310-330 Esplanade Avenue Infrastructure Preservation Project

Final Environmental Impact Report

SCH# 2022100372

Lead Agency:

City of Pacifica
Planning Department
540 Crespi Drive (temporary)
Pacifica, CA 94044
www.cityofpacifica.org

May 2024

Table of Contents

Appendices

1 INTRODUCTION

This document is the Final Environmental Impact Report (Final EIR) for the City of Pacifica (City, or Lead Agency) 310-330 Esplanade Avenue Infrastructure Preservation Project. The EIR is prepared as an informational document for action by the City for the proposed project.

Per the California Environmental Quality Act (CEQA) Guidelines Section 15132, the Final EIR shall consist of:

- The Draft EIR or a revision of the draft.
- Comments and recommendations received on the Draft EIR either verbatim or in summary.
- A list of persons, organizations, and public agencies commenting on the Draft EIR.
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
- Any other information added by the Lead Agency.

In accordance with CEQA Guidelines Section §15132, this document together with the October 2023 Draft EIR constitutes the Final EIR for the 310-330 Esplanade Avenue Infrastructure Preservation Project.

1.1 ENVIRONMENTAL REVIEW PROCESS

Public outreach for the EIR included public noticing, issuance of a Notice of Preparation (NOP) for an Environmental Impact Report, and conducting a public scoping meeting for the EIR, as summarized below. Comments received during the public scoping meeting were taken into consideration and addressed during the preparation of the Draft EIR. Additionally, the City issued a Notice of Availability to initiate public review of the Draft EIR. Details of the public noticing is provided below.

1.1.1 Notice of Preparation of an EIR

The NOP was prepared and circulated to local, state, and federal agencies and made available to the public on October 19, 2022 (SCH# 2022100372). The NOP contained a summary of the Project and resource areas that would be covered in the EIR, and instructions on how to submit comments. Circulation of the NOP consisted of its filing with the San Mateo County Clerk's Office and submittal to the Governor's Office of Planning and Research State Clearinghouse for distribution to various State Agencies for review.

Copies of the NOP were also made available at the City's Planning Department and electronically via a web link on the City's website. A notice of the NOP's availability was also posted in the Pacifica Tribune. The City provided for a 30-day public review period on the NOP that ended on

November 18, 2022. Written comments in response to the NOP were received from four agencies/organizations and seven interested individuals. The NOP and the written comments received on the NOP were included in Appendix A of the Draft EIR.

1.1.2 Public Scoping Meeting

The City held a virtual (online) public scoping meeting on November 3, 2022, during which the City staff made a presentation of the Project and received comments and fielded questions from members of the public in attendance. Oral comments heard at this scoping meeting generally consisted of concerns over access to the beach from Esplanade Avenue, that the Project should address impacts that extend all the way down to Manor Drive including the 400 block of Esplanade Avenue and the beach access ramp, potential coastal trail damage, erosion, disruption to the residents on Esplanade Avenue from Project construction, the basis for selecting the proposed Project design and the construction timeline.

1.1.3 Public Review of the Draft EIR

The Draft EIR was posted on the City's website[1] and hardcopies were made available for viewing at City Hall (541 Crespi Drive, Pacifica, CA 94044), Pacifica Sharp Park Library (104 Hilton Way, Pacifica, CA 94044) and Pacifica Sanchez Library (1111 Terra Nova Boulevard, Pacifica, CA 94044). The Draft EIR was circulated for a 45-day public review beginning October 4, 2023 and ending on November 20, 2023. The Notice of Availability was released to public agencies and the general public, printed in the newspaper, posted with the County Clerk's office and filed at the State Clearinghouse for State Agency review on October 4, 2023.

A total of seven comment letters and emails were received by the November 20, 2023 deadline. These included five comment letters from a State Agency (California Coastal Conservancy (two letters), California Coastal Commission, California Department of Fish and Wildlife and the State Lands Commission) and two letters from members of the public.

1.2 CHANGES TO THE DRAFT EIR

CEQA anticipates that the public review process will elicit information that can result in modification of the project design and refined impact analysis to reduce potential environmental effects of the project. As provided in CEQA Guidelines Section 15088.5, when significant new information is added to the EIR after public noticing of the Draft EIR, the EIR must be recirculated to give the public a meaningful opportunity for review. Significant new information is defined as 1) a new significant environmental impact, 2) a substantial increase in the severity of an environmental impact requiring new mitigation, or 3) a feasible project alternative or mitigation measure considerably different from those previously analyzed that would clearly reduce environmental impacts. Recirculation is not required where the new information added to the EIR

[1] https://www.cityofpacifica.org/departments/planning/environmental-documents)

merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

This Final EIR includes the following modifications to the Draft EIR:

- Text changes to provide clarity to the analysis, make minor text corrections, or fix grammatical or typographic errors.
- Text changes and additional information based on the comments received on the Draft EIR.

These revisions do not include any added significant new information disclosing new or more severe impacts that would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5.

1.3 FINAL EIR ORGANIZATION

The Final EIR for the City of Pacifica is organized as follows:

Chapter 1 **Introduction.** This chapter explains the contents of a Final EIR and the environmental review process for the Project.

Chapter 2 **Additional Information.** This chapter describes and summarizes additional information related to the project.

Chapter 3 **Public Comment on Draft EIR and City Responses to Comment.** This chapter contains copies of the comment letters received on the Draft EIR during the public review period. The comment letters have been individually numbered. A list of those who commented is provided at the front of the chapter. Each comment letter is presented and a written response is provided to each comment raising a significant environmental issue submitted on the Draft EIR.

Chapter 4 **Errata and Revisions.** This chapter includes the changes to the Draft EIR needed to respond to comments and clarify or amplify the information provided in the Draft EIR. The changes correct inaccuracies and clarify the analysis in the EIR.

Appendix A **Mitigation Monitoring and Reporting Program**

Appendix B **New Information**

1.4 NOTICE OF DETERMINATION

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a Project for which an EIR has been certified which identifies one or more significant

environmental effects of the Project unless the public agency makes one or more written findings. If the lead agency approves a Project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of Project approval.

If the Project is approved, the City of Pacifica will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days, as well as the State Clearinghouse. The filing and posting of the NOD starts a 30-day statute of limitations period on court challenges to the approval under CEQA.

2 ADDITIONAL INFORMATION

2.1 REVISIONS TO THE DRAFT EIR

The following summarizes new information that is incorporated into the Draft EIR. The edits involve incorporating two memos prepared for the project that address comments that were made during the public comment period. These memos are summarized below and provided in full in Appendix B.

2.1.1 Seawall Impact on Sand Supply

As stated in the Draft EIR, Cotton Shires and Associates (CSA) prepared a memo (March 30, 2020) to calculate the potential impacts of the proposed sea wall on sand supply. The memo presented variables used to calculate a volume of beach quality sand that would have been supplied to the beach, if natural erosion continued (i.e., without the project). The volume of beach quality sand that would have been supplied to the beach if natural erosion continued is 2,145 cubic yards. The memo notes that the bluff material collected for a sieve analysis was significantly finer than the beach sand material collected. Therefore, it was concluded that the bluff materials composed zero or a very small fraction of the beach sand. It goes on to state other neighboring projects used a greater percentage for this variable, however no justification was provided for the use of the higher percentage.

2.1.2 Slope Stability Analysis to Analyze Bluff Retreat

CSA prepared a memo (November 15, 2023) to address a request to provide a slope stability analysis to determine a factor of safety for the infrastructure the project is intended to protect. The memo summarizes how computers analyze slope stability and the shortcomings of various methods commonly used and various problems that can arise using these methods. The memo reiterates the documented method of ongoing bluff retreat noting that wave action erodes the toe of the bluff which results in near vertical or vertical and undermined bluff faces. The lower portions of the bluff face then calve off like a glacier, followed later by the mid-bluff portion, then the upper bluff portion, and notes that these calving events are typically about 2 to 10 feet thick. The memo states this type of calving event (or failure) is not a typical landslide event, and based on CSA's experience, does not lend itself to a traditional slope stability analysis. CSA states that a quantitative slope stability analysis could be undertaken, however notes that the analysis would not be modeling the bluff retreat hazard the proposed project is designed to address or any hazard that has been observed at the site.

3 RESPONSES TO PUBLIC DRAFT EIR COMMENTS

In accordance with CEQA Guidelines Section 15088, this document includes written responses to comments received by the City of Pacifica on the Draft Environmental Impact Report (Draft EIR). This chapter contains copies of the letters and emails, collectively called "comment letters" received on the Draft EIR during the public review period.

3.1 COMMENT LETTERS AND COMMENTERS

The comment letters have been individually numbered and will appear on the following pages in the order presented below. Comments were received from the following agencies and individuals:

Federal and State Agencies:

A1. California Coastal Conservancy (email received October 26, 2023)

A2. California Coastal Conservancy (email received November 9, 2023)

B. California Coastal Commission (dated November 2, 2023)

C. California Department of Fish and Wildlife (dated November 16, 2023)

D. California State Lands Commission (dated November 20, 2023)

Organization, Businesses, and Individuals:

E. RJR Engineering and Consulting, Inc. (dated November 18, 2023)

F. David Whitney (email received October 23, 20230)

Copies of each comment letter, followed by the City written responses thereto are provided below..

From: Duff, Tim@SCC <Tim.Duff@scc.ca.gov>
Sent: Wednesday, October 25, 2023 4:17 PM
To: Yip, Roland
Cc: Harvey, David
Subject: RE: Esplanade CCC Grants

[CAUTION: External Email]

Roland,

A1-1 My comment on Table 2-1 on pg. 2-7 pre-construction surveys for nesting birds to call out snowy plovers was not addressed.

A1-2 My comment on 3.3.5 Construction (now 3.4.5) to "add signage at public path used for construction access and on the beach to notify the public of closures to these areas" was not addressed.

A1-3 My comment to add traffic to Ch 1 Intro Section and following relevant Sections such as Section 4 Impact Analysis were not addressed.

A1-4 My comment at 4.1.1 Aesthetics to "Add description of public access on bluff to the beach at 380 block" and at seawall site was not addressed.

A1-5 My comment at 4.1.2 Regulatory Setting- Coastal Act policies to "add public access policies, i.e. Ch 3" was not addressed. Same for local access/recreation policies (not only scenic access policies).

A1-6 Separate from my comments submitted to date, SCC owns a public access easement across the 380 block property that prohibits the proposed construction activity there. We need to discuss, including the need for similar bluff restoration as is proposed at the seawall bluff site, i.e. plantings, fencing, signage.

Tim

From: Duff, Tim@SCC
Sent: Wednesday, October 25, 2023 3:22 PM
To: 'Yip, Roland' <RYip@pacifica.gov>
Cc: 'Harvey, David' <DHarvey@pacifica.gov>
Subject: RE: Esplanade CCC Grants

Roland,

I meant the top of 2.2. The following table 2-1 does not include my suggested need for public access / recreation mitigations for the new seawall impacts.

-Tim

From: Duff, Tim@SCC
Sent: Wednesday, October 25, 2023 3:13 PM

To: Yip, Roland <RYip@pacifica.gov>
Cc: Harvey, David <DHarvey@pacifica.gov>
Subject: RE: Esplanade CCC Grants

Roland,

A1-7 For starters, my comment at the top of Section 2.1 does not appear to be addressed: "Add mitigation measures for public access impacts, including impacts to access to and along bluffs, trails and the beach."

Please clarify why, thanks.

-Tim

Responses to Comment Letter A1 from the California Coastal Conservancy, October 26, 2023

Response to Comment A1-1: Snowy plover nests are not called out specifically in this measure because no impacts are expected to snowy plover. The biological resources chapter states: "There is no suitable breeding habitat for western snowy plovers at the study area, as the high tide line reaches all the way to the riprap and therefore any nest established on the beach would be washed away. However, western snowy plovers are known to occur throughout the Pacific Coast and may occasionally pass through the Project area or even use the beach for foraging. However, there is no resident population of western snowy plovers in the Project area according to databases such as the CNDDB (2019) and eBird (Cornell Lab of Ornithology, 2019).

Response to Comment A1-2: Signage notifying the public of closures of public facilities such as the beach access trail used for construction access and/or the beach in the area of the proposed seawall construction would be installed with the project, as it is standard procedure for such construction projects in public areas. The Project Description section of the EIR has been revised to include this information (see Chapter 4, Errata).

Response to Comment A1-3: Chapter 1 INTRODUCTION of the Draft EIR contains descriptions of: the purpose and scope of the EIR; the scoping and public review processes; the areas of known controversy; the public review and comment period; the availability of EIR materials; the Final EIR and Responses to Comments processes; and the Notice of Determination process. The issue of potential traffic impacts resulting from the Project is not relevant to any of these subcategories of discussion but would have been more appropriately addressed under Chapter 4. IMPACT ANALYSES. However, the issue areas addressed in Chapter 4 were limited to the most applicable to the Project, and traffic was not considered by staff to be an issue that warranted in-depth analysis or presented a potentially significant impact due to the nature of the proposed construction project and was therefore briefly addressed in Chapter 6.1 Impacts Found Less Than Significant. Chapter 6.1.6 concluded that the proposed construction staging areas would be fully contained on sites off of the street and would not impair vehicle, bicycle or pedestrian movements along the street and would not require any street closures or encroachment permits.

The impact analyses contained in Chapter 6.1.6 Transportation address the project's impacts related to conflicts with existing programs and policies, generation of VMT, geometric design hazards, and emergency access, per the CEQA thresholds.

Response to comment A1-4: Mention of the existing public access trail at 100 Esplanade was added in Chapter 4.1.1 (3rd paragraph) because its adjacency to the future restoration/passive recreation area proposed by the project is relevant to the chapter's discussion of views and scenic vistas. The existing beach access ramp at the south end of the 380 block would remain in its current condition following completion of the project, with no improvements proposed with the project.

Response to Comment A1-5: None of the policies contained in Article 2 (Public Access) of Chapter 3 of the California Coastal Act (Coastal Resources Planning and Management Policies) have any relation to a project's potential impacts on scenic vistas and scenic resources, or the potential of a project to degrade the existing visual character or quality of the project area, which

is the subject of Chapter 4.1 of the Draft EIR. That is why they are not included in the analysis. The relevant Coastal Act policies addressing scenic and visual qualities of coastal areas, Section 30251 of the Coastal Act and Policy 24 of the Local Coastal Land Use Plan, are described in Chapter 4.1.2. Public access policies are described in the Regulatory Settings discussions in other parts of the Draft EIR, such as Chapters 4.7.2 (Pacifica Zoning Ordinance), 4.8.2 (Pacifica General Plan 2040), and 4.10.2 (Coastal Act Policies).

Response to Comment A1-6: As stated in the introductory paragraph of Chapter 2.2, Table 2-1 summarizes project and cumulative impacts that are considered significant and have associated mitigation measures. There were no significant or cumulative impacts to public access or recreation requiring mitigation identified in the Draft EIR. The public access trail at 400 Esplanade would be maintained during the construction. The impact discussions in Chapter 4.10.4 stated that the project could restrict access in the area during construction, but that the construction site would be managed to maintain emergency vehicle access, and that no alteration of existing recreational facilities would be necessary. It further states that the project may restrict adjacent beach uses during the construction period, but that these impacts would be temporary during the construction period. These impacts are considered less than significant and therefore do not require mitigation.

Response to Comment A1-7: This comment is in reference to an earlier comment that was based on consultation with the California Coastal Conservancy during preparation of the administrative draft of the EIR and received in an email to Roland Yip of the Pacifica Public Works Department, dated 8/22/23, prior to the release of the Draft EIR for public review. In response to the original comment, and prior to its publishing, the Draft EIR was revised to include statements regarding public access to the bluffs, trails and beach in several different sections of the document. There were no findings of potentially significant impacts requiring mitigation, and therefore no impacts or mitigation measures were included in the summary table (Table 2-1) in Chapter 2.2. The original comment appeared in Chapter 2.2. (not “Section 2.1”).

From: Duff, Tim@SCC <Tim.Duff@scc.ca.gov>
Sent: Thursday, November 9, 2023 3:48 PM
To: Yip, Roland <RYip@pacifica.gov>
Cc: Harvey, David <DHarvey@pacifica.gov>
Subject: RE: Esplanade CCC Grants

[CAUTION: External Email]

Hi Roland,

Thank you for the email and preliminary responses to my comments. Below are my responses:

- The top of 2.2. The following table 2-1 does not include my suggested need for public access / recreation mitigations for the new seawall impacts.
  As stated in the introductory paragraph of Chapter 2.2, Table 2-1 summarizes project and cumulative impacts that are considered significant and have associated mitigation measures. There were no significant or cumulative impacts to public access or recreation requiring mitigation identified in the DEIR. The public access trail at 400 Esplanade will be maintained during the construction. The impact discussions in Chapter 4.10.4 stated that the project could restrict access in the area during construction, but that the construction site would be managed to maintain emergency vehicle access, and that no alteration of existing recreational facilities would be necessary. It further states that the project may restrict adjacent beach uses during the construction period, but that these impacts would be temporary during the construction period. These impacts are considered less than significant and therefore do not require mitigation.

A2-1 The project when completed will impact physical public access and should be mitigated, e.g. with new blufftop park improvements at both the 400 block area and the 380 block bluff where public access will also be impacted by the existing to-be-repaired rip rap that will continue to occupy the sandy beach and diminish beach area available to the public. The 380 block access impacts must be addressed by this EIR to avoid piecemealing as the City proposes to assert the 380 block project is exempt from CEQA review.

- My comment at 4.1.1 Aesthetics to "Add description of public access on bluff to the beach at 380 block" and at seawall site was not addressed.
  Mention of the existing public access trail at 100 Esplanade was added in Chapter 4.1.1 (3rd paragraph) because it's adjacency to the future restoration/passive recreation area proposed by the project is relevant to the chapter's discussion of views and scenic vistas. The existing beach access ramp at the south end of the 380 block would remain in it's current condition following completion of the project, with no improvements proposed with the project.

A2-2 I do not understand how the 100 block addresses public access impacts at the 380 and 400 blocks. The 380 block bluff physical public access will be impacted by the existing to-be-repaired rip rap that will continue to occupy the sandy beach and diminish beach area available to the public. The 380 block physical access impacts must be addressed by this EIR as the City proposes to assert the 380 block project is exempt from CEQA review. The 380 block physical access impacts must be addressed by this

EIR to avoid piecemealing as the City proposes to assert the 380 block project is exempt from CEQA review.

- My comment at 4.1.2 Regulatory Setting- Coastal Act policies to "add public access policies, i.e. Ch 3" was not addressed. Same for local access/recreation policies (not only scenic access policies).
  None of the policies contained in Article 2 (Public Access) of Chapter 3 of the California Coastal Act (Coastal Resources Planning and Management Policies) have any relation to a project's potential impacts on scenic vistas and scenic resources, or the potential of a project to degrade the existing visual character or quality of the project area, which is the subject of Chapter 4.1 of the DEIR. That is why they are not included in the analysis. The relevant Coastal Act policies addressing scenic and visual qualities of coastal areas, Section 30251 of the Coastal Act and Policy 24 of the Local Coastal Land Use Plan, are described in Chapter 4.1.2. Public access policies are described in the Regulatory Settings discussions in other parts of the DEIR, such as Chapters 4.7.2 (Pacifica Zoning Ordinance), 4.8.2 (Pacifica General Plan 2040), and 4.10.2 (Coastal Act Policies).

A2-3 The project's impacts to physical access to the beach at the 380 block with the existing to-be-repaired rip rap that will continue to occupy the sandy beach and diminish beach area available to the public. The 380 block physical access impacts must be addressed by this EIR to avoid piecemealing as the City proposes to assert the 380 block project is exempt from CEQA review.

Thanks. I look forward to discussing our public access / Coastal Trail easement over the 380 block during the EIR review period.

-Tim

Responses to Comment Letter A2 from the California Coastal Conservancy, November 9, 2023

Response to Comment A2-1: Mention of the existing public access trail at 100 Esplanade was added in Chapter 4.1.1 (3rd paragraph) because its adjacency to the future restoration/passive recreation area proposed by the project is relevant to the chapter's discussion of views and scenic vistas. The existing beach access ramp at the south end of the 380 block would remain in its current condition following completion of the project, with no improvements proposed with the project. Therefore, the project has no impacts on public access at the 380 block because the project does not block or prevent access at this location.

The commentor asserts that public access will be impacted by the existing to-be repaired rip rap that will continue to occupy the sandy beach and diminish beach area available to the public. The project would remove existing rip rap from the beach in the area immediately adjacent to the proposed seawall construction site (310-340 Esplanade Avenue) following construction. Removal of existing rip rap from other areas of the beach outside of the seawall construction site is not included in the project, as it does not affect nor would it be impacted by the proposed seawall construction. Removal of rip rap to improve beach availability outside of the proposed seawall construction site is not within the scope of this project, and there is no nexus to require any impact analysis in the Draft EIR. A project to remove rip rap from the beach along the rest of the block, including 380 Esplanade Avenue, would be a separate project as it is not a reasonably foreseeable consequence of the proposed project.

Response to Comment A2-2: This comment was received during the public review period for the Draft EIR, however it was written in response to a previous email exchange with the Public Works Department that began prior to the publication of the Draft EIR regarding the provision of public access during the Project's construction period (see Response to Comment A1-7 and Comment Letter A2, above).

The existing 100 block access trail provides public access to the beach below. It was discussed in Chapter 4.1 AESTHETICS of the Draft EIR because of its relevance to the analysis of views and scenic vistas contained in that chapter, but also because it provides an example of how the Project would not impact public access to the beach and trails. Similarly, public access to the beach from the trail located on the 380 block would not be impacted by the Project.

The commenter's assertion that the 380 block bluff access will somehow be impacted by the existing rip rap on the beach is unsubstantiated. The Project includes removal of existing rip rap in the immediate vicinity of the proposed seawall construction, which spans from the northernmost point of the 100 block to approximately the southern end of the 340 Esplanade Avenue property. The existing access trail is located approximately 1,100 feet to the south of this location.

The CEQA document prepared for the subject Project, which consists of the construction of a seawall and revegetation of areas along the blufftop that are proposed for equipment staging, is this EIR. The Project would not affect any other blufftop areas or properties from the 350

Esplanade Avenue property to the proposed staging area near the access trail, and thus a CEQA exemption is neither relevant nor proposed.

Response to Comment A2-3: As discussed in Chapter 3.4.6 of the Draft EIR, the existing beach access ramp at the south end of the 380 block of Esplanade Avenue would provide access for construction equipment during the construction phase of the project, and would remain in its current condition and provide public access following completion of the construction of the project. The project does not propose to close the ramp or preclude public access to the beach from this ramp during construction. It would therefore remain available to provide public access during the construction phase, and there would be no public access impacts.

The project would remove existing rip rap from the beach in the area immediately adjacent to the seawall construction site following construction. Removal of existing rip rap from other areas of the beach outside of the seawall construction site is not included in the project, as it does not affect nor would it be impacted by the proposed seawall construction. Removal of rip rap to improve beach availability outside of the proposed seawall construction site is not within the scope of this project and there is no nexus to require any impact analysis in the Draft EIR.

CALIFORNIA COASTAL COMMISSION
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455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
WEB: WWW.COASTAL.CA.GOV

November 2, 2023

City of Pacifica
Attn: Stefanie Cervantes, Senior Planner.
540 Crespi Drive
Pacifica, CA 94044

Subject: ***Draft Environmental Impact Report for the proposed 310-330 Esplanade Drive Infrastructure Preservation Project***

Dear Ms. Cervantes:

Thank you for sending the Draft Environmental Impact Report for the proposed 310-330 Esplanade Drive Infrastructure Preservation Project. The proposed project includes several shoreline protection structures intended to fortify the toe of the bluff including a sheet pile wall, a cap beam on top of the sheet pile wall, and a shotcrete wall secured to the bluff face with tensioned tieback rods/tendons. The wall is estimated to be 650 feet long and 40 feet high as measured from the base of the bluff. Staff requests that the following be incorporated in the Environmental Impact Report for the project, as discussed below.

Project Description
Please address the following:

B1 1. Provide a written explanation and accompanying graphic to illustrate the infrastructure and/or any other development present, that the armoring is proposed to protect, including the anticipated remaining life, initial date of construction, and any associated coastal development permit history of such infrastructure or other development.

B2 2. Explain the need to protect the infrastructure with armoring, including the length of time at which such infrastructure is expected or likely to be in danger, and the rationale for why the armoring is proposed to extend further south than the 310-330 block of Esplanade Drive.

B3 3. Describe the long-term plans for this area after the 30-year life span of the seawall has been exceeded, including long-term plans for adapting the infrastructure or development that the armoring is proposed to protect.

Aesthetic Resources
Please address the following:

B4 1. Please ensure that the shotcrete wall design matches the aesthetics of the surrounding bluffs through color choice and mimicking natural grooves.

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Biological Resources
Please address the following:

B5 1. Please include avoidance, minimization, and mitigation (for unavoidable impacts) to address the potential for marine mammals on the beach during construction, since a juvenile sea lion was surveyed onsite.

B6 2. Staging in ESHA is prohibited by the Coastal Act per policy 30240. The draft LCLUP maps the south staging as ESHA and there may be further evidence of ESHA produced as a result of a Coastal Development Permitting process analysis. Therefore, please explain the necessity of the south staging area and explore alternatives that would avoid impacts to ESHA.

Geology and Soils
Please address the following:

B7 1. This section explains the history of shoreline armoring along the bluff side of these three properties, and notes that there is no indication or documentation regarding the depth of a revetment that was installed at this site in 2010. While possible, it seems unlikely that no plans exist for this revetment, and City staff should explore other avenues to research this point, including through potential Coastal Commission record reviews, to find and analyze further information about the configuration (both permitted and on the ground as built) armoring structure.

B8 2. The soil erosion section notes that the average retreat rate for this site between 1943-2017 was 2.7 feet per year, and between 2004-2017 was 5.4 feet per year. While this is critical information, Commission staff strongly recommends providing additional detail and analysis to this end, to include: the current rate of retreat of the bluff, a more robust analysis of the historical retreat rates for the area, estimates of future retreat rates with and without armoring, including an assessment of such rates as impacted by a range of projected sea level rise scenarios; as well as a quantitative slope stability analysis to determine the factor of safety for the infrastructure the project is intended to protect.

B9 3. This section also explains that these sites would be uniformly graded to very gently drain towards Esplanade Avenue, the blufftop is proposed to be revegetated with native plantings, and pervious paving materials are proposed to be used, all of which will result in a low potential for runoff from the lots to the bluff face. Commission staff recommends providing additional detail regarding this proposed grading, including the resulting slope following grading, the proposed amount of cut and fill, and analysis on how that resultant slope was selected.

Public Services and Recreation

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NORTH CENTRAL COAST DISTRICT
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Please address the following:

B10 1. Clarify if the proposed project will improve public access and recreation opportunities, and connectivity and continuity of such opportunities, at this site and at the adjacent 400 Esplanade site or if improvements will be proposed under the separate 400 Esplanade project.

B11 2. Please note that additional public access mitigation may be required depending on the sand supply impacts of both the proposed project, as well as from previous shoreline protective devices which were installed on an emergency basis, never authorized with required follow-up CDPs, and thus at this point could constitute unpermitted development on the site.

Alternatives

Please address the following:

1. While the DEIR evaluates 1) the CEQA-mandated no-project alternative; 2) grading of the bluff alternative; 3) sand replenishment alternative; and 4) rock revetment alternative, it is missing a thorough analysis of a critical adaptive planning alternative that would involve retreat of the infrastructure that the proposed shoreline protection structure is intended to protect. The section notes that a managed retreat alternative was reviewed but not included for further evaluation and identifies a number of reasons why it was not included. However, B12 without further evaluation Commission staff is unable to concur with the conclusion of this document that the alternative does not merit further consideration, especially as the Coastal Act requires shoreline protection be the least environmentally damaging, feasible alternative. In order to actually be able to evaluate the feasibility of such an alternative, City staff should provide and evaluate the bluff erosion analysis information requested in the Geology and Soils section, above; and complete a cost analysis over the long-term of protecting the bluff as-is (including by incorporating necessary maintenance and mitigation costs) vs. the cost of relocating the infrastructure the shoreline armoring is intended to protect.

B13 2. Although this document analyzed the CEQA-mandated no-project alternative, which evaluates the site as-is, please note that the Commission would view a no-project alternative as requiring the removal of any unpermitted armoring on the site.

B14 3. The sand replenishment alternative notes that it is likely infeasible as sand is rapidly removed from the beach under winter storm conditions. While this may be the case for this alternative, this fact should be evaluated in more depth for the selected project as well, especially given that the proposed project would cut off

CALIFORNIA COASTAL COMMISSION
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sand supply to the beach fronting the toe of the bluff, and thus impact wave dynamics and subsequently bluff erosion.

Thank you again for the opportunity to comment on this Draft EIR, and we look forward to continued coordination on this project. If you have any questions regarding these comments, please contact me via email at oceane.ringuette@coastal.ca.gov.

Sincerely,

Oceane Ringuette

Oceane Ringuette
Coastal Planner
North Central Coast District Office
California Coastal Commission

Response to Comment Letter B from the California Coastal Commission, November 2, 2023

Response to Comment B1: The proposed armoring serves to protect critical coastal infrastructure adjacent to the bluff, encompassing essential components such as storm drains, sewer, water, electrical, and gas lines. Furthermore, the armoring is vital for safeguarding existing residences and apartments along the coastal area. This infrastructure, initially constructed in the early 1960's, is a fundamental part of the community, facilitating daily life and supporting residential structures. Although the City does not have any graphics from the pre-Coastal Act period directly showing the infrastructure within the street, an aerial photograph of the project area from 1965 shows existing structures located from 310 to 350 Esplanade Avenue and the existing street. In addition, the original subdivision map from 1961 shows 5-foot public utility easements along both sides of Esplanade Avenue, within which below-ground electrical, gas, water and other utility lines were installed.

The proposed armoring is a proactive measure to enhance the resilience of these vital services against coastal erosion and potential storm-related impacts. Although hard to estimate, the anticipated remaining life of the infrastructure on Esplanade Avenue is approximately 20 years if 5.4 feet per year of erosion is considered. The existing infrastructure in Esplanade Avenue (roadway, sewer, water, storm, and gas lines) are assumed, based on recorded subdivision maps, to have been constructed in approximately 1961. With proper maintenance, piping materials and roadways can last up to 100 years or longer, which means that in circumstances where there are no hazards such as coastal erosion, the existing roadway and infrastructure could remain operational for an additional 40 years or more. As far as Coastal Development Permit history along Esplanade Avenue, there have been two permits issued within the past 15 years that are known of. One is for the development of the storm drain pump station at 380 Esplanade Avenue that that was constructed roughly ten years ago (CDP 2-11-009) and another was for the shotcrete wall at 360 Esplanade Avenue that was installed approximately 15 years ago (CDP 2-08-020).

Response to Comment B2: The imperative to protect the coastal infrastructure with armoring arises from the imminent and ongoing threat of erosion along the bluff. Without intervention, the infrastructure, including the street itself (Esplanade Avenue), would be continuously exposed to the erosive forces of the coastline. The danger is perpetual, as erosion continues to degrade the coastal environment, jeopardizing critical elements.

The length of time at which such infrastructure is expected or likely to be in danger is indefinite without intervention. Coastal erosion is an ongoing process, and the rate of degradation will persist unless preventative measures are implemented. The threat extends not only to Esplanade Avenue but also to the broader coastal infrastructure network, including the potential risk of Highway 1 far down the line. This proactive approach aligns with the principles of sustainable coastal management, recognizing the necessity to act now to preserve the integrity and functionality of essential infrastructure for the benefit of the community in the face of ongoing coastal challenges.

The rationale as to why the armoring is proposed to extend slightly further south than 330 Esplanade is to ensure seamless integration with the existing shotcrete wall that exists at 360

Esplanade (CDP 2-08-020) to create a unified and resilient coastal protection system. In order to preserve the infrastructure between 310-330 Esplanade Avenue, the Project's geotechnical report recommended that a continuous seawall be constructed along the base of the bluff. It stated that ideally, the seawall should overlap behind the existing seawall to the north (at Land's End) and tie-in to the existing seawall to the south (at 360-380 Esplanade Avenue). Based on CSA's evaluation of the neighboring seawalls to the north and south, the wall to the north does not appear to be providing satisfactory long-term support to the lower portion of the bluff, and consequently the report recommended overlapping behind the wall to the north instead of connecting to it. Conversely, the seawall to the south at 360/380 Esplanade Avenue appears to be providing satisfactory support to the bluff. The purpose of tying in to the existing seawall to the south would be to form a continuous barrier for bluff support against wave scour. The report stated that without adequate tie-in provisions, the potential for erosional out-flanking of the proposed seawall would be significantly increased. The Project Description section of the EIR has been revised to include this information (see Chapter 4, Errata).

Response to Comment B3: Currently there is no predefined long-term plan in place beyond the 30-year lifespan of the proposed armoring. The immediate focus is on the installation of the armoring to address pressing erosion threats and protect vital infrastructure. Recognizing the dynamic nature of coastal environments, the intention is to remain adaptive and responsive to evolving conditions. Once the armoring is in place, continuous monitoring and assessment will be integral to gauge its performance and to understand how the coastal landscape evolves. Future consideration will be made based on the ongoing challenges posed by erosion, with an openness to exploring adaptive strategies, potential improvements, or alternative measures as needed. This adaptable approach ensures a proactive stance in addressing the changing dynamics of the coastal zone while prioritizing the long-term sustainability of the protected infrastructure.

Response to Comment B4: Comment noted. The construction drawings for the proposed seawall contain a finish facing schedule that includes the following note: "Finish facing shall be colored, sculpted and stained to resemble natural occurring geologic formations." This would ensure that the seawall would match the aesthetics of the surrounding bluffs. The impact discussion under Impact AES-3 has been modified to include this information (see Errata section).

Response to Comment B5: The Draft EIR acknowledges that California sea lions and harbor seals can haul out into the study area at any time of the year to rest, but that the study area is not known to be a significant haul-out site. It additionally states that there are no known significant haul-out sites or rookery sites for either species near the study area, and that marine mammals would only be temporarily displaced by construction noise and can forage in areas surrounding the Project. Because marine mammals are not expected to be killed or injured since they could easily avoid the work site, and because the proposed Project would not result in permanent substantial changes to the availability of nearby foraging or haul-out habitat after construction is completed, this issue was not considered a significant impact requiring avoidance, minimization or mitigation measures.

Response to Comment B6: The south staging area is proposed because of its adjacency to the existing beach access trail, which would be used by construction equipment to access the project site.

The Sensitive and Critical Habitat Map (Figure 4-3) contained in the Certification Draft Local Coastal Land Use Plan (February 2020) contains the following disclaimer: *"The preliminary delineation of ESHA boundaries does not include an exhaustive compilation of the habitat areas that meet the ESHA definition. Site Specific biological evaluations and field observations shall be required to identify ESHAs and other special status resources that may not have been included in the literature and database review."* The biological assessment prepared for the project site by MIG that was included in the City's CDP application as Appendix H, (and also included as Appendix D in the Draft EIR), stated that are no mapped ESHAs within or nearby the study area (Dyett and Bhatia 2014). Given the disclaimer on the LCLUP map, the precise boundaries of the EHSA designation shown near the proposed southern staging area should not necessarily be interpreted as including the actual staging area, which consists of an approximately 7,500-square foot area extending from the edge of Esplanade Avenue to approximately 40 feet from the edge of the bluff. This area is devoid of vegetation, although the edge and face of the bluff are vegetated.

Response to Comment B7: The purpose of the Surface Conditions discussion in Chapter 4.5.1 of the Draft EIR is to provide a cursory review of the surface conditions as they currently exist on the project site. Additional research and discussion of the placement of the existing revetment is not necessary as it would not be germane to the subsequent analysis of geotechnical hazards and impacts of the project in relation to the CEQA thresholds. CEQA is focused on the project's effects on the environment, and not the effects or impacts of existing conditions or environment on the project (See California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369.). None of the CEQA Checklist questions addressed in Chapter 4.5.4 are related to the existing revetment's effect on the project design or potential geotechnical hazards associated with the project.

Response to Comment B8: The rates of coastal retreat cited in the EIR are consistent with the rates described in recent studies, such as the study published by Scripps Institution of Oceanography at the University of California, San Diego in 2022 (Spatial and Temporal Trends in California Coastal Cliff Retreat, Swirad & Young, *Geomorphology*, Volume 412, 1 September 2022), which used data of cliff erosion between 2009-2011 and 2016 at various locations along the California coast. Retreat rates in northern and central California were determined to have an average retreat rate of 0.2 to 0.7 meters (0.65 to 2.3 feet) per year. This is roughly consistent with the Draft EIR which stated that the rate between 1943-2017 was 2.7 feet per year at the project site. The need to conduct a more robust analysis of historical and future retreat rates is unclear, since the project anticipates that the unsupported portion of the bluff above the proposed seawall would continue to experience raveling and erosion/bluff retreat until ultimately reaching equilibrium at a static inclination of approximately 40 to 50 degrees, as clearly stated in the Introduction chapter of the Draft EIR (Chapter 1.1 Purpose and Scope of the EIR).

According to the project geologist, Cotton Shires & Associates (CSA), the provision of a quantitative slope stability analysis as recommended by the CCC would not be appropriate because such an analysis would not be modeling the actual bluff retreat hazard that the proposed project is designed to arrest or a hazard that has been observed at this site, as explained in the following paragraph.

The documented mechanism for the on-going bluff retreat at 310-330 Esplanade Avenue is characterized by wave action eroding the toe of the bluff, which results in near-vertical, vertical, and undermined bluff faces. The lower portion of the bluff face then calves off like a glacier, followed a while later by the mid bluff portion, and then by the upper bluff portion. Typically, these calving events are only about two to ten feet thick. This type of calving failure is not a typical landslide event, and based on CSA's experience does not lend itself to traditional slope stability analysis due to the near-vertical failure surface the calving material mobilizes and the void at the base of the bluff caused by undermining.

Response to Comment B9: As stated under Impact HYD-3 on Page 4.7-11, the blufftop between 310 and 330 Esplanade Avenue would be recontoured to ensure that the blufftop slopes uniformly towards Esplanade Avenue to direct stormwater sheet flow towards Esplanade Avenue and away from the bluff face. Per Section 3.4.7, recontouring is anticipated to require less than 50 cubic yards of imported material. Although no significant amounts of cut and fill would be anticipated to implement the revegetation of the blufftop or create positive overland drainage flow towards Esplanade Avenue, a grading plan prepared with construction documents for the project, outside of the CEQA process, would provide more detailed information. In response to the CEQA threshold questions, the Draft EIR has concluded that impacts related to the alteration of existing drainage patterns, generation of substantial erosion or siltation on- or off-site, increases in the rate or amount of surface runoff that would result in flooding, or contribution of runoff water that would exceed the capacity of existing stormwater drainage systems, or provision of substantial additional sources of polluted runoff are less than significant.

Response to Comment B10: In the discussion under Impact REC-1 on Page 4.10-5 the Draft EIR states that the Project may restrict some adjacent beach uses during construction, as the existing access ramp to the beach from Esplanade Avenue near Manor Drive (currently closed to the public) would be used for construction vehicle and equipment access and would remain closed to the public during construction, but that the access would be improved following the project construction in conjunction with the City's planned park and infrastructure preservation improvements for the adjacent 400 block of Esplanade Avenue. A correction to this statement has been included in the Final EIR to state that the existing access ramp would be made available to provide public access to the beach during construction (see Chapter 4, Errata).

Response to Comment B11: Comment noted. The Final EIR has been revised to include the results of a sand supply impact study for the proposed project, which concluded that the impact would be insignificant (see Response to Comment B14, and Chapter 4, Errata).

Response to Comment B12: Per Section 15126.6(c) of the CEQA Guidelines, the EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. The reasons for rejecting the Managed Retreat Alternative discussed in the EIR include: the undermining of Esplanade Avenue being highly dependent on uncertain winter swell and rainfall conditions; significant potential for impacts to utilities and pavement (based on tension cracks observed from 5 to 15 feet from the top edge of the bluffs west of Esplanade Avenue); impacts to the stability of adjacent bluffs; and the prohibitive costs of relocation of and compensation for existing infrastructure and structures. The discussion further states that the timing for moving infrastructure such as water and wastewater lines, and planning for construction of a new pump station is lengthy, and may require acquisition of private easements, the success of which would not be guaranteed.

Further evaluation of this Alternative, including a complete cost analysis over the long term of protecting the bluff versus relocation of infrastructure is not required in order to explain the reasons underlying the City determination of infeasibility, per Section 15126.6(c). See Response to Comment B8 regarding the provision of bluff erosion analysis information.

Response to Comment B13: Comment noted.

Response to Comment B14: The EIR has been revised to modify the Principal Characteristics discussion on Page 5-14 to include impacts of the proposed project on sand supply to the beach fronting the toe of the bluff (see Chapter 4, Errata). The analysis is based on the conclusions of a memorandum prepared by Cotton, Shires & Associates, Inc. (CSA) in 2020 that calculated the volume of beach quality sand that would have been supplied to the beach if natural erosion continued.

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CHARLTON H. BONHAM, Director

November 16, 2023

Stefanie Cervantes, Senior Planner
City of Pacifica Planning Department
500 Crespi Drive
Pacifica, CA 95044
SCervantes@pacifica.gov

Subject: 310-330 Esplanade Avenue Infrastructure Preservation Project, Draft Environmental Impact Report, SCH No. 2022100372, City of Pacifica, San Mateo County

Dear Ms. Cervantes:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a Draft Environmental Impact Report (EIR) from the City of Pacifica Planning Department (City) for the 310-330 Esplanade Avenue Infrastructure Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife resources. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. For example, to the extent implementation of the Project as proposed may result in "take[2]" as defined by state law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Pacifica Planning Department

Objective: The Project would construct a sea wall and trail features with three primary objectives: (1) halt bluff toe erosion toward Esplanade Avenue to prevent infrastructure (roadway, sewer, and other utilities) collapse for at least 30 years; (2) minimize impacts to sensitive resources, such as sand supply, beach access, ecological function, water quality, and shoreline aesthetics; (3) provide public access to ocean views from Esplanade Avenue, except where public access would endanger public safety or fragile coastal resources.

Location: The Project is located along the west side of Esplanade Avenue, between Manor Drive on the south and West Beaumont Boulevard on the north in the City of Pacifica. The approximate Project centroid is Latitude 37.65173, Longitude -122.49361.

Timeframe: Construction of the seawall would take approximately 260 days and would occur in spring and early winter (draft EIR page 3-6).

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

COMMENT 1: Bank Swallow

C1

Issue: The draft EIR states that bank swallow (*Riparia riparia*) may use the coastal bluffs and terraces along the bluff within the Project area as nesting and foraging habitat (draft EIR page 4.3-5). The Project is approximately 5 miles south of a known coastal bank swallow colony at Fort Funston (California Natural Diversity Database (CNDDB) 2023, San Francisco Planning 2023). Another coastal bank swallow colony occurs approximately 26 miles south of the Project at Año Nuevo State Park (CNDDB 2023). The coastal bluffs at the Project site may provide similar habitat as the Fort Funston colony and the Año Nuevo colony. The draft EIR does not provide an adequate

[2] Take, as defined in Fish and Game Code section 86, means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

evaluation to determine if bank swallow may use the Project bluffs or sufficiently analyze Project impacts to bank swallow habitat.

Evidence the Impact would be Significant: The bank swallow is listed as a threatened species under CESA. In 2016, Rosenberg et al. estimated a 95 percent reduction in the North American bank swallow population. The bank swallow population in California has seen a similar decline (BANS TAC 2013, Wright et al. 2014). In addition, the majority of remnant bank swallow colonies in California occur in riverine systems; coastal colonies are rare (*ibid.*).

Bank swallow rely on ephemeral eroding banks with friable soil for nesting (Sieber 1980, Garrison 1998). In addition, bank swallows typically need a slope of 70 degrees or more for suitable nesting habitat, with a preference for banks or cliffs that are vertical (90 degrees) or slightly inclined (75 degrees) (Hjertaas 1984). Bank stabilization activities halt natural bank erosion and remove habitat through hardening the bank or reducing the slope (BANS TAC 2013, Wright et al. 2014). In addition, human harassment can cause nest abandonment and has contributed to the population declines in California (CDFG 1995).

The Project would construct a sheet pile wall and install shotcrete on the bluff face with tensioned tieback rods or tendons drilled into the bluff face (draft EIR page 3-4). This activity could remove potential bank swallow nesting habitat, a potentially significant impact. In addition, if nesting bank swallows are present during proposed activities, those activities could result in injury or mortality to bank swallows or their young, a potentially significant impact. The Project would also install a pedestrian trail on the bluff top, thereby increasing human disturbance to the site. Human presence and harassment of bank swallows can cause abandonment of nest or eggs, leading to injury or mortality of young, a potentially significant impact.

Recommendation 1: CDFW recommends the draft EIR provide a detailed bank swallow habitat assessment that follows similar methods and definitions as the CDFW Statewide Bank Swallow Colony Inventory Survey Methods (CDFW 2021). The draft EIR should be updated with the results of the habitat assessment and include a discussion of the likelihood of bank swallow presence at or near the Project.

Recommended Mitigation Measure BIO-1d: Bank Swallow Habitat Assessment: Prior to initiating Project activities, a qualified biologist shall conduct a bank swallow habitat assessment of the cliff bluffs within and near the Project footprint. The habitat assessment will at minimum address the cliff face attributes of 1) slope, 2) vegetation cover, 3) soil type (e.g., friable soils), and 4) cliff height. Based on these and any other relevant attributes, the habitat assessment will identify potentially suitable bank swallow habitat.

A qualified biologist is an individual who holds a bachelor's degree from an accredited university and: 1) is knowledgeable in bank swallow and other relevant species' life histories and ecology, 2) can correctly identify relevant species, 3) has conducted field surveys for relevant species, 4) is familiar with relevant survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species.

Recommendation 2: If the habitat assessment described above identifies potentially suitable bank swallow habitat at or near the Project site, the draft EIR should identify whether the habitat can be avoided and if take of bank swallow could occur. If so, the draft EIR should also incorporate avoidance, minimization, and mitigation measures, in coordination with CDFW, as appropriate. An example of a measure could include restoration and enhancement of bank swallow habitat.

Recommended Mitigation Measure BIO-1e: Bank Swallow Incidental Take Permit: If the Project has the potential to cause take of bank swallow, the City shall apply for and obtain a CESA Incidental Take Permit (ITP).

COMMENT 2: Project Lighting

C2

Issue: The draft EIR identifies that the Project may use temporary light facilities with generators for equipment staging and material storage areas (draft EIR page 3-17). A significant portion of the proposed Project limits do not contain any overhead artificial light sources. It is unclear if the Project proposes to install new permanent light sources. Artificial light spillage beyond the prism of the bluff tops into natural areas may result in potentially significant impacts through substantial degradation of the quality of the environment, including altering fish and/or wildlife movement and natural behavior.

Evidence the Impact would be Significant: Artificial night lighting can disrupt the circadian rhythms of many wildlife species, and lead to a significant impact on resident and migratory species that utilize the Project area and surrounding lands and waters. 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). A number of species in the Project area travel only during the evening, including bats. Impacts to nocturnal species movement with lighting can expose them to predators and force them to take less preferred routes, leading to mortality and/or indirect impacts to the population. Nighttime lighting also attracts insects, which in turn attracts insectivorous species. Attracting these species to lights at night can increase the likelihood of direct mortality from traffic and construction equipment. Artificial night lighting has also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refugia and reducing their ability to feed during the winter (Contor and Griffith 1995), while larval green sturgeon avoid light at night (Nguyen and Crocker 2006). For nocturnally migrating birds, direct mortality as a result of collisions

with anthropogenic structures due to attraction to light (Gauthreaux, 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).

Recommendation 1: CDFW strongly recommends no nighttime work and no new artificial lighting as a result of the Project to avoid potentially significant impacts to biological resources.

Recommendation 2: If the City installs new artificial lighting as part of the Project, the lights should be installed to limit light output as much as possible.

Recommended Mitigation Measure BIO-2a: Light Output Limits: Any LED's or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin and within the warm white color spectrum.

Recommended Mitigation Measure BIO-2b: Light Pole Modifications and Shielding: Any light poles or sources of illumination, either new or replacement installations of existing light sources, shall be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat. In addition, the light pole arm length and mast heights shall be modified to reduce excessive light spillage into natural landscapes or aquatic habitat. In areas with sensitive natural landscapes or aquatic habitat, the City shall also reduce the number of light output sources, including by placing light poles at non-standard intervals, to further reduce light pollution.

REGULATORY AUTHORITY

California Endangered Species Act

C3

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in take of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, such as bank swallow, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. CEQA requires a Mandatory Finding of Significance if a Project is likely to substantially impact threatened or endangered species (CEQA Guidelines §§ 21001

subd. (c), 21083, 15380, 15064 and15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code section 2080. More information on the CESA permitting process can be found on the CDFW website at https://www.wildlife.ca.gov/Conservation/CESA.

C3

Fully Protected Species

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except for collecting these species for necessary scientific research and relocation of a fully protected bird species for the protection of livestock. Take of any fully protected species is prohibited, and CDFW cannot authorize their take in association with a general project except under the provisions of a Natural Communities Conservation Plan (NCCP), Fish and Game Code section 2081.7, a Restoration Management Permit, or a Memorandum of Understanding for scientific research purposes. "Scientific Research" does not include an action taken as part of specified mitigation for a project, as defined in section 21065 of the Public Resources Code.

C4

Raptors and Other Nesting Birds

CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nests or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

EDITORIAL COMMENT

C5

The draft EIR identifies that American peregrine falcon (*Falco peregrinus anatum*) and California brown pelican (*Pelecanus occidentalis californicus*) have the potential to occur within the Project footprint and are state listed as Fully Protected (draft EIR 4.3-12 and Appendix D). Please note that Senate Bill 147 (2023) removed American peregrine falcon and California brown pelican from the list of Fully Protected birds. Both birds still receive nesting bird and other Fish and Game Code protections as described above.

ENVIRONMENTAL DOCUMENT FILING FEES

C6

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. 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. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

ENVIRONMENTAL DATA

C7 CEQA requires that information developed in EIRs, 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 filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

CONCLUSION

CDFW appreciates the opportunity to comment on the draft EIR to assist the City in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erin Chappell
B77E9A6211EF486...

Erin Chappell
Regional Manager
Bay Delta Region

Attachment 1. Draft Mitigation and Monitoring Reporting Plan

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2022100372)
Craig Weightman, CDFW Bay Delta Region - Craig.Weightman@wildlife.ca.gov

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ATTACHMENT 1

Draft Mitigation and Monitoring Reporting Plan

Biological Resources (BIO)			
Mitigation Measure (MM)	**Description**	**Timing**	**Responsible Party**
MM BIO-1d	*Bank Swallow Habitat Assessment*: Prior to initiating Project activities, a qualified biologist shall conduct a bank swallow habitat assessment of the cliff bluffs within and near the Project footprint. The habitat assessment will at minimum address the cliff face attributes of 1) slope, 2) vegetation cover, 3) soil type (e.g., friable soils), and 4) cliff height. Based on these and any other relevant attributes, the habitat assessment will identify potentially suitable bank swallow habitat. A qualified biologist is an individual who holds a bachelor's degree from an accredited university and: 1) is knowledgeable in bank swallow and other relevant species' life histories and ecology, 2) can correctly identify relevant species, 3) has conducted field surveys for relevant species, 4) is familiar with relevant survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species.	Prior to Ground Disturbance	City & Qualified Biologist
MM BIO-1e	*Bank Swallow Incidental Take Permit*: If the Project has the potential to cause take of bank swallow, the City shall apply for and obtain a CESA ITP.	Prior to Ground Disturbance	City
MM BIO-2a	*Light Output Limits*: Any LED's or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin and within the warm white color spectrum.	Duration of Project	City
MM BIO-2b	*Light Pole Modifications and Shielding*: Any light poles or sources of illumination, either new or replacement installations of existing light sources, shall be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat. In addition, the light pole arm length and mast heights shall be modified to reduce excessive light spillage into natural landscapes or aquatic habitat. In areas with sensitive natural landscapes or aquatic habitat, the City shall also reduce the number of light output sources, including by placing light poles at non-standard intervals, to further reduce light pollution.	Duration of Project	City

Responses to Comment Letter C from California Department of Fish and Wildlife, November 16, 2023

Response to Comment C1: Comment noted. Section 4.3.1 of the EIR (Environmental Setting) has been revised to include more detailed information regarding bank swallows and their habitat within the project area. In addition, mitigation measures as recommended have been added in Section 4.3.4 (Impacts and Mitigation Measures). (see Chapter 4, Errata)

Response to Comment C2: Comment noted. As stated on Page 4.3-39 of the EIR, night lighting would be localized, temporary, and night work is not expected to occur throughout the duration of the Project, but only when necessary to address tidal conditions. Additionally, Page 4.1-9 of the Aesthetics chapter states that the City of Pacifica Design Guidelines require that exterior lighting is subdued and that large areas should use low shielded fixtures, and that tall fixtures which illuminate large areas should be avoided. It further states that any proposed construction phase lighting would be subject to compliance with the Guidelines. For these reasons, the impacts to native resident or migratory wildlife species and habitat would be less than significant.

Response to Comment C3: Comment noted. The EIR provides Mitigation Measures to address significant impacts to biological resources identified in the analysis discussions. The EIR does not identify any significant unavoidable impacts related to biological resources that would require the City to make the CEQA-mandated Findings of Overriding Considerations.

Response to Comment C4: Comment noted.

Response to Comment C5: Comment noted. The comment is not relevant to the adequacy of the Draft EIR and does not raise any significant environmental issues related to the proposed project analyzed in the Draft EIR. No response is required.

Response to Comment C6: Comment noted. Page 4.3-12 of the EIR has been revised to include the updated protection status of the American peregrine falcon and California brown pelican. (see Chapter 4, Errata).

Response to Comment C7: Comment noted. CDFW environmental document filing fees will be paid by the City of Pacifica at the time the Notice of Determination is filed at the Office of the San Mateo County Clerk-Recorder.

Response to Comment C8: Comment noted.

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

JENNIFER LUCCHESI, *Executive Officer*
(916) 574-1800
TTY CA Relay Service: **711** *or Phone* **800.735.2922**
from Voice Phone **800.735.2929**
or for Spanish **800.855.3000**

Contact Phone: **(916) 574-1890**

November 20, 2023

File Ref: SCH # 2022100372

City of Pacifica
Attn: Stefanie Cervantes
Planning Department
540 Crespi Drive
Pacifica, CA 94044

VIA ELECTRONIC MAIL ONLY (*scervantes@pacifica.gov*)

Subject: Draft Environmental Impact Report for the 310-330 Esplanade Drive Infrastructure Preservation Project, San Mateo County

Dear Stefanie Cervantes:

The California State Lands Commission (Commission) staff has reviewed the subject Draft Environmental Impact Report (EIR) for the 310-330 Esplanade Drive Infrastructure Preservation Project (Project), which is being prepared by the City of Pacifica (City). The City, as the public agency proposing to carry out the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Commission is a trustee agency for projects that could directly or indirectly affect State sovereign lands and their accompanying Public Trust resources or uses. Additionally, because the Project involves work on State sovereign land, the Commission will act as a responsible agency.

Commission Jurisdiction and Public Trust Lands

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the state for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court.

D1

According to the Draft EIR, bluff stabilization includes a seawall and related structures that could encroach on lands managed by the State of California and therefore would require a lease. Figure 3-3 depicts the proposed Project elements and includes two lines identified as a High Tide Line (HTL, dashed blue line) and a High Water Mark (HWM, dashed magenta line). Both lines are noted as having been surveyed in either 2019 or 2020. However, on the open coast the boundary between state-owned land and private upland property is the ordinary high-water mark as delineated by the mean high tide line (MHTL). On the figure it is unclear which line, if any, depicts the MHTL. Regardless, from this figure it appears that both portions of riprap to be removed and the identified temporary access area (brown shaded area) are located within Commission jurisdiction and would therefore require Commission authorization. Please include a plat with the lease application that shows the Project elements overlaid with a recent MHTL survey. Please ensure the MHTL is clearly labeled as such, and that the survey was conducted within 6 to12 months of application submittal. For additional questions please contact Kenneth Foster (contact information is provided at the end of this letter).

Project Description

The City proposes to construct several structural elements to fortify the toe of the bluff, including a sheetpile wall that would extend below the beach to an approximate elevation of 10 feet below sea level. A cap beam would be placed on top of the sheetpile wall and a shotcrete (sprayed concrete) wall would be secured to the bluff face with tensioned tieback rods/tendons drilled into the bluff face.

The wall is estimated to be 650 feet long and would extend the seawall from the base of the bluff to an elevation of 40 feet (approximately 26 feet above the summer sand level). The wall would have tiebacks that go into the bluff to support the weight of the wall and protect the toe of the bluff from erosion. The work would also include removing loose debris from the toe of the bluff and the existing rip rap on the beach. The wall would extend approximately 20 feet below the beach to protect against undermining scour from winter storms. According to the City, the Project would protect and maintain existing infrastructure along Esplanade Avenue.

From the Project Description, Commission staff understands that construction below the MHTL, including portions of the sheetpile wall, riprap removal, and construction access would likely fall within the jurisdiction of the Commission.

Environmental Review

Commission staff requests that the City consider the following comments on the Draft EIR to ensure that impacts to State sovereign land are adequately analyzed for the Commission's use of the EIR to support a future lease approval for the Project.

General Comments

1. Responsible Agencies: The Draft EIR Executive Summary states, "The City of Pacifica (City) is the CEQA Lead Agency for the Project. The Coastal Commission, U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB) are responsible agencies with permitting authority for the project." Although the Commission was added to the trustee agency list on page 3-19, the Executive Summary should also identify the Commission as a CEQA Responsible Agency.

D2

Cultural and Tribal Resources

2. Tribal Engagement and Consideration of Tribal Cultural Resources: In the Commission's comment letter on the Notice of Preparation, dated November 18, 2022, Commission staff provide guidance tor tribal consultation consistent with the Commission's Tribal Policy.

   Although the Draft EIR does disclose that outreach to interested Tribes has occurred, it does not identify the contacted tribes or provide content related to tribal communications. The Draft EIR's statement that "No specific information was provided by the tribal contacts regarding the location and nature of tribal resources in the area in response to the letters, therefore, there is no confirmed potential for impacting known tribal cultural resources," is not sufficient, as any responses or requests from the tribes during the outreach process should be part of the public record unless requested to be confidential. Commission staff recommends that the City include this information in the Final EIR to maintain a clear record of the City's efforts to comply with AB 52.

D3

Recreation

3. Public Beach Access: Chapter 4.10, *Public Services and Recreation*, should thoroughly analyze impacts to public access and recreation during and after construction of the proposed improvements, both on the bluff and on the beach, to ensure safe and continued public access to the beach. Despite the potential for danger due to construction equipment use on the beach, no

D4

mitigation measures are proposed or BMPs discussed to protect the public on the beach during the 6-month construction period. Commission staff request the Final EIR include and evaluate this potential impact and recommend mitigation that includes fencing off areas during beach construction as well as installing signage warning the public of potential Project-related dangers on the bluff or the beach.

Thank you for the opportunity to comment on the Draft EIR for the Project. As a responsible and trustee agency, the Commission will rely on the Final EIR for issuing a new lease as specified above (see Section "Commission Jurisdiction and Public Trust Lands"). Staff requests that you consider these comments before certifying the Final EIR.

D5 Please send electronic copies of the Final EIR, Mitigation Monitoring Program, Notice of Determination, approving resolution, CEQA Findings, and, if applicable, Statement of Overriding Considerations when they become available. Please note that federal and state laws require all government entities to improve accessibility of information technology and content by complying with established accessibility requirements. (29 U.S.C. § 794d; 36 C.F.R. § 1194.1 et seq.; Gov. Code, § 7405.) California State law prohibits State agencies from publishing on their websites content that does not comply with accessibility requirements. (Gov. Code, § 115467.) Therefore, any documents submitted to Commission staff during the processing of a lease or permit, including all CEQA documentation, must meet accessibility requirements for Commission staff to place the application on the Commission agenda.

Please refer questions concerning environmental review to Cynthia Herzog, Senior Environmental Scientist, at (916) 574-1310 or cynthia.herzog@slc.ca.gov. For questions concerning Commission leasing jurisdiction, please contact Kenneth Foster, Public Lands Manager, at (916) 574-2555 or kenneth.foster@slc.ca.gov.

Sincerely,

Nicole Dobroski, Chief
Division of Environmental Science, Planning, and Management

cc: Office of Planning and Research
C. Herzog, Commission
K. Foster, Commission
A. Kershen, Commission

Responses to Comment Letter D from California State Lands Commission, November 20, 2023

Response to Comment D1: Comment noted. The lease application to the California State Lands Commission will include the Project elements with a recent (within 6-12 months of the application submittal) mean high tide line (MHTL) that is clearly labeled.

Response to Comment D2: Comment noted. California State Lands Commission has been added to the list of responsible agencies in Chapter 2.1. Please see Chapter 4, Errata.

Response to Comment D3: Comment noted. Tribal outreach occurred on April 25, 2019 via certified letters to the following tribes:

- Amah Mutsun Tribal Band of Mission San Juan Bautista – Irene Zwierlein, Chaiperson
- Costanoan Rumsen Carmel Tribe - Tony Cerda, Chairperson
- Indian Canyon Mutsun Band of Costanoan - Ann Marie Sayers, Chairperson
- Muwekma Ohlone Indian Tribe of the SF Bay Area – Charlene Nijmeh, Chairperson
- The Ohlone Indian Tribe – Andrew Galvan

The letters included the objectives of the project, proposed design elements, anticipated construction duration, noted the negative Sacred Lands File search and California Historical Resources Information System results, and requested information on Tribal Cultural Resources not included in the SLF search or if they had additional information on archaeological resources in the project vicinity.

One certified letter to Ann Marie Sayers was returned to sender, therefore a follow up email was sent on August 2, 2019. No responses were received from any Tribe as a result of this outreach. The Tribes are on the City's mailing list for announcements regarding this Project. This information has been included in the Final EIR. Please see Chapter 4, Errata.

Response to Comment D4: Comment noted. For safety reasons, the beach is anticipated to be inaccessible to the public between the 400 block of Esplanade Avenue and 310 Esplanade Avenue during the construction period. However, this impact would be short-term and adjacent areas of the beach would remain open to the public during construction.

The proposed Project is not expected to impact public access or recreational beach use in the long term. There is no existing public access to the beach directly from 310-330 Esplanade Avenue, and nearby public access points would not be impacted by the project. Beaches are generally narrow in the project area and thus provide limited public access, especially at high tides, when the water level sometimes reaches all the way to the toe of the bluff. The proposed project would improve safe beach access by controlling bluff failures.

Although the impacts to beach access would be temporary, limited to the duration of the construction period, the active construction areas on the beach and blufftop would present a danger to beach users during the construction period. The installation of construction fencing and signage

at these active construction areas, in conformance with the City's standard procedures, would reduce the potential impacts to a less than significant level. The discussion under Impact PUB-1 in Section 4.10.4 has been expanded to include analysis of this issue. Please see Chapter 4, Errata.

Response to Comment D5: Comment noted. The City will provide the Final EIR, Mitigation Monitoring and Reporting Program, Notice of Determination approving resolution, CEQA findings, and if applicable, Statement of Overriding Considerations to the State Lands Commission when they become available. The City acknowledges the referenced accessibility requirements and will ensure that any documents provided to the State Lands Commission during the process of the lease or permit, including all CEQA documentation, shall meet the accessibility requirements of State Lands Commission Staff to place the application on the State Lands Commission agenda.

Civil Engineering
Land Planning
Hydrology / Flood Control
Capital Improvements
Public Works Services
Stormwater Management

November 18, 2023

CITY OF PACIFICA
Planning Department
540 Crespi Drive
Pacifica, California 94004

Attention: Stefanie Cervantes, Senior Planner {scervantes@pacifica.gov}

Subject: **DRAFT ENVIRONMENTAL IMPACT REPORT PRESERVATION PROJECT**
SCH #2022100372

Location: **310-330 ESPLANADE AVENUE**
CITY OF PACIFICA, CALIFORNIA

Dear Ms. Cervantes:

RJR Engineering & Consulting, Inc. (RJR) has prepared this letter at the request of Mr. and Mrs. Dennis Thomas, owners of 340 Esplanade Way in the City of Pacifica, California ("340"). RJR has been asked to review the Draft Environmental Impact Report (DEIR) with respect to 340 and the proposed repair scheme presented in the DEIR.

Photograph 1: GoogleEarth Image of Subject Bluff Area and Surrounding Areas

2340 Palma Drive, Suite 200 | Ventura, California 93003 | 805.485.3935
12277 Soaring Way, Suite 100, Truckee, California 96161 | (916) 260-0707
3054 Fite Circle, Suite 108, Rancho Cordova, California | (916) 260-0707
www.rjreng.com

RJR has been working in this area of Pacifica, California since the late 1990's with specific work on this bluff since 2008 to the present. We understand the City is proceeding with a seawall design that will connect to the existing sea wall north (Oceanaire)[1] and south to the sea wall at 360 Esplanade Avenue (AImco). In principle, in the opinion of RJR this is a prudent approach to retard bluff retreat. However, RJR has the following comments.

RJR Comment 1 - BLUFF RETREAT: Historically bluff retreat in the area has been on the order of 2 feet annually (average). RJR's analysis and data presented in the Cotton Shires report rendered values of 4 to 10 feet, depending on the time interval.

E1

It is worth noting that the northern Pacifica coastline has been undergoing progressive sea cliff retreat. According to Lajoie and Mathieson (1998)[2], the long-term erosion rate is approximately 2 feet per year. Bluff erosion rates are dependent on seasonal weather and tide changes and can vary depending on seasonal conditions. For instance, in 1983, 1986, 1995 and early 1998, increased rates of bluff erosion were a direct result of severe winter waves, high tides, and El Nino ocean water thermal expansion effects, coupled with a diminishing natural resupply of sand to the shoreline.

<u>Suggestion 1</u>: RJR suggests that the DEIR explain that the recent time period may reflect changes in coastal processes resulting the higher erosion rates. However, with the passage of time, the rates may normalize to lower rates more consistent with the historic rates.

RJR Comment 2 – ANALYSIS OF THE IMPACT OF SEAWALLS ON COASTAL SHORELINES: Seawalls are hard engineered structures with a primary function to prevent further erosion of the shoreline. They are built parallel to the shore and aim to hold or prevent sliding of the soil, while providing protection from wave action (UNFCCC, 1999)[3]. Although their primary function is erosion reduction, they have a secondary function as coastal flood defenses. Seawalls are

E2

subjected to significant loadings, as a result of wave impact. These loadings increase with water depth in front of the structure because this enables larger waves close to the shoreline. Seawalls are designed to dissipate or reflect incoming wave energy and as such, must be designed to remain stable under extreme wave loadings. The effects of sea level rise ("SLR"), increased wave heights and increased storminess caused by climate change should be considered in the analysis.

Smooth, vertical seawalls are the least effective at dissipating wave energy; instead, the structures reflect wave energy seawards. Reflection creates turbulence, capable of suspending

[1] RJR was the Engineer of Record for the design and construction of this seawall and repair of wall defects.
[2] Lajoie, K. R., and Mathieson, S. A. (1998). "1982-83 El Niño Coastal Erosion, San Mateo County, California." Open File Report 98-41, U.S. Geological Survey, Menlo Park, California.
[3] UNFCCC (United Nations Framework Convention on Climate Change) (1999) Coastal Adaptation Technologies. Bonn: UNFCCC. Access November 9, 2023.

sediments (Bush et al., 2004)[4], thus making them more susceptible to erosion. In a worst-case scenario, reflected energy can interact with incoming waves to set up a standing wave which causes intense scouring of the shoreline (French, 2001)[5].

Scour at the foot of a seawall is a particular problem with vertical seawall designs. Incoming waves impact the structure, causing water to shoot upwards. When the water falls back down, the force on the seabed causes a scour hole to develop in front of the structure. This can cause structural instability and is an important factor leading to the failure of many seawalls. A similar process occurs on inclined seawalls but in this case, scour will occur away from the foot of the structure.

Sediment availability is also affected by seawall construction[6,7]. The problem is caused by replacing soft, erodible shorelines with hard, non-erodible ones. While this protects the bluff, it causes problems in terms of sediment starvation; erosion in front of the seawall will continue at historic or faster rates but the sediment is not replaced through erosion (French, 2001)[8]. This can cause beach lowering, which reduces beach amenity value and increases wave loadings on the seawall by allowing larger waves close to the shore.

In the absence of a seawall, natural shoreline erosion would supply adjacent stretches of coastline with sediment, through longshore drift. Once a seawall is constructed however, the shoreline is protected from erosion and the supply of sediment is reduced[9]. This causes sediment starvation at sites located alongshore, in the direction of longshore drift and this has the capacity to induce erosion at these sites.

<u>Suggestion 2:</u> RJR suggests that the DEIR analyze and discuss the impacts of the seawall as related to wave refraction scour and shoreline degradation related to sediment distortion along this section of shoreline, given the current project and recent construction of the northern and southern sea walls.

[4] Bush, D.M., Neal, W.J., Longo, N.J., Lindeman, K.C., Pilkey, D.F., Esteves, L.S., Congleton, J.D. and Pilkey, O.H (2004) Living with Florida's Atlantic Beaches: Coastal Hazards from Amelia Island to Key West. USA: Duke University Press.

[5] French, P.W. (2001) Coastal defences: Processes, Problems and Solutions. London: Routledge.

[6] Griggs GB, Tait JF (1988) The effects of coastal protection structures on beaches along northern Monterey Bay, California; The effects of seawalls on the beach. Journal of Coastal Research 4(4): 93–111.

[7] Pilkey OH, Wright HL III (1988) Seawalls versus beaches. Journal of Coastal Research (special issue) SI(4): 41–64.

[8] Ibid

[9] Hegde AV (2010) Coastal erosion and mitigation methods—global state of art. Indian Journal of Geo-Marine Sciences 39(4): 521–530.

RJR Comment 3 – SEAWALL HEIGHT: Based on U.S. Army Corp of Engineers Coastal Engineering Manual[10], the design criteria for a coastal structure are based upon several oceanographic and geologic site conditions. This includes, but not limited to, nearshore bathymetry, water level, wave height, maximum scour depth, beach slope, wave period, and soil properties. Based on the near slope shelf a slope should be established for any wave uprush analysis, still water elevations, design wave, and wave period the super-elevation of the sea surface and the following factors included in the water surface elevation:

E3

Parameter	***Typ. Values***
Wave set-up:	1.0 to 2.5 feet
Wind set-up and inverse barometer:	0.5 to 1.5 feet
Wave group effects:	1.0 to 2.5 feet
El Niño thermal expansion effects:	0.5 to 1.0 feet
Global warming / Sea level rise:	TBD[11]
Scour	TBD
Freeboard:	1.0 to 3.0 feet

As waves break on or near the beach, the water rushes up the beach and encounter the bluff and/or proposed structure. Wave runup is defined as the vertical height above the still water level to which a wave will rise on a structure or beach of infinite height.

Overtopping is the flow rate of water over the top of a finite height structure as a result of wave runup. In general, high waves in combination with high water levels locally result in erosion of beaches and the base of the coastal bluffs. However, the design wave condition for a shoreline structure is generally not the largest wave, because the largest waves break offshore in water depths approximately equal to the wave's height. The largest "design wave force" will occur when a wave breaks at or directly on the shoreline structure. The largest wave that can break at/on the structure is determined by the depth of the water at the toe of the respective structure.

[10] U.S. Army Engineer Waterways Experiment Station, 1996, "Shore Protection and Beach Erosion Control Study"; Institute for Water Resources, Alexandria, VA, 226p.
[11] California Coastal Commission Sea Level Rise Policy Guidance, Final Adopted Science Update | November 7, 2018

The DEIR presents a wall elevation of +26 feet[12]. Given studies on adjacent projects, the design water depth was on the order of +28 to +35 feet[13], which included the previous Coastal Commission sea level rise values and estimated scour depths[14].

Based on the prior discussions, based on the sea level degradation from the long-term sea wall, the scour analysis should incorporate the future conditions, not scour estimates based on unarmored shorelines.

Wave uprush events since the construction of the 100 Esplanade Avenue Sea Wall (top of sea level wall is between Elevation +32 to +35) which has been overtopped by two separate three storm events since 2011.

Suggestion 3: RJR suggests that the DEIR analyze and discuss the method, assumptions, and values utilized to determine the top elevation of the proposed sea wall. The impacts of wall overtopping should be evaluated.

E4

RJR Comment 4 – REPAIR SEAWALL PROTECTION AND DEPTH TO BEDROCK: The DEIR suggests that the site is underlain by bedrock, which would lead parties to believe that toe protection would be readily available to protect the wall from being undermined. While observations at Mussel Rock indicates exposed Greenstone, drill holes along the beach to depths of 30 to 40 feet BEG (below existing grade, estimated to be Elevation +12 NAVD) in 2010 by Engineered Soils Repair for the 310 to 330 Esplanade Avenue did not encounter bedrock. No bedrock was encountered at depths of Elevation -15 NAVD during construction activities along the frontage of 100 Esplanade Avenue[15].

Suggestion 4: RJR suggests that the DEIR analyze and discuss how the sea wall will be protected if no bedrock is encountered within a practical depth.

E5

RJR Comment 5 – IMPACT OF SEA WALL ON 340 PROPERTY: The current bluff, as illustrated on Photograph 1 (Page 1), extends to within 25 to 30 feet of the corner of the apartment building on 340. Any alterations, modifications, or changes to the bluff can and will impact 340.

Suggestion 5: RJR suggests that the DEIR analyze and discuss the baseline and overall impact of the project on 340, especially when considering the various elements presented in this letter.

[12] RJR is assuming that the values presented are North American Vertical Datum of 1988 (NAVD 88). RJR provides all elevations in this discussion based on the 88 NAVD datum.
[13] Variable elevation is based on 50-, 75-, or 100-year studies.
[14] Scour depths varied for 50-, 75-, or 100-year evaluations.
[15] Moderate to weakly cemented sand layers were encountered at various locations within these depths.

Please feel free to contact the undersigned at 805-766-3950 (cell) or by email at randerson@rjreng.com .

Sincerely,

RJR ENGINEERING & CONSULTING, INC.

REGISTERED PROFESSIONAL ENGINEER ★ ROBERT W. ANDERSON ★ C-058383 EXP. 12-31-24 CIVIL ★ STATE OF CALIFORNIA ★

CERTIFIED PROFESSIONAL CPESC Robert W. Anderson No. 6840 IN EROSION AND SEDIMENT CONTROL

CERTIFIED PROFESSIONAL CPSWQ Robert W Anderson No. 920 IN STORM WATER QUALITY

Robert W. Anderson, R.C.E., Juris Doctorate (JD)
Principal Civil Engineer - RCE 58383 (CA)

Arizona: RCE 51923	Washington PE 47559	South Dakota PE11546	Colorado PE 44734
Hawaii RCE 14230	Oregon RCE 84690	North Dakota PE 8252	New York PE 92272
Nevada PE 22896	North Carolina PE 43503	Maryland PE 52275	Georgia RCE 043088
Massachusetts PE 54080	Delaware PE 22422		

Certified CPESC #6840 & Instructor
California Certified QSP/QSD #21902 & Trainer of Record (ToR) – Construction
California Certified /QISP #004 & Trainer of Record (ToR) – Industrial
Certified Stormwater Manager (APWA)
Certified CESSWI #3270 & Trainer
Certified CPSWQ #0920 & Trainer
Certified CPMSM #0223 & Trainer
Certified CPISM #001 & Trainer
Qualified Stormwater Manager #001
National Green Infrastructure (NGICP) #1365

EnviroCert International, Inc. Chairman of the Board & Executive Director | Commerical Pilot – Fixed Wing / Multi-Engine and Private - Helicopter Pilot (Airmen)

Distribution: Mr. & Mrs. Thomas *{via Email}*

Responses to Comments Letter E from RJR Engineering and Consulting, Inc., November 18, 2023

Response to Comment E1: Comment noted. Errata have been added to acknowledge the possibility that bluff erosion rates could, over time, normalize to lower rates more consistent with historic rates.

Response to Comment E2: Potential impacts of the proposed sea wall on sand supply was evaluated in the geotechnical report prepared for the project by Cotton, Shires & Associates, Inc. (CSA 2020), and summarized in Chapter 2 and presented in full in Appendix B of the Final EIR. The volume of beach material that would have been supplied to the beach if natural erosion continued (i.e., the long-term reduction in supply of beach quality bluff material to the beach as a result of the proposed armoring) was calculated at 2,145 yards of beach quality sand. Comparisons of bluff materials and beach sand materials revealed that the bluff materials are significantly finer than the beach sand material. Therefore, it was concluded that the bluff materials compose zero to a very small fraction of the beach sand.

The geotechnical investigation noted that wave scour is a typical hazard that could impact seawalls. Therefore, the report recommended the seawall be designed to extend the wall below elevation 2 feet. In addition, the wall was recommended to be designed to resist end-around scour by terminating the ends of the wall into well-designed and constructed existing structures, several feet into the bluff or behind superstructures. The proposed project design follows these recommendations.

Response to Comment E3: The height of the proposed seawall (40 feet NAVD88) was determined from CSA's assessment of the risk of wave overtopping, which could adversely impact the integrity of the wall and the stability of the unsupported bluff above the wall. The assessment was based on their review of the performance of existing seawalls in Pacifica, including the existing seawall immediately to the north of the project site, as described in the geotechnical report which they prepared for the project. The report is contained in Appendix B of the Draft EIR.

Response to Comment E4: The Draft EIR states that the project is underlain by bedrock at depth, but continues on to clarify that no bedrock is exposed at the project site and that it is exposed in the foothills located approximately 2,200 feet away. The geologic report contained in Appendix B of the Draft EIR describes that borings taken at the site did not encounter any bedrock. Protection of the seawall is analyzed throughout the geotechnical report.

Response to Comment E5: Because the property at 340 Esplanade Avenue is located on the blufftop area behind (to the east of) the proposed seawall, it would also be protected by the seawall. Therefore, the analyses of potential project impacts related to the bluff, as well as beneficial impacts of the proposed seawall contained in the Draft EIR would apply to 340 Esplanade Avenue.

Chapter 3.4 of the Draft EIR describes the proposed bluff restoration plan and bluff monitoring program that would be implemented with the project to stabilize the bluff following construction of the proposed seawall and evaluate the condition and performance of the seawall on an annual

basis. As stated in Section 3.4.4, the monitoring information would be summarized in a report prepared by a licensed engineer familiar with shoreline processes and would be submitted to the California Coastal Commission Executive Director after each winter storm season for the first three years, followed by inspections and reports submitted following either an El Nino storm event or significant earthquake.

Cervantes, Stefanie

From: David Whitney <dlwjkw@comcast.net>
Sent: Monday, October 23, 2023 9:45 PM
To: Cervantes, Stefanie
Subject: 310-330 Esplanade Avenue Infrastructure Preservation Project EIR Draft

Stephanie Cervantes
Senior Planner

F1 Significant environmental impact at Manor Ave construction equipment worksite: Any potential coastal trail seaward from the existing curb on Esplanade Ave to suitable beachfront recreation must provide bluff-top amenities.

David Whitney
115 Eastridge Circle
Pacifica, Ca 94044

Responses to Comments from David Whitney, October 23, 2023

Response to Comment F1: Comment noted. This comment references the potential impacts of a trail that is not proposed as part of this Infrastructure Preservation Project. Therefore, the comment is not relevant to the adequacy of the Draft EIR and does not raise any significant environmental issues related to the proposed project analyzed in the Draft EIR. No further response is required. Inclusion of these comments in this Final EIR will make the commentor's views available to the City of Pacifica Planning Commission, the Pacifica City Council, and other public officials who will make decisions about the proposed Project.

4 ERRATA AND REVISIONS

This chapter includes the changes to the Draft EIR needed to respond to comments and clarify or amplify the information provided in the Draft EIR. The changes correct inaccuracies and clarify the analysis in the Draft EIR. Text removed from the Draft EIR is marked with ~~strike-out.~~ New text is indicated by underline.

Page 2-1, first paragraph:

This DEIR evaluates the potential environmental effects of a project to construct a seawall that would extend along the base of the coastal bluff from the northern edge of the 300 Esplanade Avenue property to approximately the southern edge of the 340 Esplanade Avenue property, and revegetate the blufftop along the existing coastal bluff between 310 and 330 Esplanade Avenue in the City of Pacifica. The project includes utilizing the existing vacant blufftop areas at 310, 320 and 330 Esplanade Avenue, as well as the vacant blufftop area at the southern end of the 400 block of Esplanade Avenue adjacent to the existing beach access trail for equipment staging during construction of the project. The project includes using this trail as a temporary construction access for equipment to access the seawall construction site to the north via the beach below. The project does not include any construction on or improvements to any other portion of the 400 block of Esplanade Avenue. These proposed activities constitute a project under the California Environmental Quality Act (CEQA). The City of Pacifica (City) is the CEQA Lead Agency for the Project. The Coastal Commission, U.S. Army Corps of Engineers (USACE), California State Lands Commission, and Regional Water Quality Control Board (RWQCB) are responsible agencies with permitting authority for the ~~p~~Project.

Occurrences of Impact BIO-1, occurring on pages 2-3 bottom row, first column, and page 4.3-31 first paragraph:

Impact BIO-1: The Project could have a significant adverse effect, either directly or through habitat modifications, on special-status fish (steelhead, Coho salmon, and green sturgeon), Essential Fish Habitat (EFH), and American peregrine falcon, bank swallow, and other nesting birds. Implementation of Mitigation Measures BIO-1a, 1b, ~~and~~ 1c, 1d, and 1e would reduce potential impacts to a less than significant level. (Less than Significant with Mitigation Incorporated).

Page 2-8: after 1st Paragraph in 'Mitigation Measures' column:

Mitigation Measure BIO-1c: Bank Swallow Habitat Assessment

Prior to initiating Project activities, a qualified biologist shall conduct a bank swallow habitat assessment of the cliff bluffs within and near the Project footprint. The habitat assessment will at minimum address the cliff face attributes of 1) slope, 2) vegetation cover, 3) soil type (e.g., friable soils), and 4) cliff height. Based on these and any other relevant attributes, the habitat assessment will identify potentially suitable bank swallow habitat. A qualified biologist is an individual who holds a bachelor's degree from an accredited university and: 1) is knowledgeable in bank swallow

and other relevant species' life histories and ecology, 2) can correctly identify relevant species, 3) has conducted field surveys for relevant species, 4) is familiar with relevant survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species.

If the habitat assessment described above identifies potentially suitable bank swallow habitat at or near the Project site, the qualified biologist shall identify whether the habitat can be avoided and if take of bank swallow could occur. If so, the qualified biologist shall prescribe avoidance, minimization and mitigation measures, in coordination with CDFW, as appropriate. An example of a measure could include restoration and enhancement of bank swallow habitat.

Mitigation Measure BIO-1d: Bank Swallow Incidental Take Permit

If the Project has the potential to cause take of bank swallow, the City shall apply for and obtain a CESA Incidental Take Permit.

All references to Mitigation Measure "BIO-1c", occurring on pages 2-8 third column, second paragraph, 4.3-31 first paragraph, 4.3-37 (fourth and fifth paragraphs), 4.3-40 fourth paragraph, 5-1 fourth paragraph, 5-10 second paragraph, and 5-20 fourth paragraph:

~~BIO-1c~~ BIO-1e

Page 3-1; following first paragraph:

The imperative to protect the coastal infrastructure with armoring arises from the imminent and ongoing threat of erosion along the bluff. Without intervention, the infrastructure, including the street itself (Esplanade Avenue), would be continuously exposed to the erosive forces of the coastline. The danger is perpetual, as erosion continues to degrade the coastal environment, jeopardizing critical elements.

The length of time at which such infrastructure is expected or likely to be in danger is indefinite without intervention. Coastal erosion is an ongoing process, and the rate of degradation will persist unless preventative measures are implemented. The threat extends not only to Esplanade Avenue but also to the broader coastal infrastructure network, including the potential risk of Highway 1 far down the line. This proactive approach aligns with the principles of sustainable coastal management, recognizing the necessity to act now to preserve the integrity and functionality of essential infrastructure for the benefit of the community in the face of ongoing coastal challenges.

The rationale as to why the armoring is proposed to extend slightly further south than 330 Esplanade is to ensure seamless integration with the existing shotcrete wall that exists at 360 Esplanade (CDP 2-08-020) to create a unified and resilient coastal protection system. In order to preserve the infrastructure between 310-330 Esplanade Avenue, the Project's geotechnical report recommended that a continuous seawall be constructed along the base of the bluff. It stated that ideally, the seawall should overlap behind the existing seawall to the north (at Land's End) and tie-in to the existing seawall to the south (at 360-380 Esplanade Avenue). Based on CSA's evaluation of the neighboring seawalls to the north and south, the wall to the north does not appear

to be providing satisfactory long-term support to the lower portion of the bluff, and consequently the report recommended overlapping behind the wall to the north instead of connecting to it. Conversely, the seawall to the south at 360/380 Esplanade Avenue appears to be providing satisfactory support to the bluff. The purpose of tying in to the existing seawall to the south would be to form a continuous barrier for bluff support against wave scour. The report stated that without adequate tie-in provisions, the potential for erosional out-flanking of the proposed seawall would be significantly increased.

Page 3-4; last paragraph, following first sentence:

The geotechnical report prepared for the project (refer to Appendix B) recommended that the seawall should overlap behind the existing seawall to the north (at Land's End) and tie-in to the existing seawall to the south (at 360-380 Esplanade Avenue). Based on the report's evaluation of the neighboring seawalls to the north and south, the wall to the north does not appear to be providing satisfactory long-term support to the lower portion of the bluff, and consequently the report recommended overlapping behind the wall to the north instead of connecting to it. Conversely, the seawall to the south at 360-380 Esplanade Avenue appears to be providing satisfactory support to the bluff. The purpose of tying into the existing seawall to the south would be to form a continuous barrier for bluff support against wave scour. The report stated that without adequate tie-in provisions, the potential for erosional out-flanking of the proposed seawall would be significantly increased.

Page 3-17: Second paragraph:

Construction of the proposed seawall would occur on both weekdays and weekends. Because the construction requires a building permit from the City, the days and hours of construction would adhere to the provisions of the Pacifica Municipal Code Section 8-1.05 (Title 8. – Building Regulations, Chapter 1. – Building Code), which limits construction to the hours of 7:00 AM to 7:00 PM Monday through Friday, and from 9:00 AM to 5:00 PM on Saturday and Sunday. Additionally, during the construction period for the Project, the City would install signage at the public path used for construction access and on the beach at the seawall construction site to notify the public of closures to these areas, in conformance with standard City protocols for construction projects in public areas.

Page 4.1-8; Impact AES-3:

Impact AES-3 – Public views are those that are experienced from publicly accessible vantage points. The Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings or conflict with applicable zoning and other regulations governing scenic quality. (Less Than Significant Impact)

As noted above in response to Impact AES-1, the proposed Project installs a seawall and restoration plantings to protect the coastal bluff from further erosion. The construction method and design for the seawall proposed is similar to other seawall projects just north and south of the site as viewed from the beach. The construction plans for the Project specify that the finish facing of

the seawall shall be colored, sculpted and stained to resemble the naturally occurring geologic formations, ensuring that the appearance of the seawall would match the surrounding bluff face as closely as possible. During construction, public views of the project site would change temporarily due to the presence and operation of various construction equipment, security fencing around work and staging areas, and construction vehicles entering and exiting the site, including from the designated access ramp near Manor Drive. Although views of the ocean from nearby residences and the adjacent Esplanade Avenue could be partially blocked by the equipment, materials, and stockpiles in the staging areas and access ramp, these changes would be temporary for the duration of construction as these visual obstructions would be removed once project construction is completed.

Because of the temporary nature of the construction of the Project, and because it proposes similar improvements to others currently in the area without significant changes to the existing grade of the bluff face and would be designed to match the appearance of the surrounding bluff face, the Project is not anticipated to result in a substantial degradation of the existing visual character or quality of the site from public vantage points. The Project would change the existing view on the blufftop from a flat, gravel, six-foot tall chain-linked fenced area devoid of vegetation, to a more natural state with various coastal scrub plantings, and would also include a paved path, benches, interpretive signage, and less prominent fencing. Therefore, the impact is considered less than significant.

Page 4.3-12; Second paragraph:

American Peregrine Falcon (Falco peregrinus anatum)

The American peregrine falcon occurs throughout much of the world and is known as one of the fastest flying birds of prey. Peregrine falcons prey almost entirely on birds, which they kill while in flight. Peregrine falcons nest on ledges and caves on steep cliffs, as well as on human-made structures such as buildings, bridges, and electrical transmission towers. In California, they are known to nest along the entire coastline, the northern Coast Ranges, and the Cascade Ranges and Sierra Nevada. They have a Federal listing status of None, ~~and a State listing status of Fully Protected~~ however their State listing status of Fully Protected was removed with the 2023 passage of SB 147, which revised the list of fully protected bird species by removing American peregrine falcon and California brown pelican from the list.

Page 4.3-12; Second paragraph:

California Brown Pelican (Pelecanus occidentalis)

The California brown pelican is a permanent resident of the coastal marine environment on the Pacific Coast and its range extends from British Columbia, Canada, south to Nayarit, Mexico. The bulk of the population (about 90%) nests in Mexico. The only long-term breeding colonies of California brown pelicans in the United States are on Anacapa and Santa Barbara Islands. They have a Federal listing status of None, ~~and a State listing status of Fully Protected~~ however their State listing status of Fully Protected was removed with the 2023 passage of SB 147, which revised

the list of fully protected bird species by removing American peregrine falcon and California brown pelican from the list.

Page 4.3-14; last paragraph:

Nesting Birds

~~Nesting~~ Birds may nest within vegetation, shallow scrapes on bare ground, and on the coastal bluffs in and around the study area. Several bird species were noted during the field survey. ~~All~~ Nesting birds ~~species~~ are protected under California Fish and Game code.

The bank swallow is a threatened species under the California Endangered Species Act (CESA) and has seen a decline in California. The majority of remnant bank swallow colonies in California occur in riverine systems; coastal colonies are considered rare (BANS TAC 2013, Wright et al. 2014). According to research by the CDFW, banks swallows rely on ephemeral eroding banks with friable soil for nesting, and typically need a slope of 70 degrees or more for suitable nesting habitat, with a preference for banks or cliffs that are vertical (90 degrees) or slightly inclined (75 degrees). Bank stabilization activities halt natural bank erosion and remove habitat through hardening of the bank or reducing the slope. In addition, human harassment can cause nest abandonment and has contributed to the population declines in California. There is one documented CNDDB occurrence for a bank swallow colony within five miles of the project area at Fort Funston in San Francisco (CNDDB 2023, San Francisco Planning 2023). No suitable nesting habitat is present in or directly adjacent to the project site. However, some suitable cliff habitat for this species is present within 200 feet of the project area; therefore, if present, this species could fly through the project area. This species is not known to breed in the area.

Page 4.3-5, 2nd paragraph, 3rd sentence:

Other birds that may forage in this habitat include wintering native species such as the white-crowned sparrow, golden-crowned sparrow, and yellow-rumped warbler. Raptors, such as white-tailed kite, northern harrier, and red-tailed hawk may forage within the coastal bluff habitat. Red-tailed hawk was observed during the reconnaissance survey. The bluff habitat also provides moderately suitable nesting habitat for bank swallow and/or colonial marine birds. However, marine bird colonies have not been observed within the study area and none were observed during the field surveys. The bluff habitat also supports California ground squirrel, which was observed during the field surveys.

Page 4.3-36; following second paragraph:

Impacts to Bank Swallow Habitat – Less Than Significant with Mitigation

Because suitable cliff habitat for bank swallow is present within the vicinity of the project area, if present, the project could potentially impact the habitat for this species, which is a listed species under the CESA. Implementation of Mitigation Measures BIO-1c and BIO-1d would avoid or reduce impacts to less than significant levels for the species.

Mitigation Measure BIO-1c: Bank Swallow Habitat Assessment

Prior to initiating Project activities, a qualified biologist shall conduct a bank swallow habitat assessment of the cliff bluffs within and near the Project footprint. The habitat assessment will at minimum address the cliff face attributes of 1) slope, 2) vegetation cover, 3) soil type (e.g., friable soils), and 4) cliff height. Based on these and any other relevant attributes, the habitat assessment will identify potentially suitable bank swallow habitat. A qualified biologist is an individual who holds a bachelor's degree from an accredited university and: 1) is knowledgeable in bank swallow and other relevant species' life histories and ecology, 2) can correctly identify relevant species, 3) has conducted field surveys for relevant species, 4) is familiar with relevant survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species.

If the habitat assessment described above identifies potentially suitable bank swallow habitat at or near the Project site, the qualified biologist shall identify whether the habitat can be avoided and if take of bank swallow could occur. If so, the qualified biologist shall prescribe avoidance, minimization and mitigation measures, in coordination with CDFW, as appropriate. An example of a measure could include restoration and enhancement of bank swallow habitat.

Mitigation Measure BIO-1d: Bank Swallow Incidental Take Permit

If the Project has the potential to cause take of bank swallow, the City shall apply for and obtain a CESA Incidental Take Permit.

Page 4.3-39; fourth paragraph:

By disrupting the bluff and beach environment, grading and excavation activities could reduce wildlife movement in the project area during construction. Wildlife would still be able to move through the area, but may be deterred when equipment is operating. Equipment would not be operating 24/7, and the area would not be blocked off, so wildlife would not be prevented from moving through the construction site during the entire construction period. If Project construction occurs at night, when many mammals, reptiles, and amphibians are active, use of the study area by dispersing nocturnal animals could be disrupted during the Project construction period. ~~Night lighting during construction could disrupt foraging behavior of nocturnal birds that rely on darkness when hunting.~~

Artificial night lighting can disrupt the circadian rhythms of many wildlife species, and lead to a significant impact on resident and migratory species that utilize the Project area and surrounding lands and waters. 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). Several species in the Project area travel only during the evening, including bats. Impacts to nocturnal species movement with lighting can expose them to predators and force them to take less preferred routes, leading to mortality and/or indirect impacts to the population. Nighttime lighting also attracts insects, which in turn attracts insectivorous species. Attracting these species to lights at night can increase the likelihood of direct mortality from traffic and construction equipment. Artificial night lighting has

also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refugia and reducing their ability to feed during the winter (Contor and Griffith 1995), while larval green sturgeon avoid light at night (Nguyen and Crocker 2006). For nocturnally migrating birds, direct mortality as a result of collisions with structures due to attraction to light (Gauthreaux, 2006) is another direct effect of artificial light pollution. Additional 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 (La Sote et al. 2021) and that migrating birds avoid strongly lit areas when selecting critical resting sites needed to rebuild energy stores (McLaren et al. 2018).

Night lighting proposed for the Project would be localized~~,~~ and temporary, and night work is not expected to occur throughout the duration of the Project, only when necessary to address tidal conditions. ~~Numerous animals may breed within and around the study area, but no particularly important wildlife nursery areas are present in the study area or would be impacted by the Project.~~ Once construction activities are complete wildlife movement conditions would be similar to pre-Project conditions, and wildlife dispersal through the study area is expected to return to existing conditions.

Page 4.4-18; first paragraph:

The SLF search was negative for tribal resources in the Project area. Subsequent outreach was made to the tribal contacts provided by the NAHC for information on the location and nature of the resource(s) to determine if the Project would impact known resources. ~~Certified letters were sent to tribal representatives by MIG staff on behalf of the City of Pacifica on April 25, 2019, informing them of the Project and requesting any information they may have about Tribal Cultural Resources in the vicinity of the Project. A follow up email message was sent to one of the representatives on August 2, 2019 after the original certified letter was returned.~~ Tribal outreach occurred on April 25, 2019 via certified letters to the following tribes:

- Amah Mutsun Tribal Band of Mission San Juan Bautista – Irene Zwierlein, Chaiperson
- Costanoan Rumsen Carmel Tribe - Tony Cerda, Chairperson
- Indian Canyon Mutsun Band of Costanoan - Ann Marie Sayers, Chairperson
- Muwekma Ohlone Indian Tribe of the SF Bay Area – Charlene Nijmeh, Chairperson
- The Ohlone Indian Tribe – Andrew Galvan

The letters included the objectives of the project, proposed design elements, anticipated construction duration, noted the negative Sacred Lands File search and California Historical Resources Information System results, and requested information on Tribal Cultural Resources not included in the SLF search or if they had additional information on archaeological resources in the project vicinity.

One certified letter to Ann Marie Sayers was returned to sender, therefore a follow up email was sent on August 2, 2019. No responses were received from any Tribe as a result of this outreach. The Tribes are on the City's mailing list for announcements regarding this Project. Because no specific information was provided by the tribal contacts regarding the location and nature of tribal

resources in the area in response to the letters, ~~therefore,~~ there is no confirmed potential for impacting known tribal cultural resources.

Pages 4.5-1 – 4.5-12; header:

~~Chapter 4.6 Hazards and Hazardous Materials~~Chapter 4.5 Geology and Soils

~~Chapter 4.7 Hazards and Hazardous Materials~~Chapter 4.5 Geology and Soils

Pages 4.6-2, 4.6-4, 4.6-6, 4.6-8, 4.6-10; header:

~~Chapter 4.7 Hazards and Hazardous Materials~~Chapter 4.6 Hazards and Hazardous Materials

Page 4.10-4; Impact PUB-1;

Impact PUB-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, libraries, or parks and recreation facilities. (Less Than Significant Impact)

The proposed Project is the construction of a new seawall along the toe of a coastal bluff. Construction could restrict access in the area during construction, however the construction site would be managed in accordance with established mandates regarding access for emergency service vehicles and would not necessitate the alteration of any other facilities, including fire protection, police protection, schools, libraries or parks, and recreation facilities to accommodate the construction process.

The presence of construction equipment on the beach in the area of the seawall construction, and on the blufftop areas as well, could present a danger to the public. However, protective fencing and signage to alert people using the beach, access trail and blufftop of the closure of these areas would be installed, in conformance with the City's standard practices for such construction projects.

The proposed Project does not include new housing and would not induce population; therefore, it would not increase enrollment at local schools, or require the provision of new or physically altered schools nor increase the use of local and regional parks or require the provision of new or physically altered parks, or other governmental facilities.

Page 4.10-5; Second paragraph following Impact REC-1:

The Project may restrict some adjacent beach uses during construction, as the existing access ramp to the beach from Esplanade Avenue near Manor Drive (currently closed to the public) would be used for construction vehicle and equipment access, which could obstruct its use by the public when equipment is present. ~~also provide public access to the beach and would remain closed to the public during construction.~~ However, these impacts would be temporary, lasting only for the

duration of construction, and would only impact roughly 650 linear feet of beach. The ramp would be open for public access to the beach during construction, and ~~I~~it is likely that ~~the access~~ it would be improved following the project construction in conjunction with the City's planned park and infrastructure preservation improvements for the adjacent 400 block of Esplanade Avenue. (City of Pacifica, 2023).

Page 5-5; following end of first paragraph.

There is a possibility that bluff erosion rates could, over time, normalize to lower rates more consistent with historic rates.

Page5-7; last paragraph:

k. *Noise.* The Project would generate noise and vibration during construction. The DEIR found that the Project's impacts related to noise would be short term and less than significant with the implementation of noise control mitigation measures as noted in Mitigation Measures NOI-1A through NOI-1G ~~and Mitigation Measures NOI-2A and NOI-2B~~. Vibration impacts were found to be less than significant. Because the No Project Alternative would not result in any construction, it would not generate any construction noise and thus would have a reduced noise impact compared to the proposed Project.

Page 5-14; following second paragraph:

The potential impacts of the proposed seawall project on sand supply to the beach fronting the toe of the bluff were analyzed in a memorandum prepared by Cotton, Shires & Associates (CSA) in 2020. The memo provided a calculation of the volume of beach quality sand that would have been supplied to the beach over the 30-year life of the project if natural erosion continued. The total volume of sand was calculated to be 2,145 yards, however, based on a comparison of sieve analyses between bluff material and beach sand conducted by CSA, the memo concluded that the bluff material is significantly finer in texture than the beach sand and that consequently the bluff material composed zero or a very small fraction of the beach sand. The project would therefore not likely have an impact on sand supply to the beach.

Page 5-22; fourth paragraph:

k. *Noise.* The Project would generate noise and vibration during construction. The DEIR found that the Project's impacts related to noise would be short term and less than significant with the implementation of noise control mitigation measures as noted in Mitigation Measures NOI-1A through NOI-1G ~~and Mitigation Measures NOI-2A and NOI-2B~~. Vibration impacts were found to be less than significant. Construction of the Rock Revetment Alternative would involve very noise-intensive activities such as mechanical picking, placing and driving rocks down to the beach with trucks. These activities would also be expected to be short term in nature and therefore result in less than significant noise impacts. The Rock Revetment Alternative would have similar Noise impacts compared to the proposed Project.

5 LIST OF PREPARERS

5.1 LEAD AGENCY

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Appendix A: Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA Statute Section 21081.6 and State CEQA Guidelines Section 15097 require a public agency to adopt a reporting or monitoring program (MMRP) to ensure compliance with the mitigation measures adopted by the agency at the time of project approval. A mitigation monitoring program would therefore be required for the San Carlos Focused General Plan Update EIR to ensure compliance with the mitigation measures that are adopted and incorporated into the project. Adoption of the MMRP would occur at the time of project approval.

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to the CEQA Guidelines, which state:

> "When adopting a final EIR with findings as required under 14 CCR section 15091(a)(1) the lead agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental effects" (§15097(a)); and
>
> "The Lead Agency may choose whether its program will monitor mitigation, report on mitigation, or both. "Reporting" generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. "Monitoring" is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both." (§15097(c))

The table beginning on the next page lists the impacts, mitigation measures, and timing of the mitigation measure (when the measure will be implemented) related to the Project. The "Impact" column lists each significant impact, by resource topic, that is identified in the EIR and for which mitigation measures are recommended. The "Mitigation Measure" column provides the full text of each mitigation measure identified in the EIR. The "Monitoring" column describes (1) the "implementation entity" responsible for carrying out each mitigation measure (such a "project applicant" or "City of Pacifica Planning Department"); (2) mitigation implementation timing requirements (e.g., at the completion of a particular future individual project development review or construction phase, prior to occupancy, or when some other specific threshold is reached); and (3) the entity responsible for performing the monitoring of each mitigation measure (the "monitoring and verification entity;" e.g., a City department or agency, another public agency, or some other entity).

According to CEQA Guidelines Section 15126.4(a)(2), "Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design." Therefore, all mitigation measures as listed in this MMRP will be adopted by the City of Pacifica when the project is approved.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
Air Quality						
Impact AIR-3: The Project could expose sensitive receptors to substantial pollutant concentrations and associated adverse health risks. **(Less than Significant with Mitigation Incorporated).**	**Mitigation Measure AIR-3:** To reduce potential, short-term adverse health risks associated with $PM_{2.5}$ exhaust emissions, including emissions of DPM generated during Project construction activities, the City shall require its designated contractors, contractor's representatives, and/or other appropriate personnel to comply with the following construction equipment restrictions. All mobile construction equipment greater than 50 horsepower in size shall meet with U.S. EPA and CARB Tier IV interim exhaust emission standards. This may be achieved via the use of equipment with engines that have been certified to meet U.S. EPA and CARB Tier IV interim emissions standards, or through the use of equipment that has been retrofitted with a CARB-verified diesel emission control strategy (e.g., particulate filter) capable of reducing exhaust $PM_{2.5}$ emissions to levels that meet U.S. EPA and CARB Tier IV interim emissions standards. As an alternative to having all mobile construction equipment greater than 50 horsepower meet with U.S. EPA and CARB Tier IV interim exhaust emission standards, the City may prepare a refined construction health risk assessment once additional Project-specific construction information is known (e.g., specific construction equipment type, quantity, engine tier, and runtime by phase). The refined health risk assessment shall demonstrate and identify any measures necessary such that the proposed Project's incremental carcinogenic health risk at nearby	City of Pacifica Public Works Department	City of Pacifica Planning Department	Prior to the start of and during construction activities.		

	sensitive receptor locations is below the applicable BAAQMD threshold of 10 cancers in a million.					
Biological Resources						
Impact BIO-1: The Project could have a significant adverse effect, either directly or through habitat modifications, on special-status fish (steelhead, Coho salmon, and green sturgeon), Essential Fish Habitat (EFH), and American peregrine falcon, bank swallow, and other nesting birds. Implementation of Mitigation Measures BIO-1a, 1b, 1c, 1d, and 1e would reduce potential impacts to a less than significant level. **(Less than Significant with Mitigation Incorporated)**	**Mitigation Measure BIO-1a: Best Management Practices (BMPs) to Protect Water Quality, Special-Status Fish, and EFH** The project shall minimize to the greatest extent feasible all construction in tidal / open water habitat areas. During all construction in and near tidal aquatic habitat, standard BMPs shall be used to minimize erosion and impacts to water quality as well as direct impacts to special-status fish and EFH. The following BMPs shall be included in the Project to minimize erosion, impacts to water quality, and impacts to special-status species (also see BMPs in Chapter 3.3.9, of the Project Description): • The contractor shall monitor the tides and coordinate work to avoid construction activities in open water habitat. The timing and elevation of tides can be monitored by checking the San Francisco NOAA tidal station (#9414290) found online at https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9414290. Because the Project area is approximately 16 miles south of the tidal station, the actual timing and elevation of tides needs to be adjusted specifically for the Project area. • No vehicles or heavy equipment shall be operated in open water habitat. • Earthmoving and clearing activities shall be performed in dry weather only.	City of Pacifica Public Works Department	City of Pacifica Planning Department	BIO-1a: Prior to the start of construction and during construction activities.		

	• Spoils shall be removed promptly and stockpiling of fill materials shall be avoided when rain is forecast. Stockpiles shall only be placed in designated locations, including near the 500 Esplanade ramp and at the staging area at the 310-330 lots at least 20 feet from the bluff face. No stockpiles shall be located on the beach. Soil stockpiles and other materials shall be covered with a tarp or other waterproof material during rain events. • In the event of rain, all grading work is to cease immediately. • Implement an erosion control plan during the wet season (October 15 through April 15), including, at a minimum, the following: o During the rainy season, all paved areas will be kept clear of earth material and debris. o Inlet protection will be installed at open inlets to prevent sediment from entering the storm drain system. o Straw rolls will be placed at the toe of slopes, and along the down slope perimeter of the Project area. • Equipment staging and parking of vehicles shall occur on defined staging areas only. • The integrity and effectiveness of erosion control measures shall be inspected on a daily basis or as required under the approved SWPPP. Corrective actions and repairs shall be carried out immediately for ineffective BMPs. • Fueling, washing, and maintenance of					

	vehicles shall occur in the defined staging areas, away from open water habitat. Equipment shall be regularly maintained to avoid fluid leaks. Any leaks shall be captured in containers until equipment is moved to a repair location. Hazardous materials shall be stored only within the defined staging areas. Containment and cleanup plans shall be prepared and implemented for the immediate cleanup of fluid or hazardous materials spills. • Sediment-laden water shall not be allowed to enter the ocean. • All litter and construction debris shall be disposed of off-site in accordance with state and local regulations. All trash and debris within the work area shall be placed in containers with secure lids before the end of work each day to reduce the likelihood of predators being attracted to the site by discarded food wrappers and other rubbish. If containers meeting these criteria are not available, all rubbish shall be removed from the study area on a daily basis. • Discharge of all potential pollutants, including solid wastes, paints, concrete, petroleum products, chemicals, wash water or sediment and non-stormwater discharges to storm drains and water courses shall be controlled and prevented. • A hazardous spill plan shall be developed prior to construction. The plan shall describe what actions shall be taken in the event of a spill. The plan shall also incorporate preventative measures to be implemented, such as vehicle and equipment staging, cleaning, maintenance, and refueling; and contaminant (including fuel)					

	management and storage. In the event of a contaminant spill, work at the site shall immediately cease until the contractor has contained and mitigated the spill. The contractor shall immediately prevent further contamination and notify appropriate authorities and mitigate damage as appropriate. Adequate spill containment materials, such as oil diapers and hydrocarbon cleanup kits, shall be available on site at all times. Containers for storage, transportation, and disposal of contaminated absorbent materials shall be provided in the study area. • Trash and construction related solid wastes shall be deposited into a covered receptacle to prevent contamination and dispersal by wind. Trash and solid waste shall not be stored on the beach. • Work areas that are temporarily impacted shall be restored with respect to pre-existing contours and conditions, to the extent feasible, upon completion of work. Restoration work including revegetation and soil stabilization will be evaluated upon completion of work and performed, as needed. Construction materials and wastes shall be stored, handled, and disposed of properly, so as to prevent their contact with stormwater.					

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE	MONITORING			VERIFICATION	
		Implementation Entity	Monitoring and Verification Entity	Timing Requirements	Signature	Date
	Mitigation Measure BIO-1b: Pre-Construction/Pre-Disturbance Surveys for Nesting Birds **Avoidance.** To the extent feasible, construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in San Mateo County extends from February 1 through September 15. **Pre-Construction Surveys.** If it is not possible to schedule construction activities between September 1 and January 31, then preconstruction surveys for nesting birds will be conducted by a qualified biologist to ensure that no nests would be disturbed during Project implementation. These surveys will be conducted no more than five days prior to the initiation of any site disturbance activities and equipment mobilization. If Project activities are delayed by more than five days, an additional nesting bird survey will be performed. During this survey, the biologist will inspect all potential nesting habitats (e.g., shrubs, ruderal areas, cliff terraces, etc.) in and immediately adjacent to the impact area and a 250-foot buffer around the area for nests. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are	City of Pacifica Public Works Department	City of Pacifica Planning Department	BIO-1b: Prior to the start of construction activities.		

	observed carrying food to the nest. The results of the surveys will be documented. If an active nest is found in the impact area or the 250 foot buffer, the biologist will determine the extent of a construction-free buffer zone to be established around the nest (typically up to 1000 feet for raptors and up to 250 feet for other species though this may sometimes be reduced in urban areas at the discretion of the biologist), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation. Within the buffer zone, no site disturbance and mobilization of heavy equipment, including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, demolition, and grading will be permitted until the chicks have fledged. Monitoring will be required to ensure compliance with MBTA and relevant California Fish and Game Code requirements. Monitoring dates and findings will be documented**.** **Mitigation Measure BIO-1c: Bank Swallow Habitat Assessment** Prior to initiating Project activities, a qualified biologist shall conduct a bank swallow habitat assessment of the cliff bluffs within and near the Project footprint. The habitat assessment will at minimum address the cliff face attributes of 1) slope, 2) vegetation cover, 3) soil type (e.g., friable soils), and 4) cliff height. Based on these and any other relevant attributes, the habitat assessment will identify potentially suitable bank swallow habitat. A qualified biologist is an individual who holds a bachelor's degree	City of Pacifica Public Works Department	City of Pacifica Planning Department	BIO-1c: Prior to the start of construction activities.		

	from an accredited university and: 1) is knowledgeable in bank swallow and other relevant species' life histories and ecology, 2) can correctly identify relevant species, 3) has conducted field surveys for relevant species, 4) is familiar with relevant survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species. If the habitat assessment described above identifies potentially suitable bank swallow habitat at or near the Project site, the qualified biologist shall identify whether the habitat can be avoided and if take of bank swallow could occur. If so, the qualified biologist shall prescribe avoidance, minimization and mitigation measures, in coordination with CDFW, as appropriate. An example of a measure could include restoration and enhancement of bank swallow habitat. **Mitigation Measure BIO-1d: Bank Swallow Incidental Take Permit** If the Project has the potential to cause take of bank swallow, the City shall apply for and obtain a CESA Incidental Take Permit. **Mitigation Measure BIO-1e: Invasive Species Best Management Practices** The following measures will be implemented to limit the spread of invasive species into native habitats: • All ground disturbing equipment used adjacent to native habitats will be washed (including wheels, tracks, and undercarriages) at a legally operating equipment yard both before and after	City of Pacifica Public Works Department City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department City of Pacifica Planning Department	BIO-1d: Prior to the start of construction activities. BIO-1e: Prior to the start of and during construction activities.		

	being used at the site. • All applicable construction materials used on site, such as straw wattles, mulch, and fill material, will be certified weed free. • The Project will follow a Stormwater Pollution Prevention Plan as per the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Board Order No. 2009-0009- DWQ) if applicable. • All disturbed soils will be stabilized and planted with a native seed mix from a local source following construction. • If excavating, soil and vegetation removed from weed-infested areas will not be used in general soil stockpiles and will not be redistributed as topsoil cover for the newly filled areas. All weed-infested soil will be disposed of off-site at a landfill or buried at least 2.5 feet below final grade.					
Cultural Resources						
Impact CUL-1: The Project could inadvertently encounter cultural resources. (Less than Significant with Mitigation Incorporated).	**Mitigation Measure CUL-1: Inadvertent Discovery of Resources.** In the event that historical, archaeological, tribal cultural, or paleontological resources are accidentally discovered during construction, grading activity in the immediate area shall cease and materials and their surroundings shall not be altered or collected. A qualified archaeologist or paleontologist must make an immediate evaluation, and avoidance measures or	City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department	During Construction		

	appropriate mitigation should be completed, according to CEQA Guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archaeological Resource Management Reports that may be used as guidelines. In the event that archaeological resources are discovered, the site should immediately be considered archaeologically sensitive and subject to the following conditions: development on archaeologically sensitive sites requires on-site monitoring by Native American consultant(s) if resources are Native American in origin in addition to a qualified archaeologist of all grading, excavation, and site preparation activities that involve earth-moving operations. It is recommended that if a newly discovered resource is, or is suspected to be, Native American in origin, the resource shall be treated as a significant Tribal Cultural Resource, pursuant to California Public Resources Code 21074, until USACE has determined otherwise with the consultation of a qualified archaeologist and local tribal representative. California laws and regulations state that if human remains are unearthed during construction, the County Coroner will be notified immediately, and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the					

	person(s) thought to be the Most Likely Descendent. Title to all archaeological sites and historic or cultural resources on or in the tide and submerged lands of California is Vested in the State under the jurisdiction of the State Lands Commission (Public Resources Code, §6313). If any cultural resources are discovered on State lands during construction, the City shall consult with the State Lands Commission Staff Attorney, Jamie Garrett. Final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the State Lands Commission must be approved by the Commission.					
Noise						
Impact NOI-1: The construction of the Project could result in the generation of a substantial temporary increase in ambient noise levels in excess of applicable standards established in the City's General Plan and Municipal Code (Less than Significant with Mitigation Incorporated).	**Mitigation Measure NOI-1a: Provide Notification of Construction Activities.** To ensure receptors in the vicinity of the Project are aware of the Project and its planned construction activities, the City and/or its designated contractors, contractor's representatives, or other appropriate personnel shall: 1. *Notify Residential and Commercial Land uses of Planned Construction Activities*. This notice shall be provided at least 14 calendar days prior to the start of any construction activities, describe the planned schedule of construction activities, describe the noise control measures to be implemented by the Project, and include the name and phone number of the designated contact for the	City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department	NOI-1a: 14-Calendar Days Prior to Construction		

	City of Pacifica and its construction contractor responsible for handling construction-related noise complaints (per Section 3 of Mitigation Measure NOI-1b). This notice shall be provided to the owner/occupants of all residential dwelling units within 1,000 feet of construction work areas and the owner/occupants of commercial buildings within 500 feet of construction work areas. 2. *Notify Trail and Beach Users of Construction Activities.* The City shall post signs along overlook trails and trails leading to publicly accessible beaches within 500 feet of work areas warning of potential temporary elevated noise levels during construction. Signs shall remain posted throughout the duration of all sea wall installation activities. **Mitigation Measure NOI-1b: Reduce Construction Equipment Noise Levels.** To reduce potential noise levels associated with Project construction activities, the City and/or its designated contractors, contractor's representatives, or other appropriate personnel shall: a. Control Construction Traffic and Site Access. Construction truck traffic, including soil and debris and riprap hauling, equipment deliveries, and concrete and other vendor deliveries shall follow City-designated truck routes. Pursuant to City Municipal Code Section 4-7.1601, current designated truck routes in the City include Skyline Boulevard and State Highway Route 1. Pursuant to Municipal Code Section 4-7.1402(b), ingress and egress for the purpose of	City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department	NOI-1b: During Construction		

	picking up or delivering construction-related materials shall occur via a direct route between the designated truck route and the Project site. Construction truck traffic shall avoid routes that contain residential dwelling units to the maximum extent feasible given specific Project location and access needs. b. Construction Equipment Selection, Use, and Noise Control Measures. The following measures shall apply to Project construction equipment: c. Contractors shall use the smallest size equipment capable of safely completing work activities. d. Construction staging activities such as receipt of deliveries, equipment and material storage, etc. shall occur as far away from residential land uses as possible. e. All stationary noise-generating equipment such as pumps, compressors, and welding machines shall be shielded and located as far from sensitive receptor locations as practical. Shielding may consist of trailers, stored materials, or a three- or four-sided enclosure f. provided the structure/barrier breaks the line of sight between the equipment and the receptor and provides for proper ventilation and equipment operations. g. Heavy equipment engines shall be					

	equipped with standard noise suppression devices such as mufflers, engine covers, and engine/mechanical isolators, mounts, etc. These devices shall be maintained in accordance with manufacturer's recommendations during active construction activities. h. Pneumatic tools shall include a noise suppression device on the compressed air exhaust. i. The applicant/project representative and/or their contractor shall connect to existing electrical service at the site to avoid the use of stationary power generators (if feasible). j. No radios or other amplified sound devices shall be audible beyond the property line of the construction site. **Mitigation Measure NOI-1c: Install Temporary Noise Barrier along Esplanade Avenue.** To reduce potential construction noise levels at receptors on the east side of Esplanade Avenue, the City and/or its construction contractor shall install a temporary, six-foot-tall noise barrier along the eastern perimeter of the northern staging area. To the maximum extent feasible given site constraints and existing road/curb conditions, vehicular access to this staging area shall occur at the northern terminus of the barrier at Beaumont Avenue. The barrier shall consist of nominal 0.5-inch plywood with a minimum material density of 1.7 pounds per square foot installed at grade (or mounted to structures located at-grade, such as a K-Rail) and free of openings or gaps other	City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department	NOI-1c: Prior to Construction		

	than weep holes). Alternatively, commercially available acoustic panels or other products such as acoustic barrier blankets that have a minimum sound transmission class or transmission loss value of 20 dB may be attached to a chain link or other security fence. The noise barrier may be removed following the completion of sea wall installation (i.e., it is not necessary during restoration or riprap removal phases). **Mitigation Measure NOI-1d: Prepare Construction Noise Complaint Plan.** To prepare for unanticipated or unexpected construction noise issues, the City and/or its designated contractors, contractor's representatives, or other appropriate personnel shall prepare a Construction Noise Complaint Plan that shall: 1. Identify the name and/or title and contact information (including phone number and email) for designated City and construction contractor representatives responsible for addressing construction-related noise issues. Include procedures describing how the designated Project representative will receive, respond, and resolve construction noise complaints. At a minimum, upon receipt of a noise complaint, the designated representative shall notify the City, verify and determine the nature of the complaint (e.g., identify the noise source generating the complaint), and take steps to resolve the complaint, such as, but not limited to, changing equipment operations, installing a temporary noise shield, etc.	City of Pacifica Public Works Department/ Contractors	City of Pacifica Planning Department	NOI-1d: Prior to Construction		

Appendix B: New Information

CSA MEMORANDUM

Project: 310 – 330 Esplanade Dr.

Project No.: E5158

Date: March 30, 2020

Re: Impacts on Sand Supply Calculations

CSA calculated the potential impacts of the proposed seawall on the sand supply using the following equation provided in MIG's *310-330 Esplanade Avenue Infrastructure Preservation Project, Supplemental Information*, dated March 2020:

Vb = (S x W x L) x [(R x hs) + (1/2hu x (R + (Rcu – Rcs)))]/27

Vb = Volume of beach material that would have been supplied to the beach if natural erosion continued (this is equivalent to the long-term reduction in the supply of beach quality bluff material to the beach resulting from the armoring): **2,145 yards**

S = Fraction of beach quality material in the bluff material: **1%**

W = Width of property to be armored: **625 feet**

L = Design life of the structure: **30 years**

R = Long term average annual erosion rate: **2.7 ft/yr (74 years)**

hs = Height of the armoring structure: **30 feet**

hu = Height of the unprotected upper bluff: **60 feet**

Rcu = Predicted rate of retreat of the crest of the bluff during the period that the armoring structure would be in place assuming no armoring were installed (this value can be assumed to the same as R unless site-specific geotechnical information is provided that supports a different value): **5.4 ft/yr (13 years)**

Rcs = Predicted rate of retreat of the crest of the bluff during the period that the armoring would be in place assuming armoring has been installed (this value will be assumed to be zero unless site-specific geotechnical information is provided that supports a different value): **0.5 ft/yr**

Based on the values provided in **bold** for each above variable, we calculated a volume of beach quality sand (**Vb)** that would have been supplied to the beach if natural erosion continued of **2,145 yards**. Note that based on comparisons of bluff material sieve analysis and beach sand sieve

analysis (Figure 1), the bluff material is significantly finer than the beach sand material. Consequently, we concluded that the bluff materials compose zero or a very small fraction of the beach sand, and we therefor used 1% for the variable **S**. We understand that the neighboring projects used 20% for this variable (**S**); however, no justification was provided.

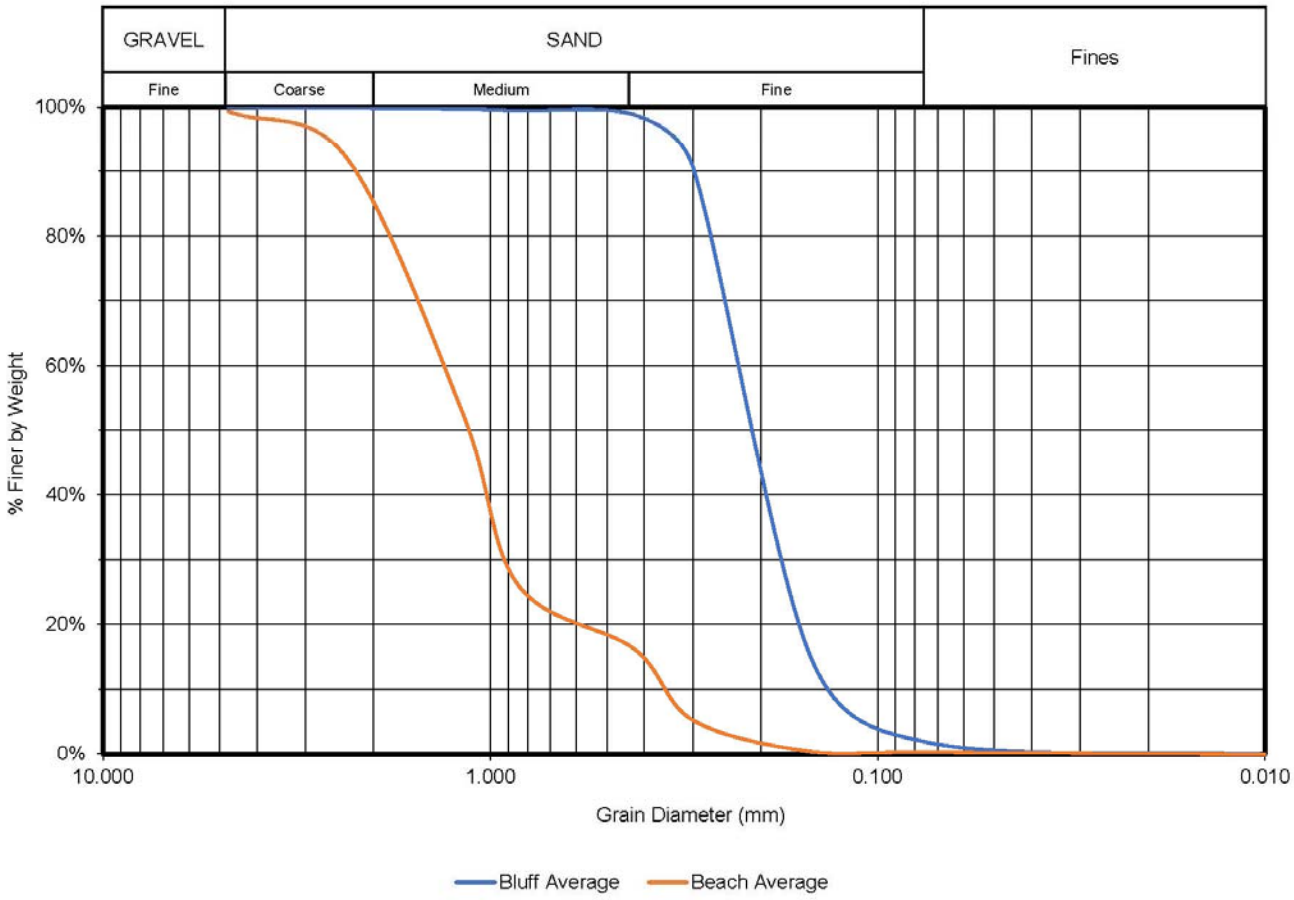

Figure 1

CSA MEMORANDUM

Project: 310 – 330 Esplanade Drive Infrastructure Preserve Project

Project No.: E5158

Date: November 15, 2023

Re: Applicability of Using 2-D Limit Equilibrium Slope Stability Analysis to Analyze Bluff Retreat

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The purpose of this email is to address a portion of the California Coastal Commission's (CCC) November 2, 2023, Comment No. 2 under Geology and Soils, specifically the comment indicates: *"Commission staff strongly recommends providing additional detail and analysis to this end, to include: . . . as well as a quantitative slope stability analysis to determine the factor of safety for the infrastructure the project is intended to protect."*

A typical computer aided 2-D Limit Equilibrium Slope Stability Analysis is used to analyze the factor of safety of a slope based on resisting forces divided by driving forces. The algorithms in the program divide the hypothetical landslide into vertical slices, and calculate internal forces for each slice, and interslice forces transferred to the adjacent slices. Simplified methods such as Bishop's or Janbu's method only solve for the sum of moments or sum of forces, respectively. More complete methods, such as Morgenstern-Price and Spencer's method, solve for both moment and force equilibrium, and introduce a parameter "lambda," that is varied until the two sum of forces result in the same factor of safety. The computer programs have "problems" including they don't converge, provide warning notices and error messages when interslice angles exceed certain thresholds, the lambda value is exceedingly high or low (typically in the range of 0 to 1), and when the hypothetical failure surface and the base of slices become too steep. Most programs cannot compute the factor of safety for slopes with overhanging geometries. Therefore, the slope needs to be modified by either modelling an overhanging slope as vertical, or introducing a "void" material in the case of undermining (sea caves). This will impact the critical slip surfaces because the slip surface has to extend to the ground surface, which is now potentially altered by a void material, and in some cases the critical slip surfaces passes through this void material and back into underlying material, which is not a realistic scenario.

The documented mechanism for the on-going bluff retreat at 310-330 Esplanade Blvd. is characterized by wave action eroding the toe of the bluff, which results in near-vertical, vertical, and undermined bluff faces. The lower portion of the bluff face then calves off like a glacier, followed a while later by the mid bluff portion, and then upper bluff portion. Typically, these calving events are only about 2 to 10 feet thick.

This type of calving failure is not a typical landslide event, and based on our experience does not lend itself to tradition slope stability analysis due to the near vertical failure surface the calving material mobilizes and the void at the base of the bluff caused by undermining.

We can undertake a quantitative slope stability analysis and extend a hypothetical failure surface to the Esplanade Blvd. infrastructure as the CCC has recommend; however, this analysis will not be modelling the bluff retreat hazard the proposed project is designed to arrest or a hazard that has been observed at this site.