gas emissions due to traffic congestion, as well as additional neighborhood noise. There is also the possibility that the Project will create new erosion due to a vertical wall. The current proposal does not factor in any consideration or review of the possible effects noted by multiple environmental groups, including Surfrider Foundation and the Sierra Club. The project will in fact cause additional vehicle miles traveled by altering the transportation network – this is stated plainly in the DEIR, with no mitigation described, and insufficient discussion of greenhouse gas emission effects. The DEIR simply suggest to reroute traffic into residential neighborhoods, as if this is not a big deal, and concludes that traffic impact may be “significant and unavoidable.” For a DEIR to conclude that there are “significant and unavoidable” traffic impacts – words used in the DEIR itself – but not analyze the noise or emission effects of those significant impacts nor any mitigation considerations (which have simply been precluded without explanation) is at best intellectually corrupt.” (Goffrey Moore [I-Moore.8])

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### **RESPONSE GC-3.2**

Comment O-SURF.5 expresses concern about recreational, mineral resources, and habitat impacts. Response RE-1, in Section 11.8 of this RTC document, elaborates on the draft EIR analysis of public access and recreational facilities impacts discussed in draft EIR, Section 4.5, Recreation. EIR Appendix B, Initial Study, Section E.19, Mineral Resources, evaluates the project’s impacts related to mineral resource availability. Section 11.9, Responses BI-1 and BI-2, provides additional information and responses to comments concerning project effects on dune and bank swallow habitat. Comments I-Moore.4 and I-Holl-2.3 express concern about project consistency with the Ocean Beach Master Plan, and compliance with charter requirements and other regulatory obligations. The draft EIR addresses project consistency with applicable plans, policies, and regulations in Chapter 3, and in the topical sections of Chapter 4 and Appendix B. Section 11.3, Response PP-1, of this RTC document, provides additional information in response to comments concerning applicable plans, policies, and regulations, as well as the project’s relationship to the Ocean Beach Master Plan.

The rendering discussed in Comment I-Holl-2.3 (draft EIR Figure 2-7) represents a scenario in which remnant bluff material seaward of the buried wall remains intact. Over time the remnant bluff would be expected to erode, resulting in a background condition that shows a more gradual, sandy slope. Draft EIR **Figure 2-7** has been revised as shown below to reflect updated project design. The revised figure shows the buried wall and beach access stairs with typical summer (high), winter (low), and intermediate beach elevations.

As Comment I-Moore.8 notes, the draft EIR identified significant impacts related to VMT, which are discussed in Section 4.3, Transportation and Circulation, Impacts TR-5 and C-TR-5. Hazardous conditions for bicyclists, people walking, and people driving are addressed in Impact TR-2. Concerns about the project's noise, air quality, and emission impacts including noise and emissions associated with changes in traffic patterns (e.g., Comment I-Moore.8) are addressed in draft EIR Section 4.4, Noise and Vibration, and in Appendix B, Initial Study, Section E.8, Air Quality. Comments concerning these topics are also addressed in Sections 11.6, Transportation and Circulation; 11.7, Noise and Vibration; and 11.11, Greenhouse Gas Emissions, of this RTC document.

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## **Comment GC-4: Cumulative Impacts**

### **GC-4.1 BEACH NOURISHMENT**

This section of Response GC-4 addresses the following comment, which is quoted below:

A-GGNRA.13

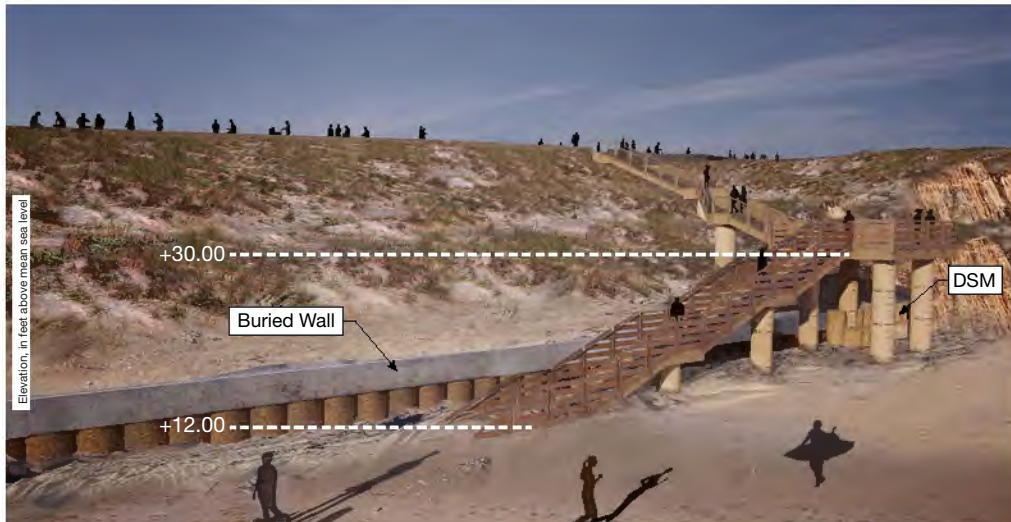
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**“Table 4.1-3 Projects Considered in Cumulative Impact Analysis and Fig 4.1-1 Cumulative Projects:** The tables and analysis need to include the recent USACE beach nourishment project.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.13])

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### ***RESPONSE GC-4.1***

In response to comment GGNRA.13, the draft EIR has been revised to include the Corps (USACE) beach nourishment project in the cumulative impact analysis. The 2021 Corps beneficial use project involved a one-time placement of sand along the South Ocean Beach shore with no long-term operations or maintenance activities. Discussion regarding the cumulative impacts on nesting bank swallow and bank swallow habitat has been added to reflect the inclusion of this project in the cumulative scenario. The planning department determined that revisions to other cumulative impact analyses are not necessary because the effects of the project in combination with those of other projects in the cumulative scenario with the addition of the Corps' 2021 sand placement would not result in new or more severe cumulatively significant effects than identified in the draft EIR. The addition of this cumulative project does not change the draft EIR's conclusions regarding cumulative impacts.



Typical Winter Low Beach



Typical Intermediate Beach



Typical Summer High Beach

DSM = Deep Soil Mixing  
All elevations relative to  
mean sea level.

SOURCE: San Francisco Public Utilities Commission

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-7**  
Conceptual Diagram of Beach Access Stairway

In response to Comment A-GGNRA.13, EIR Table 4.1-3, Projects Considered in Cumulative Impact Analysis (p. 4.1-11), has been revised to include a new row, as follows:

**Table 4.1-3 Projects Considered in Cumulative Impact Analysis**

Project No. on Map	Project Name (Project Sponsor or Jurisdiction)	Project Description	Construction Dates
<u>13</u>	<u>Ocean Beach Storm Damage Reduction Beach Nourishment Project (Army Corps of Engineers with SFPUC as the local sponsor)<sup>g</sup></u>	<u>In August to September 2021, the Corps placed approximately 380,000 cubic yards of material dredged from the main ship channel along South Ocean Beach, instead of its past practices of placing the material offshore at SF-8 or the Ocean Beach Demonstration Site. With roughly 32 percent losses during placement, post-placement surveys confirm 256,588 cubic yards of sand remained on the beach as of October 1, 2021.</u>	<u>2021</u>

<sup>g</sup> etrac, 2021. West Coast Hopper – Ocean Beach Pump Ashore Final Pay Volumes. Memo from Greg Gibson (Etrac, Inc.) to Marshall Thompson (Dutra Group), Subject: Ocean Beach – Final Pay Volume for Ocean Beach. October 1, 2021.

In response to Comment A-GGNRA.13, EIR Section 4.6, Biological Resources (Impact C-BI-2, pp. 4.6-73 and 4.6-74), has been revised as follows:

#### ***Nesting Bank Swallow***

As discussed under Impact BI-2, sand placement on South Ocean Beach could disrupt bank swallow nesting efforts within the Fort Funston colony adjacent to (south of) the project area if sand placement were to occur within 650 feet of active nest burrows during nesting season. This impact would be reduced to a less-than-significant level through mitigation. The only other cumulative projects in proximity to the bank swallow colony ~~is~~ are the Fort Funston Trail Connection on the bluffs above the northernmost segment of the colony and the 2021 U.S. Army Corps of Engineers (Corps) Storm Damage Reduction Beach Nourishment Project along South Ocean Beach. Given its inland location, use of the trail system on the bluffs above the bank swallow colony would not be expected to result in substantial noise or visual disturbance that would adversely affect nesting within the colony. Furthermore, the 2021 Corps project was completed in August and September, outside of the bank swallow nesting season, and resulted in no direct or indirect effects on nesting bank swallows. Therefore, the effects of project operations in combination with those of the cumulative projects, would be ***less than significant***.

#### ***Bank Swallow Habitat***

As explained in Impact BI-2, the coastal engineering study concluded implementation of the project would not have a substantial adverse effect on adjacent shoreline erosion when compared with the no-project scenario ~~such and that the potential project impacts on habitat characteristics of the remaining suitable bank swallow nesting bluff habitat in Fort Funston for breeding bank swallow~~ would be less than significant. The 2021 Corps project involved placement of sand over the revetments immediately below the bank swallow habitat at South Ocean Beach. The placed sand did not cover the bluff face or burrows in the bluff that comprise the bank swallow habitat within the project area (see photograph of site A-001 in Table 3 of Attachment D). No other project in the cumulative scenario would contribute to a cumulative impact on bank swallow habitat through operations. Therefore, the cumulative impact on bank swallow habitat would be ***less than significant***.

In response to Comment A-GGNRA.13, EIR Section 4.6, Biological Resources (Impact C-BI-2, p. 4.6-75), has been revised as follows:

### Marine Biological Resources

The project's operational impacts on marine biological resources are identified under Impacts BI-5, BI-6, and BI-7; they include temporary impacts on benthic habitats and marine species migration from dredge vessel anchoring and pipeline placement, temporary impacts on water quality through sediment resuspension in support of these activities, potential impacts on the intertidal invertebrate community following nourishment activities, and temporary fill of jurisdictional waters. Of the cumulative projects examined, only the 2021 U.S. Army Corps of Engineers (Corps) Storm Damage Reduction Beach Nourishment Project could result in impacts that could combine geographically with the project's operational effects on marine biological resources. The Corps beach nourishment project involved a one-time placement of approximately 380,000 cubic yards of dredged sand at South Ocean Beach. This placement had the potential to result in similar impacts to those identified for the project and could potentially exacerbate impacts on benthic habitat and species.

Applied Marine Sciences (AMS) evaluated whether the 2021 beach nourishment project had changed the ecological value of benthic conditions at South Ocean Beach, relative to baseline conditions. In brief, the AMS evaluation found some evidence that the benthic community at South Ocean Beach had been altered in the area of the Corps' 2021 sand placement. Species presence/absence and species acquisition at South Ocean Beach appeared to differ relative to the Fort Funston beach reference site. Similarly, a common crustacean taxon, *Eohaustorius washingtonianus*, was found to differ in distribution between surveys. However, these changes could not be associated with concurrent changes in physical variables (e.g., beach width, beach slope, etc.).<sup>146</sup> Changes in mean grain size were observed from the baseline to year 1 surveys at both South Ocean Beach and Fort Funston beach, but corresponded to a narrow range; from 0.29 (+/- 0.004) mm to 0.27 (+/- 0.006) mm at South Ocean Beach and from 0.29 (+/- 0.006) mm to 0.31 (+/- 0.005) at Funston Beach. It is unlikely that these small changes would result in adverse effects on the benthic community since there were no significant changes in total abundance, *Emerita* density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area.<sup>147</sup> Following the first year of post-nourishment assessment, AMS concluded that there was not sufficient evidence, based on the monitoring results, that the benthic community at South Ocean Beach was similar to baseline survey conditions. The authors concluded that additional surveys are needed to be confident that the observed changes reflect stability of the benthic community of South Ocean Beach compared to baseline and reference conditions.<sup>148</sup> Nevertheless, since there were no significant changes in total abundance, *Emerita* density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area, it is unlikely that the effects of the Corps' 2021 beach nourishment project would combine with those of project operations to result in a cumulatively significant effect. ~~none would result in impacts that could combine geographically with the project's operational effects.~~ Therefore, cumulative impacts resulting from in-water work, and the cumulative impact on marine resources associated with operations, would be **less than significant**.

<sup>146</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 3, 2023.

<sup>147</sup> Species acquisition depicts the relationship between the number of new taxa observed with increased sampling effort. It is a helpful metric for understanding how benthic communities change over time or in response to disturbance.

<sup>148</sup> Applied Marine Sciences, 2023, Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey, Prepared for Environmental Science Associates, March 1, 2023.

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## **GC-4.2 2700 SLOAT BOULEVARD**

This section of Response GC-4 addresses the following comment, which is quoted below:

I-Sarjapur.1

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“As described in further detail below, the DEIR’s cumulative projects analysis considers the 2700 Sloat Boulevard Project based on preliminary applications submitted in early 2020, and the information and project scope referenced in the DEIR are now out-of-date. The Project Sponsor has recently submitted a Project Application for the 2700 Sloat Boulevard Project (Planning Case No. 2021-012382PRJ) and would like to bring attention to the updated project scope.

The Project Sponsor requests that the current scope of the 2700 Sloat Boulevard Project be referenced and considered in the DEIR’s cumulative projects analysis.

### **I. Updated Project Scope**

The current scope of the 2700 Sloat Boulevard Project substantially differs from the project scope referenced in the DEIR. For example, the DEIR describes the project as three 8-to-12 story towers with up to 283 residential units, 250 Class I bicycle parking spaces, and no off-street parking. The current 2700 Sloat Boulevard Project scope, as detailed in the recently submitted project application, consists of 400 total residential units, 200 Class I and 24 Class II bicycle parking spaces, 56 off-street parking spaces, and 9,719 sq. ft. retail space. Please refer to application on file for the official details of the updated project scope. Additionally, we note that while the 2700 Sloat Boulevard Project application anticipates a total of 56 off-street parking spaces, the local zoning controls for allow up to 600 residential accessory parking spaces and 73 retail accessory parking spaces for the current project scope.

### **II. Transit Stop Relocation**

The Project Sponsor would like to draw special attention to the 2700 Sloat Boulevard Project’s proposed relocation of the bus stop currently located in front of the Property, on Sloat Boulevard between 45th Avenue and 46th Avenue. The project is proposing the permanent relocation of the bus stop to 2800 block of Sloat Boulevard, one block to the west of its current location, which places it closer to the Zoo entrance and the signalized crosswalk on 47th Avenue. In addition, the MUNI L Line stop is also located on the 2800 Sloat Blvd block between 47<sup>th</sup> and 46<sup>th</sup> Avenues, but on Wawona Street. Relocating the 18 & 23 bus stop to the 2800 Sloat block would eliminate the need for riders transferring between 18 & 23 buses and the MUNI L Line to cross any city streets since all of the MUNI stops would be located on the same block.

### **III. Conclusion**

For the foregoing reasons, we request that the application on file for the 2700 Sloat Boulevard Project (Planning Case No. 2021-012382PRJ) be reviewed, and that the DEIR be updated to reflect and analyze the current scope of this project as it is detailed in that application.” (Melinda A. Sarjapur [I-Sarjapur.1])

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## **RESPONSE GC-4.2**

As discussed in Comment I-Sarjapur.1, 2700 Sloat Holding, LLC., submitted a project application for the 2700 Sloat Boulevard Project in December 2021. The project consists of a 12-story building over two-level basement with 400 residential units, 224 bicycle parking spaces, 56 off-street parking spaces, and 9,719 square feet of retail space. On April 11, 2023, the project sponsor submitted new application for a 50-story mixed-use building with 712 residential units, a 31,075 square-foot fitness center and spa, 21,864 square feet of community facility space, 15,302 square feet of retail space, 212 carshare parking spaces, and 327 bicycle parking spaces. The planning department, however, has determined that the project application is incomplete and that revised project does not meet the requirements of the planning code or state density bonus law.<sup>1</sup> The draft EIR has been revised throughout to reflect the current development proposal for that site for the purpose of analysis; revisions are presented in Chapter 12. The comment's suggestion to relocate the Muni 18 46th Avenue and 23 Monterey stops to the 2800 block of Sloat Boulevard is noted. The planning department has determined that the updated cumulative project description does not change the draft EIR's conclusions regarding cumulative impacts, as discussed in Chapter 12.

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## **GC-4.3 UPPER GREAT HIGHWAY**

This section of Response GC-4 addresses the following comments, which are quoted below:

I-Ciganek.5, I-Moore.7, I-Moore.13

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“Trying to plan the “project” South of Sloat without including and incorporating possible future changes to the Upper Great Highway from Sloat to Lincoln as a whole is an exercise in futility and mismanagement of public resources. It simply isn't going to come to pass. Time to start anew, whether you like it or not.” (Matt Ciganek [I-Ciganek.5])

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“Amidst this backdrop of possible malfeasance, the DEIR surprisingly asks residents and regulatory officials to just simply take things on faith. Specifically, the DEIR indicates that missing data related to the UGH Project and this Project will be forthcoming and will show that there is no material environmental impact when (if?) the information ever happens to materialize (at some undetermined time and in some undetermined form in the future). Brazenly and openly, the DEIR acknowledges that data is missing but will be forthcoming in “good faith” and must necessarily demonstrate unseen that there are no material environmental concerns. In fact, the single instance of the phrase “good faith” even being used in the DEIR appears as follows: “Because detailed analyses of the Upper Great Highway project have not been conducted by other agencies (e.g., Rec and Park, SFMTA or SFCTA), the analysis of this additional cumulative scenario is a good faith effort that considers the best available information.” Translation – “you should just trust us as we move forward, and this project is fine because we think other agencies will do their job properly, eventually, even though there isn't sufficient information available and a full analysis has not

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<sup>1</sup> San Francisco Planning Department, Plan Check Letter, 2700 Sloat Boulevard, Planning Record Number 2021-012382PRJ/ENV/CUA/SDB/SHD/CTZ/TDM, May 8, 2023.

been conducted to conclude whether we might be right . . . because that is the responsibility of another part of the City, and we just can't be bothered to coordinate things."

The obvious lack of information is staggering, and the conflicted behavior of certain public officials is on full display. There is no explanation in the EIR for why the City should have unilateral authority to proceed in a "good faith" information vacuum in which a public official tied to the project has already been found unanimously by an ethics mechanism to have operated in bad faith. The California Coastal Commission and associated state agencies cannot permit this unilateral approach in "good faith" in an information vacuum under these conditions. It is not acceptable for the City to take the position that essentially says: "we would like to proceed even though we don't have all the information, because we just think that the information will be forthcoming in good faith and won't adversely affect any issues for which we've already indicated that there are material traffic impacts." This hamfisted approach impairs the credibility of the process and underscores the need for state oversight by state officials.

If there is any doubt that the UGH Project and this Project are not inextricably intertwined, consider what the City itself has previously said. In addition to public officials advocating with circular logic that the UGH closure must necessarily be justified because the Sloat extension will just be closed too (and in some cases, vice versa), the City represented directly to the public that environmental concerns with respect to *both* projects were critical, and that the concerns would be addressed properly via multiple EIRs.

Specifically, the City is already aware of the important linkage among various area projects, and has previously acknowledged that critical environmental concerns require further consideration and coordination. The City previously represented to the public that an EIR would be conducted with respect to the UGH Project, yet has refused to conduct such a review, and continues to attempt to subvert CEQA requirements with respect to the UGH Project due to the conflicts discussed above. Specifically, page 5 of the September 9, 2020 EIR notice indicates that the UGH Project will be subjected to an EIR.<sup>7</sup> Yet no such action has taken place, and so no data exists which informs this Project which is itself relying on an acknowledged gap in data. Instead, the DEIR takes the position that future data may be forthcoming, and asks the public to proceed based on "best available information." That's not an approach in compliance with EIR requirements, nor the representation the City made to the public – either the data exists and should be considered properly, or it doesn't exist and should be collected first before project analysis is undertaken." (Goffrey Moore [I-Moore.7])

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<sup>7</sup> The DEIR notes the following: "There are also several other separate projects that may occur in the vicinity of South Ocean Beach. The city and the California Department of Transportation (Caltrans) have proposed separate projects to improve the operations and safety of Skyline Boulevard (State Route 35) at its Great Highway and at Sloat Boulevard intersections. NPS is planning a trail to link the proposed multi-use trail to Fort Funston's existing trail network. The city and the U.S. Army Corps of Engineers (Army Corps) are currently planning and designing a project to place sand dredged from San Francisco's main shipping channel along South Ocean Beach in 2021. The San Francisco County Transportation Authority is leading the District 4 Mobility Study and will be exploring the feasibility of modifying the Great Highway between Lincoln Way and Sloat Boulevard, which is currently temporarily closed due to COVID-19. In addition, Rec and Park, with support from SFMTA and Public Works, is considering temporary closure of the southbound lanes of the Great Highway between Sloat and Skyline boulevards. **Each of these separate projects would be subject to separate environmental review.**" Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting, September 9, 2020, Page 5 (emphasis added).

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"Underscoring this faulty analysis and defective project justification is the very real possibility that multiple projects are negatively impacting the area without appropriate independent oversight and common sense. The City has supported significant real estate development along the westward section of Sloat Boulevard,

with significant additional vehicles, while simultaneously proposing that the end of the road essentially be transformed into a dead end with no exits except into residential neighborhoods. Skyline Boulevard is a state facility, and has already seen increased congestion during the UGH closure, which highlights the need for a comprehensive project with multiple EIRs scoped together for the area. Yet the City continues to assert that a large number of people are now suddenly using a closed UGH such that closure can be justified by the new usage demand, but resisting the obvious conclusion that a large influx of people does not require an environmental assessment of the garbage, sand displacement, dunes and other impacted areas along the UGH.” (Goffrey Moore [I-Moore.13])

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### **RESPONSE GC-4.3**

Several comments (I-Ciganek.5, I-Moore.7, I-Moore.13) address the Potential Upper Great Highway Closure. As noted in the draft EIR, the Potential Upper Great Highway Closure would be subject to additional environmental review, separate from the analysis conducted in this EIR. This EIR evaluates the cumulative impacts of the project, the Potential Upper Great Highway Closure, and all other projects listed in draft EIR Table 4.1-3. The CEQA Guidelines section 15144 provide that an EIR may include some degree of forecasting in evaluating a project’s environmental impacts. As discussed in draft EIR Section 4.1.5.2, long-term decision-making about potential closure of the Upper Great Highway between Sloat Boulevard and Lincoln Way is uncertain, and the planning department considers projects with this level of uncertainty as speculative and does not typically consider them in CEQA analysis of cumulative impacts. However, to support informed decision-making and for the reasons discussed on draft EIR p. 4.1-6, the planning department elected to evaluate the project’s cumulative impacts with and without the permanent closure of the Upper Great Highway between Sloat Boulevard and Lincoln Way. As discussed on draft EIR pp. 4.3-49 through 4.3-53, cumulative transportation impacts that would occur if the Upper Great Highway were closed in the future would be similar to cumulative conditions without the Potential Upper Great Highway Closure. Under cumulative conditions with and without the Potential Upper Great Highway Closure, construction-related transportation impacts and operational impacts related to potentially hazardous conditions, accessibility, transit delay, and loading would be less than significant, while cumulative VMT impacts would be significant and unavoidable.

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### **Comment GC-5: Public Involvement and Collaboration or Coordination**

This response addresses the following comments, which are quoted below:

A-Caltrans.1, A-CDFW.9, A-GGNRA.1, A-GGNRA.3, A-GGNRA.24, A-SFBOS.2, O-SURF.10, I-Ciganek.3

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“Please keep Caltrans Transportation Planning & Local Assistance's Climate Change Branch informed about adaptation measures as they are developed and implemented near Skyline/SR-35 and the nearby multi-use bike/ped trail network. Caltrans Bay Area is interested in engaging in multi-agency collaboration early and often, to find multi-benefit solutions when planning and implementing adaptation measures, including nature-based solutions outlined in this DEIR. Please contact Vishal Ream-Rao, Climate Change Branch Chief,

at vishal.ream-rao@dot.ca.gov with any questions.” (Yunsheng Luo, Associate Transportation Planner, California Department of Transportation, District 4 [A-Caltrans.1])

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#### “ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be found at the following link: <https://wildlife.ca.gov/Data/CNDDB/Submitting-Data#44524420-pdf-field-survey-form>. The completed form can be mailed electronically to CNDDB at the following E-mail address: [CNDDB@wildlife.ca.gov](mailto:CNDDB@wildlife.ca.gov). The types of information reported to CNDDB can be found at the following link: <https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals>.

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (FGC, Section 711.4; Pub. Resources Code, section 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.” (Erin Chappell, Regional Manager, Bay Delta Region (3), and Craig Shuman, D. Env., Regional Manager, Marine Region (7), California Department of Fish and Wildlife [A-CDFW.9])

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“The Golden Gate National Recreation Area (GGNRA), a National Park Service (NPS or park) unit, has reviewed the draft Environmental Impact Report (DEIR) for the Ocean [Beach] Climate Change Adaptation Project. The NPS has an interest in this project because substantial project elements of the proposed action would be constructed on and immediately adjacent to property owned and managed by the NPS.

The NPS is pleased to submit the attached comments on the DEIR for the Ocean Beach Climate Change Adaptation Project at Ocean Beach. We appreciate your close coordination with our park interdisciplinary team to develop the draft, including numerous discussions and meetings about the proposed action, possible alternatives, GGNRA’s General Management Plan (GMP), NPS policy, and resource impact analyses. We look forward to continuing the collaborative dialogue in support of a project that advances our shared goals at Ocean Beach.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.1])

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“We note that GGNRA was among the primary proponents for conceptual planning that eventually led to San Francisco Public Utilities Commission’s proposed project at Ocean Beach. When the Ocean Beach Vision Council (Council) was created by Mayor Gavin Newsom in 2008, then Superintendent Brian O’Neill said, *“Ocean Beach is as unique and irreplaceable as Muir Woods, the Presidio, the Marin Headlands or any other part of the Golden Gate National Recreation Area. We [the National Park Service and the City of San Francisco] now have an unprecedented opportunity to work together towards the rejuvenation of Ocean Beach.”* Four years later, the vision of the Council was achieved when the Ocean Beach Master Plan was published by San Francisco Planning and Urban Research Association (SPUR). Mr. O’Neill passed away in 2009, and SPUR dedicated the Master Plan to honor his invaluable leadership.

Thank you for the opportunity to share our issues and concerns again as the environmental analysis moves forward. And thank you for the opportunity to advance the vision established by our predecessors. I encourage the San Francisco Planning Department and SFPUC to actively collaborate with my staff on resolving the direct and indirect impacts this project would have on GGNRA lands and resources. If you have questions or need further clarification regarding our comments, contact Larry Miranda, Environmental Protection Specialist, at 628-218-1722 or [larry\\_miranda@nps.gov](mailto:larry_miranda@nps.gov).” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.3])

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“General Comment: NPS considers the DEIR to be a concise and thorough CEQA document for all of the elements in the proposed action on city property. However, as NPS has already conveyed to SFPUC, and SFPUC has agreed, SFPUC is also responsible for ensuring all of the requirements under the National Environmental Policy Act (NEPA) are fulfilled since many of the city’s project elements would either be constructed directly on NPS property (with direct impacts to park resources including bank swallows and bank swallow critical habitat) or constructed adjacent to NPS property (with indirect impacts to park resources). To that end, NPS has approved that the city’s consultant, Environmental Sciences Associates (ESA), who has prepared the city’s CEQA DEIR, may conduct the NEPA review and documentation at SFPUC’s cost, and in coordination with and approval by park.

Earlier during the CEQA process for this project, NPS advised and recommended to the San Francisco Planning Department and SFPUC, that rather than two separate processes and documents, it would be more efficient and cost effective to collaborate and prepare a joint CEQA/NEPA document, as recommended in the handbook, *NEPA and CEQA: Integrating Federal and State Environmental Reviews*, which was prepared and approved by the State of California and the White House Council on Environmental Quality (CEQ) in 2014. Per the guidance recommended in the handbook, the purpose of a joint process and document is to improve efficiency, timely review, and reduced cost of preparing and reviewing one document rather than two for a project affecting both state and federal jurisdictions. The park has recommended the same for earlier multi-agency city projects affecting park lands and requiring CEQA and NEPA reviews, but the city has always declined.

The NPS would like to take this opportunity to bring the value of the joint process to the attention of SF Planning again and requests that sometime convenient in the future that leadership in both city and GGNRA planning offices meet and discuss how to integrate both compliance processes for future multi-jurisdictional projects affecting the city and the park in order to improve efficiency and reduce costs for both the city and the National Park Service.” (Laura E. Joss, Golden Gate National Recreation Area, National Park Service, United States Department of the Interior [A-GGNRA.24])

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“I look forward to ongoing discussion with the Public Utilities Commission, Municipal Transportation Agency, community stakeholders, and nearby residents as we proceed in this review process. Thank you for your consideration and please do not hesitate to contact me at [Myrna.Melgar@sfgov.org](mailto:Myrna.Melgar@sfgov.org) if I can offer further clarification.” (Myrna Melgar, Supervisor, District 7, San Francisco Board of Supervisors [A-SFBOS.2])

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“Thank you for the opportunity to comment on this draft EIR. We hope to work with SFPUC and all interested to pursue changes to this plan that honor the OBMP vision for a more sustainable beach and public access

friendly project for the area.” (Holden Hardcastle, Chair, Surfrider Foundation San Francisco Chapter, and Laura Walsh, California Policy Manager, Surfrider Foundation [O-SURF.10])

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“The seawall that has been proposed appears to have discounted all neighborhood input as well as that of the various environmental groups.” (Matt Ciganek [I-Ciganek.3])

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## **RESPONSE GC-5**

Many of the comments above express interest in continued multi-agency and stakeholder collaboration on the project, either in general or with a focus on issues of particular interest to the commenter (such as GGNRA lands and resources for the National Park Service). These comments are acknowledged. Draft EIR Chapter 1, Introduction and Background, discusses the long history of collaboration for this project with multiple agencies and stakeholders, the environmental review process and associated opportunities for public and agency involvement. Chapter 2, Project Description, lists agencies that would issue separate permits or approvals for the project.

Regarding neighborhood input and agency coordination (Comment I-Ciganek.3), the EIR public outreach process included distributing notices of preparation of an EIR, holding a scoping meeting and accepting written public scoping comments, and notifying all interested parties of EIR publication. This process is described in draft EIR Section 1.5.1, Notice of Preparation and Public Scoping Period. Draft EIR Table 1-2 identifies commenters, summarizes comments, and lists the places in the EIR where scoping comments were addressed. As also explained in Section 1.1., Introduction, the project description and design have been developed in collaboration with multiple agencies and organizations, including the San Francisco Public Utilities Commission, the San Francisco Recreation and Parks Department, San Francisco Public Works, the San Francisco Municipal Transportation Agency, and the National Park Service and Federal Highway Administration, among others.

In response to Comment A-CDFW.9, the requirement to pay California Department of Fish and Wildlife CEQA document filing fees is noted. As acknowledged by the commenter, this fee is associated with and to be paid at the time of Notice of Determination filing, which would occur following EIR certification (if the EIR is certified). The comment’s request that the city report to the California Natural Diversity Database any special-status species or sensitive natural communities detected during project surveys is noted.

As explained further in Section 8.2, Environmental Review Process, of this RTC document, the planning department has prepared this EIR in accordance with CEQA Guidelines sections 15080 to 15097. These guidelines set forth the EIR process, which includes multiple phases involving notification and input from responsible agencies and the public. This RTC document addresses all substantive written and oral comments on the draft EIR received during the public review period. In addition, as explained in Section 11.9, Response BI-1, the city has coordinated extensively with the National Park Service and California Department of Fish and Wildlife in responding to their comments on the draft EIR’s bank swallow impact discussion and mitigation measures.

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## Comment GC-6: Traffic Congestion Impacts

This response addresses the following comments, which are quoted below:

I-Moore.9, I-Petterson-1.1, I-Petterson-2.1

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“While vehicle miles traveled (“VMT”) may have been quantified in the DEIR, increased congestion (and resulting emissions) was not. This failure is sadly consistent with the shortsighted viewpoint that vehicle impairment must necessarily be a byproduct of new bike path construction.” (Goffrey Moore [I-Moore.9])

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“Traffic at the intersection of Skyline and Sloat is already very heavy. Closing off the Great Highway from Skyline for good is not going to work, when that road has been closed in the past, traffic backs up for half a mile or more. That intersection at Sloat and Skyline can't handle the traffic load. Cars honk their horns and drivers are cussing and yelling at each other. It is very annoying, my neighbors and I are tired of it. My house is right in front of that intersection.” (Paul Petterson [I-Petterson-1.1])

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“My neighbors and I are really against the rerouting of traffic through there because when the Great Highway's closed or clearing sand and other issues, the traffic backs up for half mile and the drivers are honking their horns, cussing and yelling. And there's a lot of excess that intersection just can't handle the load. And it's gotten a lot worse in the last 15 years.” (Paul Petterson [I-Petterson-2.1])

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## RESPONSE GC-6

### ***ANALYSIS OF TRAFFIC CONGESTION***

Consistent with CEQA section 21099(b)(1), the planning department does not use automobile delay or traffic congestion, by itself, to determine whether a project would have a significant effect on the environment.

However, the planning department considered in the draft EIR the secondary effects of vehicle congestion. For transportation analyses, the draft EIR evaluates whether the Great Highway closure between Sloat and Skyline boulevards and the associated shift in traffic volumes that could result from the project would:

- Create potentially hazardous conditions for people walking, bicycling, or driving, in Impact TR-1 for conditions during project construction and Impact TR-2 for conditions during project operations
- Interfere with accessibility for people walking or bicycling, in Impact TR-1 for conditions during project construction and Impact TR-3 for conditions during project operations
- Substantially delay transit, in Impact TR-1 for conditions during project construction and Impact TR-4 for conditions during project operations
- Cause substantial additional vehicle miles traveled, in Impact TR-5

- Result in a loading deficit that could create potentially hazardous conditions, in Impact TR-6

The analyses of project-related air quality impacts during construction and long-term impacts from project operation, inclusive of secondary effects of vehicles, are presented in EIR Appendix B, Initial Study, pages 27 through 47, while project-related construction and operational impacts related to greenhouse gas emissions are presented in EIR Appendix B, Initial Study, pages 48 through 55.

The analysis of project-related noise impacts during construction and operation of the project is presented in Section 4.4, Noise and Vibration, on draft EIR pp. 4.4-1 through 4.4-35, inclusive of noise from traffic redistribution (draft EIR pp. 4.4-24 through 4.4-28).

### ***INTERSECTION OF SKYLINE BOULEVARD/SLOAT BOULEVARD***

Comments regarding traffic congestion at the intersection of Skyline Boulevard/Sloat Boulevard and additional congestion in the area when the Great Highway is closed due to sand backpass or erosion events or other issues are noted by the city. The SFMTA project to reconfigure the intersection of Skyline Boulevard/Sloat Boulevard is described on draft EIR p. 4.1-9 and is included in the cumulative impact analysis. The intersection of Skyline Boulevard/Sloat Boulevard will be reconfigured with a traffic signal to improve safety for all road users, increase visibility of people walking, and improve or maintain transit and vehicle circulation at the intersection. This project is estimated to be completed by early 2024, as reflected in the cumulative projects revisions in Section 12.4 of this RTC document.

## 11.15 Late Comments

Under CEQA, a lead agency may—but is not required to—consider comments submitted after the close of the draft EIR public review period (CEQA sections 21091(d)(1) and 21091(d)(2)(A)). For the benefit of the public and decisionmakers, the planning department has included within this RTC document general topics raised in comments submitted after the close of the draft EIR public comment period, which ended on January 24, 2022 (“late comments,” submitted after the close of the comment period without a request and formal approval of an extension).

### Topics Raised in Late Comments

Topics raised in late comments are similar to topics raised in timely comments. The late comments address (1) general project support and opposition; (2) assertions of inconsistencies between the Ocean Beach Master Plan concepts and the project described in the draft EIR; (3) shoreline erosion and the project’s ability to retain a sandy beach; (4) project effects on wildlife and wildlife habitat, including snowy plover; and (5) the effects of Great Highway closure on neighborhood safety and traffic congestion.

### Response to Late Comments

All topics raised in late comments also appear in timely submitted comments. The locations within this RTC where a corresponding response is provided are as follows:

- Response GC-2 in Section 11.14, General Comments, addresses comments concerning general project support and opposition.
- Response PP-1 in Section 11.3, Plans and Policies, addresses comments asserting inconsistencies between the Ocean Beach Master Plan concepts and the project described in the draft EIR.
- Response GE-1 in Section 11.12, Geology and Soils, addresses comments related to shoreline erosion and the project’s ability to retain a sandy beach.
- Response BI-6 in Section 11.9, Biological Resources, addresses comments noting the project’s potential effects on wildlife and wildlife habitat.
- Response GC-6 in Section 11.14, General Comments, addresses comments concerning the effects of Great Highway closure on neighborhood safety and traffic congestion.

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## CHAPTER 12

# DRAFT EIR REVISIONS

This chapter presents revisions to the Ocean Beach Climate Change Adaptation Project (project) Draft Environmental Impact Report (draft EIR), which was published on December 8, 2021. These revisions include both (1) changes made to text, tables, or figures in response to comments on the draft EIR, as identified Chapter 11, Responses to Comments; and (2) San Francisco Planning Department (planning department) 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. The chapter includes all revisions by reproducing the relevant excerpt of the draft EIR in the sequential order by the chapter, section, and page where it appears in the document. Staff-initiated changes to clarify information presented in the draft EIR are highlighted by an asterisk (\*) in the margin to distinguish them from text changes in response to comments. Deletions in text and tables are shown in strikethrough (~~strikethrough~~) and new text is shown in underline (double-underline). None of the revisions results in substantial changes in the analysis or conclusions presented in the draft EIR. These revisions do not constitute “new information of substantial importance” within the meaning of California Environmental Quality Act (CEQA) Guidelines section 15162(a)(3); therefore, recirculation of the draft EIR is not required.

### 12.1 Revisions to the Summary Chapter

The first paragraph of Section S.2 on draft EIR p. S-1 has been revised as follows:

Ocean Beach, which is owned and managed by the Golden Gate National Recreation Area, a unit of the National Park Service, comprises a 3.5-mile stretch of sandy beach that forms the western boundary of San Francisco. It is influenced by complex coastal processes, including an intense wave climate, strong tidal currents, and irregular offshore underwater features. Chronic erosion of the beach and bluffs by episodic coastal storms occurs at South Ocean Beach. This erosion has undermined and damaged beach parking lots, stormwater drainage facilities and the Great Highway, threatens existing underground wastewater system infrastructure, and has constrained public shoreline access and recreational opportunities.

The first paragraph of Section S.3.1 on draft EIR p. S-2 has been revised as follows:

Major project components include: (1) permanently closing the Great Highway between Sloat and Skyline boulevards to public vehicular traffic, reconfiguring affected intersections and San Francisco Zoo parking access, removing the existing restroom, and maintaining a service road to SFPUC facilities; (2) constructing an approximately 3,200-foot-long buried wall (with approximately 2,200 feet of the wall constructed on city property and 1,000 feet on NPS property) to protect existing wastewater infrastructure from shoreline erosion; (3) removing pavement, rock and sandbag revetments,<sup>6</sup> rubble and debris from the beach, reshaping the bluff, and planting native vegetation; (4) constructing a multi-use trail, beach access stairway, coastal access parking, and restrooms; and (5) providing long-term *beach nourishment* (sand replenishment).<sup>7</sup> **Figures S-1a and S-1b** show the project components, each of which is described in more detail below.

Figure S-1a has been revised as shown on the following page.

The following note has been added to Figure S-1b on draft EIR pp. S-5:

NOTE: Sand removal from North Ocean Beach for beach nourishment at South Ocean Beach would require GGNRA approval.

A new third paragraph has been added to Section S.3.3 on draft EIR p. S-7, as follows:

The buried wall would be designed to accommodate sea level rise and storm events with a nominal service life of 50 years (until approximately 2075), but with the proposed beach nourishment it is expected to last until 2100. The city anticipates that reevaluation of the performance of the buried wall and beach nourishment program would be conducted around 2060 to provide sufficient time to plan and implement additional adaptation measures, if determined necessary.

The text in **Figure S-3** on draft EIR p. S-7 has been enlarged and the tunnel labeled. Also, weight has been added to the dashed lines to increase their visibility.

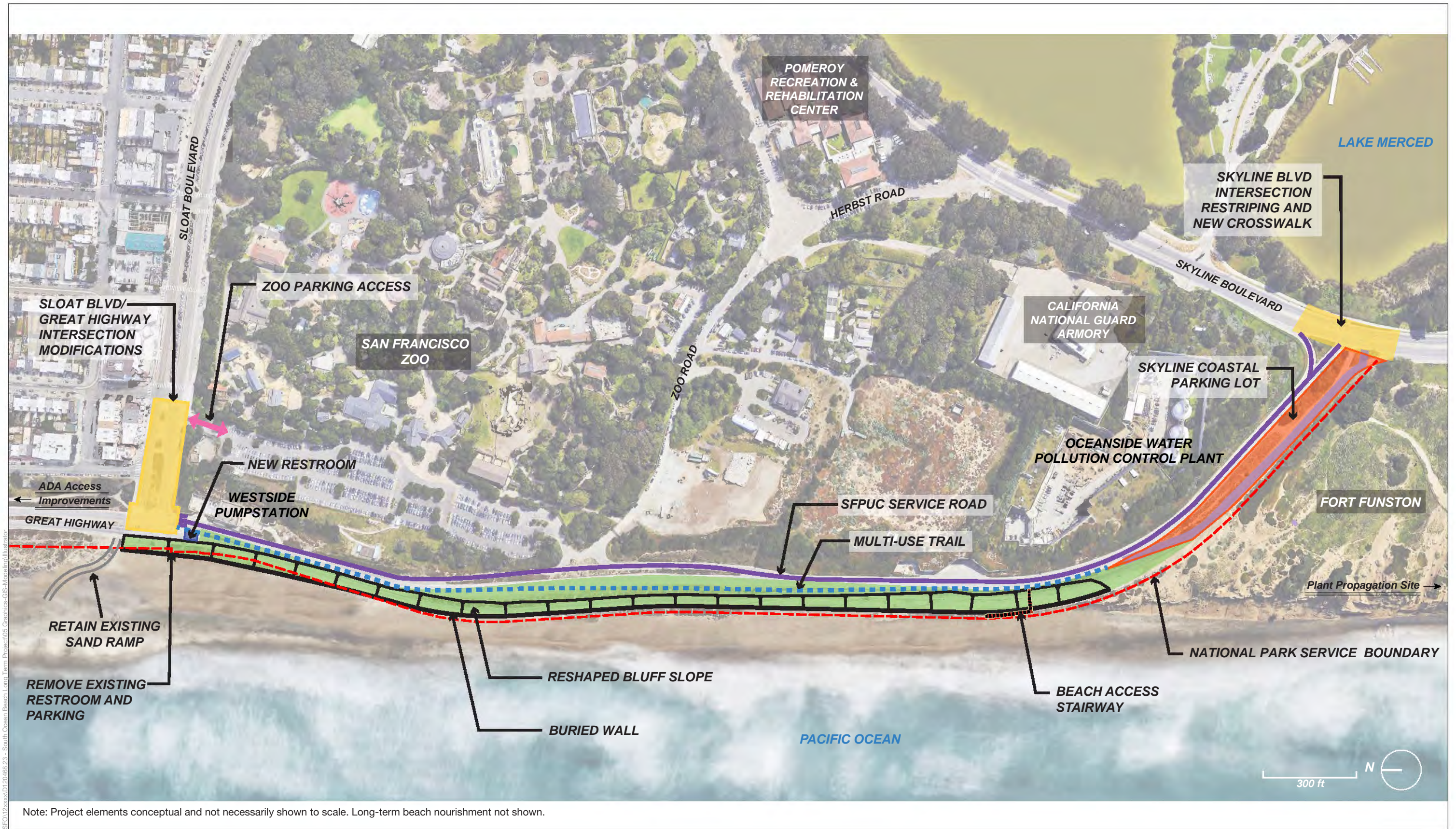
The text of Section S.3.6 on draft EIR p. S-9 has been revised as follows:

The city has identified two primary sand sources and placement methods. The first is the San Francisco Harbor – Main Ship Channel, which is regularly dredged by the Corps as part of that agency’s ongoing federal navigation channels maintenance program.<sup>9</sup> Under this first option – referred to as the “large placement” – a Corps dredge would pump up to 575,000 cubic yards of sand in a *slurry*<sup>10</sup> form onto the beach, rather than disposing of it offshore.<sup>11</sup> The second primary source is North Ocean Beach (i.e., north of Lincoln Way). Under this option – referred to as the “small placement” – at the discretion of the GGNRA, the city would continue its practice of excavating and trucking excess sand from North Ocean Beach to South Ocean Beach (referred to as *sand backpass*).<sup>12</sup> The small placement option would involve trucks dumping up to 85,000 cubic yards of sand onto the beach and reshaped bluff. The city could also obtain a smaller volume of sand from a commercial vendor if necessary.

The type and frequency of sand placements would depend upon sand availability (i.e., Corps and North Ocean Beach) and shoreline conditions (e.g., sea level rise and related erosion rates). Sand placements would occur about once every four to ten years;. Small sand placements from North Ocean Beach would occur generally in late spring, while large sand placements from Corps dredging would occur generally in summer or early fall.<sup>13</sup>

Footnote 12 on draft EIR p. S-9 has been revised as follows:

<sup>12</sup> Sand backpassing has been performed at Ocean Beach since 2013 and occurred most recently in 2019. Continued sand backpassing would require GGNRA approval. Refer to Section 2.7, Intended Uses of this EIR and Required Actions and Approvals, for a list of potential approvals needed for project construction and operation.



SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-1a**  
Project Elements Proposed for South Ocean Beach

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SOURCE: ESA, 2020; Google Earth, 2020

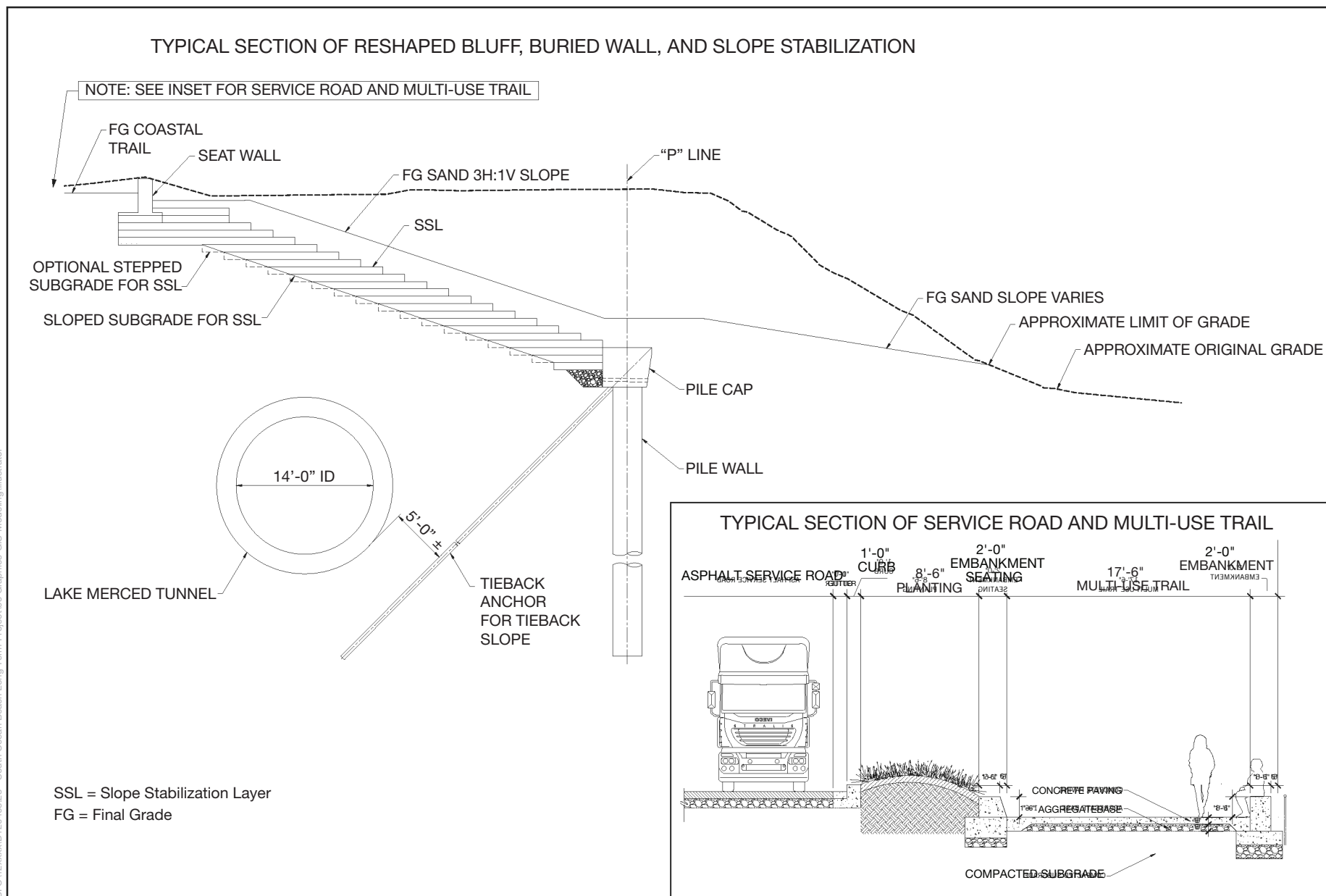
**NOTE:**

Sand removal from North Ocean Beach for beach nourishment at South Ocean Beach would require GGNRA approval.

Ocean Beach Climate Change Adaptation Project

**Revised Figure S-1b**  
Project Elements Proposed for North Ocean Beach

SFO120xxx\DI120468.23 - South Ocean Beach Long Term Project\05 Graphics-GIS-Modeling\Illustrator



SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure S-3**  
Conceptual Cross Sections of Access Improvements  
Proposed for South Ocean Beach

\*Mitigation Measure M-NO-3: Noise Monitoring and Traffic Re-Distribution Noise Reduction Plan, in Table S-1 on draft EIR pp. S-18 through S-19, and Mitigation Measure M-C-NO-1: Cumulative Construction Noise Control Measures, in Table S-1 on draft EIR pp. S-20 through S-22, have been revised shown in the table on the following pages:

**Table S-1 Summary of Impacts and Mitigation Measures**

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>NOISE AND VIBRATION, EIR SECTION 4.4 (CONT.)</b>			
<b>Impact NO-3:</b> Project operations would cause a substantial permanent increase in ambient noise levels at noise-sensitive receptors, above levels existing without the project, in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	S	<p><b>Mitigation Measure M-NO-3: Noise Monitoring and Traffic Re-Distribution Noise Reduction Plan</b></p> <p>To reduce roadside noise increases attributable to rerouted traffic resulting from the project, prior to the project's closure of the Great Highway, the SFPUC shall prepare, and <u>the city shall implement</u>, a Noise Monitoring Plan and, <u>if warranted</u>, a Traffic Re-Distribution Noise Reduction Plan for Sloat and Skyline boulevards, <del>as described further below</del>. The goal of the Noise Monitoring and Traffic Re-Distribution Noise Reduction Plan is <u>would be</u> to reduce roadway noise level increases sufficient to achieve a performance standard of a less than 3 dBA increase over existing ambient traffic noise levels along: a) Sloat Boulevard between Great Highway and 47<sup>th</sup> Avenue; b) Sloat Boulevard between 47<sup>th</sup> Avenue and Skyline Boulevard; and c) Skyline Boulevard between Sloat Boulevard and Harding Road. The Noise Monitoring and Traffic Re-Distribution Noise Reduction Plan shall include the following elements:</p> <p><b>Part I – Noise Monitoring</b></p> <ul style="list-style-type: none"> <li>Noise monitoring shall be conducted along the three segments of Sloat Boulevard and Skyline Boulevard listed above prior to and after intersection closure to empirically verify the amount of noise reduction required to meet the performance standard of less than 3dBA increase over existing ambient traffic noise. Noise monitoring shall consist of one-week-long 24-hour measurements collected <del>at three, six, and nine months</del> prior to closure of the Great Highway between Sloat and Skyline boulevards, and three, six, and nine months after the roadway closure. A noise monitoring plan shall be approved by the Environmental Review Officer (ERO), or its designee, prior to noise monitoring.</li> </ul> <p><b>Part II – Noise Reduction</b></p> <ul style="list-style-type: none"> <li>If noise monitoring indicates that the project has resulted in a <u>persistent</u> increase of traffic noise levels of 3 dBA or greater relative to pre-closure conditions, within the three, six, or nine months after post-closure noise monitoring completion, the <del>SFPUC city</del>, in consultation with <del>SFMTA, Public Works, the</del></li> </ul>	SUM

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>NOISE AND VIBRATION, EIR SECTION 4.4 (CONT.)</b>			
<b>Impact NO-3</b> (cont.)		<p>planning department, and a qualified noise consultant, shall identify measures that would achieve the required performance standard (a noise level increase less than 3 dBA) on the affected roadway segments. The proposed traffic noise reduction measures must be described in a Traffic Re-Distribution Noise Reduction Plan that shall be submitted to the ERO for review and approval <u>within 12 months from the completion of noise monitoring</u>. The noise reduction measures may include, but are not limited to: speed limit reductions, installation of new traffic signals, and street redesign (e.g., lane reduction, speed tables, or other traffic calming features). <u>Noise reduction measures implemented prior to preparation of the Traffic Re-Distribution Noise Reduction Plan shall be credited towards achieving the 3 dBA performance standard.</u></p> <ul style="list-style-type: none"> <li>• The <del>SFPUC</del> <u>city</u> shall confer with Caltrans with respect to elements of the Traffic Re-Distribution Noise Reduction Plan that may require implementation on Skyline Boulevard, which is outside the jurisdiction of the city.</li> <li>• With the exception of measures within Caltrans' jurisdiction whose implementation is beyond the city's control, the <del>SFPUC, in consultation with SFMTA and Public Works,</del> <u>city</u> shall implement noise reduction measures identified in the Traffic Re-Distribution Noise Reduction Plan within 24 months of ERO approval of the Plan. This timeline may be extended, with ERO approval, if the <del>PUC</del> <u>city</u> identifies separate projects or other circumstances that may reduce traffic noise levels on the affected roadway segments (such as other changes to the transportation network or implementation of other traffic calming measures in the vicinity).</li> <li>• Within 6 months of noise reduction measure implementation, the SFPUC shall: (1) demonstrate to the ERO that implementation of the noise reduction measures has achieved the required performance standard; or (2) <u>in consultation with Caltrans and city departments with jurisdiction over the streets,</u> identify adjustments or alternative measures proposed to achieve the standard, along with an implementation and monitoring schedule.</li> </ul>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>NOISE AND VIBRATION, EIR SECTION 4.4 (CONT.)</b>			
<b>Impact NO-4:</b> Operation of the project would not generate excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation required.	NA
<b>Impact C-NO-1:</b> The project, in combination with the cumulative projects, would result in significant construction-related noise impacts.	S	<p><b>Mitigation Measure M-C-NO-1: Cumulative Construction Noise Control Measures</b></p> <p>If exterior construction of the northern end of the buried wall for the proposed project is determined to overlap with that of nearby adjacent project(s) (2700 Sloat Boulevard Project, the Westside Pump Station Reliability Improvements Project, or the Westside Force Main Reliability Project), the SFPUC or contractor shall submit a project-specific construction noise control plan to the ERO or the ERO's designee for approval. Exterior construction for purposes of the proposed project and the nearby cumulative projects includes construction including the following activities; heavy-duty construction equipment for excavation, grading, foundation and shoring, and construction of building shells. The construction noise control plan shall be prepared by a qualified acoustical engineer, with input from the construction contractor, and include all feasible measures to reduce construction noise. The construction noise control plan shall identify noise control measures to meet a performance target of construction activities not resulting in a noise level greater than <u>90 dBA and 10 dBA above the ambient noise level at noise sensitive receptors (daytime ambient noise levels at the time construction begins + 10 dBA performance target)</u>. The SFPUC shall ensure that requirements of the construction noise control plan are included in contract specifications. If nighttime construction is required, the plan shall include specific measures to reduce nighttime construction noise. The plan shall also include measures for notifying the public of construction activities, complaint procedures, and a plan for monitoring construction noise levels in the event complaints are received. The construction noise control plan shall include the following measures to the degree feasible, or other effective measures, to reduce construction noise levels:</p> <ul style="list-style-type: none"> <li>• Use construction equipment that is in good working order, and inspect mufflers for proper functionality</li> <li>• </li> </ul>	LSM

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>NOISE AND VIBRATION, EIR SECTION 4.4 (CONT.)</b>			
<b>Impact C-NO-1</b> (cont.)		<ul style="list-style-type: none"> <li>• Select “quiet” construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures)</li> <li>• Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors</li> <li>• Prohibit the idling of inactive construction equipment to no more than five minutes</li> <li>• Locate stationary noise sources (such as compressors) as far from nearby noise sensitive receptors as possible, muffle such noise sources, and/or construct barriers around such sources and/or the construction site</li> <li>• Avoid placing stationary noise-generating equipment (e.g., generators, compressors) within noise-sensitive buffer areas (as determined by the acoustical engineer) immediately adjacent to neighbors or other noise-sensitive properties</li> <li>• Enclose or shield stationary noise sources from neighboring noise-sensitive properties with noise barriers to the extent feasible. To further reduce noise, locate stationary equipment in pit areas or excavated areas, if feasible</li> <li>• Install temporary barriers, barrier-backed sound curtains and/or acoustical panels around working powered impact equipment and, if necessary, around the project site perimeter. When temporary barrier units are joined together, the mating surfaces shall be flush with each other. Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that completely closes the gaps, and dense enough to attenuate noise</li> </ul> <p>The construction noise control plan shall include the following measures for notifying the public of construction activities, complaint procedures and monitoring of construction noise levels:</p> <ul style="list-style-type: none"> <li>• Designation of an on-site construction noise manager for the project</li> <li>• Notification to neighboring noise sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pier drilling, pile driving, and other</li> </ul>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>NOISE AND VIBRATION, EIR SECTION 4.4 (CONT.)</b>			
<b>Impact C-NO-1</b> (cont.)		<p>activities that may generate noise levels greater than <del>90</del> <u>10</u> dBA <u>above the ambient noise level</u> at noise sensitive receptors) about the estimated duration of the activity</p> <ul style="list-style-type: none"> <li>• A sign posted on-site describing noise complaint procedures and a complaint hotline number that shall always be answered during construction</li> <li>• A procedure for notifying the planning department of any noise complaints within one week of receiving a complaint</li> <li>• A list of measures for responding to and tracking complaints pertaining to construction noise. Such measures may include the evaluation and implementation of additional noise controls at sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels, and sensitive wildlife habitat)</li> <li>• Conduct noise monitoring (measurements) at the beginning of major construction phases (e.g., demolition, grading, excavation) and during high-intensity construction activities to determine the effectiveness of noise attenuation measures and, if necessary, implement additional noise control measures</li> </ul>	

Mitigation Measure M-BI-2c: Bank Swallow Signage and Protective Fencing, in Table S-1 on draft EIR p. S-25 has been revised; and new Mitigation Measures M-BI-2d: Public Engagement Specialist; M-BI-2e: Bank Swallow Movement, Population Dynamics, and Coastal Habitat Use Research; M-BI-2f: Blufftop Foraging Habitat Restoration; M-BI-2g: Bank Swallow Habitat Enhancement; and M-BI-2h: Bank Swallow Artificial Habitat Creation have been added to Table S-1 after Mitigation Measure M-BI-2c, as shown starting on the following page.

**Table S-1 Summary of Impacts and Mitigation Measures**

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
Impact BI-2 (cont.)		<p><b>Mitigation Measure M-BI-2c: Bank Swallow Educational Signage and Protective Fencing</b></p> <p>During the construction period and prior to project completion, the SFPUC, with the oversight of the planning department, shall implement the following:</p> <ol style="list-style-type: none"> <li><u>Educational Kiosk or Signs.</u> Develop and produce one, permanent educational kiosk or signage to be installed in the Skyline coastal parking lot or along the multi-use trail. Educational content, sign design and structure shall be coordinated with the San Francisco Recreation and Parks Department and the National Park Service (NPS).</li> <li><u>Sensitive Habitat Signs.</u> Develop and produce <del>semi-permanent</del> <u>removable educational sensitive habitat</u> signs that shall be installed on NPS property along bluff top access points at Fort Funston <u>and within the conservation easement with the Olympic Club above Phillip Burton Memorial beach</u> near the bank swallow nesting locations to alert the public of the sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-time development and production of the <del>semi-permanent</del> <u>removable</u> signs that the NPS shall install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands <u>or within the boundaries of its conservation easement.</u></li> <li><u>Sensitive Habitat Fencing.</u> Install <del>semi-permanent</del> <u>removable</u> fencing at a setback from the bluff edge above suitable nesting habitat to restrict public access above sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-time development and production of the <del>semi-permanent</del> <u>removable</u> fencing that the NPS shall design and install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands <u>or within the boundaries of its conservation easement with the Olympic Club.</u></li> </ol>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
Impact BI-2 (cont.)		<p><b><u>Mitigation Measure M-BI-2d: Public Engagement Specialist</u></b></p> <p><u>The SFPUC shall enter an agreement with NPS requiring SFPUC to fund bank swallow public engagement work by a seasonal, part-time, public engagement specialist for five bank swallow nesting seasons (April 1 to August 1). The role of the public engagement specialist shall be determined by NPS, and may include visual monitoring of the public's compliance with physical deterrents, supporting ongoing NPS bank swallow monitoring, development of educational materials, and public engagement and education related to bank swallow and their nesting habitat. The public engagement specialist shall prepare a final report for submission to NPS and the ERO at the end of the five nesting seasons documenting lessons learned and recommendations for future habitat protection and management actions.</u></p> <p><b><u>Mitigation Measure M-BI-2e: Bank Swallow Movement, Population Dynamics, and Coastal Habitat Use Research.</u></b></p> <p><u>The SFPUC shall fund up to five years of research related to bank swallow movement, population dynamics, and coastal habitat selection. The research scope shall be developed in coordination with NPS and approved by the ERO and research shall be conducted by a qualified biologist with relevant expertise. Research supported by this measure would augment existing NPS monitoring data to quantify survivorship and movement patterns of bank swallows in coastal California, specifically the Fort Funston population, to better understand the populations' habitat selection, and identify its key threats. The funding agreement shall stipulate that the findings of the research funded under this measure shall be documented in a final report and made publicly available, to increase the body of knowledge around the species' habitat conservation and management.</u></p> <p><b><u>Mitigation Measure M-BI-2f: Blufftop Foraging Habitat Restoration</u></b></p> <p><u>Prior to construction, the SFPUC shall submit to the NPS and the Environmental Review Officer (ERO), a detailed restoration plan and schedule for implementing this measure. The schedule shall provide for completion of</u></p>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
<b>Impact BI-2 (cont.)</b>		<p><u>the restoration prior to completion of project construction. If any element of the restoration plan cannot be completed prior to completion of project construction, the SFPUC shall provide an explanation and an alternative completion date. The plan shall also include a proposed monitoring and reporting schedule. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to NPS and the ERO, a final report describing the types, dates, and locations of work performed.</u></p> <p><u>The SFPUC, with oversight from the planning department and in coordination with the NPS, shall implement or fund restoration of: 1) approximately 2 acres of bluff-top foraging habitat within the approximately 8-acre portion of Fort Funston identified for habitat restoration in Figure 4.6-3a; and 2) an additional approximately 200 linear feet of blufftop dune habitat at locations above active nesting habitat identified and mapped in the bank swallow habitat assessment memorandum where safe and effective at limiting human disturbance (ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023). Restoration activities may include removing non-native and/or invasive vegetation and planting native dune plants using hand tools, an NPS-approved herbicide, and mechanical equipment (e.g., small backhoe or excavator), or combination thereof, and in combination with installation of sensitive habitat signage and removable fencing provided in M-BI-2c. All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.</u></p> <p><u>The SFPUC shall prepare and implement or fund a bank swallow foraging habitat revegetation and restoration plan which sets forth the basis of restoration design, planting plan, and monitoring and reporting requirements for the restoration areas. The plan shall be coordinated with and approved by NPS and shall inform restoration design plans developed by the SFPUC in coordination with NPS. The restoration monitoring plan shall be prepared by a qualified restoration ecologist and shall include or provide for the following:</u></p>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
<b>Impact BI-2 (cont.)</b>		<ul style="list-style-type: none"> <li>• <u>Restoration methods for selected areas, including site preparation, such as removal of existing vegetation and soil preparation, seed material and application, vegetative plant material harvest (if any), and plant specimen sourcing and planting methods;</u></li> <li>• <u>Schedule to guide seed and/or vegetative material collection/harvest or procurement, and seeding and/or planting within the restoration areas;</u></li> <li>• <u>Quantitative monitoring methods to evaluate performance of restored areas, including characterizing species richness, vegetative composition and cover;</u></li> <li>• <u>Identification of appropriate reference sites to implement monitoring methods and compare results with restoration areas regarding species richness, vegetative composition and cover;</u></li> <li>• <u>Photo points located at each restoration site and reference area(s) to document conditions during the monitoring period;</u></li> <li>• <u>Performance criteria and measures to control/remove target invasive plants according to NPS policies. Control species shall include those ranked by Cal-IPC as high or moderately invasive. The performance standard for target invasive weeds shall be no more than 10 percent absolute cover during the five-year performance period;</u></li> <li>• <u>Performance criteria for native plantings, appropriate for species and quantities planted at the 2-acre restoration site and the blufftop restoration sites (criteria may differ depending on site design);</u></li> <li>• <u>Adaptive management schedule and actions (maintenance weeding or replanting) to address underperformance throughout the monitoring period;</u></li> <li>• <u>Restoration areas shall be monitored to assess plant establishment for five years or until the sites meet the success criteria determined in the plan. At a minimum, total native vegetation cover, composition, and species richness in the restored areas shall be monitored and maintained until comparable with suitable reference sites.</u></li> </ul>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
<b>Impact BI-2 (cont.)</b>		<p><b><u>Mitigation Measure M-BI-2g: Bank Swallow Habitat Enhancement</u></b></p> <p><u>The SFPUC shall implement or fund ice plant removal from the bluff face within suitable nesting habitat areas (i.e., active and historic nest sites), as identified in the bank swallow habitat assessment memorandum (ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023). The ice plant removal shall be completed prior to completion of project construction. If the removal work cannot be completed prior to project completion, the SFPUC shall provide the NPS and the ERO an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the NPS and the ERO a report describing the types, dates, and locations of work performed.</u></p> <p><b><u>Mitigation Measure M-BI-2h: Bank Swallow Artificial Habitat Creation</u></b></p> <p><u>Prior to construction, the SFPUC shall submit to the NPS and the ERO a detailed plan and schedule for implementing this measure. The schedule shall provide for completion of the feasibility study described in paragraph 1, below, prior to completion of project construction and installation of the pilot project described in paragraph 2, below, prior to the first nesting season that follows project removal of bank swallow habitat. If any element of the plan cannot be completed on schedule, the SFPUC shall provide an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the ERO a final report as described in paragraph 2(c) of this mitigation measure.</u></p> <p>1. <b><u>Feasibility Study.</u></b> <u>The SFPUC shall fund development and implementation of a study to explore the feasibility, efficacy, and logistics of installing artificial habitat creation concepts within the project vicinity to support the local nesting bank swallow population. These concepts may include drilling artificial burrows into the bluff face, or installing wooden nest box “bank” habitats along the bluff top, among other concepts that have documented success supporting other nesting bank swallow populations and would not conflict with Coastal Act or other applicable laws or policies. The feasibility</u></p>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
<b>Impact BI-2 (cont.)</b>		<p><u>study shall be developed in coordination with NPS and analyze how each concept would be implemented along the Fort Funston blufftop or other nearby locations, including design, siting and other locational considerations, and geotechnical considerations. Feasible artificial habitat creation shall avoid disrupting scenic resources, cultural resources, or sensitive habitat. The feasibility study shall be completed in time to ensure the pilot project would be installed prior to the first nesting season after habitat removal by the project and identify at least one concept for implementation as an artificial habitat pilot project, though multiple concepts may be determined feasible and incorporated into the pilot project.</u></p> <p>2. <b>Pilot Project.</b> <u>The SFPUC shall fund development and implementation of an artificial habitat pilot project. The pilot project shall include implementing and monitoring the effectiveness of the selected experimental concept(s) identified in the feasibility study (e.g., drilling artificial burrows into the bluff face or installing several wooden nest box banks along the Fort Funston blufftop or other nearby locations). The artificial habitat should be constructed on a schedule that allows for bank swallow use ahead of the first nesting season following project removal of existing bluff habitat.</u></p> <p>a) <u>Once installed, the artificial habitat(s) shall be surveyed for nesting activity monthly by a qualified biologist in April, and August, and twice a month in May, June, and July, for five consecutive years to document bank swallow use.</u></p> <p>b) <u>An annual monitoring report shall be prepared that summarizes seasonal use observations at the artificial habitat(s). This report shall be provided to the NPS and the ERO within 90 days of the end of the annual monitoring period. The artificial habitat shall be considered successful if bank swallow nest or attempt to nest (repeatedly visit</u></p>	

IMPACT	Level of Significance prior to Mitigation	Mitigation Measure	Level of Significance After Mitigation
<b>BIOLOGICAL RESOURCES, EIR SECTION 4.6 (CONT.)</b>			
<b>Impact BI-2 (cont.)</b>		<p><u>the habitat(s)] during the nesting season within the five-year monitoring period.</u></p> <p>c) <u>Upon completion of the five-year monitoring period, a final report shall be prepared which compiles results of the artificial habitat pilot project. If the artificial habitat(s) was successful, the report shall include recommendations for potential funding mechanisms and partnerships for continued maintenance. This report shall be made publicly available.</u></p> <p><u>All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.</u></p>	

\*Item A of Mitigation Measure M-AQ-2: Construction Emissions Minimization, in Table S-1 on draft EIR p. S-29 has been revised as follows:

### Mitigation Measure M-AQ-2: Construction Emissions Minimization

#### A. Engine Requirements.

All off-road equipment greater than 125 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet the USEPA or California Air Resources Board Tier 4 Final off-road emission standards in construction years 2, 3 and 4 (~~2024 through 2026~~ 2025 and 2027).

## 12.2 Revisions to Chapter 1, Introduction and Background

The first paragraph of Section 1.4.1 on draft EIR p. 1-4 has been revised as follows:

### 1.4.1 Coastal Processes at Ocean Beach

Ocean Beach, which is owned and managed by the Golden Gate National Recreation Area, a unit of the National Park Service, is a 3.5-mile stretch of sandy beach that forms the western boundary of San Francisco. It is influenced by complex coastal processes, including an intense wave climate, strong tidal currents, and irregular offshore underwater features. The beach is the visible portion of a much larger coastal sand and sediment system, known as the San Francisco Littoral Cell.<sup>8</sup> The littoral cell extends from Fort Point in the north to Point San Pedro in the south. A prominent feature of the littoral cell is a large, semi-circular sandbar (the San Francisco bar) that extends from the Marin Headlands in the north to Ocean Beach in the south.<sup>9</sup> Within this area, sand circulates with the currents and tides, and alternately erodes and nourishes adjacent beaches. Figure 1-2 includes a diagram showing the San Francisco Littoral Cell, the San Francisco bar, and Ocean Beach.

\*The last row and table source information in Table 1-1, Shoreline Modifications and Sand Placement at South Ocean Beach Since 1990, on draft EIR page 1-10 have been revised as follows:

Year	Intervention Type and Volume or Length
2021	380,000 cubic yards of sand from the San Francisco Bay Main Ship Channel placed west of the bluffs along South Ocean Beach by the U.S. Army Corps of Engineers. With roughly <del>33</del> <u>32</u> percent losses during placement, post placement surveys confirm <del>255,300</del> <u>256,588</u> cubic yards of sand remained on the beach.

SOURCE: SFPUC, *Alternatives Analysis Report for Coastal Adaptation Strategies for South Ocean Beach Wastewater Systems*, February 15, 2018; ESA, *Ocean Beach Short-term Erosion Protection Measures Project – 2018-2019 Monitoring Report*. Prepared for San Francisco Public Utilities Commission. July 2019.

USACE, 2021, Email correspondence from Nathan Miller (USACE) to Karen Frye (SFPUC) and others; Re: Ocean Beach Project Status Update – 19 Sep. September 21, 2021; Etrac, 2021, West Coast Hopper – Ocean Beach Pump Ashore Final Pay Volumes. Memo from Greg Gibson (Etrac, Inc.) to Marshall Thompson (Dutra Group), Subject: Ocean Beach – Final Pay Volume for Ocean Beach, October 1, 2021.

\*Footnote 23 on draft EIR page 1-10 has been revised as follows:

<sup>23</sup> With roughly ~~33~~ 32 percent losses during placement, post placement surveys confirm ~~255,300~~ 256,588 cubic yards of sand remained on the beach.

## 12.3 Revisions to Chapter 2, Project Description

\*The first line of the second paragraph on draft EIR p. 2-2 has been revised as follows:

Major project components, which are shown in **Figures 2-1a, 2-1b, 2-1c, and 2-1d**, include:

\*Draft EIR **Figure 2-1a** has been revised as shown on p. 12-17 of this responses to comments (RTC) document to include labels for the ADA access improvements and Fort Funston plant propagation site.

The following note has been added to **Figure 2-1b** on draft EIR pp. 2-5:

NOTE: Sand removal for beach nourishment would require GGNRA approval.

\*New **Figure 2-1c, Project Elements Proposed for Middle Ocean Beach**, and new **Figure 2-1d, Project Elements Proposed for Fort Funston** have been added after Figure 2-1b (draft EIR p. 2-5).

Draft EIR **Figure 2-2** has been revised as shown on p. 12-31 of this RTC document to include a label identifying the green line as a designated bicycle lane along the service road. Figure 2-2 labeling has also been revised for consistency with project description revisions described in Chapter 9 of this RTC.

\*Draft EIR **Figures 2-4** and **2-5** have been revised as shown on pp. 12-25 and 12-26 of this RTC document to: label the bicycle lane along the service road and update the zoo parking lot access configuration (Figure 2-4); and to illustrate the multi-use trail along the Skyline coastal parking lot and label the existing bicycle route (Figure 2-5).

Section 2.4.1.3 on draft EIR p. 2-13 has been revised as follows:

### SKYLINE BOULEVARD AND GREAT HIGHWAY

As part of a separate project, the California Department of Transportation (Caltrans) – which owns the segment of Skyline Boulevard (also known as State Route 35) at its Great Highway intersection – plans to signalize the intersection prior to construction of the proposed project to address ongoing safety concerns. After Caltrans completes this work, restriping pavement, adding a crosswalk, or altering signal timing at the Great Highway/Skyline Boulevard intersection would be implemented as part of the project (i.e., the Ocean Beach Climate Change Adaptation Project evaluated in this environmental impact report [EIR]). In addition, the city would install wayfinding signage along the multi-use trail near the intersection directing people walking and bicycling to cross Skyline Boulevard at the designated crosswalk to connect with the existing path around Lake Merced. Figure 2-5 shows preliminary designs for roadway and access modifications at the Skyline Boulevard intersection with the Great Highway.

\*Section 2.4.1.4 on draft EIR p. 2-13 has been revised as follows:

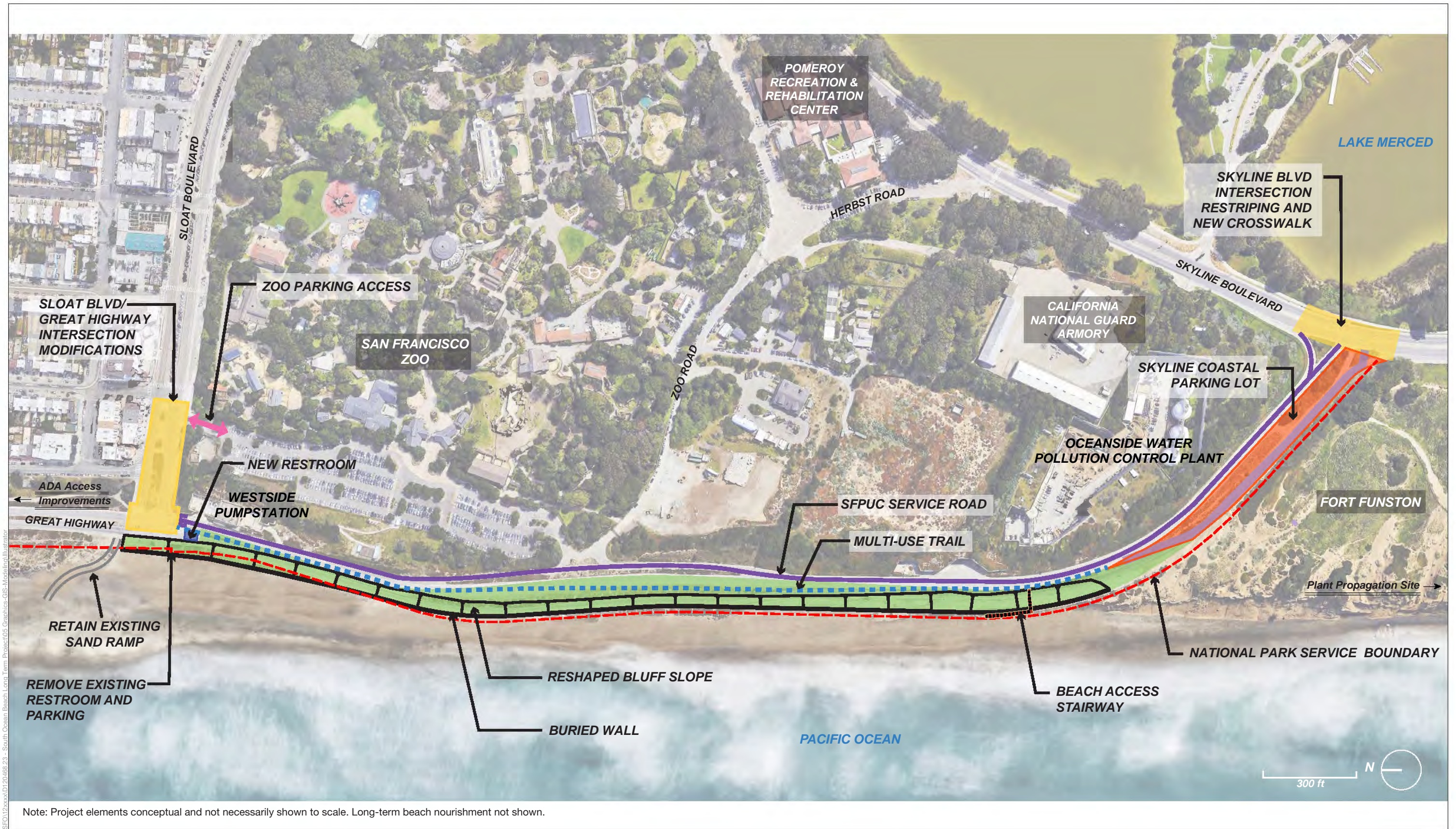
### ZOO AUTOMOBILE ACCESS

The San Francisco Zoo's existing Sloat Boulevard vehicle entrance has two entrance lanes (no exit), while both a vehicle entrance and exit to the facility are provided from the Great Highway. The project proposes to modify the zoo's Sloat Boulevard entrance to provide both entrance and exit lanes as

presented on Figure 2-4. The paved area would be restriped to allow for one inbound lane and one outbound lane and the access gate modified as needed. Signage and striping at the zoo driveway would also be added to direct safe pedestrian and bicycle crossings of the driveway. The zoo pump station access through the existing zoo main parking lot would be retained. The existing entrance and exit lanes and gate to the zoo parking lot from the northbound Great Highway would be closed but the roads would be retained for use by emergency vehicles and emergency egress. The Zoo Road entrance/exit off Herbst Road would continue to be available for use by zoo employees and deliveries only.

The text in **Figure 2-6** on draft EIR p. 2-15 has been enlarged and the tunnel labeled as shown on p. 12-35 of this RTC. Also, weight has been added to the figure's dashed lines to increase their visibility.

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SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-1a**  
Project Elements Proposed for South Ocean Beach

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SOURCE: ESA, 2020; Google Earth, 2020

**NOTE:**

Sand removal from North Ocean Beach for beach nourishment at South Ocean Beach would require GGNRA approval.

Ocean Beach Climate Change Adaptation Project

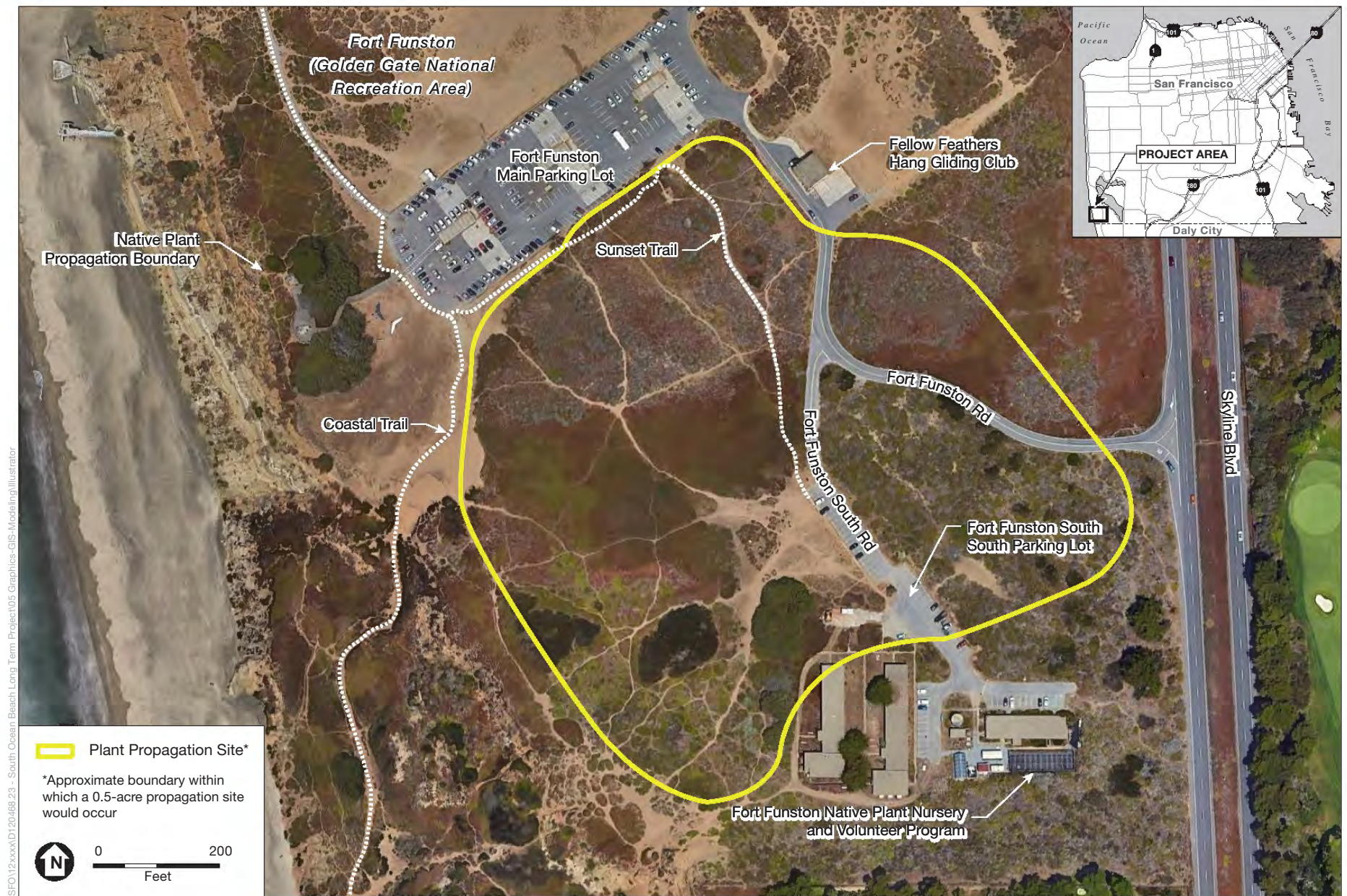
**Revised Figure 2-1b**  
Project Elements Proposed for North Ocean Beach



SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 95% Submittal, May 2023

Ocean Beach Climate Change Adaptation Project

**New Figure 2-1c**  
Project Elements Proposed for Middle Ocean Beach



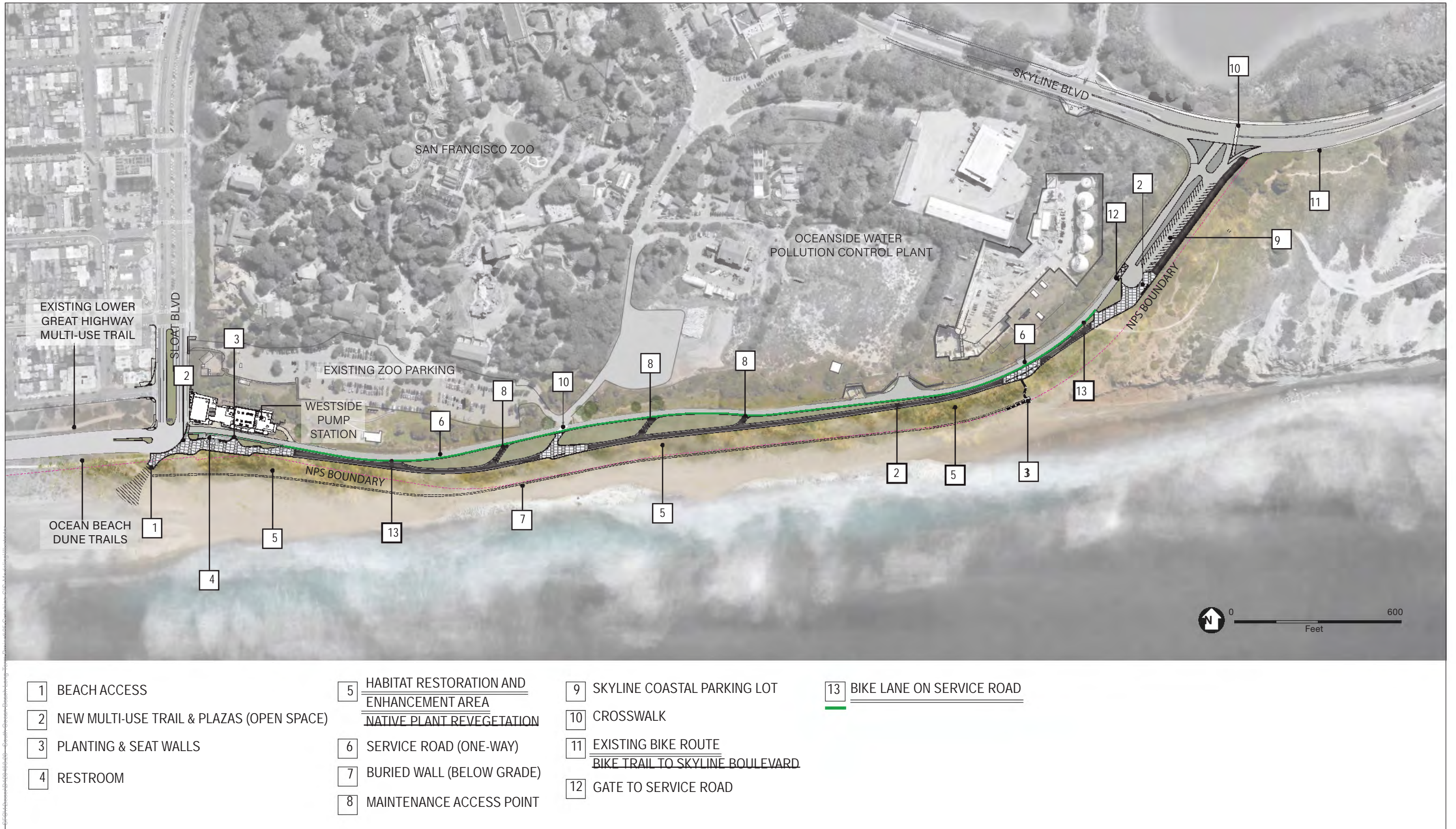
SFO12xxxx\DI20469.23 - South Ocean Beach Long Term Project\05 Graphics-GIS-Modeling\Illustrator

SOURCE: ESA, 2022; Google Earth, 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 2-1d**  
Project Elements Proposed for Fort Funston

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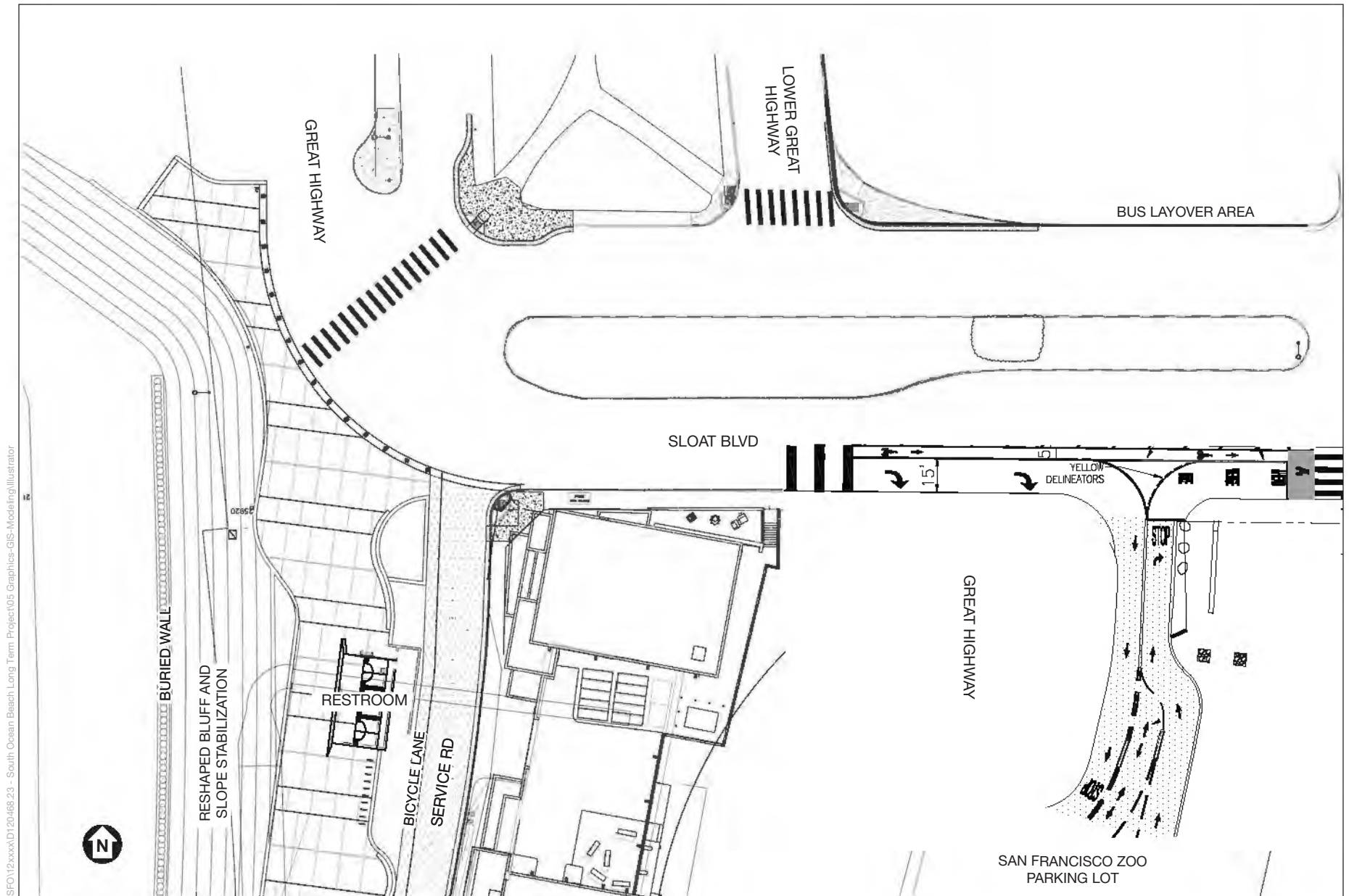


SOURCE: San Francisco Public Utilities Commission Ocean Beach Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-2**  
Conceptual Rendering of Project Elements  
Proposed for South Ocean Beach

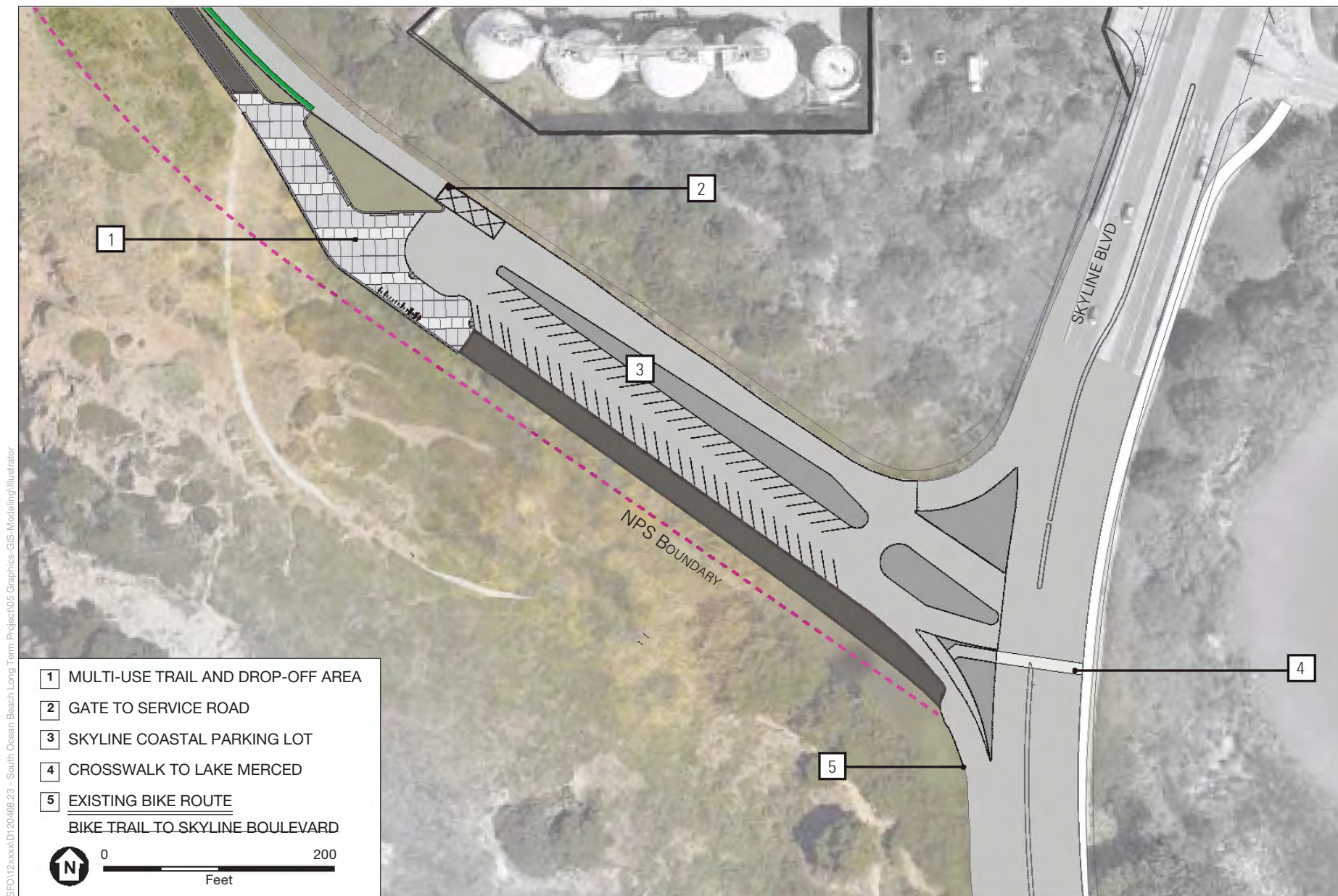
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SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 95% Submittal, May 2023

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-4**  
Road and Access Modifications:  
Great Highway and Sloat Boulevard

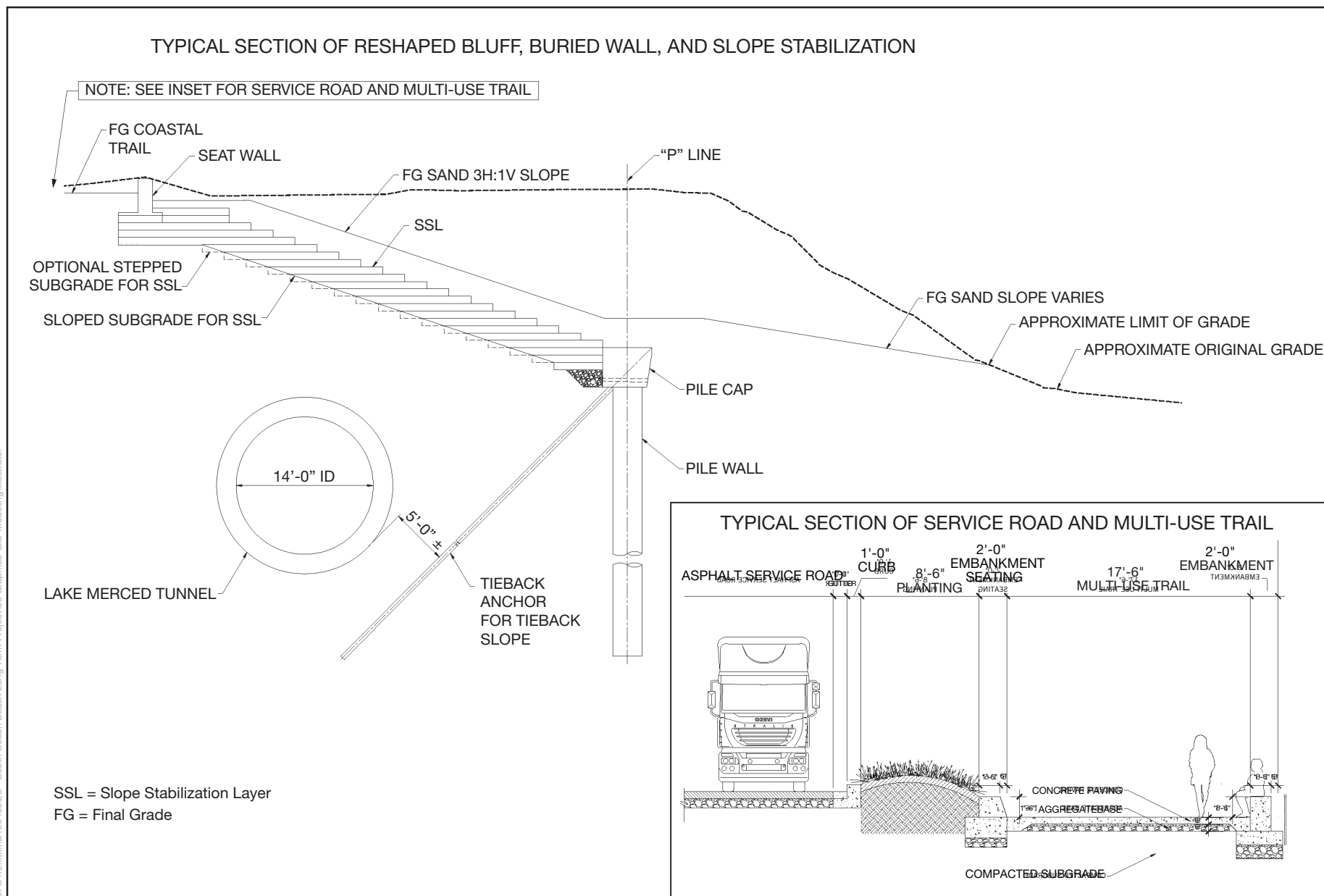


SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-5**  
Road and Access Modifications:  
Great Highway and Skyline Boulevard

SFO1200001D120468.23 - South Ocean Beach Long Term Project05 Graphics-GIS-Modeling/Illustrator



SOURCE: San Francisco Public Utilities Commission Ocean Beach  
Climate Change Adaptation Project - Long Term Improvements 65% Submittal, October 2021

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-6**  
Conceptual Cross Sections of Access Improvements  
Proposed for South Ocean Beach

\*Section 2.4.3 on draft EIR p. 2-16 has been revised as follows:

The city, in coordination with NPS, would also plant native vegetation along the reshaped bluff in accordance with a habitat restoration and enhancement plan (restoration plan). The vegetation would include locally sourced plants historically native to San Francisco, the types of which would vary depending on elevation, as shown in Figure 2-6a. ~~Lower elevation areas seaward of the buried wall would be planted with an assemblage of native dune vegetation that tolerates sand burial and storm overwash and grows rapidly, while higher elevation areas would be planted with a denser and more diverse array of native dune plants, including those appropriate for coastal dunes, that help cover and stabilize sand. The restoration plan area would be established in three zones. The farthest landward zone would be the stable backdunes zone, located between the service road and the multi-use trail. Next would be the native vegetative stabilization zone, west of the multi-use trail, above the slope stabilization layer and low-profile wall. The farthest seaward zone would be the sacrificial zone, which would be expected to erode periodically and be replenished by beach nourishment (sand placement). Sand nourishment of the native vegetative stabilization zone and stable backdunes zone would be expected to occur naturally from sand blown from the beach and sacrificial zone during windy conditions. For the initial installation, Plants would be sourced from established nurseries in the region—plants proposed for installation on NPS lands would be sourced from NPS nurseries such as the proposed Fort Funston propagation site (see Section 2.4.6, Fort Funston Plant Propagation Site, for details), or nurseries that otherwise meet NPS native plant requirements. The SFPUC would follow the Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands to prevent the spread of invasive species and pathogens.~~<sup>12a</sup>

The restoration plan would be informed by nearby natural examples and reference sites. For example, the vegetative stabilization zone would draw upon local and regional sites where shallow dune fields are present below marine terrace scarps and bluffs with perched groundwater seepage, such as Franklin Point and Año Nuevo in San Mateo County, Point Reyes National Seashore (north of Abbott's Lagoon), and MacKerricher State Park in Mendocino County. The restoration plan would include specifications for planting, monitoring, and adaptive management.

The city ~~may~~would install temporary irrigation to support the plants during their establishment period. Irrigation would be provided for up to three years for the initial dune vegetation establishment. A small-scale irrigation system would be installed and would rely on existing potable or recycled water lines already within the project areas analyzed in the draft EIR. Irrigation water demand would be approximately 48,000 gallons per week during low-precipitation months (April to October), amounting to approximately 1,344,000 gallons of water annually. Periodic replanting and removal of invasive weeds would be conducted by the city, consistent with the maintenance schedule for other San Francisco parks. Once established, landscape maintenance would be minimal, generally limited to restoration of portions of the vegetative stabilization zone that erode due to large storms.

The city may also implement other wind-erosion control measures to help keep the placed sand on the beach and bluff. These measures may include sand fencing, brushwood fencing,<sup>13</sup> and placing a layer of coarse sand over the finer beach sand. During initial dune landscape establishment, such nature-based features could be used to stabilize the sand and promote the formation of dune

landscape topography. Brushwood fencing or similar woody surface stabilization features, if used, would be installed intermittently within or behind the native vegetative stabilization zone (e.g., between the plantings and the trail), such that it would not preclude transport of sand between the sacrificial zone and native vegetative stabilization zone. Coarse sand compatible with establishment of native vegetation, if used, would be placed immediately after project construction, before vegetation is established, and after major storm wave erosion or nourishment events. The city would install signs along the multi-use trail, between the beach access stairs and sand ramp, educating visitors about the restoration area and its habitat values, and directing people to use designated beach accessways. To further discourage public access through the restoration plan area, the city would install a low-profile post and cable fence west of the multi-use trail.

\*Footnote 12a has been added to draft EIR p. 2-16 as follows:

<sup>12a</sup> City and County of San Francisco Public Utilities Commission Natural Resources and Land Management Division, *Standard Operating Procedure (SOP) for Non-Aquatic Vehicle, Tool, and Personal Protective Equipment (PPE) Decontamination for Invasive Plants, Pests and Pathogens for all work on SFPUC Peninsula and Alameda Watershed Lands.*

\*Footnote 13 on draft EIR p. 2-16 has been modified as follows:

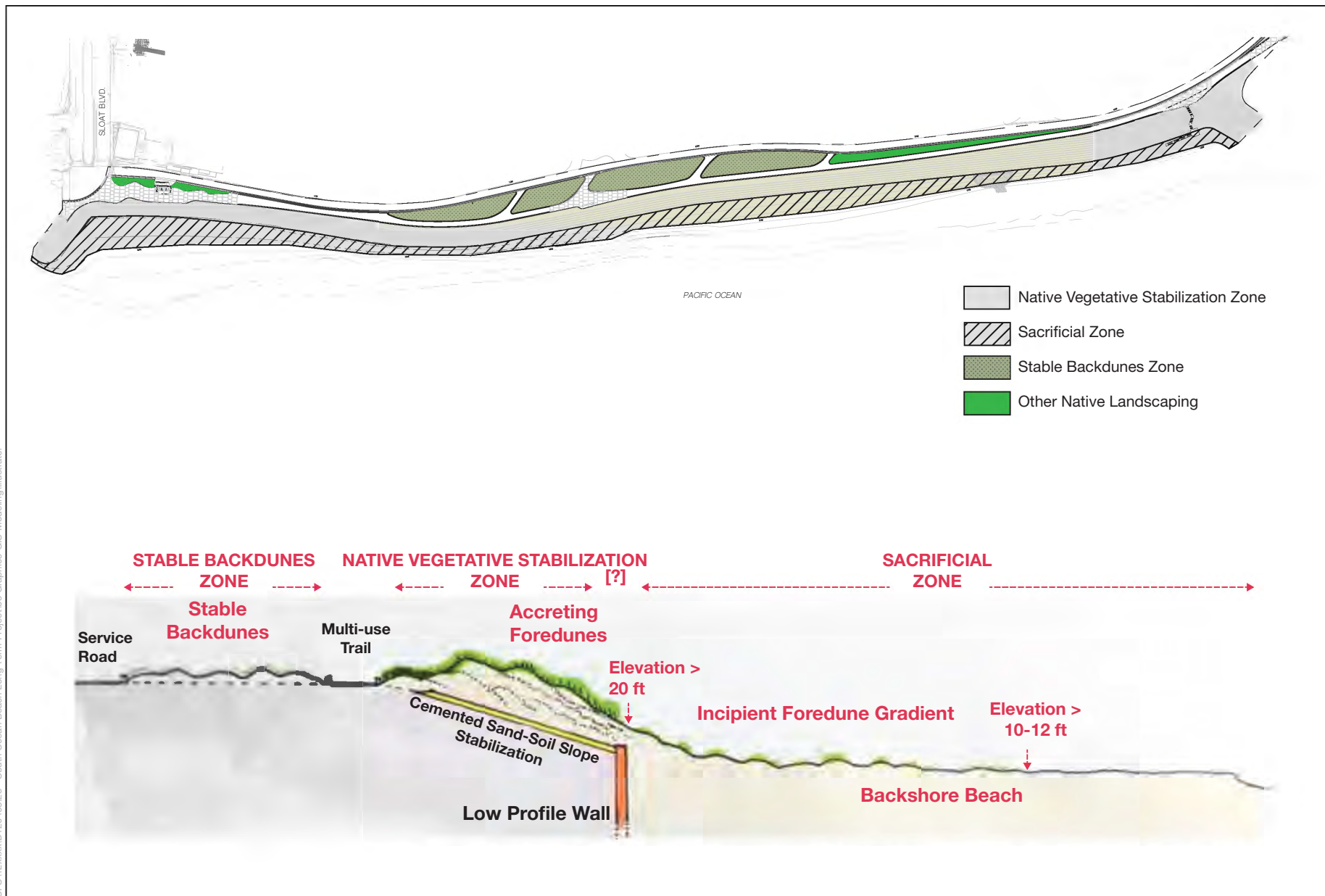
Sand fencing consists of wooden slats, plastic, or fabric attached to fence posts and is designed to reduce local wind speed and trap sand. Brushwood fencing performs a similar function and consists of bunched narrow branches formed into a low fence. Sand fencing or brushwood fencing on a beach or berm can assist in building additional berms and helps prevent sand from blowing onto roads and paths.

\*New **Figure 2-6a**, shown on the following page, has been added after draft EIR p. 2-16.

\*The subsection heading *Multi-use Trail* on draft EIR p. 2-16 has been revised to *Multi-use Trail and Lighting*, and the first full paragraph on draft EIR p. 2-17 has been revised as follows:

The new service road storm drain system described in Section 2.4.1.2, *Service Road*, would collect storm water runoff from the multi-use trail and service road. Up to 31 new solar-powered lighting fixtures ~~Lighting~~ would be provided for users of the multi-use trail and service road. Of the new fixtures, up to 15 would be mounted on 15-foot-tall poles along the service road, and up to 15 would be mounted on 3-foot-tall bollards in the median between the service road and multi-use trail near the new beach access stairway. One additional light fixture would be mounted on a 25-foot-tall pole within the median between the service road and the Skyline coastal parking lot. ~~The minimal~~ All lighting ~~along the multi-use trail~~ would incorporate NPS best management practices for lighting, including only adding lighting where it is needed, shielding lights and directing them downward, and using lamps with warmer colors. Plantings along the multi-use trail would be native, climate-appropriate, locally adaptive, and non-invasive, and would require little water.

**Figure 2-7** on draft EIR p. 2-18 has been revised as shown on p. 12-39 of this RTC to reflect a scenario in which remnant bluff material seaward of the buried wall has been eroded.



SOURCE: Peter Baye et al., Ocean Beach Climate Change Adaptation Project Design Basis for Native Vegetation and Wind-Blown Sand in Managed Coastal Dunes, August 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 2-6a**  
Generalized Conceptual Layout and Cross-Section View  
of the Habitat Restoration and Enhancement Plan Area



Typical Winter Low Beach



Typical Intermediate Beach



Typical Summer High Beach

DSM = Deep Soil Mixing  
All elevations relative to  
mean sea level.

SOURCE: San Francisco Public Utilities Commission

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-7**  
Conceptual Diagram of Beach Access Stairway

\*The second paragraph of Section 2.4.4.3 on draft EIR p. 2-19 has been revised as follows:

Vehicle access to the new lot would be via Skyline Boulevard. ~~A parking pay station may be located within the lot to collect parking fees.~~ Parking within the new lot would be allowed between 5 a.m. and midnight daily, consistent with the rules in city parks under Rec and Park jurisdiction. A gate would be installed to restrict after hours parking. Accessible parking spaces would be included in conformance with the Americans with Disabilities Act. Bicycle parking stalls would also be included at the northern and southern termini of the trail.

\*New Section 2.4.4.4 has been added starting on draft EIR p. 2-19 after Section 2.4.4.3, as follows:

#### **2.4.4.4 AMERICANS WITH DISABILITIES ACT ACCESS IMPROVEMENTS**

The project would include improvements to the existing multi-use trail along Middle Ocean Beach to provide greater access to and along the coast for people with disabilities. Under the project, the city would improve an approximately 2,200-foot-long segment of the multi-use trail between the Upper Great Highway and Lower Great Highway, from Sloat Boulevard to Taraval Street. The improvements would occur within the existing trail footprint and include pavement grinding, surface grading, and repaving to make the trail smoother. The purpose of these improvements is to make the existing multi-use trail compliant with Americans with Disabilities Act (ADA) and city building code (Division 4 of Chapter 11B) standards, and to provide continuous ADA-compliant access between the new multi-use trail (between Sloat Boulevard and Skyline Boulevard) and existing ADA access features at Taraval Street and the Great Highway.

The improved multi-use trail would connect to the existing ADA-compliant facilities at Taraval Street and the Upper and Lower Great Highway, including the city's public convenience station (restroom) and the Taraval Street beach access intersection improvements completed during restroom renovations in 2013.

The project would also improve access to the beach from Taraval Street. The project would provide new beach access for wheelchairs and walkers via *mobi-mats*, which are ADA-compliant non-slip rollable pathway mats that would be placed on the beach at the Taraval Street beach access. These mats would be neutral-colored and low-profile.

Construction of the ADA improvements would be completed in the first phase of construction activity, over an approximately four-week period during which segments of the existing multi-use trail and associated beach access points would be closed to the public and signage would direct users to adjacent beach access points.

\*The first paragraph of Section 2.4.5.3 on draft EIR p. 2-22 has been revised as follows:

#### **2.4.5.3 LARGE SAND PLACEMENTS**

The Corps presently dredges the main ship channel and transports the dredged material to a nearshore location near South Ocean Beach, commonly known as the Ocean Beach Demonstration Site (OBDS), where the material is dumped into the ocean.<sup>24</sup> The locations of the main ship channel and the OBDS are shown on Figure 1-2. In August to September 2021 the Corps placed approximately 380,000 cy of material dredged from the main ship channel on South Ocean Beach, instead of

placement offshore at OBDS. With roughly ~~33~~ 32 percent losses during placement, post placement surveys confirm ~~255,300~~ 256,588 cubic yards of sand remained on the beach. The Corps and the city are considering placing dredged sand on the beach in the future and as such, future large sand placements are included in the operation and maintenance of the proposed project and analyzed in this EIR.<sup>25</sup>

The first paragraph of Section 2.4.5.5 on draft EIR p. 2-25 has been revised as follows:

#### **2.4.5.5 TYPE AND FREQUENCY OF SAND PLACEMENT**

The type and frequency of sand placements would depend upon sand availability (i.e., Corps dredge and North Ocean Beach) and observed shoreline conditions (e.g., sea level rise and related erosion rates). In general, the project could involve three beach nourishment scenarios. Under the first scenario, the city would undertake both large and small sand placements. Under the second scenario, the city would undertake small placements only, without the use of Corps dredge sand. Under the third scenario, the city would undertake large placements only, without the small sand placements. Sand Small sand placements would occur generally in late spring, while large sand placements would occur generally in summer or early fall. Placement of sand cleared from the Great Highway or multi-use trail, movement of sand within South Ocean Beach, and sand grooming could occur year-round, as conditions allow.

The large sand placement duration in draft EIR Table 2-1 (p. 2-26) has been revised as follows:

**Table 2-1 Frequency and Duration of Sand Placements**

Placement Scenario	Average <sup>a</sup>	Range (max - min) <sup>a</sup>	Duration <sup>b</sup>
Small sand placements only	4 years	3 to 5 years	6 weeks
Large sand placements only	10 years	9 to 16 years	<del>8</del> <u>12</u> weeks
Large and small sand placements	7 years	3 to 16 years	6 to <del>8</del> <u>12</u> weeks

SOURCE: Moffatt & Nichol, AGS, McMillen Jacobs, CHS Consulting Group, and San Francisco Public Works, 2020. Sand Management Plan – Ocean Beach Climate Adaptation Project, Long-term Improvements. Prepared for San Francisco Public Utilities Commission. July 2020.

NOTE:

<sup>a</sup> The first post-construction sand placement would likely occur about five years after construction is complete.

<sup>b</sup> Duration is approximate, accounts for work stoppages due to tides, wave conditions, or unanticipated equipment repair and maintenance.

\*New Section 2.4.6 has been added after Section 2.4.5.6 on draft EIR p. 2-26 as follows:

#### **2.4.6 Fort Funston Plant Propagation Site**

The project would include city funding to establish a plant propagation site through an NPS permit or agreement on lands owned by the NPS within nearby Fort Funston. The plant propagation site would provide a self-replenishing stand of native dune plants that may be used on an as-needed basis for initial revegetation and periodic maintenance planting of the reshaped bluff between the beach and upland areas of South Ocean Beach. The 0.5-acre Fort Funston plant propagation site would be located within an approximately 16-acre area, in dune flats generally dominated by ice plant mats and perched on Colma formation sands in the vicinity of the GGNRA native plant nursery. The site would be clear of park trails and nearby hang-gliding areas. The ice plant mats would be

removed prior to planting in the early wet season (fall/winter). Hand tools, an NPS-approved herbicide, mechanical equipment (e.g., small backhoe or excavator), or combination thereof would be used to remove ice plant mats.

Once the ice plant mats have been removed, activities at the propagation site would consist of (1) initial planting of native seedlings, plugs, or plant divisions; (2) routine manual weeding around the transplants; and (3) as-needed hand watering of plants in the first season following initial planting and dependent on precipitation. Irrigation would not be necessary to sustain the native species planted within the propagation site because existing dune sand is suitable for semi-wild plant cultivation. Soil amendments would be limited to re-use of decayed ice plant litter and duff as compost, and low doses of nitrate or organic nitrogen incorporated into the organic matter placed directly under transplant roots. To avoid stimulation of undesirable weedy species within the propagation beds, no surface application of fertilizers (organic or synthetic) is proposed. Small signs would be installed near the propagation site to inform visitors and protect against trampling.

All vegetation planted in the propagation beds would be historically native to San Francisco and consist of clonal (creeping) and perennial species. The source material for propagation beds would be local to the San Francisco Peninsula, with San Francisco populations prioritized. The majority of planted vegetation in the beds would be American dune grass (*Elymus mollis* [= *Leymus*]), a native beach and foredune grass likely to be in greatest long-term demand for routine revegetation efforts. Other species would be planted in the propagation beds for one-time planting during the initial revegetation effort. These include native perennial, creeping dune grasses, such as Vancouver wildrye (*E. x vancouverensis*) and Pacific wildrye (*E. pacificus*; or natural local San Francisco hybrid species with beardless wildrye [*E. triticoides*]), as well as a diverse assemblage of broadleaf native dune forbs and low shrubs, as approved by the GGNRA.

The propagation site would be planted during the first phase of construction. Once planted, propagation beds would take at least two growing seasons to establish mature vegetation suitable for transplanting. Any watering would be performed by hand, and no other irrigation would be required. All cultivated low shrubs and most creeping dune grasses and dune forbs (one-time planting species) would be harvested from the beds to support project revegetation. The American dune grass would be harvested such that sufficient above and below ground matter remains to repopulate the plots for future planting efforts within two growing seasons, depending on rainfall. Long-term use of the plots would be to supply the project and the NPS with American dune grass for revegetation following major beach erosion and replenishment events.

Details for funding the installation, propagation, and maintenance of the native vegetation would be approved through either an NPS Agreement or Special Use Permit mutually agreed upon by the NPS and SFPUC. The funding agreement would stipulate that the SFPUC's standard construction measures, as applicable, would be implemented to protect against inadvertent impacts on sensitive resources. As described in Section 2.4.3, NPS nurseries (such as the proposed Fort Funston propagation site) could serve as a source for initial plantings and replacement plantings within the project's restoration plan area along South Ocean Beach. However, NPS may also use the Fort Funston propagation site as a plant source for other restoration projects within GGNRA.

The second paragraph of Section 2.5.1 on draft EIR p. 2-27 has been revised as follows:

Prior to commencement of construction, subsurface investigations (e.g., utilities exploration, geotechnical investigation) might be necessary to support final designs. This work could include cutting and restoring pavement, obtaining soil samples through coring or auguring, and/or vacuum excavation. This work would occur within developed, landscaped or disturbed areas, and would be limited to one week per location. Depending upon the nature of the investigation, some nighttime work might be required. Any nighttime lighting required for pre-construction or construction activities would be directed downward and toward the active work, and would use shields or baffles to ensure light is not directed above the horizon. During construction, the city would post signage at the Sloat Boulevard/Great Highway intersection notifying the public of alternative beach access, parking, and restroom locations along Ocean Beach. Temporary restrooms and trash facilities would be placed in a publicly accessible area near the Sloat Boulevard/Great Highway intersection. To the extent it could be done safely, the city would also allow beach access during periods of construction that do not require active work or equipment use on the beach.

\*The text of Section 2.5.1.3 on draft EIR p. 2-30 has been revised as follows:

### **2.5.1.3 PHASE 3 – REMOVE REVETMENTS AND RUBBLE, PLACE SAND ON BEACH**

As segments of the buried wall and slope stabilization are completed, the city would begin to remove the existing boulder and sandbag revetments, along with the various rubble and debris, from the bluff and beach areas seaward of those segments. This work would be conducted intermittently over a period of approximately ~~18~~<sup>24</sup> months, using excavators working on the beach during low tide and when weather permits. A coffer dam would not be required; however, a temporary sand berm comprised of materials onsite could be constructed to allow for protection of the active construction area from ocean waves and tidal activity. The approximately 20,000 cubic yards of material requiring removal would be stockpiled within staging areas prior to being hauled offsite.

Construction of the buried wall and slope stabilization would require substantial excavation of the sandy bluff. The excavated materials would be sorted and stockpiled onsite. Once the wall and slope stabilization are constructed, bulldozers would move approximately 40,000 cubic yards of the stockpiled sandy material onto these constructed features. In addition, approximately 85,000 cubic yards of sand would be obtained from North Ocean Beach for additional wall and slope stabilization cover at the end of Phase 3, likely in two placement episodes (fall of 2026 and fall of 2027). The North Ocean Beach sand would be obtained using the same types of equipment and placed in a manner similar to that of the proposed small sand placements described in Section 2.4.5.4, Small Sand Placements. As described in that section, the city would use excavators, loaders, dozers, and off-road dump trucks to move the sand. At North Ocean Beach, equipment would enter and exit the beach through an access point at the south end of the O'Shaughnessy Seawall near Lincoln Way. At South Ocean Beach, equipment required for the sand placement activities would enter and exit the beach via the sand ramp located at the northwestern corner of the Sloat Boulevard/Great Highway intersection. The city would also place sand from existing sandbag revetments onto the beach prior to off-hauling the bags. The reshaped bluff would include a minimum of 3 to 4 feet of graded sand sourced locally and from North Ocean Beach over the stockpiled sandy material, wall and slope stabilization.

\*Temporary closure of the northbound lane of the Upper Great Highway for staging near the anticipated ADA access improvements has been added to the list of potential staging areas on draft EIR p. 2-31, as follows:

Multiple areas may be used for construction staging, including construction worker parking, as shown on **Figure 2-11**. The following potential construction staging areas may be used:

- The Great Highway's closed northbound and (until demolished) southbound lanes between Sloat Boulevard and Skyline Boulevard. SFPUC operations and maintenance staff would also use the Great Highway's northbound lanes to access the Westside Pump Station and Oceanside Treatment Plant during construction.
- The existing NPS parking lot at the western terminus of Sloat Boulevard (until removed).
- The closed area of Ocean Beach, intermittently during Phase 3 (revetment removal and initial sand placement). Work on the beach would be weather- and wave-condition-dependent.
- Available space within the Oceanside Treatment Plant, Westside Pump Station, and Zoo Pump Station.
- The northbound lane of the Upper Great Highway north of Sloat Boulevard in the vicinity of the ADA access improvements.

\***Figure 2-11** on draft EIR p. 2-34 has been modified to include ADA access improvements construction staging, as shown on the following page.

\***Table 2-3** on draft EIR p. 2-32 has been revised to show that Phase 1 would start in the third quarter of 2024, and all subsequent construction phases would shift accordingly. Thus, under the revised schedule, Phase 1 of project construction would be expected to commence in the third quarter of 2024, and project construction would be expected to be completed in the third quarter of 2028. In addition, the duration of Phase 3 has been revised from 18 months to 24 months, and the duration of Phase 4 has been revised from 9 months to 12 months, as shown in the table below, to account for seasonal limitations on construction activities.

\*Section 2.5.2, Construction Schedule, on draft EIR page 2-31 has been revised to reflect the updated construction schedule, as follows:

The city would construct the project over approximately four years, with an estimated construction period from ~~2023 to 2027~~ 2024-2028. During this period, the city would close the entire construction area, including the Great Highway and beach, to the public. **Table 2-3** presents an overview of the proposed construction implementation sequence, by component. Construction would proceed up to seven days per week, except holidays, between 7 a.m. and 8 p.m. consistent with the city's noise ordinance. Some nighttime construction may be required for the buried wall, which would require the use of portable lights.



SOURCE: ESA, 2019; Google Earth, 2019

Ocean Beach Climate Change Adaptation Project

**Revised Figure 2-11**  
Staging for Construction and Operational Sand Placement Activities

**Table 2-3 Project Construction Schedule**

Construction Activity	2023	2024	2025	2026	2027	2028
<b>Phase 1:</b> Modify Sloat Boulevard/Great Highway Intersection, remove NPS restroom, reconfigure San Francisco Zoo parking access, reroute Muni 23 Monterey bus layover and turn-around, permanently close Great Highway, <u>construct ADA access improvements, establish Fort Funston plant propagation site</u>						
<b>Phase 2:</b> Remove Great Highway southbound lanes, construct a buried wall, and stabilize the slope						
<b>Phase 3:</b> Remove revetments and rubble from beach, place sand on beach <u>and on slope stabilization layer</u>						
<b>Phase 4:</b> Remove or repurpose Great Highway northbound lanes; install multi-use trail and service road; construct Skyline coastal parking lot, new restroom, and beach access stairways, install multi-use trail landscaping; restripe Great Highway/Skyline Boulevard intersection						
<b>Phase 5:</b> Install native landscaping and temporary irrigation, undertake site cleanup						

\***Table 2-4** on draft EIR p. 2-35 has been revised to reflect the updated Phase 1 construction activities and haul loads, as follows:

**Table 2-4 Construction Assumptions for the Project**

Construction Activity	Quantity of Material Import and Export (Haul Loads) <sup>a</sup>	Estimated Construction Equipment			Workers (Daily)	Estimated Construction Duration
<b>Phase 1:</b> Modify Sloat Boulevard/ Great Highway intersection, remove NPS restroom, reconfigure San Francisco Zoo parking access, reroute Muni 23 Monterey bus layover and turn-around, permanently close Great Highway, <u>construct ADA access improvements</u>	Export: <del>444</del> 484 Import: <del>3,240</del> <u>3,280</u> Vendor: 245	<ul style="list-style-type: none"> <li>• Air Compressors</li> <li>• Crawler Tractors</li> <li>• Excavators</li> <li>• Forklift</li> <li>• Generators</li> <li>• Heavy Duty Breaker Hammer</li> </ul>	<ul style="list-style-type: none"> <li>• Motor Grader</li> <li>• Front End Loader</li> <li>• Paving Equipment</li> <li>• Vibration Compactor</li> <li>• AC Roller</li> </ul>	<ul style="list-style-type: none"> <li>• Pumps</li> <li>• Signal Boards</li> <li>• Tractors/ Loaders/ Backhoes</li> <li>• Water Trucks</li> <li>• Haul Trucks</li> </ul>	50	12 months

\***Table 2-4** on draft EIR p. 2-35 has been revised to reflect the updated Phase 3 estimates of material exported and imported and construction duration and Phase 4 duration, as follows:

**Table 2-4 Construction Assumptions for the Project**

Construction Activity	Quantity of Material Import and Export (Haul Loads) <sup>a</sup>	Estimated Construction Equipment			Workers (Daily)	Estimated Construction Duration
<b>Phase 3:</b> Remove revetments and rubble from beach, place sand on beach	Export: 2,500 Import: <del>None</del> <u>2,834</u> Vendor: <del>None</del> <u>None</u>	<ul style="list-style-type: none"> <li>• Air Compressors</li> <li>• Cranes</li> <li>• Crawler Tractors</li> <li>• Excavators</li> <li>• Forklifts</li> <li>• <u>Dozers</u></li> </ul>	<ul style="list-style-type: none"> <li>• Generators</li> <li>• Heavy Duty Breaker Hammer</li> <li>• Motor Grader</li> <li>• Front End Loader</li> <li>• Pumps</li> </ul>	<ul style="list-style-type: none"> <li>• Signal Boards</li> <li>• Tractors/ Loaders/ Backhoes</li> <li>• Water Trucks</li> <li>• Haul Trucks</li> <li>• <u>Off-road Dump Trucks</u></li> </ul>	20	<del>18-24</del> months
<b>Phase 4:</b> Remove or repurpose Great Highway northbound lanes; install multi-use trail and service road; construct Skyline coastal parking lot, new restroom, and beach access stairway; install multi-use trail landscaping; restripe Great Highway/Skyline Boulevard intersection	Export: 484 Import: 89 Vendor: 890	<ul style="list-style-type: none"> <li>• Air Compressors</li> <li>• Boring/Drill Rigs</li> <li>• Cranes</li> <li>• Concrete Pump</li> <li>• Crawler Tractors</li> <li>• Excavators</li> </ul>	<ul style="list-style-type: none"> <li>• Forklifts</li> <li>• Generators</li> <li>• Motor Grader</li> <li>• Front End Loader</li> <li>• Paving Equipment</li> <li>• Vibration Compactor</li> </ul>	<ul style="list-style-type: none"> <li>• AC Roller</li> <li>• Pumps</li> <li>• Signal Boards</li> <li>• Tractors/ Loaders/ Backhoes</li> <li>• Water Trucks</li> </ul>	50	<u>9</u> 12 months

The text of Section 2.6.1 on draft EIR p. 2-37 has been revised as follows:

~~Rec and Park~~ The city would maintain the multi-use trail, restroom, beach access stairway, and Skyline coastal parking lot. The Skyline coastal parking lot would be accessible between 5 a.m. and 12 a.m. daily. The multi-use trail would have posted open hours of 5 a.m. to 12 a.m. daily. Trash collection and restroom cleaning would be administered by the city ~~Rec and Park~~. Occasionally, as conditions warrant, sand would be removed from the multi-use trail and service road using a front loader or vacuum. ~~Rec and Park~~ The city would provide temporary irrigation to plants during the plant establishment period, and conduct some replanting as needed.

\*The text of Section 2.6.2 on draft EIR p. 2-37 has been revised as follows:

The NPS does not regularly conduct beach maintenance at Ocean Beach (designated by the NPS as a Natural Zone management area).<sup>33</sup> Maintenance of the vegetation on the reshaped bluff would be minimal, as the plants would be native and adapted to project area conditions. However, some landscape maintenance may be needed after sand placement, ~~or storm~~ erosion events, and significant wind-induced sand movement. Replacement plants would be sourced from established nurseries in the region and/or the Fort Funston plant propagation site (see Section 2.4.6, Fort Funston Plant Propagation Site for details). ~~→ Replacement plants on NPS lands would be sourced from NPS nurseries or nurseries that otherwise meet NPS native plant requirements, including the Fort Funston plant propagation site.~~

The fourth bullet in Section 2.7.2 on draft EIR p. 2-38 has been revised as follows:

- California Department of Fish and Wildlife: Fish and Game Code section 2081 permit for potential effects on bank swallow or State-listed marine species

## 12.4 Revisions to Chapter 3, Plans and Policies

The second and third paragraphs of Section 3.5.1 on draft EIR p. 3-11 have been revised as follows:

Section 30240 requires that *environmentally sensitive habitat areas* (ESHA) be protected against significant disruption of habitat value, and limits allowable uses within and adjoining such areas to those dependent upon and compatible with the continuance of the habitat. Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, Section 4.6, Biological Resources, includes an assessment of whether the project area contains ESHA. Specifically, within Section 4.6.2.2, under the subheading *Environmentally Sensitive Habitat Areas*, each of the project area's bluff, intertidal, beach, and dune habitats is evaluated for its ESHA potential.

While determinations regarding ESHA are ultimately made through the coastal development permit process, this EIR considers the bluffs historically inhabited by the breeding colony of the state-listed as threatened bank swallow and selected coastal dune habitat along South Ocean Beach to be potential ESHA because of ~~its~~ their rarity and limited habitat areas. As it would require modification of the bluff and roadside areas that contains a portion of ~~this~~ these habitats, project construction could conflict with the Coastal Act's ESHA policy if the bank swallow or coastal dune habitat is determined to be ESHA through the coastal permit process. The other habitats considered (intertidal, and beach, dune) were found not to be potential ESHAs, but also would be evaluated through the

coastal development permit process. Refer to Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, Section 4.6, Biological Resources, for additional discussion of the project's effects related to potential ESHA.

## 12.5 Revisions to Section 4.1, Overview

Table 4.1-3 on draft EIR pp. 4.1-9 through 4.1-11 has been revised in response to comments and update project information, as follows:

**Table 4.1-3 Projects Considered in Cumulative Impact Analysis**

Project No. on Map	Project Name (Project Sponsor or Jurisdiction)	Project Description	Construction Dates
4	Reconfiguration of the Sloat Boulevard and State Route 35 (Skyline Boulevard) Intersection (SFMTA) <sup>c</sup>	The intersection of State Route 35 (Skyline Boulevard) and Sloat Boulevard would be reconfigured <del>either with a traffic signal at all three approaches to the intersection roundabout</del> to improve safety for all road users, increase visibility of pedestrians, and improve or maintain transit and vehicle circulation at the intersection. This <u>work is expected to be completed by early 2024.</u> <del>project is currently on hold pending the results of other circulation studies that would not be complete until after 2024.</del>	<del>After 2023-</del> 2024
5A	Oceanside Treatment Plant Improvements - Biosolids Cake Hopper Reliability Upgrade (SFPUC)	The SFPUC would refurbish the three biosolids cake hoppers, including replacement of the discharge gates and actuators (type of gate to be determined by pilot study), load cells, and ultrasonic level instrumentation.	2026-2030
5B	Oceanside Treatment Plant Improvements - Seismic Retrofits (SFPUC)	To meet seismic reliability goals (provide treatment within 72 hours of an earthquake and provide life safety protection for occupied facilities), the SFPUC would undertake seismic and structural retrofits on the primary clarifiers, administration building, and pretreatment and solids building.	2026-2030
6	Signalization of State Route 35 (Skyline Boulevard) and Great Highway Intersection (Caltrans)	Caltrans would install a traffic signal at the intersection of the Great Highway and State Route 35 <u>and install two 15-foot-tall streetlights approximately 300 feet west of the intersection.</u>	<del>2022-2023-</del> 2024
<del>17</del>	San Francisco Zoo Recycled Water Pipeline (SFPUC, San Francisco Zoo) <sup>d</sup>	The San Francisco Zoo Recycled Water Pipeline Project would convert the current groundwater supply and distribution system to a recycled water supply and distribution system, except for end uses that need to be converted to potable water (e.g., drinking water for animals). Recycled water would replace groundwater currently used to supply various uses including irrigation, cleaning and replenishment of surface water bodies, animal exhibit washdown and pool refilling, and general cleaning. A new recycled water pipeline would be installed connecting the zoo's groundwater reservoir to the existing Westside Enhanced Recycled Water Project distribution line. The project would also include a series of small retrofits including signage installation and tagging of fixtures. This project does	2023-2024

**Table 4.1-3 Projects Considered in Cumulative Impact Analysis**

Project No. on Map	Project Name (Project Sponsor or Jurisdiction)	Project Description	Construction Dates
8	Lake Merced West Project - 520 John Muir Drive (Rec and Park)	not include landscaping, irrigation system retrofits, or cross-connection testing.  The Lake Merced West Project would create a recreational facility on approximately 11 acres located at 520 John Muir Drive, on the southwest side of Lake Merced. The proposed recreation facility would offer an array of activities open to the public. The facility would include a restaurant, community building, skateboard park, boat dock and rentals, sport courts, and areas that could be used flexibly for a wide variety of uses such as picnics or larger gatherings.	2024-2026
9	Westside Force Main Reliability (SFPUC) <sup>e</sup>	A redundant force main would be installed between the Westside Pump Station and the Oceanside Treatment Plant. The approximately 2,765-linear-foot pipeline would run west from the Westside Pump Station and then south and parallel to the existing force main, either west of the existing force main within the paved outer northbound lane in the Great Highway or east of the existing force main within the east shoulder of the Great Highway, then turn east to connect to the headworks at the Oceanside Treatment Plant. Open cut construction would likely be required, with a trench depth ranging from approximately 3 feet near the Westside Pump Station to up to 60 feet near Oceanside Treatment Plant.	2027-2030
10	2700 Sloat Boulevard <sup>f</sup> (2700 Sloat Holdings, LLC)	The project would demolish the existing Sloat Garden Center consisting of a commercial building, display areas, storage, and parking lot and construct a new residential development with ground floor commercial/retail and a basement. <del>According to preliminary plans, the project could consist of three 8- to 12-story towers and provide between 213 and 283 residential units, a total of over 250 class 1 bicycle parking spaces, and no off-street parking spaces. A new project application for the site includes a 50-story building with 712 residential units, a 31,075 square-foot fitness center and spa, 21,864 square feet of community facility space, 15,302 square feet of retail space, 212 carshare parking spaces, and 327 bicycle parking spaces. Because the planning department has determined this recent application is incomplete and does not meet the requirements of the planning code and state density bonus law, there is uncertainty regarding this project. Nonetheless, for the purposes of this EIR, this project is considered in the cumulative impact analysis as proposed.</del>	Unknown
11	Potential Upper Great Highway Closure between Sloat Boulevard and Lincoln Way (Rec and Park/SFMTA)	<i>This potential project could be proposed by Rec and Park and SFMTA following additional study. This project is included in a second program-level cumulative impact analysis for relevant topics. The analysis conservatively assumes permanent full</i>	Unknown

**Table 4.1-3 Projects Considered in Cumulative Impact Analysis**

Project No. on Map	Project Name (Project Sponsor or Jurisdiction)	Project Description	Construction Dates
		<i>closure of the Great Highway between Sloat Boulevard and Lincoln Way for a pedestrian and bicycle promenade.</i>	
<u>12</u>	<u>Great Highway Pilot Project (Rec and Park/SFMTA)</u>	<u>The Great Highway Pilot Project authorized a three-year pilot study using the Upper Great Highway between Lincoln Way and Sloat Boulevard as a car-free promenade on weekends, holidays, and Friday afternoons until 2025.</u>	<u>2023-2025</u>
<u>13</u>	<u>Ocean Beach Storm Damage Reduction Beach Nourishment Project (Army Corps of Engineers with SFPUC as the local sponsor)<sup>g</sup></u>	<u>In August to September 2021 the Corps placed approximately 380,000 cubic yards of material dredged from the main ship channel along South Ocean Beach, instead of its past practices of placing the material offshore at SF-8 or the Ocean Beach Demonstration Site. With roughly 32 percent losses during placement, post-placement surveys confirm 256,588 cubic yards of sand remained on the beach as of October 1, 2021.</u>	<u>2021</u>
<u>14</u>	<u>Sloat Boulevard Quick Build Project (SFMTA)<sup>h</sup></u>	<u>The Sloat Quick-Build Project would upgrade pedestrian crossings, add a two-way protected bikeway, improve accessibility, and consider other measures to reduce vehicle speeds while keeping traffic moving on Sloat Boulevard between the Great Highway and Skyline Boulevard. The two-way protected bikeway would be located on the south side of Sloat Boulevard. Bus boarding islands, painted safety zones at unsignalized intersections, a speed table in the exit lane to Skyline Boulevard, and parking and loading changes near the San Francisco Zoo would also be installed.</u>	<u>2023</u>
<u>15</u>	<u>2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco)</u>	<u>The project would demolish the existing 21,263 square foot two-story private community building and construct a new six-story 125,380 square foot mixed-use building. The building will contain a combination of public and private uses including a library, museum, restaurant, office, and gym, 31 off-street parking spaces, and approximately 7,116 square feet of open space.</u>	<u>Unknown</u>
<u>16</u>	<u>Sunset Boulevard Project (Public Works)</u>	<u>The project would install curb ramps, bus stops, and repave Sunset Boulevard between Golden Gate Park and Lake Merced. Paving work would be limited to three blocks at a time during off-peak hours.</u>	<u>2024-2025</u>

SOURCES: <sup>a</sup> San Francisco Public Utilities Commission (SFPUC), Westside Pump Station Reliability Improvements, <https://www.sfpuc.org/construction-contracts/construction-projects/westside-pump-station-reliability-improvements>, accessed July 31, 2020.  
<sup>b</sup> U.S. Department of the Interior, National Park Service, Record of Decision Vista Grande Drainage Basin Improvement Project Environmental Impact Statement, July 26, 2018.  
<sup>c</sup> San Francisco Municipal Transportation Agency, *Sloat & Skyline Intersection Alternatives Analysis*, <https://www.sfmta.com/projects/sloat-skyline-intersection-alternatives-analysis>, accessed August 29, 2023 July 31, 2020.  
<sup>d</sup> SFPUC, Water Enterprise FY 2021-2030 Capital Plan Summary, Water Appendix.  
<sup>e</sup> SFPUC, Water Enterprise FY 2021-2030 Capital Plan Summary, Water Appendix.  
<sup>f</sup> The San Francisco Planning Department issued Preliminary Project Assessments for two versions of this project in June 2020. Although a project application has not been submitted and future project plans could be different than described, this project is included on the cumulative projects list due to its scale and the infrequency of new development in the neighborhood. The timing of an application for a residential development is unknown, but is considered likely in the foreseeable future San Francisco Planning

**Table 4.1-3 Projects Considered in Cumulative Impact Analysis**

Project No. on Map	Project Name (Project Sponsor or Jurisdiction)	Project Description	Construction Dates
		<p><u>Department, Case No. 2021-012382PRJ, 2700 Sloat Boulevard, Project Application (PRJ) – Exhibit A, December 9, 2021, Supplemental (SB 330) rev. 4.6.23; Supplemental CUA 4.9.23; San Francisco Planning Department, Plan Check Letter, 2700 Sloat Boulevard, Planning Record Number 2021-012382PRJ/ENV/CUA/SDB/SHD/CTZ/TDM, May 8, 2023. The initial project application proposed a 12-story building with 400 residential units, 224 bicycle parking spaces, 56 off-street parking spaces, and 9,719 square feet of retail space.</u></p> <p><sup>g</sup> <u>etrac, 2021. West Coast Hopper – Ocean Beach Pump Ashore Final Pay Volumes. Memo from Greg Gibson (Etrac, Inc.) to Marshall Thompson (Dutra Group), Subject: Ocean Beach – Final Pay Volume for Ocean Beach. October 1, 2021.</u></p> <p><sup>h</sup> <u>San Francisco Municipal Transportation Agency. Sloat Quick-Build Project. Available online at: <a href="https://www.sfmta.com/projects/sloat-blvd-quick-build-project">https://www.sfmta.com/projects/sloat-blvd-quick-build-project</a>. Accessed September 7, 2023.</u></p>	

Draft EIR **Figure 4.1-1** has been revised to reflect additional cumulative projects, as shown on the following page.

## 12.6 Revisions to Section 4.2, Aesthetics

\*The text of the first two paragraphs of Section 4.2.2.2 on draft EIR p. 4.2-2 has been revised as follows to reflect the revised project description.

The visual study area for the project includes all public areas from which project components would be visible. The project area is located along a coastal bluff on the edge of a mixed urban and open space environment often comprised of steep terrain. This location offers expansive views of Ocean Beach and the Pacific Ocean, as well as distant hills and views of San Francisco’s distinctive built environment; however, topography, trees, shrubs, and buildings quickly restrict or block views of project components as viewers move away from the project site. Consequently, these elements generally limit the visual study area to publicly accessible locations within and immediately surrounding project components. For example, while components of the project are adjacent to Fort Funston, the only areas of public use in Fort Funston from which project activities would be visible is are the northern portion of Fort Funston beach and the Fort Funston plant propagation site.

The exact boundaries of the visual study area depend on site conditions (i.e., viewshed, structures, and vegetation) and are highly site-specific. Site visits were performed in November and December 2019 ~~and~~ March 2020, and August-September 2022 in order to further define and assess the visual study area and capture representative photographs documenting existing visual conditions of the project site. An additional site visit was done in August 2022 to define and assess the new Fort Funston plant propagation area and trail improvements between Sloat Boulevard and Taraval Avenue. **Figure 4.2-1** provides a map showing the location and direction of photograph viewpoints that generally define the visual study area. **Figures 4.2-2, 4.2-3, 4.2-4, 4.2-5, and 4.2-5a** present ~~13~~ 17 representative publicly available views of the project site and adjacent areas, which are used to describe the project site’s visual character in the next section.



SOURCE: ESA, 2020; ESRI, 2020

Ocean Beach Climate Change Adaptation Project

**Revised Figure 4.1-1**  
Cumulative Projects



SOURCE: ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS Use Community

Ocean Beach Climate Change Adaptation Project

**Revised Figure 4.2-1**  
Photo Location Map



Photo 15. View facing south toward Fort Funston Nursery.



Photo 16. Example of Potential Plant Propagation Site Location.

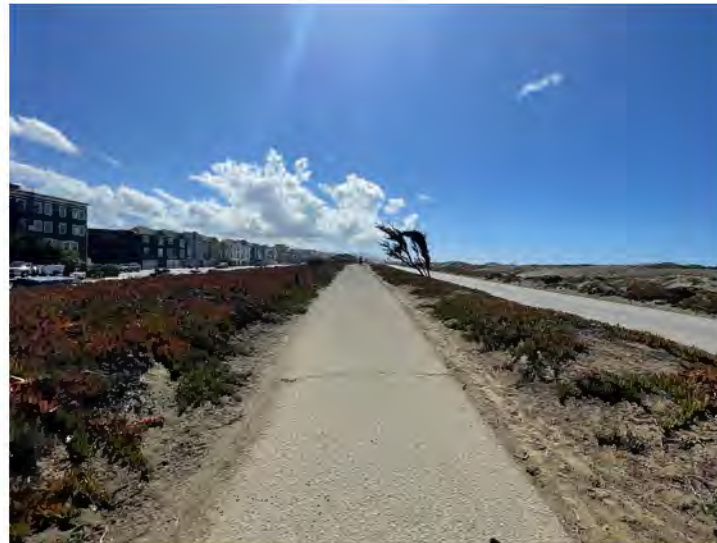


Photo 17. View from the multi-use trail adjacent to the Taraval Street beach access, facing south.

SFO12\00001D120468.23 - South Ocean Beach Long Term Project\05 Graphics-GIS-Modeling\Illustrator

SOURCE: ESA, 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 4.2-5a**  
 Photos of Fort Funston Blufftop Near Nursery and  
 Multi-Use Trail Between Sloat Boulevard and Taraval Street

\*The paragraph heading on draft EIR p. 4.2-2 has been revised as follows:

***VIEWS ALONG SLOAT BOULEVARD AND GREAT HIGHWAY INTERSECTION***

\*The paragraph heading and text at the bottom of draft EIR p 4.2-2 has been revised as follows:

***VIEWS FROM NORTH OCEAN BEACH, AND SKYLINE BOULEVARD, AND TARAVAL STREET***

Figure 4.2-4 depicts views from the ~~northernmost and southernmost extents of the project area; namely, the area of North Ocean Beach from which sand would be excavated for small sand placements, and the Great Highway/Skyline Boulevard intersection where the Skyline coastal parking lot would be constructed.~~

\*Draft EIR **Figure 4.2-1** has been revised as shown on the following page to incorporate additional photo locations.

\*New **Figure 4.2-5a**, shown on p. 12-43, has been added after Figure 4.2-5 on draft EIR p. 4.2-7.

\*The text of the second paragraph on draft EIR p. 4.2-8 has been revised as follows:

Moving to the southern end of the main project area, the north-facing view towards the project area (Photo 11) represents what trail users traveling north along the Lake Merced Trail currently see as they approach the Skyline Boulevard/Great Highway intersection. As the photo shows, vegetation, topography, and roadway alignments near the intersection obscure views of the project area beyond those in the immediate intersection vicinity. The intersection with the Great Highway is dominated by a small median island with small trees and ground cover.

\*The following paragraph has been added after the second paragraph on draft EIR p. 4.2-8:

Figure 4.2-5a, photo point 17, depicts views of the project area near the terminus of Taraval Street along Middle Ocean Beach. Facing south along the multi-use trail towards Sloat Boulevard, views of the sandy beach are impeded by the Upper Great Highway, bluff topography and small adjacent sand dunes, but the Pacific Ocean is visible at most points and portions of the beach are visible in some areas. On the east side of the trail, a vegetated median and the Lower Great Highway/48<sup>th</sup> Avenue separate trail users from residential structures, while the paved trails and vegetated medians dominate foreground and mid-range views.

\*The following new subheading and paragraph have been added to draft EIR p. 4.2-9, immediately before Section 4.2.2.3, to address the revised project description including the Fort Funston plant propagation site:

***VIEWS OF THE FORT FUNSTON PLANT PROPAGATION SITE***

Figure 2-1d shows the approximate location of the plant propagation site and Figure 4.2-5a depicts typical views of potential areas for the plant propagation site located within Fort Funston. The propagation site would be located within Fort Funston, between the Fort Funston Main Parking lot and the Native Plant Nursery. The area is generally dominated by ice plant, and is visible from the Sunset Trail, surrounding social trails, and parking areas (see Figure 4.2-5a, Photo 15 and 16). This location

offers expansive views of the Pacific Ocean as well as distant views of San Francisco's built environment.

\*Section 4.2.2.3 on draft EIR p. 4.2-9 has been revised as follows to reflect the revised project description:

The project area comprises ~~two~~ four locations along San Francisco's Pacific Ocean coastline. The main project activities would occur on the portion of coastline between Sloat Boulevard and Fort Funston, generally referred to as "South Ocean Beach." The South Ocean Beach project area also includes locations of work activities on adjacent roadways (i.e., Great Highway, Sloat Boulevard, and Skyline Boulevard). The second location, where a smaller amount of work is proposed, is the stretch of coastline north of Lincoln Way generally referred to as "North Ocean Beach." The visual study area also includes the portion of Ocean Beach extending between Sloat Boulevard and Taraval Street (generally referred to as "Middle Ocean Beach") where the existing multi-use trail would be improved for Americans with Disabilities Act (ADA) accessible use. The fourth study area location encompasses the plant propagation site. The site would be located within Fort Funston, between the Fort Funston Main Parking lot and the Native Plant Nursery. The visual character of the project area and adjacent areas reflects the mix of urban, public utility, recreational, residential, and open space land uses in the vicinity, including Ocean Beach, the San Francisco Zoo, Lake Merced, Fort Funston, urban development, and wastewater and transportation infrastructure. One can view both natural and built features such as vegetated hills, walking paths, the sandy beach, the ocean, public park and utility infrastructure, shoreline protection structures (i.e., rock and sandbag revetments), and residential and commercial buildings in close proximity and in the far distance.

\*The first paragraph of Section 4.2.2.4 on draft EIR p. 4.2-9 has been revised as follows to reflect the revised project description:

The visual quality of the project area is also generally high, defined by the dynamic contrast between built and natural environments and vivid colors from the city's architecture and from the ocean and dune vegetation. However, rock revetments and rubble along the beach, and fencing and a concrete barrier railing along the west side of Great Highway along South Ocean Beach (Figure 4.2-2), and to a lesser extent the large O'Shaughnessy seawall along North Ocean Beach (Figure 4.2-4), disrupt the continuity, texture, and integrity of scenic views and vistas to and along the coast, thereby detracting from the area's overall scenic quality. Within Fort Funston, the plant propagation site area is generally dominated by non-native ice plant in the vicinity of the Sunset Trail and adjacent roads and parking area (Figure 2-1d).

\*The first paragraph on draft EIR p. 4.2-11 has been revised as follows:

The project area is not designated as a scenic area in the general plan or other regional plans, such as the Coastline Preservation and Recreation Plan.<sup>2</sup> There are no state designated scenic highways in San Francisco<sup>3</sup>; however, State Route 1 (S.R. 1) and S.R. 35 (also referred to as Skyline Boulevard at this location) are identified as eligible for designation as state scenic highways. S.R. 1 is located nearly 2 miles east of the project site at its closest point; views from this distance are obstructed by topography, vegetation, and residential development. S.R. 35 runs along the eastern edge of the project boundary, near the Fort Funston plant propagation site and the S.R. 35/ intersection with the Great Highway intersection. Project activities associated with the installation and maintenance of the service road, Skyline coastal parking lot, and multi-use trail would be visible from the

S.R. 35/Great Highway intersection. All other areas of the project site are screened from view by topography and trees.

\*The first paragraph under Section 4.2.4.2 on draft EIR p. 4.2-17 has been updated as follows:

The visual quality impact analysis is based on field observations conducted by ESA in November and December 2019, ~~and March 2020~~ and August-September 2022; review of project maps and drawings; aerial and ground-level photographs; simulations of the project within photographs; and review of a variety of data in the record, such as local planning documents. The analysis identifies potential temporary (short-term) and permanent (long-term) project impacts on scenic vistas, scenic resources, or the visual character and quality of a site as seen from public urban locales, recreational facilities, and open space areas. The analysis does not address views from Zoo Road, which is not a public road.

\*The text of Impact AE-1 has been revised to include a new paragraph between the first and second paragraphs on draft EIR p. 4.2-19, as follows:

Vegetation removal and replanting activities at the plant propagation site, including equipment if used, would be visible to Fort Funston visitors for approximately two weeks. Planting activities would appear comparable to other restoration activities within Fort Funston and therefore consistent with existing visual character and quality of public views of the site and surroundings. Considering the small scale of the work area within Fort Funston relative to the expansiveness of the area's scenic vistas, as well as the fact that all scenic vista viewing opportunities around the plant propagation site would remain publicly available during construction, the plant propagation site construction activities would not adversely affect a scenic vista.

\*The second paragraph on draft EIR p. 4.2-19 has been revised as follows:

Travelers whose views of the project area could be affected include those approaching the Sloat Boulevard/Great Highway intersection, including along the existing Great Highway multi-use ~~path~~ trail from the north; travelers approaching the Skyline Boulevard/Great Highway intersection, including along the Lake Merced multi-use path and Skyline Boulevard (eligible for designation as a state scenic highway [S.R. 35]); travelers along the Upper Great Highway and Lower Great Highway between Sloat Boulevard and Taraval Avenue ~~travelers along the retained Great Highway northbound travel lane (e.g., SFPUC staff and other authorized or emergency personnel going to nearby wastewater infrastructure);~~ and visitors to the beach up- and down-coast of the project area. From these vantage points, travelers might be able to view construction equipment and associated activities. Generally, the views of travelers passing by along area roadways or trails are defined by motion as they focus on their travel path. While they would have some views of project construction activities, these views would be fleeting and indirect, and partially obstructed by topography, vegetation, and fencing. ~~As a result, impacts on passersby would not be substantial.~~ Construction of the ADA access improvements would be noticeable to trail visitors and motorists traveling along the Great Highway during the work period of approximately four weeks. Any such views would be fleeting, as motorists would be in motion, and the subject work would appear similar that required for periodic trail maintenance along the existing multi-use trail.

\*The second to last sentence of the last paragraph on draft EIR p. 4.2-19 has been revised as follows:

The South Ocean Beach disturbance area and equipment would be larger and more numerous, respectively, than that commonly occur with the city's ongoing beach nourishment activities; however, they would be seen from a distance given the closure of construction work areas to public access.

\*The first paragraph under Impact AE-4 on draft EIR p. 4.2-21 has been revised as follows:

As noted for Impact AE-1, scenic vistas of the project area include expansive views of the Pacific Ocean, beach, dunes, bluffs, and silhouettes of distant hills. The project area also offers views of these scenic resources from other less expansive vantage points, including from the beach, Sloat Boulevard, the areas surrounding the parking lot and roads in Fort Funston, and the Great Highway. The visual character of the area includes a mix of large-scale built and natural features. The visual quality is generally high, defined by the contrast between the built and natural environment; however, the rock revetments and rubble along the beach and fencing and railing along the highway detract from the area's overall scenic quality.

\*The first paragraph on draft EIR p. 4.2-22 has been revised as follows:

~~Installation of~~ The multi-use trail, associated turnouts and seating, ADA access improvements between Sloat Boulevard and Taraval Avenue, and constructing new beach access stairs would provide visitors with new opportunities to access locations within the project area from which they could access scenic vistas of the Pacific Ocean and distant hills, as well as the beach, dunes and bluff free of revetments and debris. Existing adjacent vista points, such as those located to the north of the existing NPS public restroom and parking lot, along the west side of the Great Highway, would remain and offer enhanced views to the south. After construction of the ADA access improvements from Sloat Boulevard to Taraval the improved multi-use trail would be similar in appearance to the existing trail. Passersby traveling along the beach or Great Highway may have fleeting views of the low-profile mobi-mats, but considering the undulating dune topography of the area, the mats would not be conspicuous or otherwise alter the visual character of the area or scenic views in the area. The proposed ADA improvements would provide visitors with expanded access to viewing opportunities along Ocean Beach and would not substantially alter or affect the natural character of Ocean Beach for recreational visitors.

\*The following paragraph has been inserted after the fourth full paragraph on draft EIR p. 4.2-22:

The Fort Funston plant propagation site would not include any new vertical features and would not impact scenic vistas. While occasional harvesting activity at the plant propagation site would be noticeable to park visitors, it would not represent a substantial change in the quality or character of views within the park, as there are several areas of the park in which vegetation has been removed through overuse and ongoing restoration initiatives. Once established, the propagation site would appear similar to other areas of the park where restoration activities have occurred. Due to the relatively small scale of the work area within Fort Funston relative to the expansiveness of the area's scenic vistas and considering all scenic vista viewing opportunities in the nearby vicinity would remain publicly available, the plant propagation area would not substantially adversely affect a scenic vista or degrade the existing visual character or quality of public views.

\*The second paragraph of Impact AE-6 on draft EIR p. 4.2-29 has been revised to reflect the updated lighting plan as follows:

Lighting for the multi-use trail, service road, and Skyline coastal parking lot would similarly occur mainly within areas of existing nighttime lighting (e.g., near the Great Highway's Sloat Boulevard and Skyline Boulevard intersections), but would also introduce new sources of lighting for the multi-use trail and service road along a segment of South Ocean Beach between these two intersections where no substantial permanent lighting presently exists (from approximately 600 feet north of the Great Highway zoo entrance to Skyline Boulevard). The project would add minimal lighting up to 31 solar powered lighting fixtures along the multi-use trail and service road. Of the new fixtures, up to 15 would be mounted on 15-foot-tall poles and up to 15 would be mounted on 3-foot-tall bollards in the median between the service road and the multi-use trail near the new beach access stairway. One additional light fixture would be mounted on a 25-foot-tall pole within the median between the service road and the Skyline coastal parking lot, including at trail junctions (e.g., where Zoo Road meets the trail). The increase in permanent lighting would not substantially affect nighttime views, as it would be shielded, directed downward, and would use warm-colored, energy-efficient bulbs in compliance with the NPS best practices for outdoor lighting. The installed lighting would also be offset by decreases in other sources of light and glare that would result from the project. For instance, the existing streetlights that run approximately 600 feet south of Sloat Boulevard on the west side of the Great Highway would be removed as part of the project. Further, the project would permanently close and remove the southern portion of the Great Highway, thereby substantially reducing the amount of vehicular traffic and associated nighttime lighting (and daytime reflectivity and glare) within this area. The project does not otherwise involve structures or finishes that would create substantial glare or that would be substantially different from existing infrastructure at the site.

\*The list of projects that could have a cumulative aesthetic impact in combination with the project, on draft EIR p. 4.2-31, has been revised to include three additional projects as follows:

- Vista Grande Drainage Basin Improvement (City of Daly City)
- Great Highway Closure Pilot Project
- 2700 45<sup>th</sup> Avenue

\*The second paragraph under *Construction Impacts* on draft EIR p. 4.2-31 has been revised as follows:

Of the projects listed above, four are estimated to have construction schedules that overlap with construction of the project: the Westside Pump Station Reliability Improvements, the Oceanside Treatment Plant Improvements, the San Francisco Zoo Recycled Water Pipeline Project, and the Westside Force Main Reliability Project. The Great Highway Closure Pilot Project would be in effect during project construction, although it does not include construction activities that could combine with the project's construction activities to result in a cumulative impact on scenic vistas, scenic resources, or existing visual character. Construction activities for the Oceanside Treatment Plant Improvements would occur inside the Oceanside Treatment Plant. As a result, this work would be shielded from public view. The San Francisco Zoo Recycled Water Pipeline project includes installation of a pipeline, construction of which would occur entirely within the zoo, largely screened from the proposed project's viewshed by topography, vegetation, and the zoo's boundary fencing.

\*The following paragraph has been added after the second full paragraph on draft EIR p. 4.2-32:

The Vista Grande Drainage Basin Improvement Project would involve staging and excavation in an area of Fort Funston to the northeast of the Fort Funston main parking lot, which could be within view of the Fort Funston plant propagation site. Vista Grande's construction phase could overlap in time with Fort Funston plant propagation site work, but since the propagation site construction activities would not require significant stockpiling of materials, and would be implemented by workers using hand tools or mechanical equipment which would not affect the dominance of open sky, sand dunes, and the Pacific Ocean in views from public trails in the vicinity, there would be no significant cumulative effect.

The third paragraph under *Operational Impacts* on draft EIR pp. 4.2-32 through 4.2-33 has been revised as follows:

Those projects that have potential to influence visual resources or visual character include the 2700 Sloat Boulevard Project and the Signalization of State Route 35 (Skyline Boulevard) and Great Highway Intersection Project. The 2700 Sloat Boulevard Project would include demolishing the existing Sloat Garden Center and constructing ~~an 85-foot tall~~ a mixed residential and commercial development 50 stories in height. Given the height of the proposed building, the project will require environmental review to determine whether it would have a potential significant aesthetic impact.<sup>17a</sup> The 2700 Sloat Boulevard Project's tower would introduce a new vertical element to the nearby residential neighborhood which would be distinct from the horizontal recreational features proposed by the project along the oceanfront. The Ocean Beach Climate Change Adaptation Project would not include any vertical elements (other than a small one-story restroom) and therefore would not contribute to any potential cumulative aesthetics impacts in the project vicinity. ~~The new development would meet all zoning, density, and height requirements for the area and would be consistent with the urban residential visual character that dominates the north side of Sloat Boulevard.~~<sup>18</sup>

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<sup>17a</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes.

<sup>18</sup> ~~This project is conservatively included in the cumulative analysis, although the timing of its development is unknown, as there is a reasonable likelihood of an application being filed and overall neighborhood awareness of this project. Analysis of its contribution to the cumulative aesthetics impact is based on preliminary project designs and unknown construction schedule that may overlap given the potential for overlap due to the long duration of construction of the proposed Ocean Beach Climate Adaptation project.~~

## 12.7 Revisions to Section 4.3, Transportation and Circulation

\*Footnotes 1 on draft EIR p. 4.3-1 and 12 on draft EIR p. 4.3-3, respectively, have been revised as follows:

CHS Consulting Group, Ocean Beach Climate Change Adaptation Project Traffic Operations Analysis, Final, March ~~February~~ 2021.

\*The following paragraph has been added after the first paragraph under *Construction Travel Demand* on draft EIR p. 4.3-20:

Additionally, the project would create a self-replenishing stand of native dune plants within Fort Funston for use in initial revegetation and periodic maintenance planting of South Ocean Beach. Limited construction activities would be required for creating this plant propagation site, and would be intermittent and is generally included within the construction travel demand estimates. The project would also repave the existing multi-use trail east of the Upper Great Highway between Sloat Boulevard and Taraval Street. Construction activity associated with the upgrade of approximately 2,200 feet of the existing path would be limited in duration and intensity and is not included in the estimate of construction trucks and workers presented below. However, construction of these upgrades to the existing trail would occur during Phase 1 of the construction schedule below and would not physically overlap with construction activities south of Sloat Boulevard.

\*The text under *Construction Schedule* on draft EIR p. 4.3-20 has been revised as follows to reflect the revised project description:

The city would construct the project over approximately four years, with an anticipated construction period generally from 2024 ~~to~~ through 2027~~8~~. Project construction would occur in five phases and would be sequenced as follows (see Chapter 2, Project Description, Section 2.5.1, Construction Activities and Phasing, for details):

\*To reflect the revised project description the following text has been added to the end of the paragraph under *Project Daily Vehicle Trips During Construction* on p. 4.3-20.

However, for four to six weeks during phase 3, deliveries of North Ocean Beach sand would add between 94 and 135 import trucks per day. Thus, during the construction-phase sand placements there would be between 108 and 149 trucks traveling to and from the project site per day (i.e., 14 export trucks plus the 94 to 135 import trucks) and an average of 20 construction workers traveling to and from the project site per day.

\*The column titled “Phase 3 Remove Revetments (18 months)” in Table 4.3-5 on draft EIR p. 4.3-21 has been revised to reflect the updated phase 3 construction schedule and to include table note f to read:

Phase 3 Remove Revetments (~~18~~ 24 months)<sup>f</sup>

\*The column titled “Phase 4 Install Trail/Parking Lot (9 months)” in Table 4.3-5 on draft EIR p. 4.3-21 has been revised to reflect the updated phase 4 construction schedule to read:

Phase 4 Install Trail/ Parking Lot (9 12 months)

\*Table note f has been added to Table 4.3-5 on draft EIR p. 4.3-22 as follows:

<sup>f</sup> Deliveries of North Ocean Beach sand for placement over the slope stabilization layer are assumed to occur over a four- to six-week period during phase 3’s 24-month duration. During this period, the sand placements would add about 94 to 135 truckloads of sand imported to the site per day. Thus, during sand placements there would be between 108 and 149 trucks traveling to and from the project site per day (i.e., 14 export trucks plus the 94 to 135 import trucks).

\*The text of the first paragraph on draft EIR p. 4.3-21 has been revised as follows with the revised project dates.

As shown in Chapter 2, Project Description, Table 2-3, Project Construction Schedule, the construction phases would overlap. For purposes of a conservative transportation analysis, a representative day of analysis during the maximum overlap period was developed based on the construction worker and truck data. The representative weekday is when the maximum construction truck and worker trips are expected to occur. Based on an analysis of the anticipated number of construction trucks and workers and the duration of each of the five phases, the peak of construction activities would occur during a six-month period between November 2025<sup>56</sup> and April 2026<sup>57</sup> when phases 2, 3 and 4 would overlap, with approximately 53 trucks traveling to and from the site per day and 130 construction workers on site per day. For the remainder of the 49-month construction period, the daily construction trucks and workers would be less. **Table 4.3-6** presents information on the daily numbers of construction workers and trucks for the peak construction period by phase during the peak six months of construction activity.

**Table 4.3-6** on draft EIR p. 4.3-22 has been revised to include new footnote c as follows:

**Table 4.3-6 Average Daily Number of Construction Trucks and Workers During Period of Maximum Overlap of Construction Phases<sup>a</sup>**

Phase	Trucks	Workers <sup>b</sup>	Total
Phase 2	28	60	88
Phase 3 <sup>c</sup>	14	20	34
Phase 4	11	50	61
<b>Total</b>	<b>53</b>	<b>130</b>	<b>183</b>

SOURCES: San Francisco Public Utilities Commission, 2020; LCW Consulting, 2020 (see Appendix D).

NOTES:

<sup>a</sup> Daily number of trucks and construction workers traveling to or from the site.

<sup>b</sup> The number of construction workers assumes a single shift and that all construction workers would travel to the work area by auto (single occupancy).

<sup>c</sup> Deliveries of North Ocean Beach sand for placement over the slope stabilization layer would occur over a four- to six-week week period during Phase 3. During this period, the sand placements would add between 94 and 135 truckloads of sand imported to the site per day. Thus, during sand placements there would be between 147 and 188 trucks traveling to and from the project site per day (i.e., 53 trucks as noted above, plus the 94 to 135 sand import trucks).

\*The following paragraph has been added after Table 4.3-6 on draft EIR p. 4.3-22:

If deliveries of North Ocean Beach sand occur during the peak six months of construction activities when phases 2, 3 and 4 overlap, the number of trucks traveling to and from the project site during the four to six weeks of sand import would increase from 53 trucks per day to between 147 and 188 trucks per day.

\*The following sentence has been added to the end of the second paragraph under *Construction Trip Distribution* on draft EIR p. 4.3-22:

Deliveries of North Ocean Beach sand to the South Ocean Beach project site would be via the Great Highway between Lincoln Way and Sloat Boulevard.

\*Footnote 35 on draft EIR p. 4.3-24 has been revised as follows:

CHS Consulting Group, Ocean Beach Climate Change Adaptation Project Traffic Operations Analysis, Final, March ~~February~~ 2021.

\*The following paragraph has been added after Table 4.3-7 on draft EIR p. 4.3-25:

As described for the small sand placements (p. 2-24), during the four- to six-week period when sand from North Ocean Beach would be delivered to the project site, the southbound lanes of the Great Highway between Sloat Boulevard and Lincoln Way would be temporarily closed to vehicular traffic, similar to existing beach nourishment operations, and would be subject to permitting and a traffic control plan. Therefore, traffic volumes on the southbound lanes of the Great Highway north of Sloat Boulevard would be comprised of only the 94 to 135 trucks per day during the sand placement event.

\*The following text has been added to the end of the first paragraph Section 4.3.4.2 on draft EIR p. 4.3-27:

The project would create a self-replenishing stand of native dune plants within Fort Funston for use in periodic maintenance planting in South Ocean Beach. Vehicle travel demand associated with this activity would be intermittent and limited.

\*The following text has been added to the end of the first paragraph on draft EIR p. 4.3-32:

Deliveries of North Ocean Beach sand to the South Ocean Beach project site would be via the Great Highway between Lincoln Way and Sloat Boulevard. Haul truck circulation at and between the North Ocean Beach and South Ocean Beach work areas would be subject to permitting and a traffic control plan, and would require temporary travel lane closures of the southbound lanes of the Great Highway between Lincoln Way and Sloat Boulevard, same as occurs during sand backpass events.

\*The following new paragraph has been added after the third paragraph on draft EIR p. 4.3-32:

During the four- to six-week period when sand from North Ocean Beach is delivered to the project site, the southbound travel lanes of the Great Highway between Sloat Boulevard and Lincoln Way would be temporarily closed to vehicular traffic. On a daily basis, during the overlap period there would be an additional 94 to 135 trucks per day traveling between North Ocean Beach and the South Ocean Beach work site. These trucks would travel on the closed southbound travel lanes of the Great

Highway between Lincoln Way and Sloat Boulevard, and would not combine with other vehicular traffic.

\*The first sentence under *Construction Duration and Intensity* on draft EIR p. 4.3-32 has been revised as follows:

Construction of the project would occur over a four-year period from between 2023<sup>4</sup> through and 2028, which is considered an extended duration.

\*The following text has been added after the fourth paragraph on draft EIR p.4.3-33:

Haul truck circulation at and between the North Ocean Beach and South Ocean Beach work areas would be subject to permitting and a traffic control plan that would include measures such as circulation and detour plans, advance warning signage, truck routes, maintenance of pedestrian and bicycle access, and monitoring of construction vehicle movements. Thus, sand deliveries from North Ocean Beach would not create potentially hazardous conditions for people walking, bicycling, or driving on the Great Highway.

\*The first paragraph under *Impacts Related to Accessibility during Construction* on draft EIR p. 4.3-34 has been revised as follows:

During construction, emergency vehicle access to the closed portion of the Great Highway would be maintained; however, emergency access to the San Francisco Zoo during construction of the project would primarily be via the existing driveway to the zoo on Sloat Boulevard and via Herbst and Zoo roads on the southern end of the zoo property. Temporary travel lane closures on the Great Highway north of Sloat Boulevard, on Sloat Boulevard, or on Skyline Boulevard would not be required, except during reconfiguration and/or restriping of the intersections of the Great Highway/Sloat Boulevard and Skyline Boulevard/Great Highway and during the four- to six-week period in phase 3 during hauling of North Ocean Beach sand to the South Ocean Beach work site. Project construction therefore would not interfere with emergency vehicle access.

\*The following item has been added to the end of the list of transportation network changes on draft EIR p. 4.3-36:

- Repaving the existing multi-use trail east of the Upper Great Highway between Sloat Boulevard and Taraval Street to make the trail more ADA accessible.

\*The following text has been added after the second paragraph under *Potentially Hazardous Conditions Impacts Related to Walking and Bicycling* on draft EIR p. 4.3-37:

The project would also repave the existing multi-use trail east of the Upper Great Highway between Sloat Boulevard and Taraval Street to improve the conditions of the asphalt and make the multi-use trail ADA accessible. The upgrades would be consistent with Division 4 of Chapter 11B of the city's building code, which specifies accessibility guidelines. Thus, compared to existing conditions, these changes would enhance safety for people walking and bicycling.

\*Footnote 43 on draft EIR p. 4.3-37 has been revised as follows:

CHS Consulting Group, Ocean Beach Climate Change Adaptation Project Traffic Operations Analysis, Final, ~~March~~ February 2021.

\*The following text has been added after the second paragraph under *Impacts Related to Walking and Bicycling* on draft EIR p. 4.3-40:

The project would also upgrade the existing multi-use trail east of the Upper Great Highway between Sloat Boulevard and Taraval Street. The upgrade would improve the conditions of the asphalt to accommodate wheelchairs and walkers. The improved trail would connect to the existing ADA beach access features at the intersection of Taraval Street with the Great Highway. Thus, the ADA access upgrades would improve the pedestrian and bicycle network and enhance accessibility, compared to existing conditions.

\*The first three paragraphs under Section 4.3.4.4 starting on draft EIR p. 4.3-49 have been revised as follows:

Existing and probable future projects listed in Section 4.1, Overview, Table 4.1-3, could contribute to cumulative impacts related to transportation and circulation. The geographic context for the analysis of cumulative transportation impacts generally includes the sidewalks and roadways adjacent to the project area, and the local roadway and transit network within 0.5 mile of the project area. Project construction is expected to begin in 2024~~3~~ and end in 2027~~8~~, and would occur in the same time frame and vicinity as other planned and proposed projects that would use the same roadways for access to work sites (e.g., Skyline Boulevard, Sloat Boulevard).

Based on the schedule information for the cumulative projects presented in Table 4.1-3, there are ~~12~~ 16 cumulative projects that could potentially overlap with project construction or operations. However, ~~two~~ three of these projects—the Vista Grande Drainage Basin Improvement Project, ~~and~~ the Lake Merced West Project, ~~and the Sunset Boulevard Project~~ — are not located in the immediate vicinity of the project area and would not contribute to cumulative transportation and circulation conditions. The ~~nine~~ 13 remaining projects that could potentially overlap with project construction and/or operations include the five SFPUC projects (Westside Pump Station Reliability Improvements, Oceanside Treatment Plant–Improvements - Biosolids Cake Hopper Reliability Upgrade, Oceanside Treatment Plant–Improvements - Seismic Retrofits, San Francisco Zoo Recycled Water Pipeline Project, and Westside Force Main Reliability Project), the changes to the intersections of Skyline Boulevard/Sloat Boulevard by the SFMTA and Skyline Boulevard/Great Highway by Caltrans, the Fort Funston Trail Connection Project, the Great Highway Closure Pilot Project, the Sloat Boulevard Quick-Build Project, the 2700 45<sup>th</sup> Avenue Project, the Ocean Beach Storm Damage Reduction Beach Nourishment Project, and the 2700 Sloat Boulevard residential development project.<sup>53</sup>

The ~~last project in Table 4.1-3 is the~~ Potential Upper Great Highway Closure between Sloat Boulevard and Lincoln Way (referred to generally as the Upper Great Highway project). This potential project is also listed in Table 4.1-3 and is assessed in a second cumulative scenario and conservatively assumes full permanent closure of the Great Highway between Sloat Boulevard and Lincoln Way. The analysis considers whether, with the addition of this cumulative project, the project's cumulative impact conclusions for the first scenario (i.e., without this cumulative project) would change.

<sup>53</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes. The 2700 Sloat Boulevard project is conservatively included in the cumulative analysis, although the timing of its development is unknown, as there is a reasonable likelihood of an application being filed and overall neighborhood awareness of this project. Analysis of its contribution to the cumulative transportation impacts is based on preliminary project designs and unknown construction schedule that may overlap given the potential for overlap due to the long duration of construction of the proposed Ocean Beach Climate Change Adaptation project.

\*The last sentence on draft EIR p. 4.3-51 has been revised to reflect additional cumulative projects as follows:

Cumulative projects, including the project, would be designed consistent with city policies and design standards, including the Better Streets Plan and Vision Zero, and in the case of the Sloat Boulevard Quick-Build Project are designed to reduce potentially hazardous conditions, and therefore would not create potentially hazardous conditions. Thus, cumulative impacts related to potentially hazardous conditions would be ***less than significant***.

\*The second sentence in the first paragraph under Impact C-TR-3 on draft EIR p. 4.3-52 has been revised to reflect additional cumulative projects as follows:

With the exception of the project, the Sloat/Skyline boulevard and Skyline Boulevard/Great Highway intersection signals, and the Fort Funston Trail Connection Project, and the Sloat Boulevard Quick-Build Project, none of the known cumulative projects would change vehicular, pedestrian, or bicycle circulation in the project vicinity.

\*The text of Impact C-TR-4 on draft EIR p. 4.3-53 has been revised as follows:

### **Cumulative Analysis**

Most future cumulative projects listed in Table 4.1-3 and illustrated on Figure 4.1-1 in Section 4.1, Overview, are SFPUC infrastructure upgrades at the existing Oceanside and Westside facilities that would not generate new trips or change the transportation network. Both the 2700 Sloat Boulevard residential development project<sup>54</sup> and the 2700 45<sup>th</sup> Avenue mixed-use development project<sup>54a</sup> would increase p.m. peak hour vehicle trips in the project vicinity (about 400 and 334 vehicle trips during the weekday p.m. peak hour, respectively).

Proposed transportation network improvements at the intersection of Skyline Boulevard/Sloat Boulevard include installation of traffic signals at all three approaches to the intersection, and these changes in the form of either signalization or a roundabout would be designed to accommodate the three Muni bus routes currently traveling through this intersection (i.e., the 18 46<sup>th</sup> Avenue, 23 Monterey, and 57 Parkmerced). These improvements would reduce vehicle delays at this intersection and transit travel times compared to project conditions presented in Impact TR-4 above. The signalization by Caltrans and subsequent project modifications at the intersection of Skyline Boulevard/Great Highway would not substantially change intersection operations or transit travel times on Skyline Boulevard.

~~The 2700 Sloat Boulevard residential development project<sup>54</sup> would not change vehicular circulation or increase p.m. peak hour vehicle trips in the project vicinity to substantially delay public transit (since 2700 Sloat Boulevard would generate only about 60 new vehicle trips during the weekday p.m. peak~~

hour). Proposed transportation network improvements at the intersection of Skyline Boulevard/Sloat Boulevard in the form of either signalization or a roundabout would be designed to accommodate the three Muni bus routes currently traveling through this intersection (i.e., the 18 46<sup>th</sup> Avenue, 23 Monterey, and 57 Parkmerced). These improvements would reduce vehicle delays at this intersection and transit travel times compared to project conditions presented in Impact TR-4 above. The signalization by Caltrans and subsequent project modifications at the intersection of Skyline Boulevard/Great Highway would not substantially change intersection operations or transit travel times on Skyline Boulevard.

The combined effect of the additional vehicles associated with the two development projects, the two travel lanes each way on Sloat Boulevard on which the 18 46<sup>th</sup> Avenue, 23 Monterey, and 57 Parkmerced bus routes travel on, 2700 Sloat Boulevard project, changes in vehicle circulation associated with the project, and the improvements at the intersections of Skyline Boulevard/Sloat Boulevard and Skyline Boulevard/Great Highway is that the transit travel times under cumulative conditions would be similar to or less than those identified for project conditions in Impact TR-4. Thus, under cumulative conditions, transit delay increases would not be substantial, and as a result, cumulative transit impacts would be **less than significant**.

<sup>54</sup> Based on the Transportation Study Determination Request for the 2700 Sloat Boulevard project (April 2020), preliminary travel demand calculations using the planning department's Travel Demand Tool (<https://sftraveldemand.sfcta.org/>), an estimated 40263 new vehicle trips would be generated by the project during the p.m. peak hour. The residential project would replace existing garden center uses on the project site, and therefore the net new number of vehicle trips during the p.m. peak hour would be less than the 402 new vehicle trips calculated for the new uses, which This would be less greater than the screening criteria of 300 project vehicle trips during the peak hour used by the planning department to determine if transit routes traveling through the project study area are likely to be significantly delayed by a proposed project. As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes.

<sup>54a</sup> Based on the travel demand calculations prepared as part of the transportation impact assessment for 2700 45<sup>th</sup> Avenue (Case Number 2022-001407ENV). The 2700 45<sup>th</sup> Avenue project would generate 485 vehicle trips during the weekday p.m. peak hour. After accounting for the existing vehicle trips to and from the project site, this project would result in a net increase of 334 vehicle trips during the weekday p.m. peak hour.

\*To reflect additional cumulative projects, the first two paragraphs under Impact C-TR-6 on draft EIR p. 4.3-55 have been revised as follows:

Cumulative infrastructure and transportation network projects listed in Table 4.1-3 and illustrated on Figure 4.1-1 in Section 4.1, Overview, would not generate loading demand. Only the 2700 Sloat Boulevard residential development on the block bounded by Wawona Street, 46<sup>th</sup> Avenue, 45<sup>th</sup> Avenue, and Sloat Boulevard and the 2700 45<sup>th</sup> Avenue mixed-use (commercial/retail/office) development on 45<sup>th</sup> Avenue would generate commercial vehicle and passenger loading demand in the geographic scope. Under cumulative conditions, the freight and passenger loading activities associated with the 2700 Sloat Boulevard residential development and the 2700 45<sup>th</sup> Avenue project would occur on site or on-street in the vicinity of that those sites (i.e., e.g., on Wawona Street, 45<sup>th</sup> Avenue) and would not combine with the project's loading activities associated with beach nourishment.

As discussed under Impact TR-6, the project's sand deliveries during the intermittent beach nourishment activities would be accommodated within identified areas on the proposed service road and multi-use trail, and would not contribute to impacts from other nearby cumulative

development projects, such as the 2700 Sloat Boulevard residential development and 2700 45<sup>th</sup> Avenue project discussed above. No other cumulative development projects have been identified that would contribute to either commercial vehicle or passenger loading demand in the geographic scope. Thus, cumulative projects would not result in a substantial loading deficit and cumulative loading impacts would be ***less than significant***.

## 12.8 Revisions to Section 4.4, Noise and Vibration

\*The first paragraph under *Existing Noise Sources* on draft EIR p. 4.4-4 has been revised as follows:

The project site generally encompasses the portion of San Francisco's Ocean Beach extending south from Sloat Boulevard to the northern edge of the Fort Funston bluffs, and the Great Highway from Sloat Boulevard to Skyline Boulevard, along with a portion of Ocean Beach north of Lincoln Boulevard where sand is harvested for placement south of Sloat Boulevard. Project elements are also proposed along the Great Highway near Middle Ocean Beach, between Sloat Boulevard and Taraval Avenue, and within Fort Funston. The primary noise sources on and near the project sites consist of vehicular traffic on the Great Highway, Sloat Boulevard, and Skyline Boulevard. Secondary noise sources include wave action of the Pacific Ocean on the western project extent, and vehicular traffic on Herbst Road. Animals within the San Francisco Zoo can contribute occasional intermittent noise.

\*Phase 3 and Phase 4 in the list of proposed construction phases under Impact NO-1 on draft EIR p. 4.4-17 have been revised as follows:

- Phase 1 – Modify Sloat Boulevard/Great Highway Intersection, Reconfigure Zoo Access, Permanently Close Great Highway – 12 months
- Phase 2 – Construct Buried Wall – 25 months
- Phase 3 – Remove Revetments and Rubble, Place Sand on Beach, and Slope Stabilization Layer – ~~18~~ 24 months
- Phase 4 – Install Multi-Use Trail, Service Road, and Public Parking Lot, Construct Beach Access Stairs and Restroom, Restripe Great Highway/Skyline Boulevard Intersection – ~~nine~~ 12 months
- Phase 5 – Remove Construction Debris and Waste, and Plant Dune Vegetation – six months

\*The discussion of construction noise has been revised starting with the fourth full paragraph on draft EIR p. 4.4-19 as follows:

As shown in Table 4.4-9, the estimated daytime construction noise levels generated by the project would range from 68 to 83 dBA  $L_{eq}$  at the nearest residential properties. The proposed Americans with Disabilities Act (ADA) beach access improvements between Sloat Boulevard and Taraval Street would involve construction noise associated with repaving approximately 2,200 feet of the existing trail. The nearest receptors to these work areas would be residents located 120 feet to the east on Lower Great Highway. Pavement repair and repaving the trail would be a linear project that would be expected to require one week for grinding and one week for paving with a paver and concrete trucks. This work would generate a noise level of 75 dBA at the nearest residents on Lower Great Highway. As such, the period during which combined noise from the ADA access improvements and other Phase 1 construction activities could be more than 10 dBA over ambient conditions would not

exceed two weeks. While construction noise levels may occasionally result in an increase of greater than 10 dBA<sup>19</sup> over existing ambient levels during Phase 1 at the nearest residential receptors at the corner of Great Highway/Sloat Boulevard during the intersection improvements or ADA access improvements, noise levels would not exceed the FTA's 90 dBA criteria for daytime construction noise at a residential receptor. Construction noise during all other phases (phases 2-5) would not result in an increase of greater than 10 dBA over existing levels at the nearest receptors or exceed the FTA's 90 dBA criteria for daytime construction noise at a residential receptor.

Additionally, during Phase 3, approximately 2,830 truckloads would be needed to transport sand from North Ocean Beach to the South Ocean Beach project site over approximately four to six weeks, which would result in up to 135 trips per day or about 16 truck trips per hour over the 8.5-hour workday. Noise estimates for the small sand placements assume simultaneous operation of one truck, two bulldozers, and one loader. Sand placement would occur at the end of construction Phase 3, and could overlap with construction of the restroom under Phase 4. The additional trucks and equipment needed for sand placement during Phase 3 and Phase 4 would increase noise levels along the Great Highway by less than 6 dBA and would also not exceed 10 dBA Leq above ambient levels.

\*Table 4.4-9 has been revised to show footnotes "a" and "b" in the table columns as shown on the following page.

**Table 4.4-9 Exterior Noise at Off-Site Sensitive Uses from Project Construction**

Construction Phase and Duration	Nearest Off-Site Sensitive Land Uses Location	Approximate Distance to Project Site (ft.) <sup>a</sup>	Existing Monitored Noise level (dBA L <sub>eq</sub> )	Estimated Construction Noise Level (dBA L <sub>eq</sub> )	Resultant Noise Level (Existing + Construction) (dBA L <sub>eq</sub> )	Increase over Ambient (dBA L <sub>eq</sub> ) <sup>b</sup>
Phase 1: Intersection Modifications – 12 months	2788 Great Highway	60	64	83	83	+19
Phase 2: Construct Buried Wall– 25 months	2788 Great Highway	280	64	71	72	+8
Phase 3: Revetment Removal/Sand Application– 18 months	2788 Great Highway	280	64	70	71	+7
Phase 4: Restroom and Parking Lot Construction– 9 months	2788 Great Highway	280	64	67	68	+4
Phase 5: Debris Removal/Dune Landscaping– 6 months	2788 Great Highway	280	64	67	68	+4
Nighttime Equipment (Buried Wall with drill rig and crane)	2788 Great Highway	280	58	64	65	+7

NOTE:

- a The approximate distances are measured from the nearest edge of the construction activity (excluding restriping of roadways and bike lanes) to the nearest sensitive-receptor property line.  
b Shaded cells indicate noise increase in excess of applicable significance threshold.

\*Mitigation Measure M-NO-3: Noise Monitoring and Traffic Redistribution Noise Reduction Plan on draft EIR p. 4.4-26-27 has been revised as follows:

### **Mitigation Measure M-NO-3: Noise Monitoring and Traffic Re-Distribution Noise Reduction Plan**

To reduce roadside noise increases attributable to rerouted traffic resulting from the project, prior to the project's closure of the Great Highway, the SFPUC shall prepare, and the city shall implement, a Noise Monitoring Plan and, if warranted, a Traffic Re-Distribution Noise Reduction Plan for Sloat and Skyline boulevards, ~~as described further below~~. The goal of the ~~Noise Monitoring and~~ Traffic Re-Distribution Noise Reduction Plan ~~is~~ would be to reduce roadway noise level increases sufficient to achieve a performance standard of a less than 3 dBA increase over existing ambient traffic noise levels along: a) Sloat Boulevard between Great Highway and 47<sup>th</sup> Avenue; b) Sloat Boulevard between 47<sup>th</sup> Avenue and Skyline Boulevard; and c) Skyline Boulevard between Sloat Boulevard and Harding Road. The Noise Monitoring and Traffic Re-Distribution Noise Reduction Plans shall include the following elements:

#### ***Part I – Noise Monitoring***

- Noise monitoring shall be conducted along the three segments of Sloat Boulevard and Skyline Boulevard listed above prior to and after intersection closure to empirically verify the amount of noise reduction required to meet the performance standard of less than 3dBA increase over existing ambient traffic noise. Noise monitoring shall consist of one-week-long 24-hour measurements collected ~~at three, six, and nine months~~ prior to closure of the Great Highway between Sloat and Skyline boulevards, and three, six, and nine months after the roadway closure. A noise monitoring plan shall be approved by the Environmental Review Officer (ERO), or its designee, prior to noise monitoring.

#### ***Part II - Noise Reduction***

- If noise monitoring indicates that the project has resulted in ~~an~~ a persistent increase of traffic noise levels of 3 dBA or greater relative to pre-closure conditions, within the three, six, or nine months after post-closure noise monitoring completion, the ~~SFPUC city~~, in consultation with ~~SFMTA, Public Works, the planning department, and~~ a qualified noise consultant, shall identify measures that would achieve the required performance standard (a noise level increase less than 3 dBA) on the affected roadway segments. The proposed traffic noise reduction measures must be described in a Traffic Re-Distribution Noise Reduction Plan that shall be submitted to the ERO for review and approval within 12 months from the completion of noise monitoring. The noise reduction measures may include, but are not limited to: speed limit reductions, installation of new traffic signals, and street redesign (e.g., lane reduction, speed tables, or other traffic calming features). Noise reduction measures implemented prior to preparation of the Traffic Re-Distribution Noise Reduction Plan shall be credited towards achieving the 3 dBA performance standard.
- The ~~SFPUC city~~ shall confer with Caltrans with respect to elements of the Traffic Re-Distribution Noise Reduction Plan that may require implementation on Skyline Boulevard, which is outside the jurisdiction of the city.

- With the exception of measures within Caltrans' jurisdiction whose implementation is beyond the city's control, the city SFPUC, in consultation with SFMTA and Public Works, shall implement noise reduction measures identified in the Traffic Re-Distribution Noise Reduction Plan within 24 months of ERO approval of the Plan. This timeline may be extended, with ERO approval, if the city PUC identifies separate projects or other circumstances that may reduce traffic noise levels on the affected roadway segments (such as other changes to the transportation network or implementation of other traffic calming measures in the vicinity).
- Within 6 months of noise reduction measure implementation, the SFPUC shall: (1) demonstrate to the ERO that implementation of the noise reduction measures has achieved the required performance standard; or (2) in consultation with Caltrans and city departments with jurisdiction over the streets, identify adjustments or alternative measures proposed to achieve the standard, along with an implementation and monitoring schedule.

\* The last two paragraphs on draft EIR p. 4.4-27 and the first paragraph on draft EIR p. 4.4-28 have been revised as follows:

Methods of street redesign may include traffic calming measures, such as lane reductions, traffic signals, bulb outs, and speed tables. Traffic calming strategies can reduce speed variations and encourage low, constant speeds if designed appropriately. A roadway lane reduction ("road diet") could potentially reduce traffic volumes and speeds by diverting vehicles onto nearby roadways and thereby reduce traffic noise on Sloat and Skyline boulevards; however, this could increase volumes and noise levels on adjacent residential roadways on which diverted traffic would be travelling. Any increases resulting from such traffic redistribution are speculative and any such proposed future project would require project-specific environmental review.

Potential changes in the transportation network or implementation of other traffic calming measures in the project vicinity could affect the need for reducing vehicular traffic noise along these roadways in the future. For example, potential closure of the Upper Great Highway between Sloat Boulevard and Lincoln Way would redistribute vehicle traffic and reduce vehicular noise along most of the affected roadway segments (refer to Impact C-NO-3 below). Planning is currently underway to complete several nearby transportation projects prior to the project's closure of the Great Highway between Sloat and Skyline Boulevards. Caltrans proposes to install a traffic signal at the intersection of Skyline Boulevard and the Great Highway, and SFMTA ~~may propose to~~ install a traffic signal at the intersection of Sloat and Skyline boulevards. Further, the SFMTA has approved the Sloat Quick-Build Project to upgrade pedestrian crossings, add a two-way protected bikeway, improve accessibility, and other measures to reduce vehicle speeds, including a speed table in the eastbound right turn lane from Sloat Boulevard onto Skyline Boulevard. ~~These projects could also reduce vehicular traffic noise on the affected roadways.~~

\*The first full paragraph on draft EIR p. 4.4-29 has been revised as follows:

Based on the schedule information for the cumulative projects presented in Table 4.1-3, there are ~~11~~ 16 cumulative projects that could potentially overlap with project construction and operations. However, ~~three~~ two of these projects – the Vista Grande Drainage Basin Improvement Project, ~~and the Lake Merced West Recreational Facility, and the Sunset Boulevard Project~~ – are not located in the immediate vicinity of the project site and would not contribute to cumulative noise and vibration conditions. Thus, of the ~~11~~ 16 projects included in Table 4.1-3, ~~nine~~ 13 projects nearby the project site

could potentially overlap with project construction and operations. These ~~nine~~ 13 projects include the five SFPUC projects (Westside Pump Station Reliability Improvements, the Oceanside Treatment Plant Biosolids Cake Hopper Reliability Upgrade, the Oceanside Treatment Plant Seismic Retrofit, the San Francisco Zoo Recycled Water Pipeline Project, and the Westside Force Main Reliability Project), the changes to the intersections of Skyline Boulevard/Sloat Boulevard by the SFMTA, the Fort Funston Trail Connection project, the Great Highway Closure Pilot Project, the Sloat Boulevard Quick Build Project, the 2700 45<sup>th</sup> Avenue Project, the Ocean Beach Storm Damage Reduction Beach Nourishment Project and, potentially, the 2700 Sloat Boulevard residential development project.<sup>24</sup>

<sup>24</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes. This project is conservatively included in the cumulative analysis as there is a reasonable likelihood of an application being filed, although the timing of its development is unknown. Analysis of its contribution to the cumulative noise impact is based on preliminary project designs and unknown construction schedule that may overlap given the potential for overlap due to the long duration of construction of the proposed Ocean Beach Climate Adaptation project.

The second paragraph under *Cumulative Construction Equipment Noise During Daytime Hours* on draft EIR p. 4.4-30 has been revised as follows:

The 2700 Sloat Boulevard residential development project would occur approximately 700 feet from the construction activities associated with the project and has preliminarily proposed to construct new 50-story 85-foot tall, approximately 250,000 gross square foot 712-unit residential development with ground floor commercial/retail and a basement. Details on the duration, phasing, and methods of construction for this project are not presently available; however, it is conservatively assumed to overlap with project construction for this analysis. Additionally, the United Irish Cultural Center, a mixed-use project at 2700 45<sup>th</sup> Avenue, would occur approximately 850 feet from the construction activities associated with the project. Sensitive receptors midway between ~~this~~ these projects and the proposed project would be the Westerly Condominiums at 2800 Sloat Boulevard, approximately 300 feet from the nearest location of the 2700 Sloat project, 450 feet from the United Irish Cultural Center project, and 650 feet from Phase 2 and 3 work of the proposed project. As discussed in Impact NO-1, above, the proposed project would only generate noise from Phase 1 work for a limited period of time and construction noise impacts at the nearest receptors on Sloat Boulevard would be less than significant. As shown in Table 4.4-9, more persistent construction activity of Phases 2 and 3 of the proposed project would result in noise levels being increased by 7 to 8 dBA, when construction is 280 feet to the west. Noise levels at the Westerly Condominiums which are twice this distance would be approximately 6 dBA less, resulting in a nominal ~~increased~~ increase in noise contribution from the proposed project of about 2 dBA. Therefore, a construction noise contribution from the project at 2700 Sloat Boulevard would have to be more than 7 dBA over existing levels at a distance of 300 feet for a cumulative construction noise impact to occur. However, because the construction techniques and equipment to be used for the 2700 Sloat Project have not been developed, the potential exists for a significant cumulative significant construction noise impact. While the cumulative project at the United Irish Cultural Center would be a further 150 feet from the closest activity of the proposed project, the same logistical conclusions would apply as above for the 2700 Sloat Boulevard project. Given that construction of the proposed project would contribute approximately 2 dBA to this potential impact, the project's contribution is ~~be~~ considered cumulatively considerable.

Mitigation Measure M-C-NO-1 on draft EIR pp. 4.4-31 through 4.4-32 has been revised as follows to provide more clarity on the applicable performance standard:

**Mitigation Measure M-C-NO-1: Cumulative Construction Noise Control Measures**

If exterior construction of the northern end of the buried wall for the proposed project is determined to overlap with that of nearby adjacent project(s) (2700 Sloat Boulevard Project, the Westside Pump Station Reliability Improvements Project, or the Westside Force Main Reliability Project), the SFPUC or contractor shall submit a project-specific construction noise control plan to the ERO ~~or the ERO's designee~~ for approval. Exterior construction for purposes of the proposed project and the nearby cumulative projects includes construction including the following activities: heavy-duty construction equipment for excavation, grading, foundation and shoring, and construction of building shells. The construction noise control plan shall be prepared by a qualified acoustical engineer, with input from the construction contractor, and include all feasible measures to reduce construction noise. The construction noise control plan shall identify noise control measures to meet a performance target of construction activities not resulting in a noise level greater than ~~90 dBA and~~ 10 dBA above the ambient noise level at noise sensitive receptors (daytime ambient noise levels at the time construction begins + 10 dBA performance target). The SFPUC shall ensure that requirements of the construction noise control plan are included in contract specifications. If nighttime construction is required, the plan shall include specific measures to reduce nighttime construction noise. The plan shall also include measures for notifying the public of construction activities, complaint procedures, and a plan for monitoring construction noise levels in the event complaints are received. The construction noise control plan shall include the following measures to the degree feasible, or other effective measures, to reduce construction noise levels:

- Use construction equipment that is in good working order, and inspect mufflers for proper functionality
- Select “quiet” construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures)
- Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors
- Prohibit the idling of inactive construction equipment to no more than five minutes
- Locate stationary noise sources (such as compressors) as far from nearby noise sensitive receptors as possible, muffle such noise sources, and/or construct barriers around such sources and/or the construction site
- Avoid placing stationary noise-generating equipment (e.g., generators, compressors) within noise-sensitive buffer areas (as determined by the acoustical engineer) immediately adjacent to neighbors or other noise-sensitive properties
- Enclose or shield stationary noise sources from neighboring noise-sensitive properties with noise barriers to the extent feasible. To further reduce noise, locate stationary equipment in pit areas or excavated areas, if feasible
- Install temporary barriers, barrier-backed sound curtains and/or acoustical panels around working powered impact equipment and, if necessary, around the project site perimeter. When temporary barrier units are joined together, the mating surfaces shall be flush with each other.

Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that completely closes the gaps, and dense enough to attenuate noise

The construction noise control plan shall include the following measures for notifying the public of construction activities, complaint procedures and monitoring of construction noise levels:

- Designation of an on-site construction noise manager for the project
- Notification to neighboring noise sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pier drilling, pile driving, and other activities that may generate noise levels greater than 90-10 dBA above the ambient noise level at noise sensitive receptors) about the estimated duration of the activity
- A sign posted on-site describing noise complaint procedures and a complaint hotline number that shall always be answered during construction
- A procedure for notifying the planning department of any noise complaints within one week of receiving a complaint
- A list of measures for responding to and tracking complaints pertaining to construction noise. Such measures may include the evaluation and implementation of additional noise controls at sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels, and sensitive wildlife habitat)
- Conduct noise monitoring (measurements) at the beginning of major construction phases (e.g., demolition, grading, excavation) and during high-intensity construction activities to determine the effectiveness of noise attenuation measures and, if necessary, implement additional noise control measures

\*Draft EIR pp. 4.4-33 through 4.4-34 has been revised as follows:

### **Cumulative Analysis**

As discussed in Impact NO-3 above, the project would have a significant and unavoidable operational noise impact resulting from the increased traffic volumes on Sloat Boulevard and Skyline Boulevard from rerouted traffic. The majority of cumulative projects would not generate substantive additional operational vehicle trips. Both the 2700 Sloat Boulevard residential development project and the 2700 45th Avenue mixed-use development project would increase p.m. peak hour vehicle trips on Sloat and Skyline boulevards (about 400 and 334 vehicle trips during the weekday p.m. peak hour, respectively)<sup>26</sup>. ~~The cumulative 2700 Sloat Boulevard residential development project would construct a new 85-foot tall, 250,000 gross square foot residential development which would generate 553 additional daily vehicle trips or about 53 p.m. peak hour trips<sup>26</sup> that would be distributed onto Sloat Boulevard and Skyline Boulevard.~~ The addition of the vehicle trips associated with these projects ~~2700 Sloat Boulevard project~~, while relatively small, would exacerbate the project-level impact described in Impact NO-3 and the combined effects of the proposed project's roadside noise impact and that of the 2700 Sloat Boulevard project and the 2700 45th Avenue project along these two roadways would be a significant cumulative impact. The proposed project would contribute the ~~vast~~ majority of the peak hour vehicle trip increases along Sloat Boulevard (1,043

trips) of the cumulative 1,777,096 trips (5995%). Therefore, the proposed project's contribution to that significant increase would be cumulatively considerable, a significant impact.

<sup>26</sup> Trips calculated using the Travel Demand Tool of the San Francisco County Transportation Authority available at <https://sftraveldemand.sfcta.org/>

## 12.9 Revisions to Section 4.5, Recreation

\*The first paragraph under Section 4.5.2 on draft EIR p. 4.5-1 has been revised as follows:

The project includes activities ~~at the~~ extending from the northern to southern ends of Ocean Beach ~~to and a portion of Fort Funston. The project is which are both~~ surrounded by multiple recreational areas, including the overall 3.5-mile-long Ocean Beach, Fort Funston, San Francisco Zoo, Lake Merced, and Golden Gate Park.

The first row of **Table 4.5-1** on draft EIR p. 4.5-2 has been revised as follows:

**Table 4.5-1 Recreational Resources in the Project Area**

Resource	Location	Activities / Facilities	Jurisdiction
<b>RECREATIONAL FACILITIES</b>			
Ocean Beach	The Great Highway between Point Lobos Avenue and Sloat Boulevard.	Walking, picnicking, sunbathing, jogging, swimming, surfing, fishing, restrooms, parking facilities, <u>beach volleyball, ultimate frisbee</u>	GGNRA

\*The following row has been added to Table 4.5-1 under *Recreational Facilities* on draft EIR p. 4.5-2:

**Table 4.5-1 Recreational Resources in the Project Area**

Resource	Location	Activities / Facilities	Jurisdiction
<b>RECREATIONAL FACILITIES</b>			
<u>Fort Funston</u>	<u>West of Skyline Boulevard and Lake Merced; south of the Oceanside Water Pollution Control Plant.</u>	<u>Walking, running, bird watching, hang-gliding, picnicking, horseback riding, dog walking, hiking, surfing, swimming, fishing, bicycling</u>	<u>GGNRA</u>

\*The following row has been added to Table 4.5-1 under *Bicycle Routes* on draft EIR p. 4.5-3:

**Table 4.5-1 Recreational Resources in the Project Area**

Resource	Location	Activities / Facilities	Jurisdiction
<b>BICYCLE ROUTES</b>			
<u>Fort Funston Bicycle Path</u>	<u>Extends along paths within Fort Funston</u>	<u>Designated Class I bicycle route along the Coastal Trail/Sunset Trail</u>	<u>GGNRA</u>

\*The second paragraph under *Fort Funston* on draft EIR p. 4.5-5 has been revised as follows:

Numerous trails including the Horse Trail, Battery Davis Trail, Sunset Loop Trail (also known as the California Coastal Trail within Fort Funston), Chip Trail, and Funston Trail can be reached from the Fort Funston parking lot, a large paved lot located at the top of the bluffs off of Skyline Boulevard. In addition to a parking lot, portable toilets are currently available, and planning efforts are underway for the construction of a new restroom facility at the parking lot. Beachgoers can reach the beach from a sand ladder from the Fort Funston segment of the Coastal Trail at the southwestern corner of the parking lot (approximately 1 mile south of the main project area, near the proposed 0.5-acre plant propagation site discussed further in Section 4.2.2.2) and from the Funston Beach Trail north of Battery Davis (approximately 0.5 mile south of the project area). The Coastal Trail in Fort Funston currently terminates approximately 150 feet south of the proposed Skyline coastal parking lot and near the proposed plant propagation site. A trail connection to the proposed Skyline coastal parking lot and multi-use trail is planned (refer to project 1 in Table 4.1-3 in Section 4.1, Overview), but no formal access to the Great Highway or Skyline Boulevard currently exists at this location.

\*A new heading and paragraph have been added to the end of Section 4.5.2.6 on draft EIR p. 4.5-8 as follows:

#### **FORT FUNSTON BICYCLE PATH**

The Fort Funston bicycle path is a class I unpaved route that extends along the Coastal Trail north to south within Fort Funston. There are connecting trails to the Sunset Trail adjacent to the parking lot and to the sand ladder (beach access).

\*The bulleted text at the end of Section 4.5.4.1 on draft EIR p. 4.5-13 has been revised as follows:

- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.*** The project would involve the construction of a new multi-use trail and replacement of existing restrooms, ADA improvements to an existing multi-use trail and beach access, and beach access parking; thus the project includes construction of recreational facilities, the construction of which could cause adverse physical effects on the environment. The impacts that could result from the construction and operation of recreational facilities are addressed in the corresponding topical sections of this EIR (i.e., Sections 4.2 through 4.6) and initial study (Appendix B, Initial Study, Sections E.1 through E.22).

\*The first and second paragraphs under Impact RE-1 on draft EIR p. 4.5-13 have been revised as follows:

Project construction would require the closure of 0.5-mile long South Ocean Beach for approximately four years. During this period, existing San Francisco Zoo parking access from Sloat Boulevard would be modified to provide continued zoo patron access. Project construction would also require closure of approximately 2,200 feet of the existing multi-use trail along Middle Ocean Beach between Sloat Boulevard and Taraval Street for approximately two weeks during construction Phase 1, and closure of parts of North Ocean Beach for four to six weeks during construction Phase 3. Users of South Ocean Beach, the segment of existing multi-use trail, and portions of North Ocean Beach, including walkers, joggers, wildlife viewers, anglers, and others, would be displaced and would be expected to seek similar recreational opportunities at alternative destinations nearby (such as along Middle Ocean Beach and Fort Funston beach areas) and within the broader western San Francisco/San Mateo counties area. While the beach would be closed, offshore areas would remain accessible to swimmers and surfers who enter the water from adjacent beach locations, such as north of Sloat Boulevard, and paddle to the area offshore of South Ocean Beach. Surfer access to the outer and inner sandbars offshore of South Ocean Beach, when present, would be available from adjacent beach areas. However, the beach closure would be expected to deter some swimmers and surfers from using South Ocean Beach, and this analysis assumes these people would swim and surf at other locations.

As described in Section 4.5.2, Environmental Setting, the region hosts multiple recreation areas and facilities that provide similar recreational opportunities for many recreational activities. These include the approximately 3 miles of Ocean Beach north of the South Ocean Beach project site and approximately 3 miles of beach south of the South Ocean Beach project site. Each of these areas would remain open during project construction, as would numerous other regional parks and open space areas. In addition to beaches north and south of South Ocean Beach, the Great Highway multi-use trail and coastal trail would be available to displaced walkers, joggers, and other recreationists for the majority of project construction. During the construction period nearby recreational areas and facilities would in turn experience increased use, similar to that which occurs and has been accommodated during periodic project area closures for beach nourishment under existing conditions, but for a longer period of time. After improvements to the multi-use trail north of Sloat Boulevard are completed, recreationists would have improved ADA access along the trail and to the beach in the Middle Ocean Beach area while project construction continues south of Sloat Boulevard. Construction of the Fort Funston plant propagation site would not change the intensity or frequency of use at Fort Funston because it would not affect any of the adjacent trails or recreational use areas.

\*The second full paragraph on draft EIR p. 4.5-14 has been revised as follows:

As discussed in Section 4.5.2, Environmental Setting, more than a dozen public access points to Middle Ocean Beach and North Ocean Beach, which constitute approximately 3 miles of the 3.5-mile-long Ocean Beach, are available to the public from the Great Highway multi-use trail, the Outer Sunset neighborhood, nearby public transit, and adjacent public parking areas. Two public access points in Middle Ocean Beach, at Vicente Street and Taraval Avenue, would be temporarily closed for up to two weeks by the multi-use trail improvements, but are anticipated to re-open to the public long before the completion of the overall project construction. Middle Ocean Beach and North Ocean Beach are wider than South Ocean Beach and therefore can also accommodate more beachgoers per

length of beach than can South Ocean Beach. Given the number and extent of recreational areas in the project vicinity and the temporary nature of the project area's closure, the increased use of other local or regional recreation resources that may be attributable to project construction would not result in substantial physical deterioration of recreational resources, or otherwise result in physical degradation of existing recreational resources. As discussed in Appendix B, Section E.3, Population and Housing, the project would not directly or indirectly induce population growth during construction such that substantial physical deterioration of recreational facilities would occur or be accelerated.

\*The first paragraph under *Operations Impacts* on draft EIR p. 4.5-14 has been revised as follows:

The project would improve recreational opportunities on and around South Ocean Beach by removing rock and rubble from the beach and bluff that create hazards for beach users and obstruct access; implementing beach nourishment to maintain a broad, sandy beach; and installing a new multi-use trail and new beach access stairs. The project would improve recreational opportunities around Middle Ocean Beach by making the existing multi-use trail ADA compliant and improving accessibility at the Taraval Street beach access. Maintenance of the Fort Funston plant propagation site would not change the intensity or frequency of use at Fort Funston because it would not affect any of the adjacent trails or recreational use areas. These improvements would meet the project's objective of preserving and enhancing coastal public access and recreation. The project would establish better connectivity between segments of the coastal trail system, which may attract additional local and regional users who wish to walk or bike along the project's new paths, visit the beach, or use the new connection between the Lake Merced multi-use path and the Great Highway multi-use path. The project would also maintain visitor access to automobile parking and public restrooms. As discussed in Appendix B, Section E.3, Population and Housing, the project would not directly or indirectly induce population growth during operation. Thus, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Section 4.5.4.2 on draft EIR pp. 4.5-15 through 4.5-16 has been revised as follows:

#### ***Beach Access and Recreation Resources***

As noted previously, Ocean Beach is a popular recreational destination where visitors regularly enjoy walking, jogging, fishing, surfing, and picnicking, among other activities.<sup>21</sup> The amount of dry sandy beach available for such activities along South Ocean Beach varies considerably by season and location. Beach width along South Ocean Beach typically ranges from 50 feet to 200 feet. However, during spring when the beach width is typically narrowest, shoreline monitoring conducted during 2018, 2019, and 2020 documented portions of South Ocean Beach with essentially no measurable dry sandy beach.<sup>22,23,24</sup> Under the project, the city would remove the existing shore protection structures, rubble and debris, and construct a buried wall along an alignment that is inland of the existing backshore location. Through these managed retreat actions, the city would widen the beach along the entire project shoreline – in some areas by more than 100 feet (e.g., through removal of the 2010 emergency riprap revetment). As discussed in Chapter 2, Section 2.4.5, Beach Nourishment, as placed sand erodes, the beach would narrow and portions of the proposed wall would no longer be continuously buried. To address this issue, the city would implement a shoreline monitoring program and place sand when established triggers are met during annual monitoring.<sup>25</sup> Sand placements would

occur as soon as possible after the trigger is reached, generally within one year. The appropriate city agency would coordinate with the NPS on monitoring and sand nourishment for recreational purposes.

\*The following text has been added after the first full paragraph on draft EIR p. 4.5-16:

The proposed improvements to the existing multi-use trail between Sloat Boulevard and Taraval Street consist of upgrades to facilitate ADA-compliant access, consistent with the 2006 NPS management policies, the Western Shoreline Area Plan, and the 2020 Recreation and Park Strategic Plan (refer to Chapter 3, Plans and Policies). During operations, existing maintenance activities such as periodic repaving of the trail would continue. However, this maintenance is not expected to affect recreationists' ability to use the multi-use trail or existing beach access points or recreation resources in a manner that is substantially different from the current trail and facility maintenance schedule.

\*The last paragraph under Impact RE-1, Summary, has been revised on p. 4.5-18 as follows:

The project would increase the amount of publicly accessible recreational amenities and open spaces available to city residents and visitors. Thus, the project would accommodate public use of the proposed facilities at South Ocean Beach, improve existing facilities at Middle Ocean Beach, and may serve to lessen the intensity of use at neighborhood and regional parks with similar recreational facilities by providing an alternative recreational destination. Long-term shoreline modifications would not displace large numbers of beachgoers or surfers. For these reasons, project operation would have a **less-than-significant** impact related to physical deterioration of recreational facilities.

\*The second and third paragraphs of Impact C-RE-1 on draft EIR pp. 4.5-18 through 4.5-19 have been revised as follows:

As discussed in Impact RE-1, project construction and operation would have a less-than-significant impact on recreational resources. The project would temporarily affect Middle and South Ocean Beach access, associated beach access parking, and beach restrooms during project construction and would intermittently affect South Ocean Beach access thereafter during sand placements. Areas of North Ocean Beach would be temporarily closed during when conducting small sand placements during both construction and operations. If other recreational resources in the project vicinity would be closed concurrently with the project's construction or operation closure of South Ocean Beach or North Ocean Beach, beach users may be displaced to a limited number of recreational areas such that those remaining recreational areas could be physically degraded.

The Vista Grande Drainage Basin Improvement Project (City of Daly City), under construction from 2022 to 2027, could have a cumulative recreational resources impact in combination with the project. The Vista Grande Drainage Basin Improvement Project would temporarily close a small portion (approximately 4.5 acres) of Fort Funston during construction, which would overlap with construction of the project from ~~2023~~ 2024 to 2027~~8~~. However, the vast majority of the publicly accessible portions of Fort Funston (approximately 85 acres) would remain open to the public during the construction period. Moreover, as summarized in Section 4.5.2, Environmental Setting, many recreational facilities in the geographic scope would remain available for use by beach users displaced from South Ocean Beach (in particular, the remainder of Ocean Beach would be available for swimmers, surfers and other beach users), such that the combined temporary closures would not

result in a substantial cumulative impact related to recreational facilities. The cumulative projects would not permanently close recreational facilities in the project vicinity.

## 12.10 Revisions to Section 4.6, Biological Resources

\*A new footnote 1a has been added at the end of the first paragraph of Section 4.6.2.1 on draft EIR p. 4.6-1 stating the following:

<sup>1a</sup> The project elements added to the project after publication of the draft EIR, including the ADA access improvements at Middle Ocean Beach and the Fort Funston plant propagation site, are not depicted in Figure 4.6-1 but within the new project description figures 2-1c and 2-1d, respectively. Descriptions of these locations have been incorporated into the Environmental Setting.

\*The second paragraph of Section 4.6.2.1 on draft EIR p. 4.6-1 has been revised as follows:

For the purposes of this California Environmental Quality Act (CEQA) assessment, the terrestrial study area includes the landward project construction and operations areas (i.e., North Ocean Beach, to South Ocean Beach, the Great Highway, a small area within Fort Funston, staging areas, and access roads, unless otherwise stated). In addition, a 15- to 50-foot buffer area relevant to each biological resource was considered in order to assess potential impacts. ~~This~~ The terrestrial study area resources (with the exception of Fort Funston locations added to the project after publication of the draft EIR) is a subset of the area evaluated are described more fully in the project biological resources assessment<sup>1</sup> included in Appendix F.

\*The following revisions were made to the first paragraph in Section 4.6.2.2 on draft EIR p. 4.6-3:

As discussed in Chapter 2, Project Description, Section 2.2, Project Location, the project area consists of ~~two~~ locations on Ocean Beach: North Ocean Beach and South Ocean Beach; along the multi-use trail adjacent to Middle Ocean Beach; and, a small area within Fort Funston.

\*Text has been added to the end of the first paragraph under *Vegetation Communities and Wildlife Habitats* on draft EIR p. 4.6-4 as follows:

Natural communities are assemblages of plant and wildlife species that occur together in the same area and are defined by species composition and relative abundance. The biological resources assessment characterizes vegetation of the terrestrial study area to the alliance level according to A *Manual of California Vegetation*.<sup>7</sup> For the purposes of this CEQA assessment, vegetation alliances mapped in support of the project's biological resources assessment have been summarized into the following terrestrial vegetation communities, which are described below: Beach, Disturbed Dune Mat, and Developed/Landscaped/Ruderal. In addition, intertidal and subtidal zones and open water habitats have been added for discussion as marine communities. **Figures 4.6-2a through 4.6-2d** depict these communities where present within the terrestrial study area at North Ocean Beach and South Ocean Beach. Existing vegetation surrounding project elements added to the project after publication of the draft EIR and proposed for Middle Ocean Beach and within Fort Funston can also be characterized in the communities described below (see Project Description figures 2-1c and 2-1d for the location of these project elements). Primarily, the ADA access improvements to the existing multi-use trail would occur within disturbed dune mat vegetation composed almost entirely of ice plant, except for a small lawn with ornamental plantings at the Vicente Street trail connection, and mature, non-native Australian tea tree (*Leptospermum laevigatum*) shrubs at the Sloat Boulevard connection. The

Taraval Street beach access improvements would occur within disturbed dune mat vegetation or unvegetated beach. The Fort Funston plant propagation site would be located within a portion of the park covered in a dense mat of ice plant that would also be characterized as the disturbed dune mat vegetation community.

\*The third sentence of the first paragraph under *Terrestrial Communities* on draft EIR p. 4.6-4 has been revised as follows:

This community is present within the North Ocean Beach project site, north of Lincoln Way, where sand excavation would occur for small sand placement events, within the Middle Ocean Beach project site for the Taraval Street beach access improvements, and within the South Ocean Beach project site, between Sloat Boulevard and Fort Funston, where large and small sand placements would occur.

\*The second sentence in the first full paragraph on draft EIR p. 4.6-9 has been clarified as follows:

There is a higher concentration of native yellow sand verbena and beach burr in the southern portion of the South Ocean Beach terrestrial study area, closer to Fort Funston, where this dune mat community is slightly less disturbed by ice plant and sea fig.

The following text has been added to draft EIR p. 4.6-11 after the second complete paragraph to reflect information collected during the 2021 pre-construction benthic study and the 2022 year 1 post-construction benthic survey:

On June 12 and 13, 2021, Applied Marine Sciences (AMS) conducted a benthic invertebrate survey to characterize conditions at South Ocean Beach and a Fort Funston beach reference site to establish a baseline to assess potential changes in ecological values through space and time associated with beach nourishment activities. The study examined beach ecology at South Ocean Beach prior to a 2021 U.S. Army Corps of Engineers beach nourishment project, relative to that of a nearby reference beach where nourishment would not occur (Fort Funston). The Corps project involved placement of approximately 380,000 cubic yards of sand along South Ocean Beach. The AMS survey focused on the organisms that live within the beach (e.g., sand crabs, amphipods, and worms), as they represent the biological resources that are most at risk of disturbance from beach nourishment activities, and they are the prey utilized by shorebirds that feed on the beach.

The baseline survey provided strong evidence that the benthic community at South Ocean Beach is similar to that at the nearby reference area where beach nourishment activities have not been conducted. Furthermore, the benthic organism distributions of both beaches are characterized by the low species richness and high degree of variation in densities, where both beach areas are dominated by the genus *Emerita* (mole crabs). The physical characteristics of the beaches are also very similar, indicated by >95% sand content and low total organic carbon. Given that Ocean Beach has undergone many small sand placements in its history, the similarity in the physical structure and benthic biota between the two sites suggests that Ocean Beach possesses the capacity for recovery following placement events.

Approximately 10 months following completion of the Corps' 2021 South Ocean Beach nourishment project, AMS conducted a second survey (year 1 post-nourishment survey) of the South Ocean Beach nourishment area and the Fort Funston beach reference site. Similar to the baseline survey, the year 1

post-nourishment survey focused on the organisms that live within the beach (e.g., sand crabs, amphipods, and worms), as they represent the biological resources that are most at risk of disturbance from beach nourishment activities. The survey also analyzed potential changes in grain size and composition.

The year 1 post-nourishment survey provided some evidence that the benthic community at South Ocean Beach had been altered. Species presence/absence and species acquisition at South Ocean Beach appeared to differ relative to the Fort Funston beach reference site. Similarly, a common crustacean taxon, *Eohaustorius washingtonianus*, was found to differ in distribution between surveys. However, these changes could not be associated with concurrent changes in physical variables (e.g., beach width, beach slope, etc.).<sup>27a</sup> Changes in mean grain size were observed from the baseline to year 1 surveys at both South Ocean Beach and Fort Funston beach, but corresponded to a narrow range; from 0.29 (+/- 0.004) mm to 0.27 (+/- 0.006) mm at South Ocean Beach and from 0.29 (+/- 0.006) mm to 0.31 (+/- 0.005) at Funston Beach. It is unlikely that changes of this magnitude would result in adverse effects on the benthic community since there were no significant changes in total abundance, *Emerita* density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area.<sup>27b</sup> Following the first year of post-nourishment assessment, AMS concluded that there was not sufficient evidence, based on the monitoring results, that the benthic community at South Ocean Beach were similar to baseline survey conditions. The authors concluded that additional surveys are needed to be confident that the observed changes reflect stability of the benthic community of South Ocean Beach compared to baseline and reference conditions.<sup>27c</sup>

<sup>27a</sup> Applied Marine Sciences, 2021. Technical Memo Summarizing the Results of the South Ocean Beach Baseline Benthic Survey. Prepared for Environmental Science Associates. November 5, 2021.

<sup>27b</sup> Species acquisition depicts the relationship between the number of new taxa observed with increased sampling effort. It is a helpful metric for understanding how benthic communities change over time or in response to disturbance.

<sup>27c</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 3, 2023.

\*The first row of Table 4.6-1 on draft EIR p. 4.6-16 has been revised to include the plant propagation site as follows:

**Table 4.6-1** Special-Status Plant Species that may occur in the Terrestrial Study Area

Common Name Scientific Name	Federal Status	State Status	CRPR	Habitat Description / Blooming Period	Potential to Occur in the Study Area
<b>PLANTS</b>					
San Francisco spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	--	--	Rank 1B.2	Sandy terraces and slopes of coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub. April – July	<b>Moderate.</b> Occurs south of the terrestrial study area near the northern boundary of Fort Funston among other native dune species and nonnative, invasive ice plant. Was not identified within the terrestrial study area during 2019/2020 rare plant surveys. Suitable habitat is present in disturbed dune mat vegetation with a dominance of native dune species along the southern project area boundary with Fort Funston. <u>Is not expected at the proposed plant propagation site.</u>

Draft EIR page 4.6-23, paragraph 4 has been revised as follows:

### **ENVIRONMENTALLY SENSITIVE HABITAT AREAS**

California Coastal Act section 30107.5 defines an environmentally sensitive habitat as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” For a resource to be determined an ESHA, it must retain three qualities: (1) the area contains rare species or habitat, which may include globally rare but locally abundant resources that have experienced historical decline; or (2) the species or habitat is especially valuable, such as being unusually pristine, supporting species at the edge of their range, or otherwise special nature; and (3) the species or habitat in question is vulnerable to human disturbance or degradation.

The City and County of San Francisco’s local coastal program briefly addresses ESHAs in the Western Shoreline Area Plan. The plan notes that ESHAs may be associated with coastal bluffs, dunes, beach, and intertidal areas, but does not identify specific locations or resources as ESHA. Within the marine and terrestrial study areas, coastal bluffs that provide bank swallow nesting habitat, ~~dunes, foredunes, and beach and intertidal areas, and areas with vegetation characterized as disturbed dune mat~~ are discussed below as to whether they may constitute ESHA. The final determination of whether the project area contains ESHA will be made by the planning commission or the coastal commission through consideration of the coastal development permit required for the project and may differ from the conclusion presented here.

Draft EIR pages 4.6-27 through 28 have been revised as follows:

### **DUNE HABITAT**

Dune habitat occurs throughout the terrestrial study area inland of the intertidal zone and beach habitats where exposed sandy soils crest at the limit of wave reach and transition into mats of dune vegetation. Traditional foredune habitat contains undulating, varied topography which forms parallel to the shoreline as windblown sand accumulates among low-growing vegetation adapted to the harsh coastal environment.<sup>72</sup> Within the study area, topography at the transition from beach to dune habitat is varied and includes areas with gradual sandy slopes, riprap revetments, or steeply sloped, near vertical bluff. Most of the study area’s dune habitat can be characterized as a narrow band of highly constrained, plateaued foredunes with disturbed dune mat vegetation between the beach, riprap or bluff edge and the Great Highway infrastructure. The vegetation community within these areas is described as disturbed because of the characteristic barren patches of sand among predominant mats of invasive ice plant with some other common, native dune associates. This same assemblage of dune plants is present among developed portions of the study area, including the roadway medians and shoulders of the Great Highway and Sloat Boulevard; ~~however, these areas cannot be characterized as traditional dune habitat because they do not contain dune characteristics beyond sandy soil and vegetation associates.~~

Unrestricted pedestrian access through areas supporting disturbed dune mat vegetation in the study area allows for continual disturbance from trampling. This vegetation community is composed of two, intermixed alliances, including ice plant mat (*Mesembryanthemum* spp. – *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) and yellow sand verbena – beach burr dune mat (*Abronia latifolia* –

*Ambrosia chamissonis* Herbaceous Alliance). *Abronia latifolia* – *Ambrosia chamissonis* Herbaceous Alliance is identified as a sensitive natural community by California Department of Fish and Wildlife. The yellow sand verbena – beach burr dune mat alliance, in the absence of invasive ice plant, is more likely to support special-status dune plants within the study area, such as San Francisco spineflower. This alliance, with its greater abundance of native dune flora is concentrated near the project area boundary with Fort Funston where foredunes are broader at the Great Highway curve east toward Skyline Boulevard (see Figure 4.6-2d). As discussed, San Francisco spineflower has not been documented within the project area but has potential to occur within this dune community where higher concentrations of other native dune flora are present.

Dynamic and evolved coastal dunes are generally rare in the state, are vulnerable to human disturbance, and can support unique or rare flora and fauna. An advanced coastal dune system contains many geomorphic expressions of wind velocity and sand deposition. These systems are broad enough to contain established foredunes with sparse to moderate, low-growing salt-tolerant vegetation, and secondary dunes which occur at relatively higher elevations landward of foredunes. Secondary dunes may include unvegetated *blowouts*<sup>72</sup> or parabolic (“u” or “v”-shaped) dunes and transgressive (mobile or migratory) dune fields and sand drifts. Secondary dunes, where vegetated, typically support a higher diversity of plant species (including some shrubs) with greater vegetative cover because of the distance from shore, muted wave and wind influence, and greater organic soil depth and quality. Because of the existing infrastructure within the study area, dunes landward of Ocean Beach are prevented from evolving beyond foredunes and consequently provide limited habitat opportunity for dune associated plant and animal species endemic to coastal California.

<sup>72</sup> Newkirk, Sarah, et al., 2018. *Toward Natural Shoreline Infrastructure to Manage Coastal Change in California*. Prepared for California’s Fourth Climate Change Assessment, August.

<sup>73</sup> Blowouts are depressions, typically caused by wind erosion of bare sand.

The city engaged a coastal dune expert to assess and delineate dune habitat within the South Ocean Beach terrestrial study area using the Coastal Act and LCP policies, with Coastal Commission memoranda and precedent decisions regarding ESHA, to evaluate the potential for dune ESHA within the study area (“dune delineation”). Criteria for identifying, documenting, and distinguishing coastal dunes from non-dune sand deposits (mounds) created by non-dune processes (such as mechanical placement of sand cleared from the Great Highway) were developed and applied during a field survey to delineate dune boundaries within the project area. The assessment then evaluated whether dune habitat qualified as potential ESHA. The memorandum documenting the dune delineation findings is included as new Attachment F.

In summary, the dune delineation identified within the study area 2.12 acres of dunes as potential ESHA, 2.11 acres of mixed composite (non-ESHA) dunes, and 1.72 acres of non-dune (non-ESHA) sand deposits. The distinction between the potential ESHA dunes and non-ESHA mixed composite dunes was based on the following three characteristics: substrate origin (e.g., dune sand [beach or placed sand], or mixed composite silt, gravel or shell fragments); circumstances influencing the feature (e.g., wind transport, roadside clearing activities, or sand backpass activities); and landscape context (e.g., whether the feature is connected to other similar dune habitat or isolated or constrained by existing development, thereby limited in dune ecosystem functions).<sup>73a</sup>

The dunes classified as potential ESHA in the memorandum have substrate originating primarily from beach or placed sand (i.e., low silt content and minimal gravel/shell fragments) and are formed by natural eolian processes of wind transport and deposition of dune sand, typically over several seasons. Beach nourishment activities undoubtedly influence dune habitat in the study area by providing source material to create and sustain naturally formed dunes. The homogenous dune sand substrate indicates minimal external interference from roadside clearing and stockpiling that might affect the substrate composition as well as the feature shape and thickness (height above grade). Dunes that have accumulated over several seasons also indicate they are minimally influenced by external actions, and their growth and evolution may not be restricted by existing development (e.g., pavement). These multi-season dunes were often observed to support perennial dune plants (with both native and non-native species) and had thickness ranging from 0.4 to 10 meters. Homogeneous dune sand dunes in the project area as well as Colma formation dunes (located in the southern portion of the project area and derived from modern wind deflation of Pleistocene raised beaches and dunes) (both types classified as potential ESHA) are not restricted by the built environment in their ability to grow and evolve overtime, are generally connected to other dune habitat, and support dune associates. Additionally, the Colma formation dunes are unique and valuable geological features and may also support special-status dune plants. For these reasons, homogeneous dune sand dunes and the Colma formation dunes are identified as potential ESHA.

In contrast, the memorandum states that shallow sand accumulation along the Great Highway median may result from natural processes but these features do not qualify as ESHA dunes because of the mixed composite substrate (that includes degraded road base), and influence of routine, necessary roadside clearing. This influence prevents the growth, evolution, and connectivity of the median dunes with other dune habitat, that might otherwise occur in the absence of the surrounding built environment. These non-ESHA dunes are neither rare nor especially valuable, because of their ephemeral state, resulting from the routine cycles of sand accretion and collection associated with maintenance clearing sand from the Great Highway. They are innately inhibited from evolving into mature dunes because of these actions and therefore generally do not support dune associates (plant or animal) and lack habitat connectivity. As a result, the dune delineation does not classify mixed composite dunes as potential ESHA.<sup>73b</sup> The extents of dunes mapped as potential ESHA and not ESHA are presented in Attachment F, Figure 6.

<sup>73a</sup> ESA, 2022. Memorandum: Ocean Beach Climate Change Adaptation Project – Dune Delineation. December 28, 2022.

<sup>73b</sup> Ibid

Rare dune fauna, such as the globose dune beetle (*Coelus globosus*), is not supported by dune habitat of the study area.<sup>74</sup> Concentrations of native dune flora in the study area may support the special-status plant San Francisco spineflower, but this species is not extant within the project area. Ice plant mats (*Mesembryanthemum* spp. — *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) which dominate the disturbed dune mat community within the study area is not a vegetation alliance recognized as a sensitive natural community by CDFW.<sup>75</sup> As shown in Appendix F 2 Figures 3A–3I, disturbed dune mat vegetation of the study area is sparse between the beach and Great Highway and largely disconnected and patchy among existing development inland of the Great Highway. Although these areas contain dune vegetation, they do not function as part of a large, dynamic, dune system which provides high habitat value to a diversity of plant and animal species.

~~Dune habitat of the study area is not vulnerable to human disturbance or especially valuable as it is already significantly degraded by existing development and uses, is of largely disconnected and patchy distribution and stunted development, is dominated by invasive ice plant, and not known to support rare dune flora or fauna. For these reasons, this EIR does not consider dune habitat within the terrestrial study areas to constitute an ESHA.~~

<sup>74</sup> ~~This species' distribution consists of foredune and sand hummocks immediately bordering the coast from Bodega Head, Sonoma County south to the vicinity of Ensenada, Baja California Norte, including all the channel islands except San Clemente. Globose dune beetle is erratically distributed within this range, especially within the north. Populations are recorded from the west of the Point Reyes Peninsula, Marin County, Santa Cruz County, several localities at Monterey Bay, Monterey County, and Pismo Beach, and San Luis Obispo County. Intensive collecting has not yielded specimens from intermediate points, including San Francisco County. Doyen, John T., 1976. Biology and Systems of the Genus *Coelus* (Coleoptera: Tentyriidae), *Journal of the Kansas Entomological Society*, Vol. 49, No. 4 (Oct., 1976), pp 595-624.~~

<sup>75</sup> ~~California Department of Fish and Wildlife, 2020. California Natural Community List. September 9, 2020. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline>~~

\*The first three paragraphs of Impact BI-1 on draft EIR pp. 4.6-40 through 4.6-41 have been revised as follows:

Botanical surveys performed in 2019 and 2020 in support of the project did not identify any special-status plants within the terrestrial study area. San Francisco spineflower, a California Rare Plant Rank 1B.2 species, is present in the disturbed dune mat vegetation community of Fort Funston at select locations, south of the project area.<sup>90,91</sup> Suitable habitat for this species does not occur within the North Ocean Beach project site and it is not known to occur among dense ice plant mats which border the existing multi-use trail between Taraval Street and Sloat Boulevard; therefore, direct impacts on this plant at these project locations are not expected. This annual species was not documented within the South Ocean Beach project area during appropriately timed botanical surveys. Individual spineflower plants were observed in Fort Funston within 50 feet of the project area boundary in disturbed dune mat vegetation on the bluff plateau foredunes south of the Great Highway. The microhabitat where San Francisco spineflower plants occur within and around Fort Funston consists of gaps in dune vegetation with loose sandy soil and few other plant associates, where topography is relatively flat or slightly undulating. Occasionally, spineflower plants are present beneath dense canopies of taller dune scrub species; however, they are conspicuously absent from blowouts, where wind erosion and/or pedestrian traffic create inhospitable conditions for plant establishment.

San Francisco spineflower is not known to occur within the area proposed for the Fort Funston propagation site which consists almost entirely of dense mats of ice plant. The microhabitat described above does not occur in this section of Fort Funston; therefore, direct impacts on individual spineflower plants are not expected.

The southern grading limits for construction of the buried wall, bluff reshaping, and road realignment occur within steep portions of the bluff face or along the road shoulder, where dune habitat is sparsely vegetated with ice plant and sea rocket. Bluff topography and high quantities of sand accretion at this location create conditions not typically supportive of San Francisco spineflower; therefore, direct impacts on individual plants during construction near the South Ocean Beach project area's boundary with Fort Funston at this location are not expected.

The text of draft EIR p. 4.6-45 has been revised to include a new second paragraph as follows:

The planning department, in consultation with CDFW and NPS biologists, conducted a bank swallow habitat assessment in spring 2022 to quantify the amount of suitable bank swallow nesting habitat within the project area and a greater 2.9-mile-long study area that extends from Sloat Boulevard through Fort Funston to Thornton State Beach. The objectives of the habitat assessment were to: 1) identify, describe, and delineate potentially suitable nesting habitat used by the Fort Funston bank swallow colony; 2) identify and delineate cliff sites that could be enhanced through vegetation management or other means to provide potentially suitable bank swallow nesting habitat; and 3) quantify potential bank swallow nesting areas to provide a baseline of available habitat in the region. The study documented a total of 1,924 square feet of active bank swallow habitat within the study area and 6,963 square feet of historic habitat. The study concluded that the project construction would result in potential impacts to 27 percent of documented active bank swallow habitat (522 square feet of impacts) and 13 percent of historic habitat (899 square feet of impacts) or combined impacts to 16 percent of active and historical habitat (1,421 square feet). The study identified an additional 24,029 square feet of potential bank swallow nesting habitat within the study area. The memorandum describing the study's findings is included as Attachment D. The memorandum concludes by identifying five enhancement actions to improve potential bank swallow habitat quality and possibly promote recolonization in parts of the study area. These include bluff face ice plant removal, reducing recreational pressure around active and potential nest sites, native plant restoration to improve bank swallow foraging habitat quality, performing mechanical improvements (e.g., sand removal), and the use of engineered nesting structures. These recommendations, along with those contained in letters from CDFW and NPS commenting on the draft memorandum (also in Attachment D), were considered in developing the project mitigation discussed below.

The text of *Bank Swallow Habitat Removal*, beginning with the second paragraph on draft EIR p. 4.6-45, has been revised as follows:

Creation of bank swallow habitat in both natural and artificial substrate has had limited success in California and is generally considered cost prohibitive as a mitigation strategy due to the ongoing maintenance necessary to provide the required habitat elements for this species in the long term (e.g., vertical or near-vertical banks/bluffs of sufficient heights to deter predators).<sup>99</sup> Examples of habitat enhancement or creation as a mitigation strategy for impacts on this species' habitat in California are documented for riverine colonies rather than coastal colonies. Experimental nesting sites constructed on the Sacramento River between 1987 and 1989 to determine if created sites were effective and feasible mitigation for affected bank swallow breeding habitat proved difficult to maintain at the regularity needed to ensure that suitable habitat characteristics were present year after year. While these enhanced bank sites were used by swallows for nesting, once maintenance of the habitat (annual contouring the bank face to a vertical or near-vertical slope, clear of vegetation and with fresh soils) stopped, swallows no longer selected the sites for breeding.<sup>100,101</sup> Similar challenges would be expected in maintaining enhanced coastal bluff sites to attract bank swallows; however, the additional influence of natural coastal processes eroding the bluff face further complicates the situation at the project site.

Artificial sites constructed above the river bank consisting of soil mounds were never well used, and those that were occupied experienced heavy predation by herons and egrets; therefore, artificial sites

~~are not recommended mitigation for impacts on natural habitat.~~<sup>102</sup> Another example of created habitat along the Sacramento River consisted of 100 burrows mechanically drilled into the river bank in 1986; however, this site failed to attract bank swallows to nest.<sup>103</sup> The inefficacy of this attempt at habitat creation was attributed to bank swallows not previously occupying that bank location.<sup>104</sup>

<sup>99</sup> California Department of Fish and Game, 1992. Recovery Plan: Bank Swallow (*Riparia riparia*). Prepared by Nongame Bird and Mammal Section, Wildlife Management Division, Section Report 93.02. December 1992.

<sup>100</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (*Riparian riparia*) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>101</sup> Garrison, B. A. 1998. Bank Swallow (*Riparia riparia*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpif/htmldocs/riparian\\_v-2.html](http://www.prbo.org/calpif/htmldocs/riparian_v-2.html).

<sup>102</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (*Riparian riparia*) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>103</sup> Garrison, B. A. 1998. Bank Swallow (*Riparia riparia*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpif/htmldocs/riparian\\_v-2.html](http://www.prbo.org/calpif/htmldocs/riparian_v-2.html).

<sup>104</sup> Ibid.

Following the 2022 habitat assessment, the planning department met with CDFW and NPS biologists to discuss the findings and identify possible mitigation approaches for impacts to bank swallow habitat. At this meeting, CDFW shared a recent study which demonstrated that artificial habitat creation has had some recent success in Québec, Canada with bank swallow readily occupying artificial habitat composed of concrete walls backed with compacted sand (the “Quebec Study”).<sup>104a</sup> CDFW staff suggested further evaluation of this concept, acknowledging the different conditions of the Québec site from Ocean Beach. The general consensus of the biologists was that no single mitigation measure alone would be sufficient and that a suite of measures should be implemented, some of which may be more feasible or have greater conservation value than others.

The planning department considered all of the mitigation concepts identified in the habitat study and in CDFW and NPS comment letters on the study. The following sections describe each concept, evaluate their implementation feasibility and efficacy in offsetting the project’s impacts on bank swallow from habitat removal, and indicate whether the concept has been included in the revised mitigation measures for the project.

1. **Fund a biological monitor to educate and inform beachgoers about bank swallows and patrol the area to keep human disturbance to a minimum.** This concept was suggested by NPS and would provide immediate benefits to the bank swallow population during nesting season. The biological monitor could be a full-time or part-time position during the bank swallow breeding and nesting season (April 1 to August 1) and focus on public education, monitoring and deterring visitor activity near potential and occupied habitat. For example, the monitor could request beach goers keep dogs on leash during the nesting period in nesting areas, ask people and their dogs not to climb on or near bank swallow habitat or use unauthorized trails to navigate the bluff face, and assist with monitoring the bank swallow colony. This concept is feasible to implement and would require an agreement between the SFPUC and NPS for partial funding of the NPS staff person. The efficacy of one designated biological monitor is uncertain, but is expected to be moderate.<sup>104b</sup> This concept is included as Mitigation Measure M-BI-2d, Public Engagement Specialist, below.

2. **Fund construction and long-term maintenance of an artificial nesting habitat enhancement and/or creation within the project area, or at an offsite location between the project area and Phillip Burton Memorial Beach.**

Several design options and locations were considered for artificial habitat enhancement or creation based on the design criteria set forth in the Québec Study, other studies conducted in Canada and the United Kingdom, and scientific literature. 104c As summarized here and described further in Attachment E, concepts for artificial habitat creation included constructing a concrete or deep soil mixing wall backed with compacted sand, wooden nest boxes, and drilled nesting holes.

**Concrete Wall.** The wall could either be freestanding or integrated into the project's slope stabilization layer or beach access stairs. The efficacy of such experimental concepts is uncertain, but offers the most direct compensatory mitigation option for project impacts on nesting habitat. While artificial habitat enhancement has been successful in Canada, construction of such permanent concrete structures in the project area or incorporated into the project design was determined not to be technically or legally feasible. As discussed in Attachment E, several of the concrete wall concepts evaluated would not meet the design criteria established for bank swallow habitat. The city and Coastal Commission have concluded that the remaining technically feasible concrete wall concepts would conflict with Coastal Act and Western Shoreline Area Plan policies designed to restrict such developments along the shore. 104d,104e,104f Further, if such a structure did not succeed in hosting bank swallow nests, decommissioning or removing it from the project area would require additional activities that could have additional environmental impacts. For these reasons, the artificial nesting habitat mitigation concepts involving a concrete wall were rejected.

**Wooden Nest Box.** A similar, but less permanent structural concept for artificial habitat creation involves constructing a wooden nest box "bank," which resembles a small shed. In this concept, swallows can access a grid of individual nest boxes through holes drilled into wooden planks on one side of the structure. The nest boxes are composed of waterproofed medium-density fiberboard painted with a sand coating. The empty cavity can be lined with nesting material (e.g., grass, rootlets, weed stems or feathers) collected by the swallows. Nest boxes can be monitored and cleaned between uses (once nesting has concluded for the season) with entry to the bank structure through a side door for access to the rear of the nest boxes. The experimental nest box bank(s) could be temporarily installed at different locations in the project vicinity (e.g., Fort Funston or Lake Merced) during the nesting season and easily decommissioned if bank swallow did not use the boxes to nest. This concept may be feasible to implement because it does not conflict with the Coastal Act or Western Shoreline Area Plan policies related to shoreline structures in the way a permanent concrete wall does. This concept would require an agreement between the SFPUC and NPS, is experimental, and its efficacy in mitigating for loss of bank swallow habitat is uncertain. Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, includes a study to evaluate the feasibility and efficacy of this mitigation concept, and requires the SFPUC to implement and monitor the effectiveness of one or more of the experimental concepts discussed in this section.

**Burrows Drilled into Existing Bluff.** As noted above, attempts at non-structural bank swallow habitat enhancement and creation implemented in California's Central Valley have either failed or experienced limited success, including burrows mechanically drilled into the Sacramento River bank. 104g,104h The inefficacy of these attempts at habitat creation was attributed to bank swallows not previously occupying the bank location where burrows had been drilled and inadequate (and cost-prohibitive) maintenance needed to sustain the habitat characteristics required for the species over the long term (e.g., vertical or near-vertical banks/bluffs of sufficient heights to deter

predators and relatively free of vegetation).<sup>104i,104j</sup> In the case of the Fort Funston bank swallow colony because burrows could be drilled within existing bluff habitat near active nesting areas, therefore maintaining consistency in location, substrate, and natural erosive processes required to sustain preferred habitat conditions, NPS staff have expressed optimism that such habitat enhancements could be successful. In 2023, NPS staff undertook a pilot study to evaluate the effectiveness of this method. Based upon the 2023 study results, which documented bank swallow activity in one of 50 burrows drilled into the Fort Funston bluffs, implementing this habitat enhancement appears feasible.<sup>104k</sup> However, the concept remains experimental and has unproven efficacy in a broader coastal environment. Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, includes a study to evaluate the feasibility and effectiveness of this mitigation concept, and requires the SFPUC to implement and monitor the effectiveness of one or more of the experimental concepts discussed in this section.

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<sup>104a</sup> Québec Port Authority (QPA). 2018. Port Activity and Endangered Species: Possible Bank Swallow, Cohabitation Challenge Overcome (informational flier).

<sup>104b</sup> Donovan, Emily, et al., 2018. Improving Compliance with Leash Laws in Rock Creek Park, prepared for the National Park Service and Faculty of Worcester Polytechnic Institute, December 13, 2018.

<sup>104c</sup> Several recent Canadian projects implemented by the Quebec Port Authority and Montreal Port Authority which installed precast concrete walls backed by compacted sand have demonstrated some success as an effective low maintenance approach to creating bank swallow nesting habitat. Québec Port Authority (QPA). 2018. Port Activity and Endangered Species: Possible Bank Swallow, Cohabitation Challenge Overcome (informational flier); Montreal Port Authority (MPA). 2020. Online article: "Bank Swallows are Back in Great Numbers!" June 1, 2020. <https://www.port-montreal.com/en/the-port-of-montreal/news/news/bank-swallows>.

<sup>104</sup> Coastal Act Section 30235 states: "Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply." A free-standing concrete wall constructed along the coast near existing habitat would not serve a coastal-dependent use or protect existing structures or beaches and therefore would likely not receive permit approval by the Coastal Commission.

Coastal Act Section 30251 states: "The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance." A free-standing concrete wall would likely not receive permit approval from the Commission for such visual/aesthetic conflicts.

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<sup>104e</sup> The Western Shoreline Area Plan Policies 12.1, *Adopt Managed Retreat Adaptation Measures between Sloat Boulevard and Skyline Drive*, 12.2, *Develop and Implement Sea Level Rise Adaptation Plans*, and 12.5, *Limit Shoreline Protection Devices*, each preference limiting installation of new structural shoreline protection devices in favor of non-structural options. Although the purpose of the artificial habitat structure would not be for shoreline protection, the intent of these policies to limit additional hardscape installed along the coast is applicable, and would likely make this mitigation concept difficult for the Commission to permit.

<sup>104f</sup> California Coastal Commission (CCC), 2023. Email from Julia Koppman-Norton (CCC) to Julie Moore (Planning Department), Subject: RE: Ocean Beach BANS Habitat Assessment FINAL and Artificial Structures Design Memo. February 22, 2023.

<sup>104g</sup> Bank Swallow Technical Advisory Committee, 2013. Bank Swallow (Riparian riparia) Conservation Strategy for the Sacramento River Watershed, California. Version 1.0. [www.sacramentoriver.org/bans/](http://www.sacramentoriver.org/bans/). June 2013.

<sup>104h</sup> Garrison, B. A. 1998. Bank Swallow (Riparia riparia). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. [http://www.prbo.org/calpip/html/docs/riparian\\_v-2.html](http://www.prbo.org/calpip/html/docs/riparian_v-2.html).

<sup>104i</sup> Ibid.

<sup>104j</sup> California Department of Fish and Game, 1992. Recovery Plan: Bank Swallow (Riparia riparia). Prepared by Nongame Bird and Mammal Section, Wildlife Management Division, Section Report 93.02. December 1992.

<sup>104k</sup> National Park Service, 2023. Bank swallow (*Riparia riparia*) monitoring at Golden Gate National Recreation Area. Aiko Goldston (she/her), Golden Gate National Recreation Area, National Park Service Internship Program.

3. **Fund or conduct a study on bank swallow movement, population dynamics and coastal habitat use at Fort Funston and Año Nuevo to inform future habitat protection and/or enhancement.** Research would augment existing NPS monitoring data to quantify survivorship and movement patterns of bank swallows between these two coastal colonies, better understand the populations' habitat selection, and identify their key threats. Additionally, research could include a geological component to better determine what constitutes suitable nesting habitat in different geological strata within occupied bluffs. The SFPUC would fund research related to the Fort Funston bank swallow population dynamics, movement, and nesting habitat preference under Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research. Study of geologic conditions at active nesting areas is incorporated into the artificial nesting habitat feasibility study under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation.
4. **Fund research on existing protections at Philip Burton Memorial Beach, if any, and identify and fund closure of conservation gaps and long-term management planning and implementation of protection measures at such areas.** Through an existing lease with the Olympic Club, NPS can implement conservation measures within the Phillip Burton Memorial Beach bluffs, including installation of sensitive habitat signs, protective fencing, and blufftop restoration above bank swallow nesting areas. Similar to locations where these measures are proposed within Fort Funston, these protections are feasible to implement and indirectly effective in reducing project impacts by protecting active nesting areas from public disturbance. These protections could be implemented at Phillip Burton Memorial Beach under Mitigation Measure M-BI-2c, Bank Swallow Signage and Protective Fencing, and Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, at NPS discretion.
5. **Remove ice plant from bluff faces at locations identified in the bank swallow assessment memorandum (Attachment D) between the project area and Thornton State Beach.** This beneficial action would enhance existing habitat areas and may expand the area of bluffs suitable for establishing burrow nests by allowing for the natural bluff erosion required for bank swallow nesting and reducing predator accessibility and risk. This action is feasible to implement and indirectly effective in reducing project impacts by enhancing and expanding suitable habitat; Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, includes bluff face ice plant removal.
6. **Fund procurement and installation of temporary signage and fencing at active nesting locations annually to alleviate recreational pressure on nesting areas.** This mitigation concept would be indirectly effective in reducing project impacts by reducing human disturbance on bank swallow habitat. This concept is included in draft EIR Mitigation Measure M-BI-2c, Bank Swallow Signage and Protective Fencing.
7. **Remove ice plant and revegetate blufftops above occupied nesting areas with native plants, and install removable protective fencing and sensitive habitat signage at the edge of restoration planting areas.** The native planting areas would create a visual and physical buffer between the blufftop edge and publicly accessible areas, decommission unauthorized trails down the bluff face near or through nesting habitat, reduce erosion, and improve bank swallow foraging habitat. This concept would be indirectly effective in reducing project impacts on

remaining habitat by focusing protection measures on suitable nesting habitat areas. This concept is included in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration.

8. **Remove accumulated sand below bank swallow habitat to reduce recreational pressure and predator accessibility.** This concept would indirectly reduce project impacts by improving/expanding suitable coastal bluff nesting habitat through removing from the bluff toe accumulated sediments that bury burrows or make them accessible to pedestrians and predators. However, mechanical improvements to bluff habitat could destabilize bluffs and create public safety hazards for people recreating on the beach and on the bluffs above. And for sustained effect, this concept would require ongoing action due to natural sloughing and eolian processes that cause sand transport and deposition at the toe of the bluff. Therefore, this concept was rejected as infeasible.
9. **Restore and enhance existing upland dune habitat on bluffs proximate to bank swallow nesting areas to improve and expand bank swallow foraging habitat.** NPS has recommended the SFPUC undertake two acres of native dune habitat restoration within an approximately eight-acre portion of northwest Fort Funston. Although the efficacy of foraging habitat restoration as compensation for habitat removal is uncertain, this concept could indirectly reduce project impacts by improving or expanding available foraging habitat for the nesting bank swallow population. This concept is included in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration.

Regardless of whether bank swallows would actively nest within the boundaries of Fort Funston and coastal areas farther south of the project area, because the project requires removal of the 2010 emergency riprap revetment and reshaping of the remnant bluff at a location within a portion of the historic nesting location, and because For the reasons presented above, there are no feasible and proven mitigation strategies or opportunities to replace or otherwise fully compensate for lost local bank swallow breeding habitat. Moreover, of the feasible and effective options that could indirectly reduce bank swallow habitat impacts, most would require action by a third party (NPS), outside of the city's control. As a result, the project's resulting permanent impact on bank swallow breeding habitat at this location would be significant and unavoidable.

While no feasible mitigation exists to fully address the direct project effect on bank swallow habitat, **Mitigation Measure M-BI-2c, Bank Swallow Educational Signage and Protective Fencing; Mitigation Measure M-BI-2d, Public Engagement Specialist; Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research; Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration; Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement; and Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation** would avoid or minimize future disturbance or impact on the remaining suitable bluff habitat for nesting bank swallow; contribute to research and understanding of population dynamics, movement, and coastal habitat preference; improve foraging habitat within Fort Funston through removal of invasive vegetation and restoration of native dune plants; enhance or expand nesting habitat through removal of ice plant from the bluff face; and explore the feasibility and efficacy of artificial habitat concepts by studying and implementing such concepts.

Mitigation Measure M-BI-2c, Bank Swallow Educational Signage and Protective Fencing, would require the SFPUC, in coordination with Rec and Park and the National Park Service, to develop, produce, and install educational sensitive habitat signs informing the public of the bank swallow

colony. The measure calls for one educational kiosk or signs describing the history of the bank swallow colony and uniqueness of the coastal bluff habitat that supports annual nesting to be permanently installed within the Skyline coastal parking lot or along the multi-use trail. In addition, under the mitigation measure, the SFPUC would produce removable semi-permanent sensitive habitat signs that could be located near the active nesting locations annually to inform the public of the sensitive nesting area. Semi-permanent Removable fencing installed at a setback from the bluff edge above nesting locations (on National Park Service managed lands) would also be required under this measure. This fencing would restrict public access to the bluff top immediately above remaining suitable habitat at Fort Funston and/or active nesting locations in a given year. Restricting public access to the bluff top above suitable habitat ~~top~~ would avoid or minimize blufftop erosion of ~~remaining bluff habitat~~ from vegetation trampling above active nesting areas and other disturbance resulting from attempts to access the beach through a known nesting area. Implementation of the measure would require the SFPUC to coordinate with Rec and Park regarding a kiosk and signage proposed on lands under its management, and enter into an agreement with ~~the park service~~ NPS to implement the signage and fencing on lands under its management. As a condition of this agreement between the SFPUC and NPS, placement of the removable signage and fencing in a given year would be informed by NPS monitoring data and the identification of active nesting locations in need of protection, including those nesting areas south of Fort Funston and within the conservation easement areas above Phillip Burton Memorial Beach.

Mitigation Measure M-BI-2d, Public Engagement Specialist, would complement the physical installations included in M-BI-2c, Bank Swallow Signage and Protective Fencing, by requiring the funding of a public engagement specialist for five bank swallow nesting seasons, as requested by NPS. The public engagement specialist would focus on public outreach related to protecting the nesting bank swallow population and documentation of how and whether protective and conservation measures implemented as mitigation are effectively benefiting the Fort Funston bank swallow colony.

Mitigation Measure M-BI-2e, Bank Swallow Movement, Population Dynamics and Coastal Habitat Use Research, would promote continued research related to species broadly, and the Fort Funston colony, by funding research on bank swallow movement, population dynamics, and habitat preferences in coastal environments for up to five years. This mitigation measure would indirectly reduce the project's impact on bank swallow breeding habitat.

Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, would improve and expand native foraging habitat for the Fort Funston bank swallow colony through restoration, thereby indirectly reducing the project's impact on breeding habitat. The foraging habitat restoration area would be in the northwestern portion of Fort Funston, within or adjacent to areas of ongoing restoration activities (**Figure 4.6-3a**). Foraging habitat restoration may include removal of non-native, invasive ice plant and planting native dune plants. Additionally, this measure would fund the preparation, implementation, and monitoring of blufftop restoration above known nesting areas that would benefit bank swallow nesting habitat by restricting access to the blufftop edge and decommissioning trails down the bluff face. Ice plant would be removed at these locations and replaced with native dune plants. Where the foraging habitat restoration areas are near both public use areas and bank swallow habitat, signage and fencing required by M-BI-2c, Bank Swallow Signage and Protective Fencing, would be installed to increase the effectiveness of these actions at alleviating recreational pressure on suitable nesting habitat while bank swallow are present.



SOURCE: NPS, 2022

Ocean Beach Climate Change Adaptation Project

**New Figure 4.6-3a**  
Bank Swallow Foraging Habitat Restoration Area

Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, would reduce the project's impact on bank swallow breeding habitat by removing ice plant from the bluff face at active nesting locations. Preliminary locations for this work are identified in the bank swallow habitat assessment.<sup>104l</sup> Such enhancement directly benefits the Fort Funston bank swallow colony by improving the quality of existing bluff habitat for nesting.

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<sup>104l</sup> ESA, 2022. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023.

Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, would fund or implement a feasibility study and subsequent pilot project to test the efficacy of artificial bank swallow habitat concepts to be installed in the project vicinity as an experimental replacement for habitat removed under the project. The installation would be monitored for use by bank swallows during the nesting season (April 1 – August 1) for five years to document efficacy of the artificially created habitat and for comparison with historical nesting data of habitat removed under the project.<sup>105</sup> At the conclusion of the study, a publicly available report would be prepared documenting the findings of the artificial habitat experiment. This report would contribute to the scientific understanding of whether and how bank swallow respond to such concepts.

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<sup>105</sup> NPS monitoring data (1993 – 2019) documents that colony use of suitable habitat areas for nesting shift every four to seven years. (NPS, 2007. Bank Swallow Monitoring at Fort Funston, Golden Gate National Recreation Area 1993-2006; NPS, 2019, Bank Swallow Summary Information for Coastal Planning). Thus, the pilot project specifies an initial five-year monitoring period to evaluate whether bank swallow find the artificial habitat to be suitable for nesting.

Although these measures would inform and caution the public as to sensitive nesting areas and restrict public access with the intent to protect bank swallow habitat, improve foraging habitat within Fort Funston through native plant restoration, enhance nesting areas through ice plant removal, further scientific understanding of the species to support conservation efforts, and install experimental artificial nesting habitat in the project vicinity, the project impact on bank swallow habitat is considered **significant and unavoidable with mitigation** because of the uncertainty of sufficient impact offset and because the implementation of these mitigation measures relies on ~~an~~ agreements with a third party (NPS) and ~~is~~ are not fully within the project sponsors' control.

#### **Mitigation Measure M-BI-2c: Bank Swallow Educational Signage and Protective Fencing**

During the construction period and prior to project completion, the SFPUC, with the oversight of the planning department, shall implement the following:

- a. Educational Kiosk or Signs. Develop and produce one, permanent educational kiosk or signage to be installed in the Skyline coastal parking lot or along the multi-use trail. Educational content, sign design and structure shall be coordinated with the San Francisco Recreation and Parks Department and the National Park Service (NPS).
- b. Sensitive Habitat Signs. Develop and produce ~~semi-permanent~~ removable sensitive habitat signs that shall be installed on NPS property along bluff top access points at Fort Funston and within the conservation easement with the Olympic Club above Phillip Burton Memorial beach near the bank swallow nesting locations to alert the public of the sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-

time development and production of the ~~semi-permanent~~ removable signs that the NPS shall install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands or within the boundaries of its conservation easement.

- c. Sensitive Habitat Fencing. Install ~~semi-permanent~~ removable fencing at a setback from the bluff edge above suitable nesting habitat to restrict public access above sensitive nesting areas. The SFPUC and NPS shall enter into an agreement for the one-time development and production of the ~~semi-permanent~~ removable fencing that the NPS shall design and install at its discretion as long as the bank swallow are listed as special-status and nesting within NPS-managed lands or within the boundaries of its conservation easement with the Olympic Club.

**Mitigation Measure M-BI-2d: Public Engagement Specialist**

The SFPUC shall enter an agreement with NPS requiring SFPUC to fund bank swallow public engagement work by a seasonal, part-time, public engagement specialist for five bank swallow nesting seasons (April 1 to August 1). The role of the public engagement specialist shall be determined by NPS and may include visual monitoring of the public's compliance with physical deterrents, supporting ongoing NPS bank swallow monitoring, development of educational materials, and public engagement and education related to bank swallow and their nesting habitat. The public engagement specialist shall prepare a final report for submission to NPS and the ERO at the end of the five nesting seasons documenting lessons learned and recommendations for future habitat protection and management actions.

**Mitigation Measure M-BI-2e: Bank Swallow Movement, Population Dynamics, and Coastal Habitat Use Research.**

The SFPUC shall fund up to five years of research related to bank swallow movement, population dynamics, and coastal habitat selection. The research scope shall be developed in coordination with NPS and approved by the ERO, and research shall be conducted by a qualified biologist with relevant expertise. Research supported by this measure would augment existing NPS monitoring data to quantify survivorship and movement patterns of bank swallows in coastal California, specifically the Fort Funston population, to better understand the populations' habitat selection, and identify its key threats. The funding agreement shall stipulate that the findings of the research funded under this measure shall be documented in a final report and made publicly available, to increase the body of knowledge around the species' habitat conservation and management.

**Mitigation Measure M-BI-2f: Blufftop Foraging Habitat Restoration**

Prior to construction, the SFPUC shall submit to the NPS and the Environmental Review Officer (ERO) a detailed restoration plan and schedule for implementing this measure. The schedule shall provide for completion of the restoration prior to completion of project construction. If any element of the restoration plan cannot be completed prior to completion of project construction, the SFPUC shall provide an explanation and an alternative completion date. The plan shall also include a proposed monitoring and reporting schedule. Upon completion of the work described in this measure, the SFPUC shall

prepare and submit to NPS and the ERO, a final report describing the types, dates, and locations of work performed.

The SFPUC, with oversight from the planning department and in coordination with the NPS, shall implement or fund restoration of: 1) approximately 2 acres of bluff-top foraging habitat within the approximately 8-acre portion of Fort Funston identified for habitat restoration in Figure 4.6-3a; and 2) an additional approximately 200 linear feet of blufftop dune habitat at locations above active nesting habitat identified and mapped in the bank swallow habitat assessment memorandum where safe and effective at limiting human disturbance (ESA, 2023, Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023). Restoration activities may include removing non-native and/or invasive vegetation and planting native dune plants using hand tools, an NPS-approved herbicide, and mechanical equipment (e.g., small backhoe or excavator), or combination thereof, and in combination with installation of sensitive habitat signage and removable fencing provided in M-BI-2c. All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.

The SFPUC shall prepare and implement or fund a bank swallow foraging habitat revegetation and restoration plan which sets forth the basis of restoration design, planting plan, and monitoring and reporting requirements for the restoration areas. The plan shall be coordinated with and approved by NPS and shall inform restoration design plans developed by the SFPUC in coordination with NPS. The restoration monitoring plan shall be prepared by a qualified restoration ecologist and shall include or provide for the following:

- Restoration methods for selected areas, including site preparation, such as removal of existing vegetation and soil preparation, seed material and application, vegetative plant material harvest (if any), and plant specimen sourcing and planting methods;
- Schedule to guide seed and/or vegetative material collection/harvest or procurement, and seeding and/or planting within the restoration areas;
- Quantitative monitoring methods to evaluate performance of restored areas, including characterizing species richness, vegetative composition and cover;
- Identification of appropriate reference sites to implement monitoring methods and compare results with restoration areas regarding species richness, vegetative composition and cover;
- Photo points located at each restoration site and reference area(s) to document conditions during the monitoring period;
- Performance criteria and measures to control/remove target invasive plants according to NPS policies. Control species shall include those ranked by Cal-IPC as high or moderately invasive. The performance standard for target invasive weeds shall be no more than 10 percent absolute cover during the five-year performance period;
- Performance criteria for native plantings, appropriate for species and quantities planted at the 2-acre restoration site and the blufftop restoration sites (criteria may differ depending on site design);

- Adaptive management schedule and actions (maintenance weeding or replanting) to address underperformance throughout the monitoring period;
- Restoration areas shall be monitored to assess plant establishment for five years or until the sites meet the success criteria determined in the plan. At a minimum, total native vegetation cover, composition, and species richness in the restored areas shall be monitored and maintained until comparable with suitable reference sites.

**Mitigation Measure M-BI-2g: Bank Swallow Habitat Enhancement**

The SFPUC shall implement or fund ice plant removal from the bluff face within suitable nesting habitat areas (i.e., active and historic nest sites), as identified in the bank swallow habitat assessment memorandum (ESA, 2023. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023). The ice plant removal shall be completed prior to completion of project construction. If the removal work cannot be completed prior to project completion, the SFPUC shall provide the NPS and the ERO an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the NPS and the ERO a report describing the types, dates, and locations of work performed.

**Mitigation Measure M-BI-2h: Bank Swallow Artificial Habitat Creation**

Prior to construction, the SFPUC shall submit to the NPS and the ERO a detailed plan and schedule for implementing this measure. The schedule shall provide for completion of the feasibility study described in paragraph 1, below, prior to completion of project construction, and installation of the pilot project described in paragraph 2, below, prior to the first nesting season that follows project removal of bank swallow habitat. If any element of the plan cannot be completed on schedule, the SFPUC shall provide an explanation and an alternative completion date. Upon completion of the work described in this measure, the SFPUC shall prepare and submit to the ERO a final report as described in paragraph 2(c) of this mitigation measure.

1. **Feasibility Study.** The SFPUC shall fund development and implementation of a study to explore the feasibility, efficacy, and logistics of installing artificial habitat creation concepts within the project vicinity to support the local nesting bank swallow population. These concepts may include drilling artificial burrows into the bluff face, or installing wooden nest box “bank” habitats along the bluff top, among other concepts that have documented success supporting other nesting bank swallow populations and would not conflict with Coastal Act or other applicable laws or policies. The feasibility study shall be developed in coordination with NPS and analyze how each concept would be implemented along the Fort Funston blufftop or other nearby locations including design, siting and other locational considerations, and geotechnical considerations. Feasible artificial habitat creation shall avoid disrupting scenic resources, cultural resources, or sensitive habitat. The feasibility study shall be completed in time to ensure the pilot project would be installed prior to the first nesting season after habitat removal by the project and identify at least one concept for implementation as an artificial habitat pilot project, though multiple concepts may be determined feasible and incorporated into the pilot project.

2. **Pilot Project.** The SFPUC shall fund development and implementation of an artificial habitat pilot project. The pilot project shall include implementing and monitoring the effectiveness of the selected experimental concept(s) identified in the feasibility study (e.g., drilling artificial burrows into the bluff face or installing several wooden nest box banks along the Fort Funston blufftop or other nearby locations). The artificial habitat should be constructed on a schedule that allows for bank swallow use ahead of the first nesting season following project removal of existing bluff habitat.
  - a) Once installed, the artificial habitat(s) shall be surveyed for nesting activity monthly by a qualified biologist in April and August, and twice a month in May, June, and July, for five consecutive years to document bank swallow use.
  - b) An annual monitoring report shall be prepared that summarizes seasonal use observations at the artificial habitat(s). This report shall be provided to the NPS and the ERO within 90 days of the end of the annual monitoring period. The artificial habitat shall be considered successful if bank swallow nest or attempt to nest (repeatedly visit the habitat[s]) during the nesting season within the five-year monitoring period.
  - c) Upon completion of the five-year monitoring period, a final report shall be prepared which compiles results of the artificial habitat pilot project. If the artificial habitat(s) was successful, the report shall include recommendations for potential funding mechanisms and partnerships for continued maintenance. This report shall be made publicly available.

All work shall be performed in accordance with the requirements of SFPUC's Standard Construction Measures, as applicable.

### ***Impacts of Mitigation Measures***

CEQA Guidelines section 15126.4 states that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed, but in less detail than the significant effects of the project as proposed." This section identifies potential effects associated with the implementation of Mitigation Measures M-BI-2d, Blufftop Foraging Habitat Restoration, and M-BI-2e, Bank Swallow Habitat Enhancements.

**Special Status Plants and Sensitive Natural Communities:** The proposed blufftop restoration area identified in Mitigation Measure M-BI-2f, Blufftop Foraging Habitat Restoration, within Fort Funston is located immediately south of the project area's buried wall terminus in a location of the park managed for native plant restoration (see Figure 4.6-3a). Field surveys supporting the project's Biological Resources Assessment (Appendix F2) documented San Francisco spineflower plants and the yellow sand verbenas – beach burr dune mat sensitive vegetation alliance in this general area and ongoing NPS restoration efforts at this location have cultivated concentrations of native dune plants including San Francisco lessingia (*Lessingia germanorum*), blue thimble flower (*Gilia capitata* spp. *Chamissonis*), and San Francisco wallflower (*Erysimum franciscanum*).<sup>104l, 104m</sup> Restoration and maintenance activities within this area funded by the SFPUC would include removal of non-native species (primarily ice plant) and planting native dune species, which would be implemented with hand tools, an NPS-approved herbicide, and mechanical equipment (e.g., small backhoe or

excavator), or combination thereof, by people qualified in restoration ecology and botanical species identification. Similar activities would be implemented at the other M-BI-2f blufftop restoration sites near bank swallow habitat. The M-BI-2f, Blufftop Foraging Habitat Restoration, blufftop restoration sites were not included in protocol-level botanical surveys conducted for the project but are expected to support a similar combination of native and non-native dune species, likely dominated by ice plant. These foraging habitat restoration areas would likely be considered environmentally sensitive habitat (ESHA) because they comprise dune habitat that supports or is suitable for special-status plant species.

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<sup>104l</sup> BioMaAS, 2021. Ocean Beach Climate Change Adaptation Project Biological Resources Assessment, prepared for the San Francisco Public Utilities Commission, November 2021.

<sup>104m</sup> National Park Service, Golden Gate National Recreation Area, Fort Funston Special Status Plant Species, NPS data 2002-2023.

As the purpose of the work in these areas is native plant restoration and would be conducted in accordance with standard construction measure 7, any existing individual or groupings of special-status or sensitive plant species or alliances would be identified, protected, and avoided throughout restoration activities such that direct impacts on these resources is not expected. Once complete, the restored dune habitat would provide enhanced bank swallow foraging habitat, minimize human disturbance near bank swallow nesting habitat, and benefit the continued existence of San Francisco spineflower, San Francisco lessingia, blue thimble flower, San Francisco wallflower, and the yellow sand verbena – beach burr dune mat alliance, among other native and special-status dune plants and alliances. For these reasons, the restoration activities identified in M-BI-2f, Blufftop Foraging Habitat Restoration, would be consistent with Coastal Act and local coastal program policies governing development in ESHA, and would have a less-than-significant effect on special-status plants and sensitive natural communities. Removal of ice plant from the bluff face at active and historic nesting areas as described under Mitigation Measure M-BI-2g, Bank Swallow Habitat Enhancement, would not impact special-status plants or sensitive natural communities because these locations are characterized and identified for mitigation by the near exclusive presence of ice plant. Direct impacts on special-status plants and sensitive natural communities are not expected from implementation of M-BI-2g.

**Nesting Birds:** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, and M-BI-2g, Bank Swallow Habitat Enhancement, would generate noise from mechanized equipment and visual disturbance from workers and equipment. For example, small mechanical equipment may be used to collect and off-haul ice plant from the foraging habitat restoration area. Installation of artificial habitat concepts during the pilot project described under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, could also introduce noise and visual disturbance above baseline conditions. For example, burrow excavation into the Fort Funston bluff face would utilize small mechanical drills. The required burrow elevation would be reached through use of a ladder placed on the beach below areas of suitable bank swallow habitat. These areas on the bluff face could also be accessed by persons repelling down the face to the selected elevation where burrows would be drilled. If these activities were to be conducted during the bird nesting season, they could adversely affect bank swallow and other nesting birds. However, this work would be required to comply with standard construction measure 7 and Mitigation Measure M-BI-2a, Nesting Bank Swallow Protection Measures, which would protect against significant impacts on nesting birds through

seasonal avoidance or pre-construction surveys and establishment of no-disturbance buffers. With implementation of these measures, the restoration and enhancement activities identified in M-BI-2f and M-BI-2g and implementation of artificial habitat concepts under M-BI-2h would have a less-than-significant effect on nesting birds.

**Cultural and Tribal Cultural Resources:** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, and M-BI-2g, Bank Swallow Habitat Enhancement, would occur in locations that were not evaluated in the EIR for cultural or tribal cultural resources. To assess potential impacts on cultural resources within the restoration and enhancement areas, records from the Northwest Information Center and historic maps/aerial imagery were reviewed. No site visit was conducted. There are no known archeological sites, human remains, or tribal cultural resources within the mitigation work areas. However, archeological analysis indicates that there is the potential for Native American resources to be present. While unlikely, ground disturbance associated with the blufftop restoration could uncover previously undiscovered archeological sites, human remains, or other tribal cultural resources, and any inadvertent damage to these resources would be considered a significant impact. However, as set forth in M-BI-2f and M-BI-2g, the standard cultural resources construction measures for the project, including SFPUC Standard Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring), would be implemented during restoration and enhancement activities. These measures would be implemented in the same manner described in the EIR for the South Ocean Beach portion of the C-APE. With implementation of SFPUC standard construction measure 9 (Archeological Measures I and II), restoration activities identified in M-BI-2f and M-BI-2g would have a less-than-significant impact on cultural and tribal cultural resources.

**Geologic Hazards:** If drilling artificial bank swallow burrows is selected for the Pilot Project as a feasible artificial habitat concept, Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, would involve drilling burrows into the Fort Funston bluffs. If this work were to occur in areas that are not stable, it could result in direct or indirect substantial adverse effects on public safety due to landslide or other geologic hazards. As required in M-BI-2h, implementation of the measure would be subject to SFPUC's standard construction measure 1, which requires characterization of the soil types and potential for geologic hazards, including landslide. As a component of the feasibility study specified in M-BI-2h, this concept shall occur only in areas where, in the opinion of a geotechnical expert or other qualified person, drilling would not result in a public safety hazard due to increased risk of bluff failure. With implementation of standard construction measure 1, implementation of this artificial habitat concept would have a less-than-significant effect related to geologic hazards.

**Hazards and Hazardous Materials.** The work described in Mitigation Measures M-BI-2f, Blufftop Foraging Habitat Restoration, M-BI-2g, Bank Swallow Habitat Enhancement, and possibly M-BI-2h, Bank Swallow Artificial Habitat Creation, (if drilling artificial burrows in the bluff face is selected for the Pilot Project) would occur in locations near a site associated with the Department of Toxic Substances Control (DTSC) Cortese List. The DTSC cleanup status for Fort Funston is "Inactive-Action Required" due to the discovery of munitions on the Fort Funston beach.<sup>104n</sup> The restoration provided for in M-BI-2f would occur on a coastal bluff approximately 150 feet above and inland of the beach or above the beach on the bluff face (M-BI-2g and M-BI-2h). Furthermore, any unidentified hazardous materials encountered during construction would be characterized and appropriately treated, contained, or removed, in accordance with SFPUC standard construction measure 6, Hazardous

Materials. Therefore, implementation of M-BI-2f, M-BI-2g, and M-BI-2h would have a less-than-significant impact related to hazards and hazardous materials.

**Aesthetics.** One of the artificial habitat concepts that may be included in the feasibility study under Mitigation Measure M-BI-2h, Bank Swallow Artificial Habitat Creation, involves installing removable wooden nest box “bank” habitats within Fort Funston or other nearby areas for use during the bank swallow nesting season. If determined feasible to implement, at least one of the wooden nest box bank habitats, approximately the size of a small shed, could be introduced to the Fort Funston blufftop. As discussed above in Mitigation Measure M-BI-2h, feasible artificial habitat creation shall avoid disrupting scenic resources, cultural resources, or sensitive habitat. A small shed-sized nest box bank placed along the blufftop or other nearby areas could be visible to park visitors from publicly accessible trails. Due to its small size relative to the scale of the natural and scenic landscape features contributing to the park’s aesthetic character, the artificial nest box banks would not result in a substantial aesthetic or scenic resource impact. Further, lighting would not be installed as part of the artificial habitat. Construction activities associated with the artificial habitat concept which involves drilling burrows into the bluff face would be visible from the beach; however, once installed, the artificially created burrows on the bluff face would resemble those excavated by bank swallows and therefore would not result in a substantial aesthetic or scenic resource impact. Similarly, removing ice plant from the bluff face under Mitigation Measure M-BI-2g: Bank Swallow Habitat Enhancement, and planting native dune plants to improve bank swallow foraging habitat within Fort Funston and along the bluff top under Mitigation Measure BI-2f, Blufftop Foraging Habitat Restoration, would temporarily be visible while restoration work is occurring. Once complete, the aesthetics of these formerly degraded areas would be improved with the removal of non-native species and/or introduction of native vegetation. Therefore, implementation of mitigation measures M-BI-2f, M-BI-2g, and M-BI-2h would have less-than-significant impacts related to aesthetics.

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<sup>104n</sup> Department of Toxic Substances Control (DTSC), EnviroStor database search, Available online at: [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=80001046](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80001046), accessed on August 25, 2022.

\*The following paragraph has been added after the first paragraph in *Nesting Bank Swallow* on draft EIR p. 4.6-47:

Noise and visual disturbance associated with routine maintenance weeding and plant harvests from the proposed Fort Funston propagation site would not adversely affect bank swallow nesting on the bluffs. The proposed propagation site would be located at least 400 feet from the nearest blufftop edge and the closest habitat area identified in the bank swallow habitat assessment memorandum (potential habitat location P-012).<sup>105a</sup> Because of the distance between the proposed nursery site and potential nesting habitat, and given that the work at this site would primarily be conducted with hand tools, work at this location would not be expected to produce noise levels above baseline conditions, and the potential impacts on nesting bank swallow associated with activities at the Fort Funston propagation site would be less than significant.

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<sup>105a</sup> ESA, 2022. Memorandum: Fort Funston Bank Swallow Habitat Assessment, Revised January 11, 2023.

\*The second sentence under *Construction* on draft EIR p. 4.6-48 has been revised as follows:

Individuals are generally found within the designated Snowy Plover Protection Area, located between Stairwell 21 (near the Beach Chalet) and Sloat Boulevard, which is not within the South Ocean Beach project site but is within the North Ocean Beach project site, where sand would be sourced during project construction for placement atop the buried wall's slope stabilization layer and during project operation for small sand placement events.

Draft EIR pages 4.6-55 through 56 have been revised as follows:

### **Sensitive Dune Vegetation and Dune Habitat**

Project implementation would not substantially affect sensitive dune vegetation. The disturbed dune mat vegetation community of the terrestrial study area contains small assemblages of native dune plants elemental to the sensitive natural community yellow sand verbena – beach burr dune mat alliance. This sensitive dune vegetation alliance has a state rarity ranking of S3 due to its limited distribution in the state and the diversity of special-status plant species that often occur there. Within the study area (i.e., the project construction and operations areas with an additional 15- to 50-foot buffer), these areas support common native dune flora and, to a varying degree depending on presence of invasive or nonnative species, locally significant plant species. Within disturbed dune mat vegetation of the study area there is great variation in the abundance and diversity of native plants among nonnative and invasive species which consist primarily of ice plant, sea fig and annual grasses. While portions of the disturbed dune mat community within the terrestrial study area may contain areas where native dune plants are dominant, or even host a few locally significant plants, the vast majority of this vegetation community is comprised of ice plant mats among bare sandy areas.

Ice plant and sea fig are the two dominant species within the disturbed dune mat vegetation community of the project area. The California Invasive Plant Council identifies ice plant and sea fig to be highly and moderately invasive species, respectively, known to rapidly occupy dune environments and displace native vegetation. The northern portion of the South Ocean Beach project site where the disturbed dune mat community occurs is in a highly degraded state as a result of regular foot traffic and the abundance of ice plant mats, whereas the southern portion of the project site near Fort Funston is less disturbed and contains a higher abundance and diversity of the native dune flora associated with the yellow sand verbena – beach burr dune mat alliance. Farther south, the proposed Fort Funston propagation site would be located in areas currently covered in ice plant mats. Yellow sand verbena is generally uncommon in the study area, but it was observed in the northern part of Fort Funston. This area is also adjacent to (north of) active Fort Funston restoration sites that contain naturally occurring and planted native dune flora.<sup>132</sup> The northern-most portion of Fort Funston, closest to the South Ocean Beach project area, contains some of the highest quality dune habitat within the park as a result of extensive nonnative and invasive plant removal, propagation and planting of native dune plants, and restrictions on pedestrian access within restored areas.<sup>132</sup>

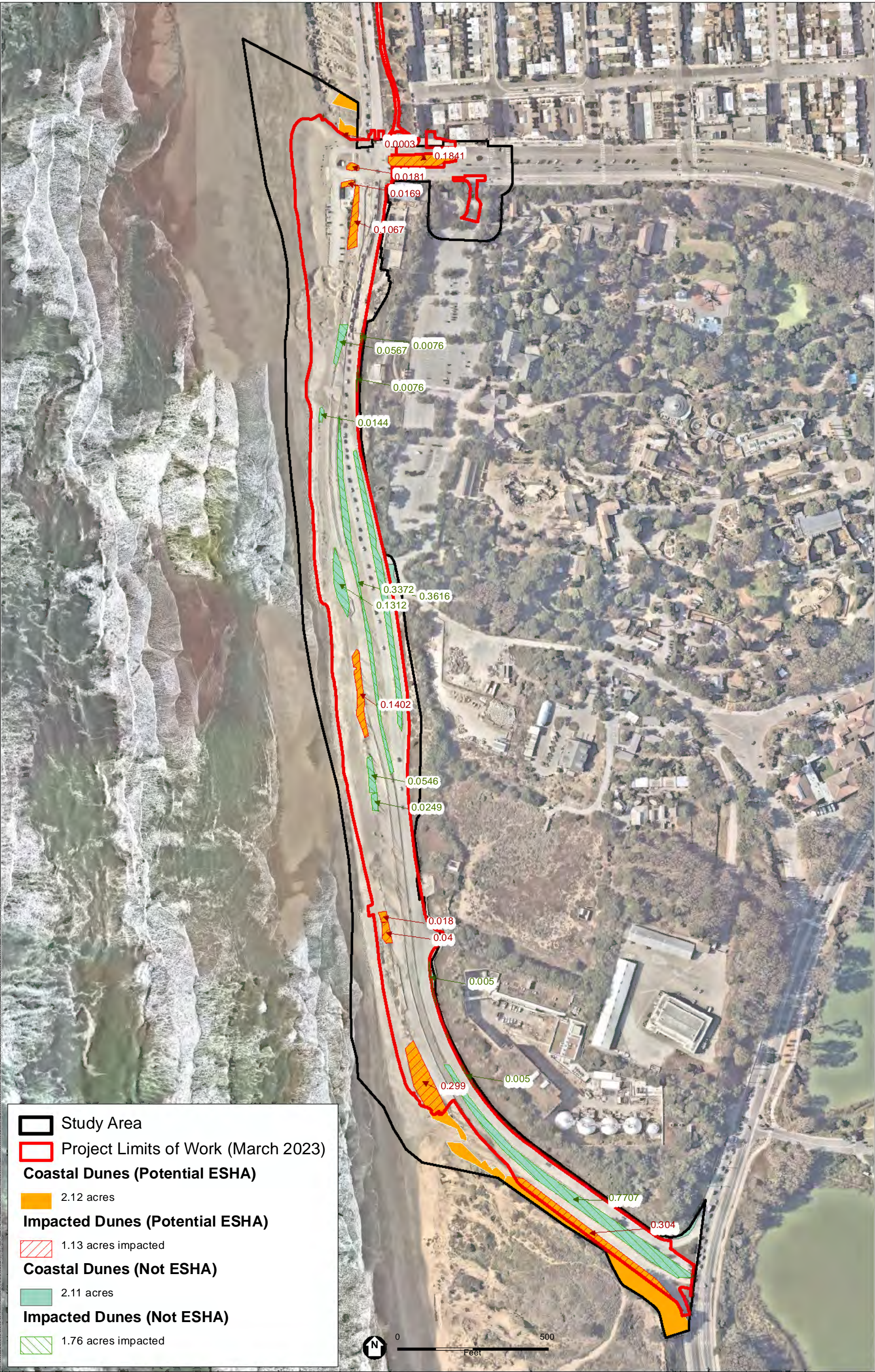
<sup>132</sup> BioMaAS, 2021. Ocean Beach Climate Change Adaptation Project Biological Resources Assessment, prepared for the San Francisco Public Utilities Commission, November 2021.

<sup>133</sup> Russell, Will, et. al., Evaluating Wildlife Response to Coastal Dune Habitat Restoration in San Francisco, California. Ecological Restoration, Vol. 27, No. 4, 2009.

Repaving the existing multi-use trail between Taraval Street and Sloat Boulevard would occur within the limits of existing pavement bounded by non-native ice plant or ornamental landscaping and would not result in impacts to native dune vegetation. The installation of mobi-mats similarly would not result in a new impact on biological resources. The areas where these mats would be deployed consist of bare sand which does not support dune vegetation, sensitive or otherwise, because this is the primary access path to the beach from Taraval Street. Project construction along South Ocean Beach would permanently disturb large areas of the disturbed dune mat community bordering the Great Highway and within highway medians, bordering the NPS parking lot, and among the rock revetments. As described in the Environmental Setting discussion of Environmentally Sensitive Habitat Areas (Section 4.6.2.2), while these fragmented areas contain sandy soils with disturbed dune mat vegetation, they are not part of an evolved, complex and dynamic dune system that meets the criteria of an ESHA. These areas are small and generally flat, lacking the dynamic topography and variation in dune structure (e.g., blowouts, parabolic or transgressive secondary dunes) typical of an advanced dune system that would consequently be more likely to support native dune flora and fauna, such as the sensitive yellow sand verbena – beach burr dune mat alliance. Although the disturbed dune mat vegetation community within the study area contains some small areas of native dune flora, these areas are not characteristic of the sensitive yellow sand verbena - beach burr dune mat alliance because most of them are densely populated with invasive ice plant and sea fig, and lacking other native dune ecosystem qualities or benefits that makes this alliance sensitive.

Small and large sand placement events during project operation would not adversely affect the sensitive yellow sand verbena – beach burr dune mat alliance, as sand excavation activities on North Ocean Beach and sand placement activities on South Ocean Beach would occur in areas of Ocean Beach with little or no dune vegetation. The access route from the Great Highway to the North Ocean Beach excavation area at Lincoln Way traverses some disturbed dune mat vegetation that is dominated by ice plant and does not have the presence or diversity of native species characteristic of this sensitive dune alliance ~~and is not characterized as dune habitat qualifying as ESHA~~. Therefore, project construction and operation would have a **less-than-significant** impact on the sensitive natural community yellow sand verbena – beach burr dune mat alliance.

Within the South Ocean Beach project area, project construction would impact up to 1.13 acre of dunes classified as potential ESHA and up to 1.76 acres of non-ESHA dunes (Figure 4.6-3b). Within this area, the city would implement a habitat restoration and enhancement plan (restoration plan), as described in Section 9.1.1, and shown in Figure 2-6a, which would restore a total of 9.36 acres of coastal dune habitat. The restoration plan area would comprise three zones, and its vegetation would vary with elevation but would be composed of native dune associates. The farthest landward zone would be the stable backdunes zone (approximately 1.25 acres), located between the service road and the multi-use trail. This area would support relatively continuous vegetative cover composed of native annual and perennial forbs, perennial grasses, and shrubs, with integrated stormwater infiltration basins (dune depressions). Next would be the native vegetative stabilization zone (4.48 acres), west of the multi-use trail, above the slope stabilization layer and low-profile wall. Vegetation in this zone would primarily consist of beach wildrye (*Elymus mollis*) to intercept, trap, and stabilize onshore wind-blown sand. Dune nourishment would be expected to occur naturally from sand blown over the vegetative stabilization zone during windy conditions. The farthest seaward zone would be the sacrificial zone (3.63 acres), which would be expected to erode periodically from wave runup and be replenished by natural sand accretion and beach nourishment. This zone comprises a landward, vegetated foredune with beach wildrye and perennial forbs, and a naturally unvegetated, dry beach zone. The



SOURCE: ESA 2022

Notes: Project limits of work extend beyond the study area and figure boundary to the north and consist of repaving a pedestrian trail.

Ocean Beach Climate Change Adaptation Project

New Figure 4.6-3b

Location and Extent of Coastal Dunes and Impacts within the South Ocean Beach Project Area

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concentration and distribution of vegetation within the landward portion of the sacrificial zone would be variable in a given year depending on the wave activity and beach nourishment. The vegetative stabilization and sacrificial zones would provide 8.11 acres of contiguous dune habitat. Implementation of the project would therefore substantially increase the quantity of dune habitat in the project area while improving habitat connectivity and habitat quality compared to existing conditions, through sustained, expanded dune system function and introduction of native dune plants. Additionally, implementation of Mitigation Measure BI-2f would restore approximately 2 acres of dune habitat within Fort Funston (see Figure 4.6-3a) through non-native vegetation removal and restoration with native dune plants to improve bank swallow foraging habitat. As the collective restoration areas that would be implemented under the project are substantially larger than the area of potential ESHA dunes impacted (1.13 acres), no additional compensatory mitigation is proposed to offset project impacts on this resource. If the California Coastal Commission determines through the permitting process that project impacts on ESHA dunes require compensatory mitigation in exceedance of the 9.36 acres dune restoration proposed within the project area, and 2 acres dune restoration proposed within Fort Funston, additional dune habitat in the project vicinity could be restored or enhanced to fulfil the compensatory mitigation requirements. Potential impacts of implementing the additional mitigation would be similar to those described above in Response BI-1.

\*The second paragraph under *Operation Effects of Night Lighting on Resident and Migratory Wildlife* on draft EIR p. 4.6-60 has been updated as follows:

The multi-use path, service road, Skyline coastal parking lot, and new restroom would involve new and relocated sources of nighttime lighting within the project area. The minimal lighting along the multi-use trail would incorporate NPS best management practices for lighting, including only adding lighting where it is needed, shielding lights and directing them downward, and using lamps with warmer colors. Lighting at the Skyline coastal parking lot and new restroom would be similar to existing nighttime lighting near the Skyline intersection and at the existing restroom facility. The project would introduce new sources of lighting along the access road for approximately 600 feet between the Great Highway zoo entrance and Skyline Boulevard where ~~none~~ minimal lighting currently exists. As explained further in Section 4.2, Aesthetics (Impact AES-6), the project would not appreciably change the lighted environment relative to baseline conditions; the increase in permanent lighting would not be substantial, and would be offset by decreases in other sources of nighttime light that would result from the project, such as the removal of street lights along the west side of the Great Highway near Sloat Boulevard and loss of vehicle lights along the former public roadway. For these reasons, replacement and introduction of some new, permanent artificial night lighting within the project area is not expected to significantly disrupt bird migration along the Pacific Flyway during operations.

\*The first paragraph under *Operation* on draft EIR pp. 4.6-63 through 4.6-64 has been updated to address the potential impacts of the plant propagation site on nesting birds as follows:

Following project construction, the project area would provide similar, if not improved, suitable habitat and nesting opportunity for birds in landscaped trees and shrubs and among ground vegetation planted on the reshaped bluff, and between the multi-use trail and service road. Although the abundance and quality of habitat for nesting birds would depend on vegetation type (e.g., tree, shrub, grasses, forbs) and species selected (e.g., native or ornamental), the project would revegetate areas largely characterized as the disturbed dune mat vegetation community, with a

dominance of ice plant and sea fig, which provided limited habitat value to nesting birds. Use of the project area by the public would not be substantially different from current conditions or affect how nesting birds occupy suitable habitat areas. Implementation of small and large sand placement events would not substantially disrupt nesting within either the North Ocean Beach or South Ocean Beach project sites, as the beach and foredune communities are not widely used for nesting by local resident or migratory species. Noise and visual disturbances generated during sand excavation and placement are not expected to substantially disrupt nesting efforts in the vicinity of this work, as vegetative habitat suitable for nesting at these locations would be buffered and obscured by the reshaped bluff topography. Disturbance to birds nesting in vegetation proximate to the sand excavation and placement locations is expected to be temporary, and limited to potential nesting sites in vegetation proximate to the equipment access routes to and from sand excavation and placement locations, where equipment would be closest to vegetation suitable for nesting, located east of the reshaped bluff on South Ocean Beach and east of the O'Shaughnessy Sea Wall on North Ocean Beach. The Fort Funston propagation site plantings, particularly the native shrubs and dune grasses, may be attractive to nesting birds. If maintenance weeding or harvesting activities were to occur during the nesting season, the project could impact active bird nests within the propagation site vegetation. Similar to protective actions implemented during the construction phase, compliance with local, state, and federal requirements for protection of nesting and migratory birds, and with implementation of standard construction measure 7, the project would avoid potential impacts to nesting birds during the operations phase. A qualified biologist would survey the propagation site for active nests during nesting season and establish protective measures around nests until they are no longer in use. Potential impacts on nesting birds due to project operations would therefore be ***less than significant***.

The text of Impact BI-10 on draft EIR p. 4.6-67, beginning with the second paragraph, has been revised as follows:

One of the Western Shoreline Area Plan includes one policy policies related to the protection of biological resources of Ocean Beach is: Policy 6.2, Improve and stabilize the sand dunes where necessary with natural materials to control erosion. Under the project, the reshaped bluff face above the buried wall would include measures to prevent wind erosion displacement of the introduced sand. As discussed in Chapter 2, Project Description, Section 2.4.3, Debris and Revetment Removal, and Sand Placement and Revegetation, these measures may include wooden slat, plastic, or fabric sand fencing to prevent sand displacement and shape additional dune berms, and placement of a layer of coarse sand over the finer sand used within the reshaped bluff. Plantings on the bluff face would be native, climate-appropriate, locally adaptive, and non-invasive, and would require little water. As the policy specifies use of natural materials to prevent dune erosion, the use of coarse sand or native plantings to stabilize the reshaped bluff face would not be in conflict with the plan. Furthermore, the project includes stormwater controls (infiltration basins) which would limit erosion by preventing stormwater from adjacent paved areas from flowing over the reshaped bluff.

The Western Shoreline Area Plan policies 12.2(e) and 12.2(f) call for the development and implementation of sea level rise adaptation plans for the city's western shoreline that preserve, enhance, or restore the sandy beach, dunes, and natural and scenic resources (e.g., beach nourishment and dune restoration); prioritize managed retreat over shoreline protection devices; and consider the recommendations of the Ocean Beach Master Plan.

Consistent with Policies 12.2(e) and 12.2(f), the project involves several managed retreat elements, many of which are recommended in the Ocean Beach Master Plan, including removing existing revetments and debris from the beach and bluff, removing the existing restroom and parking lot at the Sloat Boulevard/Great Highway intersection and relocating them landward, and removing the Great Highway to accommodate a trail, park and service road. To enable this retreat and to protect existing critical infrastructure, the city would construct a buried wall at a location inland of the existing revetments and rubble, and would also stabilize and reshape the bluff to a gentler slope, and place sand atop and revegetate the reshaped bluff with native plants. As discussed in Section 2.4.3 and consistent with Ocean Beach Master Plan recommendations, the habitat restoration and enhancement plan (restoration plan) would incorporate native dune plantings into the landscape design, including 8.11 acres of contiguous dune habitat, composed of the vegetative stabilization zone (4.48 acres) and the sacrificial zone (3.63 acres). Even with sand fencing and vegetation, dune nourishment would be expected to occur naturally from sand blown from the beach over the vegetative stabilization zone during windy conditions and further landward into the stable backdune zone (1.25 acres).

The sacrificial zone would be expected to erode periodically and be replenished by natural sand accretion and beach nourishment. The project also includes a beach nourishment program intended to maintain a sandy beach and minimize exposure of the buried wall. Removal of the revetments and rubble, and beach nourishment and plantings, would enhance scenic resources and widen the beach for recreational access, and improve its overall ecological value with the increased quantity and quality of contiguous dune habitat created in the restoration plan area compared to existing conditions. Although the project would impact 1.13 acres of dunes identified as potential ESHA, implementation of the restoration plan would more than offset the ecological loss of the existing dunes. As discussed in draft EIR Section 1.4.4, Relationship to Ocean Beach Planning Initiatives, and Section 2.1, Project Overview, the guiding principles of the Ocean Beach Master Plan are incorporated in the project's objectives and elements and the project design.

Policy 12.6 directs that shoreline protection devices be designed to avoid, minimize, and mitigate impacts on coastal resources, including ESHAs. While the project would improve scenic quality, public recreation, coastal dune habitat, and coastal access, as discussed in Section 3.2.1.2, Western Shoreline Area Plan (Local Coastal Program), the project would not entirely avoid or mitigate impacts on bank swallow habitat (potential ESHA). The project would also require removal of 1.13 acres of coastal dune habitat (potential ESHA), an impact which would be offset through implementation of the project's restoration plan. While the project's impacts on bank swallow habitat and coastal dune habitat may be inconsistent with Policy 12.6, on balance, the project as a whole is consistent with Policy 12.6 and the Western Shoreline Area Plan. The physical environmental effects of these potential inconsistencies are discussed in Impact BI-2 for bank swallow habitat and Impact BI-6 for coastal dune habitat, along with mitigation measures recommended to avoid or minimize those effects (e.g., habitat creation and enhancement, among others).

\*The text under Impact C-BI-2 on draft EIR p. 4.6-73 has been revised as follows:

**San Francisco Spineflower and Yellow Sand Verbena – Beach Burr Dune Mat Alliance**

As explained under Impacts BI-1 and BI-6, project operation would result in less-than-significant impacts on San Francisco spineflower and the sensitive natural community yellow sand verbena –

beach burr dune mat alliance. The sand excavation area and access route on North Ocean Beach and the nourishment location on South Ocean Beach do not contain dune habitat supportive of the spineflower or sensitive dune vegetation alliances; rather, these work areas are mostly bare sandy beach with some ice plant where the beach transitions to foredune habitat. Similarly, these plants are not known to occur in the proposed Fort Funston propagation site area or along the Middle Ocean Beach multi-use trail, as these areas are almost entirely covered in ice plant. The only cumulative project that could result in operational impacts on San Francisco spineflower or the yellow sand verbena – beach burr dune mat alliance would be the Fort Funston Trail Connection. Potential impacts on these resources from direct trampling or habitat degradation from introduction of nonnative or invasive plant species could occur through public use of the Fort Funston trail connection project. The cumulative impact on the San Francisco spineflower rare plant population and yellow sand verbena – beach burr dune mat alliance from operation of these projects would be less than significant because the project’s operational locations are not known to support these resources and the area of potential effect for the Fort Funston trail connection project is reasonably assumed to be limited to a relatively small verge, or narrow area beyond the footprint of the trail alignment which could be disturbed by trail users stepping off or meandering from the trail, would not result in a substantially adverse effect on these resources. Therefore, the cumulative impact would be ***less than significant***.

The text under *Nesting Bank Swallow* and *Bank Swallow Habitat* on draft EIR pp. 4.6-73 and 4.6-74 has been revised as follows:

#### ***Nesting Bank Swallow***

As discussed under Impact BI-2, sand placement on South Ocean Beach could disrupt bank swallow nesting efforts within the Fort Funston colony adjacent to (south of) the project area if sand placement were to occur within 650 feet of active nest burrows during nesting season. This impact would be reduced to a less-than-significant level through mitigation. The only other cumulative projects in proximity to the bank swallow colony ~~is~~ are the Fort Funston Trail Connection on the bluffs above the northernmost segment of the colony and the 2021 U.S. Army Corps of Engineers (Corps) Storm Damage Reduction Beach Nourishment Project along South Ocean Beach. Given its inland location, use of the trail system on the bluffs above the bank swallow colony would not be expected to result in substantial noise or visual disturbance that would adversely affect nesting within the colony. Furthermore, the 2021 Corps project was completed in August and September, outside of the bank swallow nesting season, and resulted in no direct or indirect effects on nesting bank swallows. Therefore, the effects of project operations in combination with those of the cumulative projects, would be ***less than significant***.

#### ***Bank Swallow Habitat***

As explained in Impact BI-2, the coastal engineering study concluded implementation of the project would not have a substantial adverse effect on adjacent shoreline erosion when compared with the no-project scenario ~~such and that the potential~~ project impacts on ~~habitat characteristics of the remaining suitable bank swallow nesting bluff habitat in Fort Funston for breeding bank swallow~~ would be less than significant. The 2021 Corps project involved placement of sand over the revetments immediately below the bank swallow habitat at South Ocean Beach. The placed sand did not cover the bluff face or burrows in the bluff that comprise the bank swallow habitat within the project area (see photograph of site A-001 in Table 3 of Attachment D). No other project in the

cumulative scenario would contribute to a cumulative impact on bank swallow habitat through operations. Therefore, the cumulative impact on bank swallow habitat would be **less than significant**.

\*The text under *Other Nesting Birds* on draft EIR p. 4.6-74 has been revised as follows:

As explained under Impact BI-8, the project would result in less-than-significant impacts on birds attempting to nest in suitable habitat east of the excavation areas on North Ocean Beach, ~~and east of the sand placement locations on South Ocean Beach, and near the Fort Funston plant propagation site.~~ No other project in the cumulative scenario would contribute to a cumulative impact on nesting birds proximate to the North Ocean Beach excavation area or South Ocean Beach sand placement locations through operations. Therefore, the cumulative impact on nesting birds would be **less than significant**.

The text under *Marine Biological Resources* on draft EIR p. 4.6-75 has been revised as follows:

The project's operational impacts on marine biological resources are identified under Impacts BI-5, BI-6, and BI-7; they include temporary impacts on benthic habitats and marine species migration from dredge vessel anchoring and pipeline placement, temporary impacts on water quality through sediment resuspension in support of these activities, potential impacts on the intertidal invertebrate community following nourishment activities, and temporary fill of jurisdictional waters. Of the cumulative projects examined, only the 2021 U.S. Army Corps of Engineers (Corps) Storm Damage Reduction Beach Nourishment Project could result in impacts that could combine geographically with the project's operational effects on marine biological resources. The Corps beach nourishment project involved a one-time placement of approximately 380,000 cubic yards of dredged sand at South Ocean Beach. This placement had the potential to result in similar impacts to those identified for the project and could potentially exacerbate impacts on benthic habitat and species.

Applied Marine Sciences (AMS) evaluated whether the 2021 beach nourishment project had changed the ecological value of benthic conditions at South Ocean Beach, relative to baseline conditions. In brief, the AMS evaluation found some evidence that the benthic community at South Ocean Beach had been altered in the area of the Corps' 2021 sand placement. Species presence/absence and species acquisition at South Ocean Beach appeared to differ relative to the Fort Funston beach reference site. Similarly, a common crustacean taxon, *Eohaustorius washingtonianus*, was found to differ in distribution between surveys. However, these changes could not be associated with concurrent changes in physical variables (e.g., beach width, beach slope, etc.).<sup>146</sup> Changes in mean grain size were observed from the baseline to year 1 surveys at both South Ocean Beach and Fort Funston beach, but corresponded to a narrow range; from 0.29 (+/- 0.004) mm to 0.27 (+/- 0.006) mm at South Ocean Beach and from 0.29 (+/- 0.006) mm to 0.31 (+/- 0.005) at Funston Beach. It is unlikely that these small changes would result in adverse effects on the benthic community since there were no significant changes in total abundance, *Emerita* density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area.<sup>147</sup> Following the first year of post-nourishment assessment, AMS concluded that there was not sufficient evidence, based on the monitoring results, that the benthic community at South Ocean Beach was similar to baseline survey conditions. The authors concluded that additional surveys are needed to be confident that the observed changes reflect stability of the benthic community of South Ocean Beach compared to baseline and reference conditions.<sup>148</sup> Nevertheless, since there were no significant changes in total abundance, *Emerita*

density, or *Emerita* biomass at South Ocean Beach that did not also occur at the reference area, it is unlikely that the effects of the Corps' 2021 beach nourishment project would combine with those of project operations to result in a cumulatively significant effect. ~~none would result in impacts that could combine geographically with the project's operational effects.~~ Therefore, cumulative impacts resulting from in-water work, and the cumulative impact on marine resources associated with operations, would be **less than significant**.

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<sup>146</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 1, 2023.

<sup>147</sup> Species acquisition depicts the relationship between the number of new taxa observed with increased sampling effort. It is a helpful metric for understanding how benthic communities change over time or in response to disturbance.

<sup>148</sup> Applied Marine Sciences, 2023. Technical Memo Summarizing the Results of the South Ocean Beach Year 1 Post-Nourishment Benthic Survey. Prepared for Environmental Science Associates. March 1, 2023.

## 12.11 Revisions to Chapter 5, Other CEQA Issues

\*Draft EIR Section 5.2.3, Biological Resources, starting on p. 5-2, has been revised as follows:

The project would replace areas of eroding bluff that are used as nesting habitat by bank swallows (a threatened species listed under the California Endangered Species Act) with slope stabilization and sand. As discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, Section 4.6, Biological Resources, under Impact BI-2, bank swallows returning to historical nesting areas to breed following project implementation would find this portion of bluff (approximately 500 feet) removed. The birds could attempt to establish burrows in the remaining approximately 2,750 feet of Fort Funston bluffs south of the project area where vertical sandy bluff substrate remains or farther south at Phillip Burton Memorial Beach where they have been documented to nest in the past, most recently in 2019, 2020 and 2021. Although NPS monitoring did not document bank swallow nesting in the project area during 2020 or 2021,<sup>1,2,3</sup> the resilience of the breeding colony to persist following removal of bluff habitat within the project area is unknown. Removal of a portion of the limited bluff habitat currently suitable for hosting the breeding colony could potentially contribute to the extirpation of the Fort Funston breeding colony, therefore the loss of the bank swallow breeding habitat would be a significant impact. There are no feasible and proven mitigation strategies or opportunities to replace or otherwise fully compensate for lost local bank swallow breeding habitat. While no feasible mitigation exists to fully address the direct project effect on bank swallow habitat, mitigation measures would avoid or minimize future disturbance or impact on the remaining suitable bluff habitat for nesting bank swallow; contribute to research and understanding of population dynamics, movement, and coastal habitat preference; improve foraging habitat within Fort Funston through removal of invasive vegetation and restoration of native dune plants; enhance or expand nesting habitat through removal of ice plant from the bluff face; and explore the feasibility and efficacy of artificial habitat concepts by studying and implementing such concepts. Of the feasible and effective options that could indirectly reduce bank swallow habitat impacts, most would require action by a third party (NPS), outside of the city's control. ~~Mitigation involving signage and fencing has been~~

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<sup>1</sup> National Park Service, 2020. 2020 Bank Swallow Summary Report.

<sup>2</sup> National Park Service, 2021. Bank Swallow Monitoring Update, June 2021.

<sup>3</sup> National Park Service, 2021, Email from Bill Merkel (NPS) to James Mates-Muchin (SFPUC) re: Bank Swallow Nesting 2021. November 17, 2021.

~~identified to minimize impacts on remaining potential breeding sites adjacent to the project area. However, there are no readily identifiable examples of successful habitat mitigation strategies among bank swallow coastal breeding areas that would fully avoid or reduce the project's effects on bank swallow habitat. Thus, the project would cause a substantial adverse change in special-status species habitat, and the impact on bank swallow habitat would be significant and unavoidable with mitigation.~~

## 12.12 Revisions to Chapter 6, Alternatives

The following sentence has been added under *Transportation and Circulation* on draft EIR p. 6-9:

### **TRANSPORTATION AND CIRCULATION**

Alternative A would avoid the significant and unavoidable VMT impact caused by the project because the Great Highway between Sloat and Skyline boulevards would remain open. If continued erosion were to require further Great Highway lane closures, increased VMT would result due to rerouted vehicular traffic along Sloat and Skyline boulevards. Continued erosion could also result in the relocation of the Muni 23 Monterey turnaround/layover, which could cause similar impacts as the project.

The following changes have been made under *Recreation* on draft EIR p. 6-11:

### **RECREATION**

Alternative A would not displace recreational beach users to other areas such that physical degradation of facilities would result because during ongoing shoreline management activities ample beach surrounding the project site would remain available for recreationists, resulting in less-than-significant impacts related to recreation. If continued erosion were to require closure of the NPS parking lot and restroom, increased use from recreationists displaced by the project could accelerate deterioration of the public restrooms at Taraval Street and at Judah Street.

A sentence has been added under *Transportation and Circulation* on draft EIR p. 6-16 as follows:

### **TRANSPORTATION AND CIRCULATION**

Alternative A would avoid the significant and unavoidable VMT impact caused by the project because the Great Highway between Sloat and Skyline boulevards would remain open. If continued erosion were to require further Great Highway lane closures, increased VMT would occur due to rerouted traffic along Sloat and Skyline boulevards. Continued erosion could also result in the relocation of the Muni 23 Monterey turnaround/layover, which could cause similar impacts as the project.

A sentence has been added under *Recreation* on draft EIR p. 6-18 as shown:

### **RECREATION**

During construction and beach nourishment, ample beach surrounding the project site would remain available for recreationists. Owing to the larger beach nourishment volumes, beach widths would be expected to remain similar to or wider than those under the project. As noted above, Alternative B would result in similar or slightly larger changes to sand bars than the project. Given

the dynamic nature of the system, it is expected that bar characteristics would continue to vary seasonally. A change in sand bar geometry may result in enhanced or degraded wave breaking conditions for surfing, as a function of wave conditions and skill level, with resulting changes in wave conditions likely being more attractive to some users and less to others. However, given the anticipated range of sediment dispersion, the extent of such changes relative to inherent variability would not be substantial – discernable on the order of about 1,000 feet to 3,000 feet from the project site to the north and likely an equal distance to the south. For these reasons, and given the amount of adjacent and nearby coastline available for surfing, the changes under Alternative B would not be expected to result in the displacement of substantial numbers of visitors such that other beach park facilities experienced substantial physical deterioration. If continued erosion were to require closure of the NPS parking lot and restroom, increased use could accelerate deterioration of the public restrooms at Taraval Street and at Judah Street.

## 12.13 Revisions to Appendix B, Initial Study Section E.3 Population and Housing

\*The following revisions have been made under *Construction* on draft EIR Appendix B p. 7:

As discussed above, construction is expected to require approximately 50 daily workers per phase during the construction period (approximately four years). The Westside Pump Station Reliability Improvements, Vista Grande Drainage Basin Improvement, Oceanside Treatment Plant Improvements (two projects), San Francisco Zoo Recycled Water Pipeline, Lake Merced West, and Westside Force Main Reliability, 2700 45<sup>th</sup> Avenue, and 2700 Sloat Boulevard projects may involve similar numbers of construction workers as the project due to the anticipated area of ground disturbance and project scale. Assuming these projects require a similar average number of construction workers as the project, the project in combination with cumulative projects would create up to ~~400~~ 450 temporary construction jobs. This number of jobs is substantially smaller than the anticipated growth in construction jobs projected for the area, and would be less than 1 percent of the existing number of construction jobs. Construction of the project along with cumulative projects would not induce substantial unplanned population growth. Therefore, the cumulative population and housing impact of project construction along with construction of cumulative projects would be ***less than significant***.

## 12.14 Revisions to Appendix B, Initial Study Section E.4, Cultural Resources

\*The fourth paragraph on draft EIR Appendix B p. 10 has been revised as follows:

The C-APE also includes a 14-acre section of beach north of Lincoln Way, where the project may excavate sand to use for replenishment to the south. This area is discussed in this document as the North Ocean Beach portion of the C-APE. The North Ocean Beach portion of the C-APE includes excavation up to 6 feet deep on the beach. The C-APE also includes the 16-acre area within which the 0.5-acre Fort Funston plant propagation site would be located.

\*Table 1 on draft EIR Appendix B p. 12 has been revised to include the following row after “Revegetation”:

Fort Funston Plant Propagation Site	<ul style="list-style-type: none"> <li>• <u>0.5 acre, approximately 350 feet long by 350 feet wide</u></li> <li>• <u>2 feet or less</u></li> </ul>
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\*The following text has been added after the second paragraph under *Native American Archeological Resources* on draft EIR Appendix B p. 13:

Three Native American archeological resources are within a 0.5-mile radius of the plant propagation site C-APE. Sites CA-SFR-106, CA-SFR-183, and CA-SFR-414 are all Native American midden sites; none have been tested or evaluated for eligibility determinations. These resources are all outside of the C-APE for this project.

\*The following text has been added after the second paragraph under *Dunes* on draft EIR Appendix B p. 15:

Based on the NWIC records, the Fort Funston plant propagation site portion of the C-APE has a moderate sensitivity for Native American archeological resources. Given the extensive vegetation and low visibility, a surface survey was not completed. However, no Native American resources have been previously identified in the C-APE at this location and there would be no impact to any nearby resources from project implementation.

\*The following text has been added to the first paragraph under *Summary* of Impact CR-2 on Appendix B p. 17:

**Summary.** In summary, there is no potential for intact Native American archeological deposits to be present within the upper stratum of disturbed sand dunes (identified as “fill” in geotechnical reports) throughout the South Ocean Beach portion of the C-APE. Although none was observed during the geoarcheological testing program, there is the potential for redeposited Native American material to be present within these disturbed soils. However, detecting any but a substantial redeposit would be difficult given the small sample of the cores (1.5 to 2-inch diameter cores). There is also the potential for intact Native American archeological deposits to be located in the dune sand of the Fort Funston plant propagation site portion of the C-APE.

\*The two paragraphs under *Construction* on draft EIR Appendix B pp. 19 through 20 have been revised as follows:

Project construction that has the potential to impact buried Native American archeological resources in the South Ocean Beach C-APE includes the buried wall, bluff recontouring, and beach access stairway. Excavations for the new restroom would include ground disturbance to a depth of approximately 10 feet bgs would be entirely within fill, and the proposed site appears to be within the former Lake Merced outlet creek channel, based on stratigraphic data from geotechnical investigations. On this basis, there is a low potential for excavations in this area to encounter buried Native American archeological resources. Elsewhere in the South Ocean Beach area, there remains the potential, albeit low, for project construction activities to encounter buried Native American archeological resources in intact dune sands, including the Fort Funston plant propagation site portion of the C-APE, and/or the Colma or Merced formations, as well as redeposited Native American material in the fill. There is also the potential for project excavations to encounter historic

buried features associated with the former U.S. Coast Guard and military installations in the South Ocean Beach C-APE, near the Oceanside Treatment Plant; and shipwreck remnants, near the Sloat Boulevard/Great Highway intersection. While documentation of the exact location of the bore pit that previously exposed the ship remains is not available, the north end of the Lake Merced Tunnel is under the Great Highway adjacent to the Westside Pump Station, which suggests that project excavations, which would occur primarily west of the highway in this area, are not likely to re-encounter the previously discovered ship remains. However, this cannot be determined definitively.

The archeological analysis indicates that there remains the potential for both Native American and historical resources to be present in the C-APE. Based on current project plans, this is limited to the disturbed fill and dune sand in the area of bluff reshaping along the southern part of the South Ocean Beach portion of the C-APE and in the Fort Funston plant propagation site portion of the C-APE. In order to ensure that significant impacts to archeological resources would not occur the SFPUC would implement standard construction measures for the project, including Standard Archeological Measures I (Archeological Discovery) and II (Archeological Monitoring). Under Standard Archeological Measure II, a qualified archeologist (as defined in Standard Archeological Measure I.C) would consult with the SFPUC and the ERO to develop an archeological monitoring program to guide archeological monitoring during project-related ground disturbance. The monitoring plan would identify the specific locations and construction activities within the C-APE where monitoring is required (e.g., near the suspected location of Battery Walter Howe, the proposed bluff reshaping in the southern part of the South Ocean Beach portion of the C-APE, and the Fort Funston plant propagation site portion of the C-APE), as well as the type and frequency of monitoring to be conducted. Under the monitoring program, an archeological monitor would observe excavations. If suspected archeological resources were uncovered during project implementation, ground-disturbing work at the discovery location would be required to halt, pending documentation of the find and evaluation of whether the resource encountered constitutes a historical resource under CEQA. Standard Archeological Measure I also would be implemented, to address the potential for archeological discoveries in the absence of an archeologist. This measure provides that work must halt if a suspected archeological resource is discovered during project implementation, and specifies procedures be followed to protect the resource, ensure that it is assessed by an archeologist and provide appropriate treatment of significant archeological resources. Implementation of SFPUC Standard Archeological Measures I and II would minimize the potential for significant impacts on archeological resources during construction. With implementation of these required measures, impacts to archeological resources would be less than significant.

## 12.15 Revisions to Appendix B, Initial Study Section E.5, Tribal Cultural Resources

\*The last paragraph on draft EIR p. 23 has been revised as follows:

Pursuant to CEQA section 21080.3.1(d), within 14 days of a determination that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency is required to contact the Native American tribes that are culturally or traditionally affiliated with the geographic area in which the project is located. Notified tribes have 30 days to request consultation with the lead agency to discuss potential impacts on tribal cultural resources and measures for

addressing those impacts. On ~~October 30~~ November 4, 2019, the San Francisco Planning Department contacted Native American individuals and organizations for the San Francisco area, providing a description of the project and requesting comments on the identification, presence, and significance of tribal cultural resources in the project vicinity.

## 12.16 Revisions to Appendix B, Initial Study Section E.8, Air Quality

\*The following text has been added to the end of the third paragraph under *Local Health Risks and Hazards* on draft EIR Appendix B p. 30:

Although workers may not always be considered sensitive receptors because all employers must follow regulations set forth by the Occupational Safety and Health Administration to ensure the health and well-being of their employees, off-site workers (workers near a plan-generated emissions source, such as a generator from a subsequent project) are conservatively considered sensitive receptors in this analysis.

\*A reference to new supplement to the Air Quality Technical Memorandum and Health Risk Assessment has been added to the first paragraph under *Air Quality Impacts* on draft EIR Appendix B p. 33 as follows:

This air quality impact analysis is based, in part, on the Air Quality Technical Memorandum and supplemental analysis prepared for the project, which provide detailed estimates of project-related emissions and associated health risks and ~~is~~are included in EIR **Appendix G**. The project-related air quality impacts are analyzed in the impact discussions identified below, which address short-term impacts from construction and long-term impacts from project operation, as follows:

\*The text and Table 3 on draft EIR Appendix B p. 37 have been revised as follows:

**Table 3** presents the air pollutant emissions modeling results for the project construction scenario. Detailed emissions by source for each year of construction are provided in Appendix G. Estimated construction-related emissions include combustion-related emissions (ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>) associated with the use of off-road equipment; on-road worker commute trips, vendor trips, heavy haul truck operations, and re-routed Great Highway trips; and ROG emissions from painting. As shown in Table 3, the total project daily emissions of the criteria pollutants ROG, PM<sub>10</sub>, and PM<sub>2.5</sub> would be below the listed criteria pollutant significance thresholds. However, average daily emissions of NO<sub>x</sub> would exceed the 54 pounds/day significance criterion in construction years ~~2024 through 2026~~ 2025 and 2027, and therefore result in a significant impact.

**Table 3 Average Daily Criteria Air Pollutant Emissions During Construction**

Year	Average Daily Emissions (pounds/day) <sup>a</sup>							
	Project <sup>b</sup>				Mitigated Project <sup>c</sup>			
	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Year 1 ( <del>2023</del> <u>2024</u> )	<del>18.56</del> <u>18.45</u>	<del>28.47</del> <u>28.35</u>	<del>1.12</del> <u>1.03</u>	<del>1.07</del> <u>0.99</u>	<del>N/A</del> <u>17.79</u>	<del>N/A</del> <u>21.31</u>	<del>N/A</del> <u>0.72</u>	<del>N/A</del> <u>0.70</u>
Year 2 ( <u>2024</u> <u>2025</u> )	<del>6.15</del> <u>21.69</u>	<del>58.44</del> <u>56.27</u>	<del>2.55</del> <u>2.48</u>	<del>2.07</del> <u>2.01</u>	<del>4.75</del> <u>20.39</u>	<del>43.18</del> <u>43.32</u>	<del>1.96</del> <u>1.95</u>	<del>1.54</del> <u>1.53</u>

**Table 3 Average Daily Criteria Air Pollutant Emissions During Construction**

Year	Average Daily Emissions (pounds/day) <sup>a</sup>							
	Project <sup>b</sup>				Mitigated Project <sup>c</sup>			
	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Year 3 ( <del>2025</del> <u>2026</u> )	<del>27.19</del> <u>56</u>	<del>73.05</del> <u>53.28</u>	<del>2.98</del> <u>2.26</u>	<del>2.48</del> <u>1.80</u>	<del>25.41</del> <u>4.24</u>	<del>53.10</del> <u>39.70</u>	<del>2.21</del> <u>1.72</u>	<del>1.79</del> <u>1.31</u>
Year 4 ( <del>2026</del> <u>2027</u> )	<del>27.26</del> <u>22.06</u>	<del>68.18</del> <u>63.56</u>	<del>2.94</del> <u>2.80</u>	<del>2.94</del> <u>2.30</u>	<del>24.21</del> <u>20.09</u>	<del>45.27</del> <u>43.42</u>	<del>2.07</del> <u>2.04</u>	<del>1.65</del> <u>1.61</u>
Year 5 ( <u>2028</u> )	<u>2.47</u>	<u>17.94</u>	<u>1.27</u>	<u>0.84</u>	<u>1.71</u>	<u>9.95</u>	<u>0.97</u>	<u>0.56</u>
Significance Threshold	54	54	82	54	54	54	82	54
Significant Impact?	No	<b>Yes</b>	No	No	No	No	No	No

SOURCES: Environmental Science Associates, Memo to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment, November 3, 2021 (see Appendix G); and Bay Area Air Quality Management District, California Environmental Quality Act, Air Quality Guidelines, May 2017, CalEEMod, version 2016.3.2; Environmental Science Associates, Memo Addendum to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment Addendum, June 9 (see Attachment C).

ABBREVIATIONS:

ROG = reactive organic gases

NO<sub>x</sub> = oxides of nitrogen

PM<sub>10</sub> = particulate matter less than or equal to 10 microns in diameter

PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns in diameter

N/A = Not applicable

NOTES:

<sup>a</sup> Average daily construction equipment and vehicle emissions were estimated using average equipment use hour and trip factors per day by phase. For example, total hours for each piece of equipment and total truck trips by phase were divided by the number of workdays for that phase to determine the modelled average daily equipment use hours and trips for each phase.

**Bold values** = threshold exceedance

<sup>b</sup> The project assumption is that off-road construction equipment engine tier status and associated emission factors are CalEEMod defaults, which are average emissions factors for the equipment inventory for the given calendar year of construction, assumed to be ~~2023~~ 2024 through ~~2026~~ 2028; however, the first year that the Great Highway would be closed would be ~~2024~~ 2025; therefore, those associated emissions were modelled for ~~2024~~ 2025 through ~~2026~~ 2028.

<sup>c</sup> The mitigated project requirement is that all off-road construction equipment over 125 hp meet Tier 4 Final engine emission standards. Construction ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions do not exceed thresholds in Years 1, 3 or 5 and therefore, mitigation is not required and mitigated emissions are not presented for Years 1 or 2.

\*The text on draft EIR Appendix B p. 38 has been revised to reflect the updated construction schedule as follows as follows:

To address this impact for NO<sub>x</sub>, **Mitigation Measure M-AQ-2: Construction Emissions Minimization** was identified. This measure requires off-road equipment greater than 125 horsepower and operating for more than 20 total hours over the entire duration of construction activities to have engines that meet or exceed USEPA or air board Tier 4 Final off-road emissions standards in construction years ~~2, 3~~ and ~~4~~ (~~2024 through 2026~~ 2025 and 2027). With use of Tier 4 Final off-road engines, the project's combined construction-related NO<sub>x</sub> emissions would be reduced to below the significance criteria listed in Table 3. Other criteria air pollutant emissions not exceeding applicable thresholds would also decrease as a result of this measure.

Table 3 demonstrates that equipment and vehicle exhaust emissions associated with project construction could be reduced sufficiently with implementation of Mitigation Measure M-AQ-2 so as not to result in a cumulatively considerable net increase in non-attainment criteria air pollutants. As a result, the construction criteria air pollutant impact would be reduced to ***less than significant with mitigation***.

### **Mitigation Measure M-AQ-2: Construction Emissions Minimization**

#### **A. Engine Requirements.**

All off-road equipment greater than 125 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet the USEPA or California Air Resources Board Tier 4 Final off-road emission standards in construction years 2, 3 and 4 (~~2024 through 2026~~ 2025 and 2027).

\*The first full paragraph on draft EIR Appendix B p. 40 has been revised to reflect the updated construction schedule as follows:

The analysis assumes small sand placement events would occur about once every four years; large sand placement events would occur about once every 10 years. It is anticipated that the first sand placement event would occur ~~five years after construction is completed in 2026, which would be 2031~~ 2032.

\*The notes in Table 4 of draft EIR Appendix B p. 40 have been revised as follows:

NOTES: Total values may not add precisely due to rounding. Based upon the project's Sand Management Plan, small or large sand placement activities would first occur about 5 years after completion of project construction, ~~which would be year 2032 so those activities were modelled for year 2031; however, based on a previous schedule, the first sand placement event was modelled to occur in 2031. In addition,~~ the analysis assumes 2027 would be the first year of operations where re-routed vehicle emissions would occur from Great Highway closure. Therefore, operation period sand placements and re-routed vehicle emissions were modelled for year 2031 and 2027, respectively. Since modelling the emissions for years prior to 2032 results in increased emissions compared to if the emissions were modeled for year 2032 due to year over year emissions reductions associated with cleaner equipment and vehicle fleets, and because the modelled emissions estimates are considered to be less than significant, the operational emissions were not remodeled for year 2032; BAAQMD operational significance thresholds for particulates are for total PM, rather than exhaust only. Particulate emissions from increased Great Highway closure vehicular miles include fugitive dust (i.e., brake-wear, tire-wear, and road dust) in addition to the tailpipe exhaust emissions. Sand placement fugitive emissions would be controlled by BMPs required by the San Francisco Dust Ordinance; therefore, only exhaust particulate emissions are quantified.

\*The first full paragraph on draft EIR Appendix B p. 42 has been revised as follows:

The project would require construction activities over an approximately four-year period. Project construction would result in short-term emissions of diesel particulate matter. Construction activities also emit exhaust particulate and fugitive dust and contribute to local particulate matter (PM<sub>2.5</sub>) concentrations. The Great Highway, south of Sloat Boulevard, would be permanently closed

resulting in increased mobile TAC emissions along roadways where vehicular traffic would be redirected. An HRA was conducted to assess the potential impacts of diesel particulate matter and other TAC emissions resulting from project construction and redirected vehicular traffic (Appendix G-1). Project construction sources include emissions from off- and on-road construction equipment as well as fugitive dust emissions from onsite material movement activities. Operational sources include on-road vehicles traveling along roadways that would have increased vehicular traffic due to the closure of the Great Highway. The HRA was conducted following methods in the air district's Health Risk Screening Analysis Guidelines<sup>53,54</sup> and in the Office of Environmental Health Hazard Assessment's Air Toxics Hot Spots Program Guidance.<sup>55</sup> Because the emissions from the beach nourishment sand placement activities would involve short exposure durations (approximately 6 to 8 weeks) and infrequent (about once every four years or once every 10 years), these sources are not expected to adversely affect sensitive receptors near the project site and were therefore not included in the HRA.<sup>56</sup> Detailed information and assumptions used to calculate health risks to sensitive receptors are available in Appendix G.

\*Draft EIR Appendix B pp. 42 through 43 have been revised as follows:

Additionally, the HRA evaluated health risks for children at schools for each scenario. However, health risks resulting from the project for school-child receptor types are lower than the health risks for residential receptors in part because the exposure frequency and duration is shorter for school receptors (8 hours per day, 180 days per year, over 9 years) than it is for residential receptors (24 hours per day, 350 days per year, over 30 years). Worker receptors along the Great Highway (the San Francisco Zoo and the Oceanside Water Pollution Control Plant) are in closer proximity to the construction activities than other sensitive receptors analyzed. Therefore, health risk impacts for worker receptors from the construction activities only were evaluated.

**Table 6** presents the results of the HRA and identifies the increased lifetime excess cancer risk and localized annual average PM<sub>2.5</sub> concentrations from exposure to project emissions at the location where the project would result in the maximum impact for residential and school child receptors (called the maximally exposed individual sensitive receptors; hereafter, "maximally exposed receptor"). In addition, Table 6 provides the existing modeled cancer risk and annual average PM<sub>2.5</sub> concentrations from the Citywide-HRA. As shown in Table 6, the existing plus project excess lifetime cancer risk at the maximally exposed receptor for Scenario 1 would be 46.6 per million, which is below the APEZ cancer risk criteria of 100 per one million persons exposed. Similarly, for Scenario 2, the existing plus project excess cancer risk would be 32.2 per million, which is also below the APEZ cancer risk criteria. The maximally exposed worker receptor would have an existing plus project excess lifetime cancer risk for Scenario 1 of 31.8 per million, which is below the APEZ cancer risk criteria of 100 per one million persons exposed (see Attachment C). With respect to annual average PM<sub>2.5</sub> concentrations, the existing plus project concentration for the Scenario 1 and 2 residential receptors would be 8.698-62 µg/m<sup>3</sup> and 8.51 µg/m<sup>3</sup>, respectively, which are below the APEZ PM<sub>2.5</sub> concentrations of 10 µg/m<sup>3</sup>. The existing plus project annual average PM<sub>2.5</sub> concentrations for the worker receptor under for Scenario 1 would be 9.24, which is below the APEZ PM<sub>2.5</sub> concentrations of 10 µg/m<sup>3</sup> (see Attachment C). As shown in Table 6, the health risks resulting from the project at schools all are lower than the health risks for residential receptors discussed above. Therefore, under existing plus project conditions, the project's maximally exposed receptors would not exceed the APEZ criteria and thus the project would also not expand the geographic extent of the APEZ.

Accordingly, the project's activities would not expose sensitive receptors to substantial pollutant concentrations, and the associated health risk impact would be ***less than significant***.

**Table 6 Lifetime Excess Cancer Risk and PM<sub>2.5</sub> Concentration at the Maximally Exposed Individual Sensitive Receptors**

Receptor Type/Source	Health Risk	
	Lifetime Excess Cancer Risk (in one million)	PM <sub>2.5</sub> Concentration (µg/m <sup>3</sup> )
<b>SCENARIO 1 – RESIDENT<sup>a</sup></b>		
Existing <sup>b</sup>	42.2	8.51
Project Contribution	4.4	<u>0.180.11</u>
Existing plus Project <sup>c</sup>	46.6	<u>8.698.62</u>
<b>SCENARIO 1 – SCHOOL<sup>a</sup></b>		
Existing <sup>b</sup>	20.9	8.14
Project Contribution	0.4	<u>0.080.06</u>
Existing plus Project <sup>c</sup>	21.3	<u>8.228.19</u>
<b>SCENARIO 2 – RESIDENT<sup>d</sup></b>		
Existing <sup>b</sup>	27.8	8.21
Project Contribution	4.4	0.297
Existing plus Project <sup>c</sup>	32.2	8.51
<b>SCENARIO 2 – SCHOOL<sup>d</sup></b>		
Existing <sup>b</sup>	20.9	8.14
Project Contribution	0.2	0.06
Existing plus Project <sup>c</sup>	21.1	8.19

SOURCE: Environmental Science Associates, Memo to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment, November 3, 2021 (see Appendix G).

NOTES:

- a Scenario 1 assumes exposure starting when construction starts and continuing exposure into operations.
- b Existing values are from the Citywide-HRA.
- c Existing plus project total values may appear to not add correctly due to rounding.
- d Scenario 2 assumes exposure starting after construction completes (i.e., operational exposure only).

\*The sources of Table 6 on draft EIR Appendix B p. 43 have been updated as follows:

SOURCES: Environmental Science Associates, Memo to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment, November 3, 2021 (see Appendix G).

Environmental Science Associates, Memo Addendum to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment Addendum, January 17, 2023 (see Attachment C)

\***Table 7** on draft EIR Appendix B p. 45 has been revised as follows:

**Table 7 Nearby Projects and Proximity to Maximally Exposed Individual Sensitive Receptors**

Nearby Project Information		Distance to Maximally Exposed Individual Sensitive Receptors (feet) <sup>a</sup>	
Project Name (Project Sponsor or Jurisdiction)	Construction Dates	Scenario 1 – Resident <sup>b</sup>	Scenario 2 – Resident <sup>c</sup>
Fort Funston Trail Connection (NPS)	2027	>3,000	>3,000
Westside Pump Station Reliability Improvements (SFPUC)	2021-2023	<b>195</b>	<del>2,900</del> <u>1,700</u>
Vista Grande Drainage Basin Improvement Project (City of Daly City)	2021-2026	>3,000	>3,000
Reconfiguration of the Sloat Boulevard and State Route 35 (Skyline Boulevard) Intersection (SFMTA)	2024	2,650	<del>801</del> <u><b>1,000</b></u>
Oceanside Treatment Plant Improvements – Biosolids Cake Hopper Reliability Upgrade (SFPUC)	2026-2030	2,200	2,850
Oceanside Treatment Plant Improvements – Seismic Retrofits (SFPUC)	2026-2030	2,200	2,850
Signalization of State Route 35 (Skyline Boulevard) and Great Highway Intersection (Caltrans)	2022	>3,000	>3,000
The San Francisco Zoo Recycled Water Pipeline Project (SFPUC, Zoo)	2023-2024	<b>420</b>	<b>65</b>
Lake Merced West Project -520 John Muir Drive (Rec and Park)	2024-2026	>3,000	>3,000
Westside Force Main Reliability Project (SFPUC)	2027-2030	<b>195</b>	<del>2,900</del> <u>2,000</u>
2700 Sloat Boulevard (Sloat Garden Center)	Unknown	<b>560</b>	<del>2,050</del> <u><b>850</b></u>
Potential Upper Great Highway Closure from Sloat Boulevard to Lincoln Way (Rec and Park/SFMTA) <sup>d</sup>	Unknown	<b>Variable<sup>d</sup></b>	<b>Variable<sup>d</sup></b>
<u>Great Highway Pilot Project</u>	<u>Complete; pilot study ends 2025</u>	<b>Variable<sup>d</sup></b>	<b>Variable<sup>d</sup></b>
<u>Ocean Beach Storm Damage Reduction Beach Nourishment Project</u>	<u>Complete; 2021</u>	<b>350</b>	<u>2,000</u>
<u>Sloat Boulevard Quick Build Project (SFMTA)</u>	<u>2023</u>	<u><b>100<sup>e</sup></b></u>	<u><b>100<sup>e</sup></b></u>
<u>2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco)</u>	<u>Unknown</u>	<u><b>880</b></u>	<u><b>700</b></u>

SOURCES: Environmental Science Associates, Memo to Julie Moore, San Francisco Environmental Planning Division, from Matt Fagundes, Sarah Patterson, and Elijah Davidian, Environmental Science Associates, Subject: Ocean Beach Climate Change Adaptation Project – Air Quality Technical Memorandum and Health Risk Assessment, November 3, 2021 (see Appendix G).

NOTES:

- <sup>a</sup> Distance measured from closest edge of the nearby project boundary to the maximally exposed individual sensitive receptor. Distances within 1,000 feet are in bold.
- <sup>b</sup> Scenario 1 assumes exposure starting when construction starts and continuing exposure into operations.
- <sup>c</sup> Scenario 2 assumes exposure starting after construction completes (i.e., operational exposure only).
- <sup>d</sup> The Potential Upper Great Highway Closure project and its pilot project would not be within 1,000 feet of either maximally exposed individual receptor but would impact traffic at varying distances, including areas within 1,000 feet, from these receptors. The Potential Upper Great Highway Closure project and its pilot project are ~~is~~ evaluated under the second cumulative analysis.
- <sup>e</sup> The Sloat Quick-Build Project would provide upgrades to Sloat Boulevard between the Great Highway and Skyline Boulevard. Both maximally exposed individual receptors are within 100 feet of Sloat Boulevard. However not all parts of the Sloat Quick-Build Project would be within 1,000 feet of the MEIRs, therefore 100 feet should be considered the minimum distance of any one aspect of the project to the MEIRs.

\*The third full paragraph on draft EIR Appendix B p. 46 has been revised as follows:

**2700 Sloat Boulevard.** The preliminary project proposal would demolish the existing Sloat Garden Center and construct a new ~~50-story, 85-foot tall, 252,627 gross square foot~~ 712-unit residential development with ground floor commercial/retail.<sup>59</sup> The project would result in temporary construction emissions from the off-road equipment and haul trucks required to demolish the existing garden center as well as to construct the mixed-use residential building. This project could potentially increase traffic along Sloat Boulevard from operations of the residential development and ground floor commercial/retail, contributing to mobile source TAC emissions. However, these emissions have not been quantified at the project's current planning stage.<sup>59</sup>

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<sup>59</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes. The 2700 Sloat Boulevard project is conservatively included in the cumulative analysis because there is a reasonable likelihood of an application being filed in the near future and the project's close proximity to the proposed project site. Analysis of its contribution to the cumulative air quality impact is based on preliminary project designs and unknown construction schedule that may overlap given the potential for overlap due to the four year duration of construction of the proposed Ocean Beach Climate Change Adaptation project.

\*The following text has been added after the fourth full paragraph on draft EIR Appendix B p. 46:

**Great Highway Closure Pilot Project.** The Great Highway Closure Pilot Project authorized a three-year pilot study using the Upper Great Highway between Lincoln Way and Sloat Boulevard as a car-free promenade on weekends, holidays, and Friday afternoons until 2025. The Great Highway Closure Pilot Project will have the same impacts as the Potential Upper Great Highway Closure project and therefore the cumulative analysis for the Potential Upper Great Highway Closure project, as discussed under the second cumulative analysis, applies to this pilot project.

**Ocean Beach Storm Damage Reduction Beach Nourishment Project.** In August to September 2021 the Corps placed approximately 380,000 cubic yards of material dredged from the main ship channel along South Ocean Beach, instead of its past practices of placing the material offshore at SF-8 or the Ocean Beach Demonstration Site. With roughly 33 percent losses during placement, post placement surveys confirm 255,300 cubic yards of sand remained on the beach. TAC emissions associated with the project were from temporary off-road equipment exhaust from placement activities of the dredged material. The TAC emissions already occurred in 2021 and will not overlap with the exposure scenarios analyzed for the Ocean Beach Climate Change Adaptation Project.

**Sloat Boulevard Quick Build Project (SFMTA).** The Sloat Quick-Build Project would upgrade pedestrian crossings, add a two-way protected bikeway, improve accessibility, and consider other measures to reduce vehicle speeds while keeping traffic moving on Sloat Boulevard between the Great Highway and Skyline Boulevard. The two-way protected bikeway would be located on the south side of Sloat Boulevard. Bus boarding islands, painted safety zones at unsignalized intersections, and parking and loading changes near the San Francisco Zoo would also be installed. TAC emissions associated to the project are anticipated to be from temporary construction from the Sloat Boulevard upgrades and improvements. Construction would occur all along Sloat Boulevard and would not be isolated in any one area for a long period of time. The maximally exposed individual

residents would only be affected by upgrades within 1,000 of their location. No operational TAC emissions are anticipated because there would be no significant changes in traffic operations.

**2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco).** The project would demolish the existing 21,263 square foot, two-story private community building and construct a new six-story 125,380 square foot mixed-use building. The building would contain a combination of public and private uses (including a library, museum, restaurant, office, gym), 31 off-street parking spaces, and approximately 7,116 square feet of open space. TAC emissions from the project are anticipated to be temporary during the (demolition of the existing structure and construction of the new building). While the new cultural center would be larger than the existing and offer more amenities, operational TAC emissions are anticipated to be minimal because there would be no significant changes in land use type.

\*The fifth full paragraph on draft EIR Appendix B p. 46 has been revised as follows:

### **Cumulative Analysis**

Most of these nearby projects would contribute to health risk impacts from construction activities, which are anticipated to be minimal or temporary, as discussed above. Construction health risk impacts for these projects have not been quantified. It is possible that construction-related health risks for these projects could be substantial for certain receptor locations closest to each project's respective construction site. The 2700 Sloat Boulevard and the 2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco) projects ~~are~~ are the only projects within 1,000 feet of either maximally exposed receptor that would have the potential for operational health risk impacts.

\*Text on draft EIR Appendix B p. 47 has been revised as follows:

~~Two~~ Five projects are within 1,000 feet of the Scenario 2 maximally exposed receptor, ~~both~~ each of which have the potential to result in health risk impacts from construction activities, and ~~neither~~ two of which ~~is~~ are assumed to have ~~substantial~~ some minimal health risk impacts from operations. The 2700 Sloat Boulevard project would have some increased operational emissions from the land use being converted to mix use residential land uses from a garden center (e.g., a nominal increase in traffic, an emergency generator allowed 50 hours per year for testing and maintenance, etc.). The 2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco) would have some increased operational emissions because the new cultural center would be larger than the existing and offer more amenities, however, the operational TAC emissions would be minimal (e.g., a nominal increase in traffic, an emergency generator allowed 50 hours per year for testing and maintenance, etc.). Both 2700 Sloat Boulevard and the United Irish Cultural Center are more than 700 feet from the Scenario 2 maximally exposed receptor. For the lifetime excess cancer risk at the resident maximally exposed receptor, and for both the lifetime excess cancer risk and the annual average PM<sub>2.5</sub> concentration at the school maximally exposed receptor, the project's contribution is less than the thresholds for receptors brought into the APEZ as a result of the proposed project plus cumulative projects (see Table 6). Therefore, even if the combined health risks from these projects would result in a total cumulative cancer risk and PM<sub>2.5</sub> concentration exceeding the APEZ criteria, the project's contribution would be less than considerable, and the project would result in a less than significant cumulative health risk impact.

The annual average PM<sub>2.5</sub> concentration at the Scenario 2 resident maximally exposed receptor is 0.297 µg/m<sup>3</sup>, which is less than the threshold of 0.3 µg/m<sup>3</sup> for receptors brought into the APEZ as a result of the proposed project plus cumulative projects. Additionally, the existing annual average PM<sub>2.5</sub> concentration is 8.21 µg/m<sup>3</sup> (value taken from the Citywide-HRA). In order for the Scenario 2 maximally exposed receptor to be brought into the APEZ due to the increased PM<sub>2.5</sub> concentrations from construction and operation of the ~~two~~ five nearby projects in addition to the proposed project, the combined increase in annual average PM<sub>2.5</sub> concentrations would have to be greater than 1.79 µg/m<sup>3</sup>. This value is *six times* greater than the project's increase in PM<sub>2.5</sub> concentrations at the resident maximally exposed receptor. Given the characteristics of the Sloat Boulevard and State Route 35 (Skyline Boulevard) Intersection project, ~~and San Francisco Zoo Recycled Water Pipeline Project, 2700 Sloat Boulevard project, the Sloat Boulevard Quick Build Project, and the 2700 45<sup>th</sup> Avenue (United Irish Cultural Center of San Francisco), both all~~ of which would require minimal construction near the project's maximally exposed receptor, it is ~~improbable~~ unlikely these nearby projects would result in combined annual average PM<sub>2.5</sub> concentrations of this magnitude. Thus, cumulative impacts related to health risk would be ***less than significant***.

### Cumulative Analysis with the Upper Great Highway Project

Under the cumulative scenario with Upper Great Highway closure, and similarly the Great Highway Closure Pilot Project, the number of vehicles on Sloat Boulevard between the Great Highway and Skyline Boulevard and on Skyline Boulevard between Sloat Boulevard and the Great Highway would decrease compared to cumulative conditions without the Upper Great Highway project. The reduction in vehicular traffic along Sloat Boulevard would decrease the TAC emissions from mobile sources nearby both the Scenario 1 maximum exposed receptor and Scenario 2 maximum exposed receptor. Consequently, the Upper Great Highway Closure would not bring the proposed project's maximally exposed receptors into the APEZ. Therefore, the cumulative health risk impact would be ***less than significant***.

## 12.17 Revisions to Appendix B, Initial Study Section E.10, Wind

\*The text of draft EIR Appendix B p. 57 has been revised as follows:

The geographic scope for the analysis of potential cumulative impacts related to changes in wind hazards in publicly accessible areas generally includes the areas around the project area, including pedestrian-accessible areas at the western terminus of Sloat Boulevard. Given that wind effects are highly localized, the geographic context for cumulative wind effects encompasses the immediate project area vicinity—generally a few blocks (less than one-quarter mile) in each direction. It is in this vicinity that cumulative development, when combined with the project, would have any effect on wind on the same locations. While multiple cumulative projects would be within this distance, these projects would not construct new buildings near the proposed facilities with the exception of the Westside Pump Station Reliability Improvements Project, the 2700 45<sup>th</sup> Avenue Project, and the 2700 Sloat Boulevard project. The Westside Pump Station Reliability Improvements Project would construct a one-story electrical building at the southeast corner of the Sloat Boulevard and Great Highway intersection, along with underground infrastructure improvements. The electrical building would replace trees, a tall wall, and a sculpture garden. The 2700 45<sup>th</sup> Avenue project would be up to six stories tall and the 2700 Sloat Boulevard project proposes a 50-story building<sup>95a</sup> ~~could be up to~~

~~85 feet tall~~ and either or both projects could result in pedestrian-level wind hazard impacts. However, as discussed above, the project (i.e., the Ocean Beach Climate Change Adaptation Project) would not substantially affect pedestrian-level wind speeds, and therefore would not contribute to any potential cumulative wind hazard impacts in the project vicinity. Due to the distance between cumulative structures and their heights, the project in combination with cumulative projects would not substantially increase hazardous wind conditions. The cumulative impact related to wind hazards would be ***less than significant***.

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<sup>95a</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes.

## 12.18 Revisions to Appendix B, Initial Study Section E.11, Shadow

\*The text of draft EIR Appendix B p. 59 has been revised as follows:

The geographic scope of impacts related to changes in shadow includes projects that would cast shadows affecting different portions of the same public areas affected by shadows from the project. As discussed above, the project would cast limited new shadows near the proposed restroom. The Westside Pump Station Reliability Improvements Project would be constructed in the same vicinity as the proposed restrooms at Sloat Boulevard, and the 2700 Sloat Boulevard project proposes a 50-story building.<sup>95b</sup> The Westside Pump Station Reliability Improvements Project would construct an electrical building at the southeast corner of the Sloat Boulevard and Great Highway intersection, along with underground infrastructure improvements. The electrical building would replace trees, a tall wall, and a sculpture garden, which shade the areas near the proposed restroom under current conditions. While the 2700 Sloat Boulevard project would be relatively tall and would be approximately 800 feet from the proposed restroom, due to the 2700 Sloat Boulevard project's location northeast of the proposed restroom, the 2700 Sloat Boulevard project would not cast shadows in the same locations as the restroom. While the project in combination with the Westside Pump Station Reliability Improvements Project would alter shadows along paths and sidewalks near the western terminus of Sloat Boulevard, the cumulative impact would be ***less than significant*** because the shadows would not substantially and adversely affect the use and enjoyment of this area.

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<sup>95b</sup> As noted in Table 4.1-3, there is uncertainty regarding the 2700 Sloat development proposal. While the planning department has determined that the revised 50-story project application is incomplete and the project does not meet the requirements of the planning code or state density bonus law, it is included here for analysis purposes.

## 12.19 Revisions to Appendix B, Initial Study Section E.13, Utilities and Service Systems

\*The text of draft EIR Appendix B pp. 61 through 62 has been revised as follows:

In addition, the project would remove the existing restroom at the western terminus of Sloat Boulevard and the remnants of a stormwater conveyance system that once existed along the Great Highway but has since failed due to exposure from coastal bluff erosion. The project would construct a new public restroom to replace the existing restroom, and install a new stormwater collection and conveyance system to replace the damaged system. The new restroom and stormwater conveyance would connect to the existing Oceanside Treatment Plant via existing conveyance pipelines, most likely at the zoo pump station. The native dune vegetation to be planted atop of the slope stabilization layer would be irrigated. The construction of these utilities are components of the project analyzed in this initial study and EIR.

\*The text of draft EIR Appendix B p. 62 has been revised as follows:

### Operation

Operation of the new restroom and new path, landscaping, and parking area lighting would require water, wastewater, and electricity. The demand for these services under the project would be comparable to that for existing conditions. The new restroom would replace an existing restroom, using newer fixtures. Electricity demands associated with new lighting would be partially offset by the project's removal of overhead street lighting near the Great Highway/Sloat Boulevard intersection. Irrigation of the native dune landscaping would be provided via new connections to existing pipelines located within or immediately adjacent to the South Ocean Beach project area. Irrigation would be provided during the plant establishment period, estimated to be up to three years after project construction. Regardless, considering the project's operational utility demands relative to the capacity of utility service providers (i.e., SFPUC and Pacific Gas and Electric Company), the project would not require the construction of new facilities or expansion of existing facilities to serve the project.

\*The discussion of cumulative utilities impacts on draft EIR Appendix B p. 70 has been revised as follows:

### Operation

Once operational, the project along with the cumulative projects would generally improve the stormwater and wastewater collection and treatment system and would not exceed the system's capacity. The only other cumulative projects that could generate solid waste during operation are the Lake Merced West project, the 2700 45<sup>th</sup> Avenue project, and the 2700 Sloat Boulevard project. Similar to the project, ~~both of these~~ three projects are in San Francisco and would be subject to the city's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance. Compliance with the Mandatory Recycling and Composting Ordinance would ensure that the cumulative impact on landfill capacity or attainment of solid waste reduction goals during project operation would be ***less than significant***.

## 12.20 Revisions to Appendix B, Initial Study Section E.14, Public Services

\*The discussion of cumulative public services impacts on draft EIR Appendix B p. 73 has been revised as follows:

### Operation

Cumulative development in the geographic scope would include improvements to existing wastewater collection system infrastructure, intersection improvements, new recreational trails or recreational facilities, and mixed-use development (2700 45<sup>th</sup> Avenue, 2700 Sloat Boulevard). The Fort Funston Trail Connection, Signalization of State Route 35 and Great Highway Intersection, and Lake Merced West projects would enhance recreational use of the area by connecting the project area to adjacent recreational areas and by constructing a new recreational facility (in the case of Lake Merced West). These cumulative projects are designed to support future recreational use and would not result in the need for additional parks or public service facilities. Cumulative development would be within the city's planned growth projections and, as discussed in Impact C-PH-1, the project would not induce population growth. Therefore, the project would not contribute considerably to any associated cumulative impact concerning the provision of new or physically altered governmental facilities (*less-than-significant*).

## 12.21 Revisions to Appendix B, Initial Study Section E.16, Geology and Soils

\*The text of *Roadway, Public Access, Parking, and Restroom Improvements* on draft EIR Appendix B p. 77 has been revised as follows:

The project includes only minor above ground improvements, such as the new restroom, beach access stairs, the multi-use trail and improvements to an existing trail, and roadway improvements. Regardless, the project would not expose people or structures to substantial adverse effects related to ground shaking or liquefaction, because the proposed improvements would be designed and constructed in accordance with the most current San Francisco Building Bode (building code) or SFPUC's General Seismic Requirements for Design of New Facilities and Upgrade of Existing Facilities Revision 3 (general seismic requirements), as discussed in greater detail below.<sup>128</sup>

\*The second paragraph on draft EIR Appendix B p. 79 has been revised as follows:

The project alignment with the exception of the Fort Funston propagation site is outside of any State of California-designated Seismic Hazard Zone for earthquake-induced landslides; however, the Fort Funston bluffs immediately south of the southern end of the main project site are mapped by the California Geological Survey as an area susceptible to earthquake-induced landslides.<sup>138</sup> The nearest engineered project components to this area are the southern end of the buried wall and the associated slope stabilization, for which a geotechnical report has been prepared. The steepness of the bluffs within the project site range from gentle (3.5:1 horizontal to vertical slope) in the northern portion to steeper (1.75:1 horizontal to vertical slope) in the southern portion.<sup>139</sup> Past periods of heavy storm events have caused some years of increased wave run-up which has eroded the base of

the bluffs resulting in areas of instability, bluff failure, and some collapse of the Great Highway shoulder of the southbound lane.

\*The text of *Earthquake Induced Landslides* on draft EIR Appendix B pp. 79 through 80 has been revised as follows:

The project would reshape the bluff to provide a more gradual and stable slope face that includes a buried wall with associated slope stabilization to improve overall slope stability (see EIR Figure 2-6 for a conceptual cross section of the reshaped bluff configuration). The slope stabilization would consist of a 3-foot-thick, gently sloping (3 foot horizontal to 1 foot vertical slope) layer of either a cement soil mixture or controlled low strength material. The north and south ends of the wall would also receive additional slope stabilization measures as described in more detail in Chapter 2, Project Description, which includes use of deep soil mixing (blending of cement with existing soil) to increase slope stability. This slope stabilization and any fills or backfills would be placed in accordance with the site-specific geotechnical report recommendations that would include compaction and inclination specifications necessary to meet SFPUC's general seismic requirements.

In addition, the restored dune slope face would include native vegetation planting to provide stability to the dune slopes. The proposed plant propagation site would involve ground disturbance within dunes atop the Fort Funston bluffs. However, due to the site's location, small size, and shallow depth of soil disturbance, it would not be expected to impact the stability of the underlying soil or geologic unit. The propagation site would be located away from the coastal bluff face, adjacent to existing development at Fort Funston including the Fort Funston nursery, parking lot, and Sunset Trail, and would not result in an increased safety hazard for visitors to the area. As this element of the project would not include any buildings or other vertical structures, and would be implemented in a sandy area underlain by Colma and Merced formation deposits, it would not present any risks to life or property related to expansive soils. Continued beach nourishment to replace future erosion and redistribution of the dune sand would also be part of the project. Construction of the buried wall and stabilization of the underlying slopes, consistent with geotechnical recommendations as overseen by a state licensed geotechnical engineer, would improve overall slope stability compared to existing conditions such that the potential for earthquake-induced landslides would be less than significant.

## 12.22 Revisions to Appendix B, Initial Study Section E.17, Hydrology and Water Quality

\*The last paragraph on draft EIR Appendix B p. 107 has been revised as follows:

The landside improvements (proposed service road and multi-use trail) would alter the existing drainage patterns with the inclusion of a new stormwater drainage system. Stormwater runoff from the impervious areas would be collected and directed to the Oceanside Treatment Plant for treatment prior to offshore discharge. The beachside improvements including reshaping the bluff, installation of the slope stabilization, and placement of sand after revetment and rubble removal are intended to reduce erosion compared to existing conditions but could also result in erosion due to interactions between the placed sand or buried wall and coastal processes. The Fort Funston propagation site would preserve the existing, natural topography, and would not alter existing drainage patterns.

\*The text of draft EIR Appendix B pp. 108 through 109 has been revised as follows:

The proposed service road, multi-use trail, Skyline coastal parking lot, and restroom would include construction of impervious surfaces. Most of the areas where impervious surfaces are proposed are currently already covered in impervious surfaces with the exception of portions of the Skyline coastal parking lot location, which would include pavement covering a currently unpaved vegetated median. The project would also remove the southbound lanes of the Great Highway, which would reduce the overall area of impervious surface within the South Ocean Beach project site. The plant propagation site activities would preserve existing natural drainage patterns and not increase the surface water runoff. Overall, the project would result in a net decrease in impervious surface coverage relative to existing conditions. Therefore, the project would not substantially increase the amount of stormwater runoff from the South Ocean Beach project site. Regardless, as noted above, replacement of impervious surfaces requires compliance with the city's stormwater management ordinance, in addition to the stormwater design guidelines. These requirements and guidelines include stormwater management measures that would require the project to reduce the existing stormwater runoff flow rate and volume by 25 percent for a two-year, 24-hour design storm, thereby reducing the volume and rate of runoff water in the area and draining to existing stormwater drainage systems. Runoff from proposed improvements that would be in compliance with existing stormwater requirements would ensure that flows from the project would not exceed the current amount of runoff and there would no exceedance related to the capacity of the drainage infrastructure. Further, the construction general permit requires that post-construction runoff shall not exceed preconstruction runoff and includes a water balance calculation that must be used to demonstrate how this will be achieved. The stormwater management measures that would be part of the project to comply with the city's stormwater management ordinance would be expected to meet these requirements. In addition, the project does not include any new sources that could contribute substantial polluted runoff. NPS-approved soil amendments and herbicides may be used at the plant propagation site in accordance with best management practices established by NPS that minimize potential water quality impacts. Due to the limited use of these materials and site topography, polluted runoff would not occur. ~~polluted runoff.~~ For these reasons, the project impact would be ***less than significant***.

\*The third and fifth paragraphs of Impact C-HY-1 on draft EIR Appendix B pp. 111-112 have been revised to reflect updated cumulative projects as follows:

As discussed under Impact HY-1, the project would include the use of heavy equipment and soil disturbances that could result in increased erosion or release of hazardous materials and, in turn, affect water quality in the coastal waters. Cumulative projects involving considerable ground disturbance and use of heavy equipment whose construction periods could overlap that of the project include the Westside Pump Station Reliability Improvements Project, Oceanside Treatment Plant Improvements Project, San Francisco Zoo Recycled Water Pipeline, Westside Force Main Reliability Project, 2700 Sloat Boulevard, 2700 45<sup>th</sup> Avenue, and Vista Grande Drainage Basin Improvement Project.

...

Of the cumulative projects identified, most (i.e., Westside Pump Station Reliability Improvements, Oceanside Treatment Plant Improvements, San Francisco Zoo Recycled Water Pipeline, Westside

Force Main Reliability, 2700 45<sup>th</sup> Avenue and 2700 Sloat Boulevard) are located in the vicinity of the project; however, most are proposed for sites outside of the tsunami inundation zone. Sea level rise would be expected to expand the inundation zone; however, as discussed in Impact HY-4, the project would not store hazardous materials or provide other sources of pollutants such that the project effects could combine with those of other cumulative projects to increase risk of pollutant releases. As discussed, the cumulative projects would also be subject to the same existing regulatory requirements, including good housekeeping and BMPs. Therefore, cumulative impacts on water quality due to erosion, changes to drainage patterns, flooding, inundation, or other risk of release of pollutants would be *less than significant*.

## 12.23 Revisions to Appendix B, Initial Study Section E.18, Hazards and Hazardous Materials

\*The text of *Potential Exposure to Contaminated Soil or Groundwater* on draft EIR Appendix B pp. 115 through 116, has been revised as follows:

According to mapping compiled by the city (Maher Ordinance Layer), there are two individual sites near the South Ocean Beach project site that are likely associated with a past presence of underground storage tanks.<sup>251</sup> These sites appear to coincide with the former Chevron service station at 2940 Sloat Boulevard (cleanup completed in 1996), and the former San Francisco Armory lands south of the zoo and east of the Great Highway (cleanup completed in 2012). Both of these sites are in the presumed upgradient direction from the proposed ground disturbances; for both of these sites, however, either remediation activities have been completed and/or the state has otherwise determined that no further action is required, indicating that there is a low risk of exposure to hazardous materials.<sup>252</sup> Encountering hazardous materials in excavated soil at the project site would thus be unlikely. In addition, the primary areas of subsurface disturbance would be west of the Great Highway, a minimum of 400 feet from these two sites, further reducing the probability of encountering contaminated soil or groundwater. Furthermore, any unidentified hazardous materials encountered during construction would be characterized and appropriately treated, contained, or removed, in accordance with SFPUC standard construction measure 6, Hazardous Materials. According to mapping compiled by the city (Maher Ordinance Layer), there is one site associated with the Department of Toxic Substances Control (DTSC) Cortese List located in the vicinity of the Fort Funston plant propagation site. The DTSC cleanup status for Fort Funston is “Inactive-Action Required” due to the possibility of munitions remaining on the Fort Funston beach.<sup>252a</sup> The plant propagation site would be located within an area approximately 150 feet above and at least 400 feet east of the beach. Therefore, based on the absence of any identified release sites within the proposed areas of disturbance, the regulatory status of nearby sites including the time since case closure and the distance from proposed activities, the potential impact resulting from encountering subsurface contamination in soil or groundwater is considered less than significant.

<sup>252a</sup> Department of Toxic Substances Control (DTSC), EnviroStor database search, Available online at: [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=80000607](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80000607), accessed on August 25, 2022.

\*The text of draft EIR Appendix B p. 117 has been revised as follows:

The nearest school to the South Ocean Beach portion of the project area is the Ark Christian Pre-School, which is located approximately 0.35 mile to the northeast. In addition, the Ulloa Elementary School is located approximately 0.38 mile to the northeast. The closest daycare facility is the Little Bananas Daycare, located approximately 0.33 mile to the north. The Pomeroy Recreation and Rehabilitation Center is located approximately 0.25 mile to the east; the center is considered a sensitive receptor because it offers programs and resources to children. The nearest school to the North Ocean Beach portion of the project area is Munchkinland Family and Daycare Center, located approximately 0.11 mile to the east. Saint Gabriel Catholic School, Little People Preschool, and Phoebe Apperson Hearst Home are approximately 0.25 mile east of the ADA access improvements at Middle Ocean Beach.

\*The text of *Emergency Response* on draft EIR Appendix B p. 120 has been revised to reflect cumulative projects as follows:

Construction of other planned projects in the vicinity during the same time period could cause a cumulative emergency response impact if these projects were to cause closures of additional emergency response/evacuation routes. The following cumulative projects could require temporary partial and/or full lane closures along Sloat Boulevard, or Skyline Boulevard, in the project vicinity: Westside Pump Station Reliability Improvements, Reconfiguration of the Sloat and Skyline Boulevard Intersection, San Francisco Zoo Recycled Water Pipeline, Westside Force Main Reliability, Sloat Boulevard Quick Build, 2700 45<sup>th</sup> Avenue, and 2700 Sloat Boulevard. While these projects may require temporary closure of lanes along Sloat Boulevard, or Skyline Boulevard, these projects would be required to implement construction traffic management plans that would require coordination with emergency response providers prior to construction. Coordination with emergency response providers for the project and cumulative projects in compliance with emergency access requirements in the San Francisco Fire Code and traffic control requirements for road closures would minimize the potential for a cumulative emergency response effect. As such, the project, in combination with the other planned projects, would have a ***less-than-significant*** impact on emergency response.

## 12.24 Revisions to Appendix B, Initial Study Section F, Mitigation Measures

\*Item A of Mitigation Measure M-AQ-2: Construction Emissions Minimization, on draft EIR Appendix B p. 131 has been revised as follows:

### **Mitigation Measure M-AQ-2: Construction Emissions Minimization**

#### **A. Engine Requirements.**

All off-road equipment greater than 125 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet the USEPA or California Air Resources Board Tier 4 Final off-road emission standards in construction years 2, ~~3~~ and 4 (~~2024 through 2026~~ 2025 and 2027).