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STAFF REPORT CDP APPLICATION

Application Number: 2-20-0282

Applicant: California Department of Transportation (Caltrans)

Project Location: Highway 1 between post-mile markers 15.1 and 15.7 adjacent to Gleason Beach at Scotty Creek, about 4 miles north of Bodega Bay and 5 miles south of Jenner in unincorporated Sonoma County.

Project Description: Realign approximately 3,700 feet of Highway 1 up to 370 feet inland, including removal of existing culverts and highway infrastructure over Scotty Creek; construction of a new 850-foot bridge over Scotty Creek; construction of new off-road California Coastal Trail segments and related public access amenities, including parking areas and a pedestrian bridge over Scotty Creek; transfer of Caltrans' properties to Sonoma County for public access purposes; removal of debris from shoreline and coastal bluff areas, including phased removal of prior emergency highway repair features; construction of new access roads for residential and public access purposes; and habitat restoration with conservation easements.

Staff Recommendation: Approval with Conditions

SUMMARY OF STAFF RECOMMENDATION

The California Department of Transportation (Caltrans) has applied for a consolidated coastal development permit (CDP) for the Gleason Beach Highway 1 Roadway Realignment Project in Sonoma County. The project is a major managed retreat effort that will relocate a portion of coastal Highway 1 inland away from ongoing threats related to coastal hazards, particularly in anticipation of significant erosion exacerbated by sea level rise (SLR). As impacts due to climate change increase, including elevated SLR, California faces many fundamental choices about adaptation strategies, especially in relation to significant critical public infrastructure such as coastal Highway 1. Oftentimes those choices are between several challenging options, including: armoring the coastline and retaining the infrastructure in place, with the substantial loss of beach and natural habitats that such an approach engenders; elevating the infrastructure out of harm's way; or adopting other strategies such as managed retreat to live with the eroding coastline in a way that allows coastal ecosystems and beaches to flourish and continues to provide for the recreational access and coastal economies that are dependent on such resources.

Here, the proposed project presents a significant managed retreat opportunity that can provide for the safety of the Highway 1 corridor while allowing for the natural migration of coastal bluffs and shoreline and realizing significant habitat restoration and public recreational access improvements. This important adaptation project represents almost fifteen years of planning and coordination between Caltrans, Sonoma County, and Coastal Commission staff as well as interactions with the local community and a variety of interested parties. As this case reveals, these types of SLR adaptation projects can require more up-front time and resource commitments than other approaches, such as armoring or continuing with the status quo despite erosion threats, but they also promise to lead to important longer-term public benefits. These benefits include improved coastal resiliency, increased cost savings over the long run, and additional coastal resource benefits that can accrue when the shoreline processes can evolve with the changing landscape and adaptation efforts are designed to work within that natural framework. As exemplified by this project, Caltrans and the Coastal Commission are committed to fully exploring these types of highway adaptation projects whenever possible and are developing an important portfolio of these project examples up and down the state. These experiences represent a number of lessons learned and have garnered a greater understanding of the complexities and trade-offs to be sorted through for these projects to be realized.

The project area is along a stretch of coastal Highway 1 approximately four miles north of Bodega Bay, where Scotty Creek reaches the Pacific Ocean near the Sereno del Mar/Carmet subdivision areas of unincorporated Sonoma County. Other than these two small residential subdivisions, the project area lies amidst largely undeveloped agricultural lands and coastal terrace prairie marked by cattle grazing and scattered residences, with coastal hills forming the eastern visual backdrop. Highway 1 here is considered a critical route up and down the Sonoma coast for local residents, as well as for numerous visitors who travel from all over the region, the State, and beyond to this

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highly scenic area. In fact, the journey on the highway and along the rugged Sonoma Coast is itself a major coastal recreational draw. Not only is Highway 1 also the lone evacuation route for the area, it is also the only way to reach numerous coastal public access and coastal recreational areas along Sonoma's coastline, all of which are key aspects of the region's coastal tourism economy.

Highway 1 in the project area generally runs directly along steep, high coastal bluffs above a rocky shoreline. At the south end of the project area, the highway drops in elevation to meet the Scotty Creek coastal stream and what is somewhat a rarity on the rugged Sonoma Coast: an easily accessible sandy beach area that does not require scrambling down a steep bluff. Currently the highway crosses Scotty Creek on a two-lane roadway prism atop a set of 1950s double box culverts. The culverts and roadway prism restrict the flow of Scotty Creek and impair historical, natural salmonid habitat.

Historically, Highway 1 in this area sat much further inland from the blufftop edge. In fact, just north of Scotty Creek there previously existed twenty-one residences seaward of the highway dating back to the 1940s. Early USGS maps from that time show the blufftop edge well inland above a beach, while County records indicate that in the 1950s the distance from Highway 1 to the mean high tide line across some lots was almost 500 feet. Due to ongoing coastal erosion, however, the highway now runs directly along the bluff edge in many locations. Eleven of the original homes have since been removed or collapsed onto the bluffs, beach, and ocean below them, and the others remain threatened, some imminently. This has resulted in a debris field of concrete, rebar and other structural remnants from both failed shoreline armoring attempts and the fallen residences themselves. Due to the same effects of erosion, Caltrans has been forced since the early 2000s to construct several emergency repairs to stabilize a section of Highway 1 and these temporary emergency efforts continue through to present. For example, just last year in 2019 midway along Gleason Beach, Highway 1 traffic endured roadway closures and delays until Caltrans could complete \$1.2 million worth of temporary emergency repairs to address the collapsing roadway. As described below, Caltrans is proposing for this project package to include hazards clean-up to remove the structural debris and emergency repairs from the bluff and shoreline, significantly improving the visual state of the shoreline, improving its habitat functionality, and improving the ability of the public to use the area for access and recreation.

The overarching goals of this project are to ensure the safe structural integrity of this critical Highway 1 transportation link in light of SLR projections into 2100 and to realize the positive public benefits of expanding access, protecting habitats, and fostering renewed natural coastal processes along this shoreline. Specifically, the realignment project proposes to realign approximately 3,700 feet of Highway 1 up to 370 feet inland, which is necessary to ensure coastal resilience and avoid shoreline armoring. A realignment also requires, however, a new crossing of Scotty Creek. Among many alternatives, Caltrans considered reconstructing the roadway prism inland across and through Scotty Creek, at grade and similar to the current highway. This alternative would require the construction of a roadway prism across the creek, with road cuts into the slope and substantial fill in wetlands, ESHA, and coastal waters. Incorporating a

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small bridge over Scotty Creek as part of that alternative similarly would represent substantial cut and fill. Significantly, both versions of that alternative—or simply reinforcing the roadway at current grade with armoring-- would also leave the highway at risk of flooding in the near term, which will only increase with SLR. Instead, Caltrans proposes to construct a new 850-foot vehicular bridge over Scotty Creek that will span the full length of the flood plain and be resilient to SLR into 2100. Removal of the culverts and roadway prism that currently block the free flow of Scotty Creek to the ocean will “daylight” the historic coastal stream, greatly improving the salmonid habitat and restoring the natural interchange between the stream and the ocean.

This managed retreat project also allows for a significant number of public access improvements. These primarily include, the construction of a new off-road California Coastal Trail (CCT) segment with a new CCT bridge over Scotty Creek and numerous related public access amenities. The project also proposes to widen roadway shoulders for improved cycling access and a pedestrian sidewalk on the new vehicular bridge. While the removal of the current roadway and culverts at Scotty Creek will displace some existing informal parking spots on roadway shoulders, approximately four parking spaces are expected to remain there and an additional informal parking area for 12-16 automobiles will be provided on the access road network north of Scotty Creek. Significantly, Caltrans also worked with Sonoma County to acquire and transfer to the County a portion of an adjacent private parcel necessary to reach the beach as part of the project, to perfect and permanently secure that public access to Gleason Beach.

Caltrans plans to pursue these improvements in partnership with Sonoma County through cooperative agreements to provide both funding as well as planning and construction support to the County through implementation of the project. Overall, Caltrans is providing \$1.2 million to the County to carry out and maintain complementary public access improvements through a Gleason Beach Coastal Access Plan. Caltrans will also undertake construction activities necessary to repurpose portions of existing Highway 1 into a CCT segment, along with residential and public access road connections. Additionally, sections of the existing highway that have no public access purpose will be removed and replanted with native vegetation. At the completion of the project's construction, Caltrans will transfer all of its property interests west of the new realignment (excepting those that have no public access utility) to the County. Thus, through the funding and lands provided by Caltrans to the County, the proposal provides for the long-term management of public recreation improvements, as well as for the managed retreat from continuing SLR effects for the CCT and related public access improvements.

Even in largely rural areas, managed retreat can have conflicting coastal resource impacts. Safely realigning this highway inland onto open space properties involves unavoidable development in agricultural lands, wetlands, and environmentally sensitive habitat areas (ESHA) and the new bridge structure will introduce substantial visual impacts into this highly scenic area. Normally, these impacts would require denial of the CDP for the proposed project under Coastal Act and Sonoma County Local Coastal Program policies. The project is, however, approvable through the application of the

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conflict resolution provisions of the Coastal Act to this consolidated permit application, because denial of the project would also be inconsistent with the affirmative public access and hazard avoidance policies of the Coastal Act. Specifically, if the highway is left on its current alignment, it will be lost to advancing shoreline erosion hazards in a relatively short term, eventually eliminating the public's ability to access this important stretch of California's coast. Losing the lifeline link of Highway 1 in this area would also create a gap in the coastal transportation system that would greatly impede emergency evacuation routes as well as access to numerous public recreation locations along the Sonoma Coast, threatening the safety of local residents, conflicting with numerous public access policies, and damaging the local coastal economy. And, if denial of the project were to lead to ongoing emergency armoring and future armoring proposals, as would be expected, it would also conflict with several affirmative policies protecting coastal resources because such armoring predictably would lead to degradation of coastal resources, including beach access, marine resources, and ESHA.

To date, perhaps the most significant area of controversy with the proposed project has been a concern that the large elevated bridge structure over Scotty Creek is out of character with the Sonoma Coast rural aesthetic. Specifically, the proposed 850-foot long bridge is an engineered concrete structure up to 28 feet above ground level at its highest point; this is a departure from the current highway that is essentially a roadbed at ground level. Part of the character and allure of this coast is the low-key and limited nature of the highway itself as it winds along the shoreline and the coastal bluffs. At the same time, it is worth noting that there are similar more engineered sections along this route, that were constructed in response to ongoing challenges with coastal hazards (e.g., from landslides, etc.) as well as in response to natural features (e.g., the bridge over the Russian River, that is some 75 feet longer than proposed here), but for the most part coastal vistas along the Sonoma Coast are made all the more captivating by the more subdued nature of the existing two-lane Highway 1.

Importantly, the proposal does not fundamentally change the 2-lane nature of the rural highway. It relocates a highway inland, but does not propose a new freeway, add new traffic lanes, or add other infrastructure that could increase traffic capacity. The highway will remain essentially the same, with slightly wider shoulders for improved cycling access and a bridge designed for 40 mph traffic. The new bridge will be a new presence in the landscape, but over the years Commission staff worked extensively with Caltrans to explore options that could reduce the height, scale, and massing of the proposed structure to better address this public viewshed issue. The bridge and other at-grade roadway prism alternatives, face significant constraints. The bridge and highway must be high enough to avoid flooding hazards and SLR considerations. The bridge and highway must be long enough to span the natural flood plain of Scotty Creek or they will remain subject to significant flooding hazards. Further, the bridge and highway need to avoid and minimize impacts to the wetlands, ESHA, and Native American cultural resources at the site. Lastly, Caltrans is required to maintain existing residential access to the private ranch driveway next to Scotty Creek and to provide height clearance for ranching agricultural trucks.

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Commission and Caltrans staff extensively explored different alignments and designs that might better conform to natural topography and alternative options for ingress and egress to the existing private ranch just inland of the existing highway. Ultimately, no other feasible designs could be found to alternatively meet these project goals consistent with the Coastal Act. Caltrans has reduced the height and the massing of the bridge as much as possible. Lowering the bridge deck leaves the highway susceptible to flooding and SLR hazards and potential highway closures in the project lifetime. In addition, Caltrans has sought to reduce the massing of the bridge through design exceptions that allow for narrower shoulders than their typical highway design standards. The addition of the separated pedestrian pathway on the ocean side of the bridge widens the bridge deck, but also expands the public's ability to enjoy new panoramic vistas of the ocean at their own leisure and further ensures safe coastal trail connections as the erosion of the bluffs continues. Other visual impact minimization efforts by Caltrans include adding architectural features to reflect the agricultural rural setting, coloring the concrete to harmonize with existing bluff and beach tones, and incorporating see-through bridge railings.

To address the unavoidable remaining visual impacts, Caltrans has creatively worked in conjunction with Sonoma County to develop a Conceptual Gleason Beach and Bluff Cleanup In-Lieu Fee Program that provides significant offsetting mitigation for the scenic resource impacts. Specifically, the structural debris field along the shoreline described above creates substantial visual (and accompanying public access and habitat) impacts. As visual mitigation for the bridge structure, Caltrans proposes to work in partnership with Sonoma County for the project to provide for beach and bluff hazards debris clean-up over nearly a 900-foot length of the coastal bluff and shoreline north of Scotty Creek. Through this in-lieu fee program, Caltrans will transfer \$5 million to Sonoma County to carry out this mitigation through an MOU framework with the Commission. As the local government with regulatory responsibility for local permitting and County code compliance, and with experience in similar clean-up activities after catastrophic events (e.g., wildfires) and structure abandonment, Sonoma County is well suited for implementing the overall clean-up. In addition, the County will also remove prior Highway 1 emergency repair measures over time through the in-lieu fee program and in concert with the other clean-up activities. This phased approach will clean up all failed highway structural debris currently on the bluff and shoreline while avoiding extensive excavation now to remove the structures within the road prism and the attendant potential impacts to coastal resources. The approach also provides important protection of the CCT and other access amenities for a longer period while removing the last of the emergency repairs as appropriate over time.

Overall, this project highlights the new lenses through which Californians are going to be asked to view their built environment as decisions are made on how to best adapt to SLR and climate change in ways that foster the continuation of sandy beaches and sensitive coastal habitats. In short, this is an important adaptation project for the State, not only for what it can do along this particular stretch of Highway 1, but also for what it represents in terms of a vision for the State's shoreline transportation corridors along some of California's most visually dramatic visitor destinations and next to sensitive

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coastal areas as they more naturally evolve in response to SLR processes. The project is not without its issues, including unavoidable impacts on ESHA, wetlands, agricultural lands, and public views along the Sonoma Coast, but managed retreat and coastal resiliency projects of this type will often bring with them these types of tradeoffs. Notably, the overall project package results in numerous public benefits through the restoration of natural shoreline processes with critical public infrastructure moved out of harm's way, in addition to extensive shoreline visual blight being removed, sensitive natural habitats being enhanced and coastal public access opportunities being substantially expanded—all representing a model of coastal resiliency.

Thus, staff recommends **approval** of CDP application number 2-20-0282, as conditioned. The motion to implement this recommendation can be found on page xxx below.

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APPENDICES

Appendix A – Substantive File Documents

Appendix B – Staff Contacts with Agencies and Groups

EXHIBITS

Exhibit 01 – Gleason Beach Blufftop Erosion and Highway 1(2019)

Exhibit 02 – General Project Location

Exhibit 03 – Gleason Beach Project Overview

Exhibit 04 – Project Area Visual Overview (2019)

Exhibit 05 – Gleason Beach at Scotty Creek (2020)

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Exhibit 06 – Gleason Beach at Scotty Creek Parking (2019)
Exhibit 07 – Gleason Beach Blufftop Erosion (1972-2009)
Exhibit 08 – Gleason Beach and Shoreline Armoring (1988)
Exhibit 09 – Gleason Beach Erosion and Shoreline Debris (2020)
Exhibit 10 – Caltrans Gleason Beach Emergency Repairs
Exhibit 11 – Gleason Beach 2019 Closures
Exhibit 12 – Scotty Creek Bridge Impact Mapping and Flood Zone
Exhibit 13 – Proposed Highway 1 Scotty Creek Bridge
Exhibit 14 – Proposed Public Access Improvements
Exhibit 15 – Proposed Scotty Creek Beach Access
Exhibit 16 – Impacts to Scotty Creek Habitat
Exhibit 17 – Sonoma County Board of Supervisors Authorization 2018
Exhibit 18 – WRECO Geotech and SLR Analysis
Exhibit 19 – Conceptual Public Access Plan
Exhibit 20 – ESHA and Wetlands Impacts Overview
Exhibit 21 – Impacts to Coastal Terrace Prairie ESHA Habitat
Exhibit 22 – Impacts to Myrtle's Silverspot butterfly ESHA Habitat
Exhibit 23 – Impacts to CRLF ESHA Habitat
Exhibit 24 – Commission Staff Ecologist's Memo (2020)
Exhibit 25 – Caltrans Conceptual Mitigation Plan (2020)
Exhibit 26 – Caltrans Mitigation Funding Assurance Letter
Exhibit 27 – Impacts to Wetlands
Exhibit 28 – Coastal Hazards Clean-up In Lieu Fee Program

I. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: I move that the Commission **approve** Coastal Development Permit Number 2-20-0282 pursuant to the staff recommendation, and I recommend a yes vote.

Resolution to Approve CDP: The Commission hereby approves Coastal Development Permit Number 2-20-0282 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would

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substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
- 5. Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:¹

- 1. Approved Project.** This CDP authorizes the following development subject to the terms and conditions of this CDP. All development shall be substantially consistent with the Final CDP Application, except as otherwise modified by this CDP's terms and conditions.
 - a. Realigned New Highway 1.** Construction of a new realigned segment of Highway 1 roadway from Postmile 15.1 to 15.7 with (1) 12-foot travel lanes in

¹ Note that the following terms apply to these special conditions: (1) the term "Executive Director" refers to the Executive Director of the California Coastal Commission, and all submittals to the Executive Director required in these special conditions shall be submitted through the Commission's North Central Coast District Office or the Commission's appropriate Caltrans Liaison; (2) the term "project corridor" refers to the area of construction activities approved under this CDP, specifically along Highway 1 in Sonoma County between postmile 15.1 to 15.7 and the inland areas of the Highway 1 realignment, as generally shown in Exhibit 3; and (3) the term "Final CDP Application" refers to the final CDP application dated received on October 12, 2020 in the Commission's North Central Coast District Office and includes the Final Project Description and the Final Project Application Plans received with that application submittal.

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each direction, and (2) shoulder widths up to 8 feet total along each lane (with a maximum of 4-foot paved and 4-foot unpaved shoulders).

- b. Scotty Creek Bridge.** An 850-foot-long bridge spanning Scotty Creek, with (1) shoulder widths on the bridge 6 feet wide (and up to 8 feet wide on the inside of the horizontal curves), (2) a separated pedestrian bridge on the ocean side of the bridge, and (3) Type 85 bridge railings for vehicular lanes and the similar see-through railings for the pedestrian walkway.
- c. Residential Access Roads.** At most three access roads, at the minimum width necessary to meet Sonoma County standards, from the new Highway 1 alignment to existing residential structures and public access amenities.
- d. Scotty Creek Restoration.** Removal of all existing culverts, roadway, roadway prism, and related development associated with the existing Highway 1 over Scotty Creek, and restoration of the creek's riparian and wetland habitat areas affected by removal.
- e. California Coastal Trail and Public Access Improvements.** Implementation of the Conceptual Public Access Improvement Plan dated September 30, 2020, as submitted in the Final CDP Application (**Exhibit 19**) consistent with **Special Conditions 4 and 5**, including repurposing a portion of the existing Highway 1 roadway to a segment of the California Coastal Trail (CCT) network; a CCT bridge over Scotty Creek; the transfer of fee title to a sandy beach parcel to Sonoma County to provide access to the mean high tide line near the outlet of Scotty Creek; relinquishment of other Caltrans property interests west of the new realignment of Highway 1 to Sonoma County (excepting those with no potential public access value, such as utility and drainage easements), including at a minimum, those depicted in **Exhibit 3**; provision of parking spaces on access roads and the existing Highway 1 terminus at Scotty Creek; 150 square feet of rock revetment necessary to protect a portion of the existing Highway 1 roadway that will be repurposed to provide for a residential driveway and public access connection; removal of existing segments of Highway 1 not needed for public access and replanting with native vegetation; provision of a blufftop public viewing area; and the installation of related public recreational access improvements (e.g. trash receptacles, signs, benches, and other related public access amenities).
- f. Debris and Beach Clean Up.** Clean up, restoration and enhancement of the blufftop, bluff, and beaches in the project area through an in-lieu fee program with Sonoma County consistent with **Special Condition 5** and the draft Sonoma County Gleason Beach and Bluff Clean Up In Lieu Fee Program dated September 25, 2020, as submitted in the Final CDP Application (**Exhibit 28**), in a designated clean-up area (**Exhibit 28**), including (1) the removal of structural debris from abandoned private homes and roadway failures along the shoreline as visual mitigation for this project, (2) the phased removal of emergency

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highway repairs within the highway prism installed previously by the Permittee, and (3) monitoring of bluff erosion.

- g. Habitat Restoration and Enhancement.** Habitat restoration and enhancement (including on-site and off-site mitigation) through a Habitat Mitigation and Monitoring Plan, Coastal Terrace Prairie Habitat Management Plan, and dedication of an open space conservation easement consistent with **Special Conditions 8, 9, and 10** and the Conceptual Mitigation Plan October 5, 2020, as submitted in the Final CDP Application (**Exhibit 25**).
- h. Miscellaneous Fill and Grading.** Fill and grading necessary for construction and other associated temporary construction-related development such as traffic management, staging, hauling, and other construction activities as specified in the Final CDP Application.
- i. Emergency CDP Follow-up.** This CDP provides the necessary follow-up Coastal Act authorization for prior Emergency CDPs (ECDPs) issued by Sonoma County (County ECDPs CPH16-0010 and ZPE19-0103), as well as 2004 emergency repairs.

The Permittee shall undertake all development in accordance with the terms and conditions of this CDP.

- 2. Final Construction Plans.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two full-size sets of final site and construction plans ("Final Construction Plans") for the project elements specified in **Special Condition 1a-d**, as well as one electronic copy, for the review and written approval of the Executive Director. The Final Construction Plans shall be in substantial conformance to the Final CDP Application, except as otherwise modified by this CDP's terms and conditions. The Final Construction Plans, shall, at a minimum, include and provide for the following:

- a. Construction Areas.** The Final Construction Plans shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view. All such areas within which construction activities or staging are to take place shall be minimized to the maximum extent feasible in order to have the least impact on coastal resources. Special attention shall be given to siting and designing construction areas in order to minimize impacts to public beach access, public parking, and public views. Construction is prohibited outside of the defined construction, staging, and storage areas.
- b. Construction Timing.** The Final Construction Plans shall specify that all construction grading and excavation shall be avoided during the rainy season (i.e., between November 1st and April 1st, inclusive, in this case). Any such work during this time frame shall only occur during periods of no rain and with no rain predicted in the one-week forecast. All work related to the stream diversion of Scotty Creek shall take place between April 15th and November 15th inclusive.

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In addition, all work on the beach is prohibited during weekends, from the Saturday of Memorial Day through Labor Day inclusive, unless the Executive Director specifically authorizes such work because of extenuating circumstances and/or impacts to public access are minimal.

- c. Construction Methods.** The Final Construction Plans shall specify all construction methods to be used, including all methods to keep the construction areas separated from public recreational use areas (e.g., using unobtrusive fencing or equivalent measures to delineate construction areas), all of which shall be clearly identified on the construction site map and described in a narrative description.
- d. Construction Site Documents.** The Final Construction Plans shall specify that copies of the signed CDP and the approved Construction Plans be maintained in a conspicuous location at the construction job site at all times, and be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction Plans, and the public review requirements applicable to them, prior to commencement of construction.
- e. Construction Coordinator.** The Final Construction Plans shall specify that a construction coordinator be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and that the coordinator's contact information (i.e., address, phone numbers, email address, etc.) including, at a minimum, a telephone number and an email that will be made available 24 hours a day for the duration of construction, is conspicuously posted at the job site where such contact information is readily visible from public viewing areas while still protecting public views as much as possible, along with indication that the construction coordinator should be contacted in the case of questions or emergencies. The coordinator shall record the contact information (i.e., address, email, phone number, etc.), and nature of all inquiries received regarding the construction, and shall investigate complaints and take remedial action, if necessary, as soon as possible and in all cases within 24 hours of receipt of the complaint or inquiry. All complaints and all actions taken in response shall be summarized and provided to the Executive Director on at least a monthly basis.
- f. Traffic Management Plan.** The Final Construction Plans shall include a Traffic Management Plan for each project element to be undertaken, or a statement (and supporting evidence) that no traffic impacts will result from the proposed construction and no plan is necessary. The Traffic Management Plan shall limit lane closures and the use of public access pull outs for construction staging or operations to the maximum extent feasible, and provide for full and continuous access for bicyclists through the work corridor at all times by providing designated adequate space adjacent to the open traffic lane to safely traverse through the work zone.

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- g. Construction BMPs.** The Final Construction Plans shall include copies of Erosion and Sediment Control and Pollution Prevention Plans required by **Special Condition 11** and demonstrate compliance with Construction BMPs and Water Quality protection measures consistent in **Special Condition 10**.
- h. Biological Monitoring and Minimization Measures.** The Final Construction Plans shall include documentation of biological monitoring measures consistent with **Special Condition 13** and **Special Condition 15** and delineate any exclusionary fencing or buffers determined at that time.
- i. Compliance with this CDP.** The Final Construction Plans shall include a narrative cover letter providing demonstration that the final plans are consistent with all relevant terms of this Special Condition and any other relevant term or condition of this CDP. The narrative cover letter shall indicate both how and where, compliance with these conditions is explicitly required in the final submitted construction plans and is communicated to any contractor implementing work under the plans.
- j. Construction Specifications.** All construction specifications and materials shall include provisions for ensuring that all construction personnel are briefed on the CDP terms and conditions and shall include appropriate penalty provisions that require remediation for any work done inconsistent with the terms and conditions of the CDP.
- k. Notification.** The Permittee shall notify the Executive Director at least three working days in advance of (1) commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities, and (2) of any anticipated changes in the schedule based on site conditions, weather or other unavoidable factors. Any changes in the construction operation that impact the effective implementation of the approved Plan shall be reported to the Executive Director for review and written approval in advance of the change, and documented in an updated version of the Plan.

The Permittee shall undertake all development in accordance with the approved Final Construction Plans. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.

- 3. Gleason Beach Public Access Package.** The Permittee commits to providing the public access improvements authorized by this permit as described in **Special Condition 1(e)** above through a package of property acquisitions and transfers, funding contributions, specific construction actions, and participation in the Gleason Beach Coastal Public Access Taskforce, as described in more detail in the Gleason Beach Conceptual Public Access Plan dated September 25, 2020, as submitted in the Final CDP Application (**Exhibit 19**). Specifically, the Permittee shall:

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- a. Cooperative Funding Agreement.** Consistent with the timelines in **Special Condition 4(c)** below, enter into a cooperative funding agreement(s) with Sonoma County to provide for a two-phased disbursement of funds totaling \$1.2 million (minus Sonoma County's commitment of \$64,000 toward purchase of beach property which is a portion of Assessor's Parcel Number 101-120-058 southwest of Scotty Creek) into an account specifically established by Sonoma County to underwrite Sonoma County's planning, design and engineering, construction and management commitments and responsibilities described in the Gleason Beach Conceptual Public Access Plan; the cooperative funding agreement(s) shall identify the roles and responsibilities of Sonoma County and the Permittee as described in the Gleason Beach Conceptual Public Access Plan and modified by these special conditions.
- b. Permittee Responsibilities.** Fulfill its responsibilities identified in the Gleason Beach Conceptual Public Access Plan including:
- 1) participating in the Gleason Beach Coastal Access Taskforce and supporting the production of the Phase 1 and Phase II Coastal Access Plans;
 - 2) providing geotechnical assistance for decisions regarding the repurposing of the existing Highway 1 for the CCT, access roads and any buffer areas;
 - 3) completing plans for the repurposing of Highway 1 based on the specifications developed with Sonoma County and included in the Phase I Gleason Beach Coastal Access Plan;
 - 4) constructing the various specified elements for the CCT, other public access amenities and residential/public access roads through repurposing existing Highway 1 (including regrading of the existing Highway 1 prism; removal and disposal of any asphalt and other highway components not desired for public access purposes; installation of drainage and erosion control features; providing any desired buffer areas between access road vehicular users and trail users; surfacing the CCT with naturally-appearing material; and, making provisions for current and planned CCT connections to the north and the south of the Project limits);
 - 5) constructing the new residential/public access roads from the realigned Highway 1, with provisions for the public parking areas and other related public access amenities, as specified in the Phase I Gleason Beach Coastal Access Plan;
 - 6) installing the rock revetment for the residential/public access driveway, public parking and the CCT on the repurposed existing Highway 1 south of Scotty Creek, with careful attention to helping facilitate public access from the repurposed area to the public beach;

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- 7) developing and implementing a replanting plan using native species for bare or unused portions of the repurposed existing Highway 1 area and over the rock slope protection south of Scotty Creek; and,
- 8) providing consultation support for Native American Tribes during the public access planning process as part of the Permittee's overall cultural resource mitigation strategies.

All activities shall be undertaken consistent with the approved Final Gleason Beach Coastal Access Plan prescribed in **Special Condition 4**.

4. Gleason Beach Final Phase I and II Coastal Access Plans and Implementation.

The Final Phase I and Phase II Gleason Beach Coastal Access Plans shall guide the planning, design and implementation of the public access amenities specifically identified in **Special Condition 1(e)** and the Gleason Beach Conceptual Public Access Plan consistent with the following terms:

a. Required Public Access Features of the Final Gleason Beach Coastal Access Plans.

The Final Plans shall at a minimum provide for the following features:

- 1) The initial continuous Gleason Beach California Coastal Trail (CCT) strand created through repurposing portions of the existing Highway 1 and incorporating potential connections on adjacent publicly-owned lands within the project limits, with durable and naturally appearing surfacing.
- 2) A CCT bridge over the restored floodplain of Scotty Creek.
- 3) Public beach access from the existing Highway 1 alignment to the mean high tide line near Scotty Creek.
- 4) At least one public viewpoint on the bluff to the north of Scotty Creek.
- 5) A total of 16 to 20 parking spaces along the new access roads and the remnant end of the existing Highway 1 alignment south of Scotty Creek.
- 6) A public access vehicle turn-around and unloading area within the existing Highway 1 alignment to the north of Scotty Creek.
- 7) Identification and description of an adequate number of (i.e., commensurate with expected use levels) auxiliary public access amenities to service the visiting public (such as trash receptacles, benches, bike racks, restrooms, etc.) that are appropriately located to best serve the CCT, public parking, and public beach access.

b. Required Components of the Final Phase I and Phase II Gleason Beach Coastal Access Plans.

The Final Plans shall contain several sub-component descriptions, maps and plans to guide the overall implementation, operations and

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maintenance of the public access improvements specifically identified in the 2020 Conceptual Plan and modified by these special conditions. At a minimum, these components shall demonstrate consistency with the design and operation principles and other commitments articulated in the 2020 Conceptual Plan and shall include:

- 1) A general narrative description of the public access features described above, along with a schematic map identifying their proposed locations.
- 2) Final construction plans for all public access components, including the incorporation of erosion and drainage control features into the repurposed existing Highway 1 alignment and new residential/public access pervious-surface driveways connecting to the realigned Highway 1 from the existing Highway 1.
- 3) An overview of the sequencing, timing and coordination needing to be undertaken with other concurrent realignment Project activities.
- 4) A signage plan, including interpretative panels, educational signs, and other trail signage.
- 5) A replanting plan for the areas of the repurposed existing Highway 1 that have no public access purposes and that will be recontoured to match the surrounding grade as well as over the rock revetment south of Scotty Creek, including (a) the removal of non-native and invasive species, (b) planting with native plants of local origin, and (c) a maintenance period to provide for establishment of the native plantings.
- 6) An operation and maintenance plan, describing the activities that Sonoma County will undertake to oversee the long-term maintenance of the CCT and ancillary public access amenities, including provisions that will ensure that the coastal access areas are open and available over the life of the project to the public free of charge 24 hours a day, 365 days a year, except for necessary maintenance and emergency closures. This plan shall also include a maintenance and monitoring plan, consistent with **Special Condition 7**, for the rock revetment along the remnant end of existing Highway 1 south of Scotty Creek that will protect public access facilities including roadway access and parking.
- 7) A long-term managed retreat plan that is coordinated with Sonoma County's in-lieu fee program in **Special Condition 5** to monitor bluff and shoreline erosion west of the initial CCT alignment. Monitoring results shall guide implementation of the managed retreat plan for timely removal and relocation of CCT sections inland, as well as any access roads or other public access improvements to be maintained, in a manner that will ensure continuous connectivity of the trail system over time and ensure that there will be no future reliance on shoreline armoring to protect access improvements from

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coastal erosion.

c. Timing Requirements. The development, planning, and implementation of these public access improvements shall adhere to the following timing requirements:

- 1) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit documentation of a cooperative funding agreement, or similar binding agreement, between the Permittee and Sonoma County to guide the development and implementation of the Gleason Beach Public Access Package, consistent with the 2020 Conceptual Plan and these special conditions. Prior to the final execution of that cooperative funding agreement, the Permittee shall submit the draft for review and approval by the Executive Director of the Coastal Commission based on consistency with the 2020 Conceptual Plan and these special conditions. Upon the execution of the final cooperative funding agreement, the Permittee shall submit a copy of the final agreement, along with documentation to the Executive Director of the initial transfer of \$200,000 to Sonoma County into a separate account specifically established for the Gleason Beach Public Access Package.
- 2) WITHIN THREE MONTHS OF THE INITIAL DISBURSEMENT of the Gleason Beach Public Access Package funds, Sonoma County will convene the Gleason Beach Coastal Access Taskforce, consisting of Sonoma County, Coastal Commission, State Parks, State Coastal Conservancy, and the Permittee representatives as well as other appropriate stakeholders to provide input and guidance on Sonoma County's timely completion of Phase I the Coastal Access Plan as described in the 2020 Conceptual Plan and modified by these special conditions.
- 3) WITHIN FIFTEEN MONTHS OF THE INITIAL DISBURSEMENT of the Gleason Beach Public Access Package funds to Sonoma County, per the required cooperative funding agreement, the Permittee and Sonoma County shall submit a Phase I Gleason Beach Coastal Access Plan for the review and written approval of the Executive Director of the Coastal Commission. If the Executive Director does not approve the submitted plan, the Permittee and Sonoma County shall submit an updated plan within 3 months, unless otherwise specified by the Executive Director.
- 4) WITHIN SIXTY DAYS OF THE APPROVAL OF THE PHASE I GLEASON BEACH COASTAL ACCESS PLAN by the Executive Director, the Permittee shall submit documentation of the transfer of \$936,000 to Sonoma County (this balance derives from the total of \$1.2 million minus \$200,000 from the initial fund transfer as well as a subtraction of \$64,000 under Sonoma County's previous agreement to contribute toward the executed acquisition of public beach access on a portion of Assessor's Parcel Number 101-120-058). The funds shall be deposited into the Sonoma County account previously established for the Gleason Beach Public Access Package.

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- 5) WITHIN ONE YEAR OF THE DISBURSEMENT OF THE \$936,000 to the Gleason Beach Public Access Package funds for Sonoma County, per the required cooperative funding agreement, the Permittee and Sonoma County shall submit a Phase II Gleason Beach Coastal Access Plan for the review and written approval of the Executive Director. If the Executive Director does not approve the Phase II Gleason Beach Coastal Access Plan, the Permittee and Sonoma County shall submit an updated plan within 3 months, unless otherwise specified by the Executive Director.
- 6) EACH YEAR FOLLOWING THE APPROVAL OF THE PHASE II GLEASON BEACH COASTAL ACCESS PLAN by the Executive Director, the Permittee and Sonoma County, per the cooperative funding agreement, shall submit a Gleason Beach Coastal Access Plan implementation status report documenting the completion of tasks to date and expected performance for meeting all milestones and timelines within the approved Final Phase I and Phase II Plans. These annual reports shall be required until such time that the Executive Director finds that all responsibilities and public access improvements have been completed per the required cooperative funding agreement and the approved Final Phase I and II Gleason Beach Coastal Access Plans.
- 7) UPON THE PERMITTEE'S COMPLETION OF RESPONSIBILITIES UNDER THE COOPERATIVE FUNDING AGREEMENT, the Permittee shall submit for the Executive Director's review and written approval documentation for (a) the Permittee to execute a minimum of an 8-foot wide trail easement on the western-most edge of the realigned Highway 1 right-of-way, along with provisions for allowing needed trail maintenance, for transfer to Sonoma County as planned and demarcated in the approved Final Phase II Gleason Beach Coastal Access Plan, and (b) the transfer to Sonoma County of all lands, easements, and other property interests owned or held by the Permittee between the western edge of the Permittee's Right-of-Way for the realignment of Highway 1 and the western edge of the Permittee's Right-of-Way for the existing Highway 1 (excepting those interests with no public access value, e.g., utility or drainage easements), including evidence of consistency with Section 30609.5 of the Coastal Act. Upon the Executive Director's approval of the form and contents of these documents, the Permittee shall execute the transfers of all identified lands, easements and other property interests. The Permittee shall submit to the Coastal Commission Executive Director a copy of the documentation of all property interest transfers to Sonoma County upon their final execution.
- 8) The Executive Director may extend any deadline above if the Executive Director determines that, per the cooperative funding agreement, the Permittee and Sonoma County (a) have been diligently pursuing the completion of the tasks and milestones, and (b) have demonstrated good cause for any identified delays.

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- 5. Hazard Debris Clean Up, Visual Impact Mitigation and Emergency Roadway Repair Permit Follow Up: Sonoma County Gleason Beach and Bluff Clean Up In Lieu Fee Program.** PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Permittee shall provide evidence in a form and content acceptable to the Executive Director that it has entered into an In Lieu Fee Program Cooperative Agreement with Sonoma County to transfer a total of \$5 million to Sonoma County for (1) removing structural debris and hazards from the “Coastal Hazards Mitigation Hazard Area” depicted in **Exhibit 28** (page 3).” identified in the Conceptual Gleason Beach and Bluff Cleanup In Lieu Fee Program dated September 25, 2020, as submitted in the Final CDP Application (**Exhibit 28**); (2) reestablishing natural, undeveloped bluff conditions to resemble adjacent undeveloped areas; and (3) monitoring the bluff and shoreline overtime for erosion as agreed upon by Sonoma County and the Permittee and described in the Conceptual Gleason Beach and Bluff Cleanup In Lieu Fee Program. This fee is required in lieu of the Permittee directly performing the debris hazard cleanup and visual impact mitigation for the realignment project as well as in lieu of directly performing the follow-up phased removal of roadway repairs previously installed by the Permittee in 2004, 2017 and 2019, including emergency highway repairs approved under Sonoma County Emergency Coastal Development Permits CPH16-0010 and ZPE19-0103 (see **Exhibit 19**).

a. Debris Clean Up and Visual Mitigation Cooperative Agreement.

- 1) Prior to execution of the cooperative funding agreement for the transfer of the \$5 million in lieu fee from the Permittee to Sonoma County, the Permittee shall submit a draft to the Executive Director for review and approval based on consistency with this permit condition and the Conceptual Gleason Beach and Bluff Cleanup In Lieu Fee Program (**Exhibit 28**).
- 2) The final cooperative funding agreement for the in lieu fee transfer shall also specify that Sonoma County will enter into a memorandum of understanding (MOU) with the California Coastal Commission consistent with the terms of this special condition and shall ensure that any coordination needed between the Permittee’s realignment project activities and the County’s clean-up efforts are incorporated into the Sonoma County Final Gleason Beach and Bluff Hazards Clean Up Plan prescribed in this Special Condition.

- b. Sonoma County In Lieu Fee Program MOU.** PRIOR TO EXPENDITURE OF FUNDS CONTAINED IN THE INLIEU FEE MITIGATION ACCOUNT, the proposed use of the funds must be reviewed and approved in writing by the Executive Director as being consistent with the intent and purposes of this Special Condition, the Conceptual Gleason Beach and Bluff Cleanup In Lieu Fee Program and the Debris Clean Up and Visual Mitigation Cooperative Agreement. As the entity accepting the funds required by this condition, Sonoma County, shall enter into a memorandum of understanding (MOU) with the California Coastal Commission to establish the Sonoma County Gleason Beach and Bluff

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Clean Up In Lieu Fee Program. The MOU shall include, but not be limited to, the following:

- 1) A description of how the entire fee and accrued interest will be used for the express purposes of funding administrative, planning, acquisition (if needed), hazard abatement, code enforcement, construction, oversight, restoration, maintenance and monitoring costs associated with the clean-up and disposal of manmade materials from the debris field along the bluff and shoreline within the “Coastal Hazards Mitigation Hazard Area” depicted in **Exhibit 28** (page 3).
- 2) A commitment to complete a Final Gleason Beach and Bluff Hazards Clean Up Plan (“Final Bluff Clean Up Plan”) for submittal to the Executive Director for review and approval no later than eighteen (18) months after the execution of the MOU with the Commission to establish the Sonoma County Gleason Beach and Bluff Clean Up In Lieu Fee Program. The Executive Director’s approval of the Final Bluff Clean Up Plan will be based upon a demonstration of compliance with the following requirements:
 - a) Elements. The Final Bluff Clean Up Plan will describe all beach and bluff monitoring and clean-up activities in more detail, including: techniques for structural debris removal for each phase of work; methods of disposal and locations of disposal sites; mapping of work and staging areas; avoidance of any potential conflicts between the Permittee’s realignment construction and Sonoma County’s clean-up activities; methods for avoiding coastal resource impacts from these activities; native replanting goals and activities along the bluff; potential auxiliary plans to be developed at a later date to address actual longer-term changes to the bluff; and, a scope, schedule, and milestones for completion of tasks.
 - b) Phased Clean Up Activities. The Final Bluff Clean Up Plan will describe two initial clean up phases and a long-term clean up phase within the Coastal Hazards Clean Up Area, including (i) a first phase of the debris field cleanup to focus on removing all toxic and hazardous structural debris from residences, roadway repairs and shoreline protective works on the surface of the bluff and the beach within the Coastal Hazards Clean Up Area; (ii) a second phase of the debris field cleanup to focus on removing all structural manmade debris exposed on the surface area of the bluff and beach that can be removed with no or minimal excavation; and (iii) a final long-term cleanup phase to remove over time any additional residential manmade structures and the Permittee’s subsurface roadway repairs identified in **Exhibit 10** as they become exposed by forces of coastal erosion, in a phased manner that best extends the utility of the initial alignment of the California Coastal Trail within the repurposed existing Highway 1 corridor so long as it safe for public use.

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- c) Equipment. Any structural debris removal via cranes, trucks or other mechanized equipment on the blufftop will be staged to operate from disturbed areas, including the existing Highway 1 alignment, to the greatest extent feasible and will incorporate appropriate BMPs and construction techniques (e.g., such as protection mats) for equipment moving and staging to minimize any potential impacts to blufftop, bluff, and beach resources.
- d) Tidal Areas. Construction work and equipment operations shall not be conducted below the mean high-water line unless tidal waters have receded from the authorized work areas. Grading of intertidal areas is prohibited except if required to retrieve structural debris materials (particularly toxic or hazardous debris that may pose risks to public use of the beach area) that are naturally exposed, and that can be retrieved with minimal excavation of the surrounding sediments. Any materials retrieved in this manner will be recovered by excavation equipment positioned landward of the waterline (i.e., excavator equipment with mechanical extension arms) if feasible.
- e) Biological Survey. Any beach work areas will be surveyed by a qualified biologist 30 days prior to initiation of clean-up activities to detect any active habitat activity, such as bird nests in the work area that may be impacted, and any other potential nesting habitat within 500 feet of the clean-up area for the presence of raptor nests. A final survey of the same areas shall be conducted 72 hours or less prior to the initiation of clean-up activities to detect any subsequent habitat activity. If any rare, threatened, or endangered species, or species of concern are found in the habitat activity surveys, the Executive Director shall be consulted to identify the appropriate remedial measures that must be applied prior to initiation of clean-up activities. If nests are found, remedial measures will be applied to assure adverse impacts to any nesting birds present are avoided, lessened and/or mitigated for. At a minimum, clean-up activities may not occur within 500 feet of raptor nests, or within 300 feet of an active nest of any rare, threatened, or endangered species, or species of concern. Buffers of at least 150 feet shall be maintained for all other active bird nests during the extent of the breeding season typically February 1 through September 1, or until young of the year have fledged.
- f) Cultural Resources. Provisions for monitoring will be included in the Final Bluff Clean Up Plan so that if paleontological resources or tribal cultural resources are encountered during ground-disturbing work, all work in the immediate vicinity shall be halted until the find has been evaluated by a qualified paleontologist, archaeologist or tribal cultural resource specialist. The Plan will also specify the actions that will be taken to determine and address the nature of the find in compliance with the California Government Code and Public Resources Code.

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- g) Erosion Monitoring Program. The Final Bluff Clean Up Plan will provide for tracking changed conditions from erosion and other hydrological and geological events along the bluff and shoreline so as monitor bluff erosion along the length of the existing Highway 1 alignment to be repurposed as the California Coastal Trail. The monitoring plan shall ensure that the structural debris removal and cleanup activities keep pace with changing conditions, including a phased removal of the Permittee's 2004, 2017 and 2019 emergency highway repair work identified in **Exhibit 10**, that any necessary maintenance of the rock revetment south of Scotty Creek occurs in a timely fashion, and provide information to guide any necessary managed retreat of public access improvements, including the new access roads, under **Special Condition 4**. The monitoring program will include annual photogrammetric mapping and high definition oblique aerial imaging providing direct comparison with the baseline mapping and imaging conducted by the Permittee on September 3, 2020. Depending on weather conditions, the aerial imaging conducted by the program shall occur as close as possible to September 3 each year. Annual reporting, prepared in consultation with a licensed land surveyor, geologist, or civil or geotechnical engineer, on the changed conditions will be submitted to the Executive Director no later than November 30 of each year until all work outlined in the approved plan has been completed. The monitoring program additionally will describe if other remote sensing and land survey techniques should be used in combination with this photogrammetric method to evaluate site conditions and explain the changed circumstances (e.g. level of erosion or contribution to coastal resource impacts) that will trigger the phased removals of the hazard debris and emergency highway repairs.
- h) Support of Public Access Management Plan components. Monitoring and responsive actions to changed circumstances in terms of coastal erosion along the bluff will be provided proactively so as to support the continued use of public access amenities on the shoreward top of the bluff for as long as they may be safely enjoyed by the public, with the phased debris removal and clean up being designed to support those public uses until such time that it is necessary to initiate inland migration of the CCT system to provide continuous connectivity and needed support access amenities.
- i) Status Reporting. Sonoma County will submit annual written reports to the Executive Director on the progress made toward the completion of the requirements and goals within the approved Plan until such time that all required beach/bluff cleanup and enhancement activities have been completed as prescribed by the approved Plan.
- j) Implementation. All final cleanup and enhancement activities will be executed in coordinated phases and within the timeline(s) identified within the approved Final Gleason Beach and Bluff Hazards Clean Up Plan. The

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Executive Director may extend any deadline above if the Executive Director determines that the Permittee and Sonoma County (a) have been diligently pursuing the completion of the tasks and milestones, and (b) have demonstrated good cause for any identified delays.

- k) Adjustments. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.
 - 3) An acknowledgement that Sonoma County maintains responsibility for administering any additional coastal development permitting and other Sonoma County code regulations as they apply to the structural debris removal and clean-up work within the jurisdiction of the County's certified Local Coastal Program and that the County will consult with the Executive Director to determine any additional permit processing needs under the Coastal Act for structural debris removal and clean-up work that may be proposed within the Coastal Commission's original jurisdiction.
 - 4) An agreement that the County will obtain any additional permits or approvals required from other agencies for the structural debris removal and clean-up work.
 - 5) A provision that, if any funding balances remain after the Executive Director has determined that the specified work under the Sonoma County Gleason Beach and Bluff Clean Up In Lieu Fee Program MOU is complete, Sonoma County may request the Executive Director's consent and written approval to apply those balances to similar clean up efforts to adjacent properties to the north and south of the identified Coastal Hazards Clean Up Area.
 - c. **Caltrans Obligations.** Upon the transfer of the \$5 million in-lieu fee from the Permittee into Sonoma County's interest-bearing account and approval of the MOU by the Executive Director, Caltrans obligations under these special conditions are met, except to the extent that the cooperating funding agreement identifies any continuing obligations of the Permittee. The Permittee will not be held responsible thereafter for the Hazard Debris Cleanup, Visual Impact Mitigation and Emergency Highway Repair Permit Follow Up required by these special conditions, and Sonoma County takes on the obligations of these conditions as specified in the MOU.
- 6. Realigned Highway 1 Tie-ins North and South of Existing Highway 1 Corridor: Erosion Monitoring.** The Permittee, in coordination with Sonoma County (and compatible with Sonoma County's commitments outlined in **Special Condition 5**) shall be responsible for submitting monitoring reports on blufftop erosion changes to the west of the realignment tie-in segments at (1) the northern end of the realignment north and south of approximately PM 15.7; and (2) the segment from

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the southern end of the realignment at approximately PM 15.1 to the southern Scotty Creek Bridge abutment. At a minimum, the monitoring program will include annual photogrammetric mapping and high definition oblique aerial imaging providing direct comparison with the baseline mapping and imaging conducted by the Permittee on September 3, 2020. Depending on weather conditions, the aerial imaging shall occur as close as possible to September 3 each year. The monitoring program additionally will describe if other remote sensing and land survey techniques may be used in combination with this photogrammetric method to evaluate site conditions and provide the information necessary for the Permittee to identify the changed circumstances (erosion events or increase in bluff retreat, etc.), that will trigger the need to initiate planning actions to ensure resiliency of the Highway 1 corridor into the future. The monitoring approach and reporting shall be consistent with the following requirements:

- a. Baseline Report.** WITHIN ONE YEAR OF APPROVAL OF THIS CDP, the Permittee shall ensure the submittal of a georeferenced baseline report, prepared in consultation with a licensed land surveyor, geologist, or civil or geotechnical engineer, to the Executive Director for review and written approval which:
- 1) Documents that the Permittee has selected locations in consultation with the Sonoma County Surveyor' Office and the Executive Director and set a minimum of 3 monuments suitable for use by an RTK base station and for use as visual targets for future photogrammetric surveys. The number of monuments shall be sufficient to accurately capture the rate shoreline erosion and blufftop change along the full seaward length of the project limits between photogrammetric surveys. The monuments shall adhere to the 2015 Caltrans Classifications of Accuracy and Standards for a 1-centimeter (0.03-foot) Network Accuracy horizontal, and the physical component of said monumentation shall conform to Project Control Monuments as listed in 5.8-2 of the previously referenced standard.
 - 2) Identifies how the reference monuments will be employed to evaluate blufftop erosion changes west of the road realignment tie-in segments described above. These and any other reference sites shall include locations that allow for measurement of bluff erosion and photo or drone documentation that sufficiently captures the range of likely erosion rates along the segments.
 - 3) Identifies the current location of the blufftop edge relative to the established reference points.
 - 4) Identifies the current estimated amount of the blufftop retreat.
 - 5) Describes the methodology that will be utilized to document blufftop change and the timing and frequency of measurements. Measurements shall be taken at least once per year.

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- b. Biennial Reports.** The Permittee shall ensure the submittal of biennial monitoring reports to the Executive Director by November 30 of every other year starting in 2023. The reports shall be prepared in consultation with a licensed land surveyor, geologist, or civil or geotechnical engineer. The reports shall provide comprehensive monitoring of the coastal bluff line in relation to the road realignment tie-in segments at the existing Highway 1 corridor. These reports shall include:
- 1) Documentation of the current blufftop edge position and cumulative changes over the monitoring period; any significant erosion/bluff retreat events; an updated overall average annual retreat rate and the changes and amount of retreat over the monitoring period; a comparison of the current recession rates and the historical recession rates and descriptions whether the recession rates are stable or accelerating.
 - 2) A review of the adequacy of the selected reference points. If greater erosion is observed along the sections of bluff that are not captured by the current reference points, additional reference points shall be added as necessary for measurements in subsequent annual reports to ensure data sufficiently captures the range of erosion rates of the blufftop edge along the identified segments.
 - 3) A table showing changes over time between the blufftop edge at the established reference points as compared to the 2020 WRECO Erosion Report, including in terms of average annual changes, largest change between reports, and any other relevant data that helps identify changes over time.
- c. Future Adaptation Planning.** The Permittee shall comply with the following terms related to future adaptation planning based on the results of this monitoring program:
- 1) The Permittee shall review and evaluate the implications of the data within each biennial monitoring report submitted pursuant to sub-section B of this special condition.
 - 2) Within 60 days of the completion of the biennial monitoring reports, the Permittee shall provide to the Executive Director a written determination based on its evaluation of whether the north and south realignment tie-in segments or the adjacent Highway 1 segments remain safe from coastal erosion and are anticipated to remain safe for the next 15 years. This written evaluation shall be based on the cumulative updated annual blufftop retreat rates provided in the biennial reports, whether that retreat rate is accelerating, any occurrence of large episodic bluff erosion events, and other relevant information.

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- 2) With each written evaluation above, the Permittee shall also submit any current Corridor Management Plans, Transportation Concept Plans, Vulnerability Assessments, District SLR Adaptation Plans, or other such reports or plans, that are relevant to the Project corridor.
 - 3) In the event any written determination required under c.1 indicates that adverse impacts (e.g., road undermining from erosion, lane closures, necessary emergency repairs or armoring, etc.) to the road realignment tie-in segments or any connecting sections of Highway 1 from coastal bluff erosion are anticipated within 15 years or less, the Permittee shall submit documentation that an appropriate corridor adaptation planning process is being initiated to safely adapt those sections of Highway 1 before the estimated time period that adverse impacts will become significant (e.g., lead to emergency repairs or road closures).
 - a) This documentation shall be provided within one (1) year of the submitted biennial report.
 - b) The documentation shall include a proposed timetable for the development of the adaptation plan, including provisions being made to ensure that evaluated adaptation strategies protect coastal resources and are consistent with Section 30235 and 30253 of the Coastal Act.
 - c) Following the identification of anticipated adverse impacts, the Permittee shall add into its written evaluation under c.1 a status report on the progress of the corridor adaptation planning process demonstrating that appropriate actions are being undertaken to safely adapt those threatened sections of Highway 1 before the estimated time adverse impacts will become significant.
- 7. Shoreline Armoring South of Scotty Creek.** This CDP authorizes the relocation of an existing rock revetment and the placement of new rock revetment for the repurposed existing Highway 1 roadway (including a section of the CCT and the necessary private access road to the adjacent ranch) at the planned end terminus on the south side of Scotty Creek, pursuant to the following terms:
- a. Extent.** The revetment shall be maintained in the configuration consistent with the final plans approved under **Special Condition 2**, the final project description, and the final project application plans. The revetment shall be sited and designed to be the minimum necessary to provide the required protection, shall be confined to an area of no more than 210 linear feet (4,800 square feet), and limited to a slope of no more than 2:1. Any modification to this configuration shall require a new CDP or amendment to this CDP.
 - b. Screening.** The revetment shall be screened, to the extent feasible, from public view by native vegetation appropriate to the Scotty Creek area, including through the use of species capable of trailing vegetation that at maturity can soften

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edges, grow over, and generally disguise riprap to the maximum extent possible. The replanting plan for this screening shall be integrated with the replanting plan required in **Special Conditions 3(b)(7) and 4(b)(5)**.

- c. Duration.** This CDP authorizes the revetment only until the time when the infrastructure being protected is no longer present or no longer requires armoring, or a maximum of 30 years, whichever occurs first. At such time, the Permittee, or any subsequent owner of the property (APN 101-120-058 as depicted in **Exhibit 03**), shall submit a plan for the review and written approval of the Executive Director to remove all such revetment and appropriately restore the underlying beach and bluff areas to natural conditions in a manner with the least coastal resource impacts or submit an application for a new CDP to allow for the existing or a reconfigured revetment to remain at that location.
- d. Monitoring.** The Permittee, and/or the subsequent property owner of the property (APN 101-120-058), shall submit biennial monitoring reports (prepared in consultation with a licensed land surveyor, geologist, or civil or geotechnical engineer) documenting that the approved armoring is regularly maintained. These biennial monitoring reports may be combined with the biennial bluff and shoreline monitoring reports required by **Special Condition 5(b)(g)**. The rock revetment monitoring evaluation shall at a minimum address whether any significant weathering or damage has occurred that would adversely impact future performance, identify any structural or other damage or wear and tear requiring repair to maintain in a structurally sound manner and its approved state.
- e. Future Repair and Maintenance Authorized.** This CDP authorizes future repair and maintenance to the approved armoring as described in this condition. The Permittee acknowledges and agrees on behalf of itself and all successors and assigns that the Permittee, and/or any subsequent owner of the property (APN 101-120-058 as depicted in **Exhibit 03**), is responsible to: (1) maintain the approved armoring structure in a structurally sound manner, visually compatible with the beach and bluff shoreline surroundings, and in its approved and required state throughout the life of the armoring structure; (2) retrieve any failing portions of the permitted armoring that might otherwise impair the use, aesthetic qualities, or environmental integrity of the beach and bluff areas; and (3) comply with the monitoring requirements of sub-section d of this Special Condition. Any such maintenance-oriented development associated with the approved armoring structure shall be subject to the following:

 - 1) "Maintenance" and/or "repair" as it is understood in this special condition, means development that would otherwise require a CDP whose purpose is to maintain the approved armoring in its approved and/or required state pursuant to the terms and conditions of this CDP.
 - 3) The Permittee acknowledges that these maintenance and repair stipulations do not obviate the need to obtain permits and/or authorizations from other agencies for any future maintenance and/or repair episodes.

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- 4) At least 30 days prior to commencing any maintenance and/or repair activities, the Permittee, or any current owner of the property (APN 101-120-058), shall notify the Executive Director in writing. The notification shall include: (1) a detailed description of the maintenance/repair proposed including location and amount of rock to be placed; (2) any plans, engineering and/or geology reports describing the event; (3) a construction plan that clearly describes construction areas and methods, including necessary BMPs, and that is consistent with the parameters of the approved construction plan (see **Special Condition 2**); (4) any other required agency authorizations; (5) descriptions of any potential impacts to public access and measures taken to minimize such impacts through staging, timing, etc.; and (6) any other supporting documentation describing the maintenance/repair event.
- 5) Maintenance or repair may not commence until the Executive Director has provided written confirmation that the maintenance/repair proposed complies with this CDP. If no verbal or written response from the Executive Director has been received within 30 days of the notification described in subsection (4) above, the maintenance shall be authorized as if the Executive Director affirmatively indicated that the maintenance/repair complies with this CDP. The notification shall clearly indicate that maintenance/repair is proposed pursuant to this CDP, and that the lack of a response to the notification within 30 days constitutes approval of it as specified in the CDP. If the notification does not clearly and explicitly indicate same, then the automatic authorization provision does not apply. In the event of an emergency requiring immediate maintenance, the notification of such emergency shall be made as soon as possible, and shall (in addition to the foregoing information) clearly describe the nature of the emergency.
- 6) The Permittee, and/or any subsequent owner of the property (APN 101-120-058) as applicable, shall restore all blufftop, bluff, beach areas, and all access points impacted by maintenance activities to their original final condition or better within three days of completion of construction. Any beach sand impacted shall be filtered as necessary to remove all construction debris from the beach. Within 30 days of completion of restoration activities, the Permittee shall provide a summary report to the Executive Director to allow for a site visit to verify that all beach-area restoration activities are complete. If the Executive Director should identify additional reasonable measures necessary to restore blufftop, bluff, beach areas, or access points, such measures shall be implemented as quickly and reasonably as possible.
- 7) If the Permittee, and/or any subsequent owner of the property (APN 101-120-058), is not in compliance with the terms and conditions of any Coastal Commission CDPs or other coastal authorizations that apply to the approved project or project area at the time that a maintenance event is proposed, then the maintenance event that might otherwise be allowed by the terms of this future maintenance condition may not be allowed by this condition until the

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Permittee is in full compliance with the permitting requirements of the Coastal Act, including all terms and conditions of any outstanding CDPs and other coastal authorizations that apply to the approved project or the project area.

- 8) In addition to the provisions set forth in subsection (4) above, nothing in this condition shall affect the emergency authority provided by Coastal Act Section 30611, Coastal Act Section 30624, and Subchapter 4 of Chapter 5 of Title 14, Division 5.5, of the California Code of Regulations (Permits for Approval of Emergency Work).
 - 9) Future armoring maintenance under this CDP is allowed subject to the above terms throughout the duration of the armoring authorization (see subsection c of this condition above) subject to Executive Director review and approval every 5 years from the date of the completion of the revetment installation to verify that there are not changed circumstances associated with such allowance of maintenance/repair events that necessitate re-review. The Permittee, or any subsequent owner of the property (APN 101-120-058), has the responsibility to request Executive Director approval prior to the end of each 5-year maintenance/repair period. The intent of this CDP is to allow for 5-year extensions of the maintenance/repair term and to allow maintenance/repair to occur without obtaining an otherwise necessary CDP throughout the term of this armoring authorization unless there are changed circumstances that may affect the consistency of this maintenance/repair authorization with the policies of Chapter 3 of the Coastal Act.
8. **Habitat Mitigation and Monitoring Plan.** PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two copies of a final Habitat Mitigation and Monitoring Plan (HMMP) to the Executive Director for review and written approval. The HMMP shall clearly identify the location, size, and condition of wetlands and upland ESHA within the project area before construction; the final estimated temporary and permanent project impacts; and all measures to mitigate for such impacts and to monitor mitigation success over time, and a final location for all mitigation measures in this Special Condition and **Special Conditions 9 and 10**. The HMMP shall be consistent with components identified in the "Conceptual Mitigation Plan" (**Exhibit 25**, dated October 5, 2020), and designed to achieve compliance with this condition, including providing for, at a minimum, the following:
- a. **Impact Validation Report.** A final report comparing the extent and nature of impacts as estimated by the Permittee in the Conceptual Mitigation Plan with those actually observed following construction, the latter of which final compensatory mitigation requirements will be based upon.
 - 1) **Pre-Construction Surveys.** Pre-construction baseline studies shall document, at a minimum: the physical extent and acreage of all habitats; each vegetation community's species diversity, the relative cover of dominant vegetation species, and the vegetation community's age class/structure; wetland delineations; and, for Myrtle's silverspot butterfly habitat, the number and

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extent of individual host plants, *Viola adunca*, and the density of all nectaring plant species, including non-natives.

- 2) **Post-Construction Surveys.** For each habitat, post-construction surveys shall document, at a minimum: the physical extent and acreage of all impacts; the activities that occurred within the area, including any vegetation clearance or death, or ground disturbance; wetland delineations; and, the number and condition of any individual *Viola adunca* plants remaining. Post-construction surveys shall be completed within 90 days of completion of construction activities in the area and for impacts expected to be characterized as temporary, additionally document, at a minimum: the dates of initial and final project-related disturbance to the habitat; each vegetation community's species diversity, the relative cover of dominant vegetation species, and the vegetation community's age classes and/or size structure distributions.

b. Temporary Impacts. Short-term temporary impacts are those that are restored within 12 months of initial construction activity disturbance, and long-term temporary impacts are those that may occur for up to a 24-month period from the initial disturbance but require no more than 12 months from the conclusion of construction activity disturbance to fully recover. Any impacts that do not meet these parameters (and those further specified on pages 1-2 of **Exhibit 24**) shall be considered permanent impacts and mitigated for pursuant to sub-section C of this special condition. Any impacts determined to qualify as temporary shall be mitigated for at a 1:1 (short-term) or 1.5:1 (long-term) ratio, and comply with the following terms:

- 1) **Revegetation Requirements.** Revegetation for all temporary impacts shall include, at a minimum, replanting with locally and genetically-appropriate native species, and significant removal of California Invasive Plant Council-listed species in wetlands and upland ESHA.
- 2) **Restoration Report.** Within 30 days of completion of any active restoration work, the Permittee shall submit a post-restoration report demonstrating that the areas of temporary impact have been appropriately revegetated and that invasive species appropriately addressed.
- 3) **Final Short-term Temporary Impact Survey.** Within twelve months of the initial disturbance, the Permittee shall conduct a survey that describes whether areas identified as short-term temporarily-impacted have been restored to their pre-impact condition by comparison with the baseline condition, equivalent vegetation community species diversity (or improved, in terms of the native fraction), relative cover of dominant vegetation species, and the vegetation community's age classes and/or size structure distributions. The survey shall be detailed in a report, to be submitted by the Permittee within 30 days of final survey completion. If this survey demonstrates the revegetation has been unsuccessful, in part or in whole, any remaining impacts are, by definition, permanent. Digital copies of the survey data and associated metadata shall be provided with the reports.
- 4) **Final Long-term Temporary Impact Survey.** Within twelve months of the conclusion of disturbance, the Permittee shall conduct a survey that describes

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whether areas identified as long-term temporarily-impacted have been restored to their pre-impact condition by comparison with the baseline condition, equivalent vegetation community species diversity (or improved, in terms of the native fraction), relative cover of dominant vegetation species, and the vegetation community's age classes and/or size structure distributions. The survey shall be detailed in a report, to be submitted by the Permittee within 30 days of final survey completion. If this survey demonstrates the revegetation has been unsuccessful, in part or in whole, any remaining impacts are, by definition, permanent. Digital copies of the survey data and associated metadata shall be provided with the reports.

c. Permanent Impacts. All impacts not qualifying as temporary shall be recognized as permanent and mitigated for consistent with the following ratios:

- 1) At a minimum of 3:1 for upland ESHA and 4:1 for wetlands, where these base ratios assume mitigation as habitat creation or substantial restoration. While no net loss in habitat footprint shall be assured by a minimum 1:1 as habitat creation or substantial restoration for wetlands, and to the extent feasible, for upland ESHA, habitat enhancement and/or preservation may be considered as mitigation for the balance at no less than double or triple the discounted ratios (as defined in **Exhibit 24**), respectively. Out-of-kind enhancement may be considered at triple the discounted ratios.
- 2) Mitigation for loss of larval habitat for the Myrtle's silverspot butterfly (MSB) shall take the form of establishment of *Viola adunca* individual plants at a ratio of not less than 3:1 within an area no less than the habitat area lost and no more than would diminish the pre-construction observed density of the plant. Mitigation for impacts to MSB foraging habitat shall take the form of establishment of native nectar plant species at a ratio of not less than 3:1 related to the pre-construction nectar plant density (including both native and non-native species), within an area no less than the habitat area lost and no more than would diminish the observed baseline density of nectar plants.
- 3) Restoration of riparian habitat shall exclude cattle and involve planting an appropriate diversity of native trees and shrubs within a corridor on each side of the watercourse that is at least 50 feet wide, where possible. Mitigation for riparian habitat shall also include creation or enhancement of aquatic breeding habitat for California red-legged frogs and salmonids.
- 4) All habitat mitigation shall occur within areas that are or will be under a conservation easement, or equivalent protection, and within which livestock grazing is not allowed except where conducted in accordance with a grazing management plan designed to specifically improve the quality of coastal terrace prairie habitat.
- 5) All revegetation efforts shall source plant material that is locally and genetically-appropriate for the area.

d. Elements. The HMMP shall include separate sections describing each impacted habitat type including wetlands, Myrtle's silverspot butterfly habitat, coastal terrace prairie, coastal bluff scrub, riparian habitat, and stream habitat. Each mitigation section shall describe the methods for restoration, including (1) any

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site preparation, (2) non-native species removal and control, (3) planting design (plant palette, source of material, and installation methods), (4) erosion control measures, (5) when necessary, fencing plans consistent with the Sonoma County LCP with at least 12-inch gaps between ground level and the fencing bottom to ensure passage by small wildlife species, and (6) designated success criteria.

- e. Monitoring Periods & Phasing.** The Permittee shall submit annual monitoring reports to the Executive Director for review and approval, no later than December 31st of each year. Monitoring reports shall be submitted for a minimum of five years, or for up to three years after the conclusion of all remediation and maintenance activities other than weeding, whichever date is later. Annual monitoring reports shall include a work plan for the subsequent year, including any necessary recommendations to facilitate mitigation success.
- f. Phasing.** Should multiple sites be necessary to satisfy mitigation requirements, or the timing of mitigation implementation for different areas is offset, phasing by sub-areas may be considered such that they are treated separately but mitigation requirements are not fully satisfied until all sub-areas achieve the success criteria over the minimum period required.
- g. Final Monitoring Report.** A final monitoring report shall be submitted for the review and approval of the Executive Director at the conclusion of all mitigation efforts. The final monitoring report shall be prepared by a qualified restoration ecologist. If mitigation for a habitat has been completed as sub-areas in phases, the final report shall not only summarize prior reports, but also provide a detailed timeline of the overall progress and success, and include sufficient detail to evaluate comprehensive mitigation compliance with the specified goals and success criteria set forth in the approved HMMP.
- f. Provision for Possible Further Action.** If the final monitoring report indicates that the mitigation effort has been unsuccessful, in part or in whole, based on the approved success criteria, the Permittee shall submit within 90 days a revised or supplemental HMMP to compensate for those portions of the original program which did not meet the approved success criteria. The revised or supplemental HMMP shall be prepared by a qualified restoration ecologist approved by the Executive Director, and shall specify measures to remediate those portions of the original approved HMMP that have failed or have not been implemented in conformance with the original approved HMMP. These measures, and any subsequent measures necessary to carry out the approved revised or supplemental HMMP, shall be carried out in coordination with the direction of the Executive Director until the approved revised or supplemental HMMP is established to the Executive Director's satisfaction. The revised HMMP would be processed as an amendment to the original CDP, unless the Executive Director determines that no such amendment is necessary.
- h. Partnering Agencies and/or Subcontractors.** The Permittee remains responsible for meeting all CDP terms and conditions, including funding of the full cost and implementing all measures to minimize and fully mitigate project

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impacts to wetlands, Myrtle's silverspot butterfly habitat, coastal terrace prairie, coastal bluff scrub, riparian habitat, and stream habitat. If the Permittee elects to enter into a binding agreement with a third-party agency or land management entity to carry out all or a portion of these HMMP requirements, the Permittee shall submit draft agreement provisions to the Executive Director for review and approval prior to finalizing any such agreements.

- i. **Consistency.** The Permittee or the approved third-party entity shall undertake development in accordance with the approved HMMP. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.

9. **Long-Term Coastal Terrace Prairie Habitat Management Plan.** WITHIN ONE YEAR OF COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two copies of a final Long-Term Coastal Terrace Prairie Habitat Management Plan (LTCTMP) for Executive Director review and approval. In addition to the restoration activities contained in the Habitat Mitigation and Monitoring Plan required by **Special Condition 7**, the LTCTMP shall include enhanced measures for the long-term management of coastal terrace prairie (CTP) and integrally related habitats and conditions, including maintenance and enhancement of Myrtle's silverspot butterfly (MSB) larval and nectaring habitat, and coastal terrace prairie enhancement and restoration activities, such as mowing, vegetation clearance, planting, and grazing management, to increase the abundance of native grasses and forbs, while avoiding impacts to special species habitat, and to prevent erosion. The LTCTMP shall be prepared by qualified experts in grassland restoration ecology, grazing management (if applicable to the mitigated CTP area), and MSB habitat requirements, and shall consider the specific conditions of the site (including soil, exposure, temperature, moisture, wind, etc.), as well as enhancement, restoration, and management goals. The LTCTMP shall, at a minimum, include:

- a. **Baseline.** A baseline assessment, including photographs, of the current physical and ecological condition of the restoration and enhancement area. All existing topography, stream features, and vegetation shall be depicted on a map.
- b. **Goals.** A description of the goals of the LTCTMP, in terms of native vegetation, sensitive species, and wildlife usage, where the overarching goal is to establish self-sustaining and high-quality coastal terrace prairie habitat over time.
- c. **Adaptive Management Working Group.** An Adaptive Management Working Group (AMWG) comprised of at least three scientists, including 1) one with expertise in grazing management for restoration purposes (assuming this is applicable to the mitigated CTP area), 2) one with expertise in CTP restoration, and 3) one with expertise in the MSB. The AMWG shall also include a representative of the Permittee (and/or a representative of the land manager if different) and the Coastal Commission. The AMWG may also include, if they choose to participate, representatives from the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the California Native Plant Society,

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and the California Native Grasslands Association, as long as they have expertise in grazing management, CTP, CTP-associated wildlife, or appropriate natural resource restoration and monitoring. The AMWG shall meet at least two times each year for the first 10 years, beginning within 60 days of approval of the LTCTMP to provide prioritized first-year recommendations; after the tenth year, the frequency of AMWG meetings may be reconsidered. The Permittee (and/or their designee) shall provide logistical support, including providing a meeting site, scheduling, recording meetings, and preparing reports and recommendations. The AMWG shall provide technical advice and analysis that will contribute to effective adaptive management of the CTP easement area(s) to help advance effective adaptive management of the CTP, MSB, and to accomplish the goals of the LTCTMP. All recommendations shall be clearly documented and provided to the Executive Director, for review and approval prior to implementation.

- d. CTP Enhancement and Monitoring.** A plan for grazing management and/or other enhancement activities (such as mowing, clearing, prescribed burning, and planting) and monitoring of the CTP habitat, including: a schedule; performance goals; a description of monitoring studies and initial field activities for resource enhancement; adaptive management procedures, including provisions to allow for modifications designed to better restore, enhance, manage, and protect habitat, and provision for submission of annual reports to the Executive Director that include tasks accomplished during the past year and the results of status and trends monitoring. Each such annual report shall be cumulative and shall: summarize all previous results; document the condition of the site with photographs taken from the same fixed points in the same directions; and include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the project in relation to the stated goals. To allow for an adaptive approach to management, each annual report shall also include the AWMG's assessment of past management activities and its recommendations for resource enhancement measures for the coming year that are deemed necessary based on study results or other new findings. Annual reports shall be submitted to the Executive Director for review and approval no later than December 31st of each year.
- e. LTCTMP Management Entity.** The LTCTMP shall be implemented and managed by the Permittee, or a land management entity approved by the Executive Director (e.g., Gold Ridge Resource Conservation District, Sonoma County Land Trust, Sonoma County Agricultural Preservation and Open Space District, or a similar entity). Unless already part of a conservation easement, or similar instrument, that assures resource protections meeting at least the criteria below, and that has been approved by the Executive Director, the land management entity managing the account shall enter into a memorandum of understanding (MOU) or similar binding agreement with the Commission that shall include, but not be limited to: (a) a description of the manner in which the funds will be used to enhance, restore, and manage CTP habitat, including through long-term grazing management; (b) a requirement that such entity protect and facilitate the resilience of all native habitats within the CTP

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restoration area in perpetuity; and (c) an agreement that such entity shall obtain all necessary permits and approvals, including a CDP if not covered by this CDP, for the CTP restoration, enhancement, and management required by this condition. If the Executive Director provides written notice to the Permittee that the land management entity has not entered into the MOU or similar binding agreement, the Permittee shall, within 60 days, submit a new land management entity for Executive Director approval.

- f. **Endowment.** The LTCTMP shall include documentation, in a form and content acceptable to the Executive Director, that sufficient funding has been deposited into an endowment account to support the AMWG, and long-term CTP enhancement, restoration, and maintenance activities to ensure success of the approved LTCTMP. The endowment shall be deposited into an interest-bearing account, to be established and managed by the Permittee or the LTCTMP management entity approved in sub-section E above. The original endowment and any accrued interest shall be used solely for the above-stated purposes. If all success criteria in the approved CTP and MSB mitigation plans, and the LTCTMP goals are met, and funding from the endowment account is no longer needed to implement the LTCTMP, then the Permittee or land management entity shall submit a plan for use of the remaining funds, where such a plan shall be limited to habitat enhancement, restoration, and/or management in the general project area, with preference given to facilitating resilience for other natural resources affected by the Project.

10. **Habitat, Agricultural, and Open Space Conservation Easement.** PRIOR TO CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a document irrevocably dedicating an open space conservation easement (or similar instrument such as a cooperative agreement or MOU assuring resource protection if the area is on state-owned property that is already permanently restricted to open space) in perpetuity, consistent with the following terms:

- a. **Objective.** The conservation easement shall be for the purpose of protecting and restoring or enhancing natural resources (including coastal terrace prairie, Myrtle's silverspot butterfly habitat, wetlands, riparian habitat, coastal bluff scrub, and aquatic habitat important to salmonids and the California red-legged frog) in the easement area, and allowing for managed agricultural use consistent with that purpose.
- b. **Allowed Uses and Development.** No development, as defined in Section 30106 of the Coastal Act, shall occur within the easement area except for: (1) managed grazing of the CTP as provided for in the approved Habitat Mitigation and Monitoring Plan and approved Long-Term Coastal Terrace Prairie Habitat Management Plan consistent with **Special Conditions 8 and 9**; and (2) habitat restoration activities.
- c. **Recordation.** The dedication shall be recorded free of prior liens and any other encumbrances that the Executive Director determines may affect the interest being conveyed, and it shall include formal legal descriptions of the entirety of the

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parcel, a metes and bounds legal description and graphic depiction, prepared by a licensed surveyor based on an on-site inspection, drawn to scale and approved by the Executive Director, of the dedicated easement area. The dedication shall run with the land, binding successors and assigns of the Permittee and the landowner, and indicate that the restrictions on the use of the land shall be in effect upon recording and remain as covenants, conditions and restrictions running with the land in perpetuity.

- d. Dedication.** The Permittee may dedicate the open space conservation easement to another public entity, including Sonoma County, State Parks, or another land management entity, upon approval of the Executive Director.
- e. Deadline.** The Executive Director may extend the dedication deadline if the Executive Director determines that the Permittee has been diligently pursuing the conservation easement, and that the Permittee has demonstrated good cause for any identified delays.

11. Cultural Resources. Consistent with the recommendations and mitigation measures adopted in the Memorandum of Agreement Between the California State Historic Preservation Officer (SHPO) and the California Department of Transportation Regarding the Gleason Beach Roadway Realignment Project in Sonoma County, California (MOA) adopted May 25, 2016 and the Archaeological Data Recovery (Phase III) Proposal and Treatment Plan for the Gleason Beach State Route 1 Realignment Project ("Gleason Beach Treatment Plans"), the Permittee shall comply with following specific or additional conditions:

- a. Archaeological Monitors.** During all periods of ground disturbing activities within the boundaries of known archaeological sites or any areas that have any potential to uncover or otherwise disturb cultural deposits, a qualified Cultural Resource Specialist and any necessary representatives of the Federated Indians of Graton Rancheria (Graton Rancheria) and the Kashia Band of Pomo Indians of Stewarts Point Rancheria (Kashia), shall be present on-site to monitor sub-surface conditions in search of archaeological indicators.
- b. Halt Construction.** Should cultural resources be encountered during any construction, the Permittee shall cease all construction activities that have the potential to uncover or otherwise disturb cultural deposits in an area not less than a 60-foot wide buffer around the discovery. The Permittee shall treat the discovery in accordance with the avoidance, minimization, and mitigation measures adopted in the MOA, Gleason Beach Treatment Plans, and any adopted supplements to those documents.
- c. Recommencement of Construction.** Following any discovery of cultural deposits determined or assumed to be significant per subsection (B) of this Special Condition, construction shall not re-commence until:

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- 1) A qualified cultural resource specialist, in consultation with the Graton Rancheria, the Kashia Pomo, and the SHPO, analyzes the significance of the find.
- 2) The Permittee submits to the Executive Director for review and approval a report documenting (a) the results of the assessment under **Special Condition 6(b)(1)** above; and (b) any proposed changes to the adopted cultural resources avoidance, minimization, and mitigation measures.
- 3) The Executive Director will have 48 hours to review the information provided in the report and respond in writing with a determination whether the changes to the proposed development or mitigation measures are allowable under this CDP or other applicable Coastal Act policies and regulations, or if further review and action by the Coastal Commission is necessary.

d. Final Archeological Report. Upon completion of construction, the Permittee shall submit a final narrative report, for the review and written approval of the Executive Director, showing that the development was undertaken in accordance with the MOA, the Gleason Beach Treatment Plans, and any adopted supplements to those documents, and documenting any cultural resources discovered and adopted subsequent measures enacted, and any impacts to cultural resources.

12. Construction Reporting. The Permittee shall notify the Executive Director at least three working days in advance of (1) commencement of construction or maintenance activities, (2) completion of construction or maintenance activities, and (3) any substantial changes in the schedule based on site conditions, weather or other unavoidable factors. By December 31 of each year until construction activities cease, the Permittee to submit a yearly construction update to the Executive Director reflecting progress and status of the project, including identification of any outstanding issues that may have arisen since the last progress report, or are anticipated to arise in the foreseeable future.

13. Construction Responsibilities. The Permittee shall comply with the following construction-related best management practices (BMPs) and avoidance and minimization measures:

- a. Runoff Protection.** The Permittee shall adhere to all erosion control BMPs, sediment control BMPs, tracking control BMPs, chemical and material storage BMPs, a schedule of BMP installation and construction phasing (with soil stabilized as soon as feasible) as identified in **Special Condition 14**. At a minimum, silt fences, straw wattles, or equivalent apparatus shall be installed at the perimeter of all construction areas to prevent construction-related runoff and sediment from discharging from the construction area, or entering into storm drains or otherwise offsite or towards the beach, ocean, or Scotty Creek. Similar apparatus shall be applied on the beach area for the same purpose when potential runoff is anticipated. Special attention shall be given to appropriate

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filtering and treating of all runoff, and all drainage points, including storm drains, shall be equipped with appropriate construction-related containment, filtration, and treatment equipment. All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday.

- b. Equipment BMPs.** Equipment washing, refueling, and servicing shall take place at an appropriate off-site and inland location to help prevent leaks and spills of hazardous materials in areas nearest the blufftop edge and the beach, at least 50 feet inland from the beach and preferably on an existing hard surface area (e.g., a road) or an area where collection of materials is facilitated. All construction equipment shall also be inspected and maintained at a similarly sited inland location to prevent leaks and spills of hazardous materials nearest the blufftop edge and the beach.
- c. Good Housekeeping BMPs.** The construction site shall maintain good construction housekeeping controls and procedures at all times (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the site; etc.).
- d. Rubber-tired Construction Vehicles.** Only rubber-tired construction vehicles are allowed on the beach, except track vehicles may be used if the Executive Director determines that they are required to safely carry out construction. When transiting on the beach, all such vehicles shall remain as far away from the ocean as possible and avoid contact with ocean waters.
- e. Construction Material Storage.** All construction materials and equipment placed on the beach during daylight construction hours shall be stored beyond the reach of tidal waters. All construction materials and equipment shall be removed in their entirety from these areas by one-hour after sunset each day that work occurs, except for necessary erosion and sediment controls and construction area boundary fencing where such controls and fencing are placed as close to the toe of the armoring or approved construction area as possible, and are minimized in their extent.
- f. Erosion Control.** Only wildlife-friendly 100% biodegradable erosion control products that will not entrap or harm wildlife shall be used. Erosion control products shall not contain synthetic (that is, plastic or nylon) netting. Photodegradable synthetic products are not considered biodegradable.
- g. Biology Measures.** The Permittee shall ensure compliance with avoidance and minimization measures identified in the FEIR Avoidance, Minimization and/or Mitigation measures, specifically Measure BIO-2, Measure BIO-5, Measure BIO-6, Measure BIO-7, Measure BIO-8, Measure BIO-9, and Measure BIO-10.

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- h. Education.** Prior to the commencement of construction, workers shall be educated about the construction related BMPs that must be employed during construction.
- i. Minor Adjustments.** The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.

14. Erosion and Sediment Control and Pollution Prevention Plan. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit, for the review and written approval of the Executive Director, an erosion and sediment control and pollution prevention plan. The plan shall comply with the following requirements:

- a.** The plan shall demonstrate that temporary construction impacts to the biological productivity and quality of coastal waters and wetlands shall be minimized during project construction consistent with the provisions of **Special Condition 10**.
- b.** The plan shall include a construction site map and a narrative description addressing, at a minimum, the following required components:
 - 1) A map delineating the construction site, construction phasing boundaries, and the location of all temporary construction-phase BMPs.
 - 2) A description of the BMPs that will be implemented to minimize erosion and sedimentation, control runoff and minimize the discharge of other pollutants resulting from construction activities.
 - 3) A schedule for the management of all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training).
 - 4) The plan shall specify that copies of the signed Coastal Development Permit (CDP) and the approved Erosion and Sediment Control and Pollution Prevention Plan be maintained in a conspicuous location at the construction job site at all times and be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Erosion and Sediment Control and Pollution Prevention Plan, and the public review requirements applicable to them, prior to commencement of construction.
- c.** The Permittee shall undertake development in accordance with the approved final Erosion and Sediment Control and Pollution Prevention Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission

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amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

15. Biological Monitoring During Construction. The Permittee shall comply with the following terms related to Biological Monitoring:

- a. Prior to the commencement of construction, all construction areas plus a 100-foot buffer shall be surveyed by a qualified biologist to determine the presence and behavior of any sensitive animal or plant species. The biologist shall document the results of all pre-construction surveys and the measures taken to avoid impacts (such as exclusionary fencing) and the Permittee shall retain and make these available upon request.
- b. In the event that the qualified biologist identifies any sensitive wildlife (within 30 days or less of intended construction) or special-status plant species during the pre-construction surveys, the Permittee shall implement any pre-approved mitigation measures and promptly notify the Executive Director as well as CDFW and/or USFWS, as appropriate.
- c. Nesting bird surveys shall be required for any work to be conducted during the nesting season (February 1-September 1). Nesting surveys shall include and extend at least 300 feet out from the construction area for non-raptor species, and at least 500 feet out for raptors. A final nesting survey shall occur no more than 72 hours prior to the initiation of construction. In the event that active nests are identified, minimum buffers of 300 feet for non-raptor and 500 feet for raptor species shall be applied and maintained until the nests have fully fledged. If no such buffers are feasible, construction activities that could impact the nest will be delayed until the Executive Director approves appropriate mitigation measures.
- d. A qualified biologist shall be onsite to monitor all ground-disturbing activities during Project construction and restoration activities and other actions that may reasonably result in the "take" of a listed species, to ensure that construction or restoration activities will not result in impacts to sensitive species. The biologist shall document the impacts construction activities and the Permittee shall retain and make these available upon request.

16. Access Roads. PRIOR TO, OR UPON, THE EXECUTIVE DIRECTOR'S APPROVAL OF THE PHASE I GLEASON BEACH COASTAL ACCESS PLAN (required in **Special Condition 4.c.3** above), the Permittee shall submit revised construction plans for residential access roads described in **Special Condition 1(c)** above consistent with the following terms:

- a. The Final Access Road Plans shall show that the access roads are constructed from appropriate permeable materials, are as narrow as feasible (both features remaining consistent with Sonoma County standards) and provide area for parking consistent with **Special Condition 4**.
- b. The Final Access Road Plans shall include a revised final plan for the central access road (just north of Scotty Creek) to be constructed as part of this project

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that shall show the western terminus of access road realigned southward to join the existing Highway 1 approximately at APN 101-120-046 (approximately at post mile 15.38) or southward and ensure that the redesigned access road: (1) reduces future vulnerability to coastal erosion, (2) provides safe access to remaining parcels and public access improvements, and (3) minimizes impacts to wetlands and visual resources.

- c. The Final Access Road Plans shall show that all other access roads are located in substantial conformance with the Final Project Application Plans.

17. Other Agency Approvals. PRIOR TO CONSTRUCTION, the Permittee shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, or authorizations for the approved project have been granted by all other applicable agencies, including at a minimum the U.S. Army Corps of Engineers, Regional Water Quality Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service and the California Department of Fish and Wildlife, or evidence that no such authorizations are required from each of these entities. The Permittee shall inform the Executive Director of any changes to the project required by any other such authorizations. Any such changes shall not be incorporated into the project until the Permittee obtains a Commission amendment to this CDP, unless the Executive Director determines that no amendment is legally required.

18. No Future Armoring. By acceptance of this Permit, the Permittee agrees, on behalf of itself and all successors and assigns, that no shoreline armoring shall be constructed to protect the specific highway realignment development approved pursuant to this CDP in **Special Condition 1(a)** in the event that such development is threatened with damage or destruction from episodic and/or long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunamis, tidal scour, coastal flooding, other natural hazards, and the interaction of same in the future, all as may be exacerbated by sea level rise, except that temporary emergency protection or repairs may be allowed pursuant to a Coastal Commission or Sonoma County emergency permit for limited durations when such temporary emergency protection or repairs may be readily removable in the future without causing further damage to the shoreline and when necessary to protect the public highway and keep it safe for public use as adaptation is pursued. By acceptance of this Permit, the Permittee hereby waives, on behalf of itself and all successors and assigns, any rights to construct such devices that may exist under Public Resources Code Section 30235 or the Sonoma County LCP, except emergency protection or repairs specifically allowed by this condition.

19. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this CDP, the Permittee acknowledges and agrees on behalf of itself and all successors and assigns: (a) that the site is subject to coastal hazards, including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, tidal scour, storms, tsunamis, flooding, landslide, earth movement, bluff and geologic instability, bluff retreat, liquefaction, and the interaction of same, many of

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which will worsen with future sea level rise; (b) to assume the risks to the Permittee and the property that is the subject of this CDP of injury and damage from such hazards in connection with this permitted development; (c) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees with respect to the Commission's approval of the development against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage for injury or damage from such hazards; (d) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs, including costs and fees incurred in defense of such claims, expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (e) that any adverse effects to property caused by the approved project shall be fully the responsibility of the Permittee.

20. Liability for Costs and Attorneys' Fees. The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees (including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and/or (2) required by a court) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission and/or its officers, employees, agents, successors and assigns challenging the approval or issuance of this CDP, the interpretation and/or enforcement of CDP terms and conditions, or any other matter related to this CDP. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission and/or its officers, employees, agents, successors and assigns.

IV. FINDINGS AND DECLARATIONS

A. Project Background and Context

The Sonoma Coast

The proposed project would implement a managed retreat project to relocate a section of coastal Highway 1 inland in response to coastal hazards, including coastal erosion and the impacts of sea level rise (SLR). Significant sections of the highway are currently at risk from coastal erosion and the vast majority of the highway in the project area is threatened by 2050 under sea level rise projections (**Exhibit 1**).

The section of highway is located in a rural coastal segment of unincorporated Sonoma County in an area generally known as Gleason Beach, located approximately 4 miles north of the town of Bodega Bay and 5 miles south of the town of Jenner, just north of the Sereno del Mar/Carmet area of unincorporated Sonoma County (**Exhibit 2**). Other than these two isolated subdivisions, the project is mostly in the middle of largely undeveloped agricultural lands marked by cattle grazing and a few residences.

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Highway 1 in this area provides a critical transportation route connecting residents and visitors along the Sonoma County area of Northern California. Local residents use the roadway for travel between Jenner and Bodega Bay, and visitors from Sonoma County, the Bay Area, and beyond all use this section of Highway 1 to travel up and down this highly scenic area. Rural highways at Jenner and Bodega Bay connect inland to Highway 101, though at a significant distance and requiring a long inland detour for north-south travel. Otherwise, there are essentially no routes that can provide a viable alternative to Highway 1 for north-south travel along the Sonoma coast.

For most stretches of this dramatic coastline, Highway 1 generally runs along tall, steep coastal bluffs, with deep hairpin turns following the coastal geography and dropping to meet occasional creeks or pocket beaches. In fact, Highway 1 along the rugged Sonoma Coast is a significant visitor attraction in and of itself, with tremendous scenic views of the coast and coastal hillsides. The Sonoma County Local Coastal Program (LCP) Visual Resources Map gives this region the highest rating, with “outstanding views” and characterizes it as a “key visual attribute and attraction.”

Highway 1 also provides access to multiple public access beach locations and other coastal access points north and south of the project location, and is particularly important for allowing people to view and access the sandy beach within this project’s limits. Most of the public access points in the project’s general area are informal dirt shoulder pullovers or larger pullouts, often with steep climbs down to pocket beaches. North and south of the project area are multiple state park and county park public access locations, and Highway 1 is essential for access to these locations.

Pomo and Coastal Miwok Native American Tribes originally inhabited this region, subsisting on the abundance of coastal resources including coastal streams flush with salmon, seafood and shellfish from productive coastal waters and beaches, and diverse bird life native to riparian, wetland, and beach habitats. Evidence of Pomo and Miwok settlements can be found throughout this area generally, and undiscovered cultural sites are also likely. White American settlers began arriving in the mid-19th century and transformed the landscape to support cattle grazing. Much of the area remains in large agricultural cattle-grazing tracts.

The Sonoma Coast area once supported vast areas of coastal terrace prairie habitat, which has been heavily impacted state-wide by development and is an environmentally sensitive habitat area (ESHA). Coastal terrace prairie habitat still exists in the project area but has been heavily impacted by the cattle grazing. The coastal terrace prairie habitat still supports, and could support to a greater degree, special status species, including the California Red-Legged Frog, and is an important site for the Federally Endangered Myrtle’s silverspot butterfly (MSB), which is protected by USFWS under the Federal Endangered Species Act (ESA).

Gleason Beach

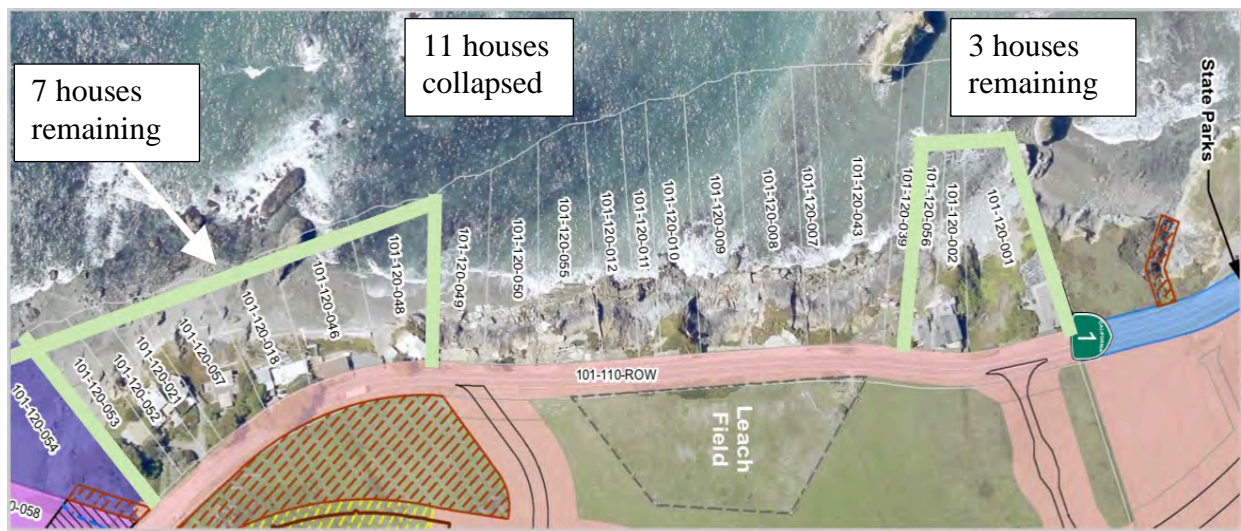
The project runs from postmile 15.1 to 15.7 (“the project corridor”) running south of Rocky Point Beach just below Duncan’s Landing to just north of a small subdivision known as Sereno del Mar and Portuguese Beach. (**Exhibit 3** shows the project corridor

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and essential project elements). As described below, the project corridor has a distinct north and center section above Scotty Creek Beach on the top of high coastal bluffs with significant erosion, a lower section at Scotty Creek that meets the beach, and a small end section below Scotty Creek. **Exhibit 4** gives an aerial visual of the center area of the project with main existing features identified.

Originally, Highway 1 in the section above Scotty Creek sat inland of the coastal bluff edge. USGS topographic maps from the 1940s through 1960s show the highway well set back from the bluff edge and county subdivision maps from the 1960s indicate the highway was almost 500 feet from the mean high tide line. Originally, the bluff was protected by a beach along its full length, known as Gleason Beach. Twenty-one historical parcel lots sit directly adjacent to and westward of the highway. Bluff top homes once sat on each of these parcels, often called the Gleason Beach subdivision, with construction beginning in the 1940s and most of the houses completed by the end of the 1960s.

Over time, however, the bluffs have eroded significantly and now Highway 1 in the project corridor runs nearly directly on the bluff edge in places, and sections of the bluff have eroded to such an extent the erosion has already on occasion undermined Highway 1. Gleason Beach, which once ran the full length of this section, is now split in two. At the north end of the project corridor is a pocket beach formally labelled Gleason Beach and owned by California State Parks. At the south end is the area of Gleason Beach at Scotty Creek described below. In between, the beach is now largely eroded away the length of the subdivision. The majority of the homes have already been lost to forces of coastal erosion from wave attack, subsurface drainage, and landslides.



Gleason Beach Subdivision lots with existing houses (in green) and collapsed lots.

At the north end of the subdivision are three remaining homes on three lots however, the County has posted the southernmost of these as “unsafe for occupancy.” At the southern end of the subdivision, a cluster of seven homes and lots remain and are somewhat protected by a rocky shore outcropping but nonetheless threatened by

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coastal erosion. The homes of the eleven lots in between were either removed or collapsed. House debris and the remains of earlier shoreline protective structures clutter the bluff and shoreline here and the blufftop in general is highly degraded with little native habitat because of continuing bluff failures.

At the end of the subdivision area, Highway 1 drops in elevation to meet Scotty Creek, a coastal creek that historically flowed freely into the ocean and connects to a beach. Scotty Creek is fed by drainages running from the coastal foothills with a watershed of about 4.3 square miles. The creek includes riparian vegetation and is flanked by a historic coastal prairie terrace grassland habitat and a floodplain comprised of marsh and seasonal wetlands. The creek meanders through the 166-acre Ballard Ranch property. The Ballard Ranch has supported agricultural production activities for some 150 years, including widespread grazing; and the property is considered a historic property and has been designated as a Sonoma County landmark, with structures built in the 1860s and 1920s. The ranch is accessed from a long driveway adjacent to Scotty Creek that connects to the current Highway 1 alignment and runs inland to the ranch historic structures.

Where Scotty Creek crosses under the highway and meets the ocean is a relatively large pocket beach, the other remaining end of Gleason Beach (**Exhibit 5**). This beach is typically called Gleason Beach but is also more specifically sometimes identified as Scotty Creek Beach (See, e.g., Sonoma County [Scotty Creek Beach](#)). With views of the Pacific Ocean and rugged coastline, and an easier accessibility because of the relative lower height of the highway, the beach is a popular destination in coastal Sonoma County. Along the highway section adjacent to the beach, informal beach parking is located on small gravel shoulders off of the southbound and northbound traffic lanes directly adjacent to the Ballard property. Caltrans estimates there are approximately 16 informal parking spaces in this general area, however the number of spaces varies with historical erosion and use (**Exhibit 6**). Visitors access the beach by crossing the highway and traffic, if necessary, and then scrambling down an 8 to 12-foot berm on the south side of Scotty Creek to reach the beach. This historical use indicated the presence of prescriptive rights of public access; but the State had taken no action to prove such rights in the courts. Notably, however, Caltrans has acquired a portion of that parcel, transferred title to it to Sonoma County and thereby secured permanent beach access to state beach properties and public trust beach lands as part of this project.

Looking east from the beach, across the highway and any parked cars, views of the nearby agricultural property show grassy rolling hills in the distance. Although passage to sandy beach areas or rocky shoreline to the north and south is possible during mid-to low-tide, such access is encumbered by the aforementioned existing debris field related to failed residential and roadway development. No coastal bluff trails exist in the project area or provide access from beach to beach along the coast. The Sonoma County LCP specifically calls for improved public access in this area, the development of a coastal trail along the bluff, and for acquiring legal access to the beach. In particular, the mouth of Scotty Creek opens onto one of only a handful of places in all of Sonoma County where a sandy beach area may be easily accessed without scrambling

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down a steep bluff; accordingly, it is explicitly identified for protection and improvement in the County's LCP.

Highway 1 currently crosses Scotty Creek on a set of concrete box culverts constructed in 1956. The box culverts are two double-sets, the first with two 6-foot wide culverts and the other with two 8-foot wide openings. The culverts are protected by concrete wing-walls, fill, and scattered rock riprap, and total over 60 feet in length (**Exhibit 5**). In the summer, when creek flows have slowed and wave activity is low, beach sand accumulates and small pools form adjacent to the highway. During winter months, when the creek is higher and forceful waves sweep sand from the beach, the creek reconnects to the sea. However, the connection between Scotty Creek and the sea and the tidal interchange between the two organic systems is generally limited, due to the separation caused by the culverts.

Scotty Creek historically supported threatened Coho and Steelhead salmon. However, cattle grazing in and around the creek has impacted its habitat and increased creek erosion of the banks. Additionally, the culverts restrict flows of the coastal stream and impede the ability of Scotty Creek to support its historic salmon habitat. Nonetheless, the flows of Scotty Creek and its associated wetland floodplain have potential to support special sensitive species, including the California red-legged frog (CRLF) and Steelhead and Coho salmon.

As the roadway continues south after the intersection with Scotty Creek and the beach, it curves and rises again, where a small group of four residences remain on rocky bluffs above the beach west of Highway 1 and overlooking the Gleason Beach area at Scotty Creek. The road continues south and the project area ends before Highway 1 passes the Sereno del Mar subdivision. South of the project corridor, Highway 1 continues past a series of blufftop pullouts and pocket beaches, including Portuguese Beach, Schoolhouse Beach, Carmet Beach, and other beaches and pullouts to reach Bodega Bay.

Coastal Erosion Background

As referenced above, homes have lined the area seaward of Highway 1 at Gleason Beach since at least the 1940s. Coastal Records Project photographs from 1972 reveal that there was formerly a gently sloping and heavily vegetated bluff between blufftop homes and the beach, north of where most of the remaining homes exist currently.

Exhibit 7 shows an example of the progression of bluff retreat through historical aerial imagery in one section. (See also the Caltrans/WRECO Report in **Exhibit 18**, pp. 87-93.) As early as the 1980s, erosion began threatening the homes on the bluff requiring emergency remedial measures. **Exhibit 8** shows an example from 1988 of Gleason Beach and the shoreline armoring that was installed by many of these homeowners to attempt to protect their residences from erosion. Nearly all of the armoring attempts were either unpermitted or were completed under emergency permits without ever obtaining a follow-up CDP. By the early 2000s, several homes were lost, demolished, and/or declared uninhabitable (e.g., red-tagged) by the County. Currently, most of these attempts at shoreline armoring have been destroyed by ocean waves and eleven of the

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former homes were either removed or collapsed, leaving a field of structural debris strewn across the bluff and shoreline area north of the beach at the Creek. **Exhibit 9** shows the center section of Gleason Beach in 2020, with the scattered debris across the eroding beach. Ten houses remain in the Gleason Beach subdivision area above Scotty Creek, but one house has already been deemed “unsafe for occupancy” by the County; it is uncertain how long the other houses can remain given the erosion conditions.

As is also apparent, as the bluff has eroded landward, the highway itself has become increasingly at risk. For the last three decades, Caltrans has endeavored to keep this stretch of highway functional through a number of emergency repairs (**Exhibit 10**). Focused Caltrans investigations began after storm damage in 1996 when erosion was identified as a threat to the highway. Because of increased erosion, in 2004 Caltrans constructed an emergency soldier pile wall at PM 15.5. However, ongoing storm events, subsurface drainage and landslides continued to cause bluff damage and temporary lane closures, and necessitated several emergency repair projects and emergency CDPs. In 2017, Caltrans installed a 200-foot long temporary armoring device under an emergency CDP. In 2019, portions of the roadway collapsed, requiring emergency lane closures to the southbound Highway 1 (**Exhibit 11**). Under another emergency CDP more piles were installed to stabilize the roadway, and the highway was shifted inland approximately one-lane width away from the erosion, using Caltrans right-of-way and highway shoulder space.

Coastal erosion in this location generally results from large winter storms, as well as groundwater seepage across the site. Caltrans currently estimates that the bluffs at this location are retreating at an average annualized rate of about one-foot per year, according to recent geotechnical assessments, leaving the highway and the majority of the blufftop homes along this strip of Highway 1 at near-term risk of bluff failure and other coastal hazards. However, the one-foot per year metric is somewhat misleading given that erosion most often occurs episodically in large chunks of bluff failures during large winter storms. Caltrans has concluded that the continuing emergency shoreline protective devices and other measures are insufficient to ensure a safe and reliable Highway 1 corridor through this area of the Sonoma coast.

Managed Retreat

This history of emergency measures to stabilize the existing highway also reflects an engineered approach to adapting to coastal erosion and SLR, which generally refers to the use of hardened structures, such as seawalls, revetments, pilings or retaining structures to protect structures from coastal erosion. Such armoring often causes a variety of impacts that are inconsistent with the Coastal Act’s resource protection policies, including loss of beach space and the loss of sand supply, negative coastal view impacts, destruction of natural landforms, impediments to intertidal habitat functioning, and general recreation losses. Moreover, by hardening the coast, these armoring structures form a barrier to the natural migration of beaches, wetlands, and other habitats as sea levels rise. Armoring also increases erosion at locations adjacent to the armoring structure, creating unequal erosion impacts along the coastline. Further, armoring the shoreline raises environmental justice issues because the loss of sandy

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beach areas diminishes opportunities for low-cost or free recreational opportunities for all Californians. In Sonoma County in particular, free beach access provides an important recreational opportunity for all residents, as well as visitors.

As sea levels rise impacts increase over this century, more and more habitat and recreational areas will be lost, and a reliance on hard shoreline devices will contribute to greater losses. Like other coastal areas, California faces a fundamental choice between a hard and artificial coastline, with substantial losses to beaches and natural habitats, or adopting other approaches to live with the retreating coastline and the rising seas caused by human-induced climate change.

“Soft alternatives” like managed retreat, living shorelines, beach replenishment, or the use of other types of natural infrastructure may provide protection to critical infrastructure while also reducing environmental impacts and often providing opportunities to improve environmental conditions and increase public access. Thus, the state of California supports strategies to protect shoreline structures from sea level rise impacts by prioritizing the use of soft solutions where feasible and minimizing shoreline armoring. (See, e.g., Safeguarding California Plan: 2017 Update, Executive Order B-30-15, [2018 State of California Sea-level Rise Guidance](#).) The Commission’s Sea Level Rise Policy Guidance recommends adaptation strategies that will “maximize protection of public access, recreation, and sensitive coastal resources,” including Principle 12 (See [Chapter 2](#), p.40):

Maximize natural shoreline values and processes; avoid expansion and minimize the perpetuation of shoreline armoring ... Priority should be given to options that enhance and maximize coastal resources and access, including innovative nature-based approaches such as living shoreline techniques or managed/planned retreat Major renovations, redevelopment, or other new development should not rely upon existing shore protective devices for site stability or hazard protection. Where feasible, existing shoreline protection that is no longer being relied upon in this way, or no longer needed otherwise, should be phased out.

The state’s recently adopted [California Sea Level Rise Principles](#) (April 2020) also includes a Principle 6 “Implement and Learn from Coastal Resilience Projects.” That principle states that projects should “[p]rioritize the use of nature-based adaptation measures where appropriate.” Of these softer and nature-based solutions, managed retreat often offers the most substantial opportunities for maintaining our natural shorelines, increasing habitat restoration, protecting and expanding public access opportunities, bolstering the coastal economy, and generally increasing coastal resilience. However, managed retreat can be challenging to achieve in many circumstances, especially in urban or semi-urban area where coastal development patterns leave little space to accommodate such retreat.

As the history of this project shows, managed retreat in more undeveloped and rural areas is also challenging to plan and implement. Even in largely undeveloped areas,

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relocation may involve impacts to natural habitat, including ESHA and wetlands, and require the conversion of agricultural lands. Wherever located, managed retreat also often entails the additional cost of acquiring land from private owners for relocation and construction of new infrastructure, which may appear initially more expensive than conventional armoring. These negotiations and coordination efforts often create conflict points and significantly increase the timeline and complexity of project development for relocation efforts.

These difficulties, however, must be weighed against the resilience and ecological benefits of managed retreat and should be considered in the context of SLR, where sound planning for resilience now avoids larger costs over time. For example, maintaining and increasing coastal armoring also quickly adds up to increased costs over time, along with continued negative impacts to coastal resources. As discussed in the California State Sea Level Rise Principals:

Action now saves up to six times the cost of action later, allows time for the state and communities to test and leverage needed solutions, and prevents untold impacts.” (emphasis original)

Adaptive efforts undertaken now reduce the need for repeated emergency repairs that can greatly add costs to maintaining infrastructure. In addition, with each new managed retreat effort brought forward, local and state agencies learn valuable insights and lessons regarding these new approaches that enable future state actions to better navigate through the complexities, reduce timelines for implementation, and meet funding challenges. Thus, investments now can bring additional savings from the higher costs of later actions.

The Commission has approved other difficult managed retreat solutions in largely rural areas before. In 2014, the Coastal Commission approved the relocation of 2.8 miles of Highway 1 near Piedras Blancas in San Luis Obispo County, with the development of a California Coastal Trail segment and habitat restoration efforts. That project remains an adaptation success story for California and shows the tremendous ecological and public benefits in relocating critical infrastructure inland, restoring shoreline areas to their natural state, creating public access improvements, and allowing natural coastal processes to continue. The Commission has also worked collaboratively before with a local government in its approval of a Federal Consistency certification and San Mateo County Local Coastal Program amendment for moving a threatened segment of Highway 1 along an eroding coast inland through the Devil’s Slide Tunnel which, like this project, also repurposed an existing Highway 1 alignment to serve as a segment of the California Coastal Trail.

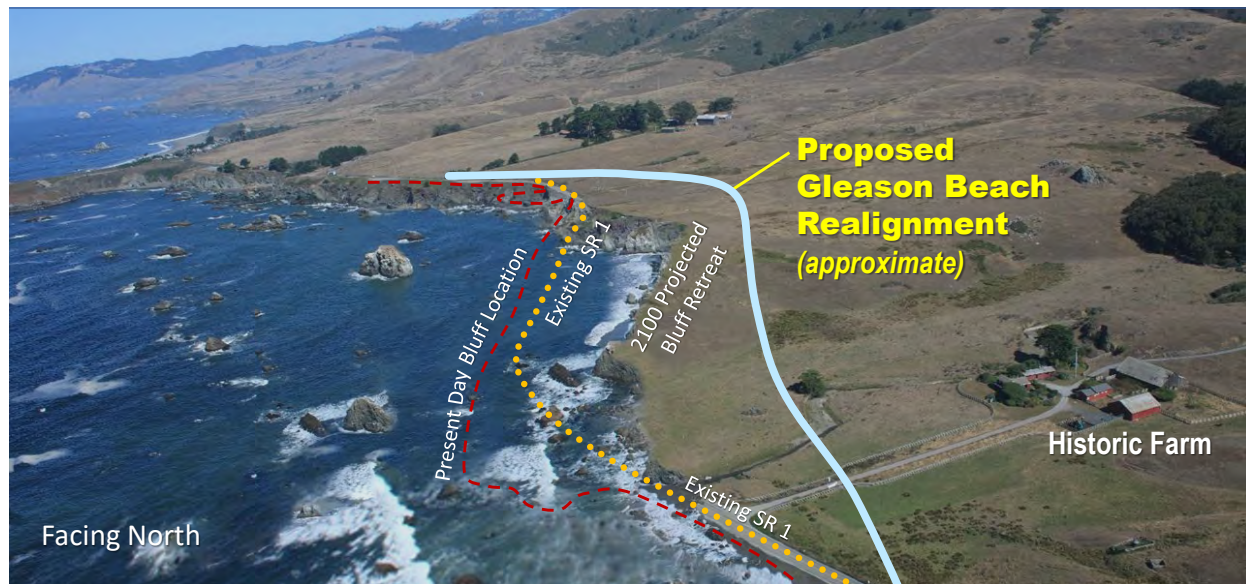
B. Project Description

Project Purpose

The primary purpose of the proposed project is to implement a managed retreat solution to address the ongoing coastal erosion that threatens existing Highway 1 in its current location, to reduce the need for continued highway emergency repairs, and to adapt to

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the impending threat of increased erosion from SLR. As discussed in more detail below, Caltrans proposes to address the coastal hazards at Gleason Beach that are threatening Highway 1 in its current location by realigning the highway inland.



Visualization of possible bluff retreat scenarios in relation to approximate highway alignments.²

The project also proposes to address habitat impacts and realize opportunities presented by the realignment of Highway 1 over Scotty Creek. Relocating the current Highway 1 alignment allows for the removal of the existing box culvert and roadway grade fill that impedes the natural flows of Scotty Creek and negatively impacts adjacent natural habitat and hinders fish passage. In order to return Scotty Creek to its natural flows, restore adjacent habitat, and provide for natural fish passage, as well as avoid increased wetland, ESHA, and cultural resource impacts from a new roadway prism at grade, the realigned Highway 1 crosses Scotty Creek with an elevated bridge. As discussed in detail below, habitat constraints, cultural site locations, the need for private property access, and traffic safety concerns all create constraints on the elevation and design of that bridge crossing. Still, while many wetland, ESHA, and agricultural impacts are eliminated by the new, long span bridge, impacts elsewhere to these resources are unavoidable from the new connecting highway segments to and from the bridge.

The proposed project also has the purpose of improving multi-modal access through the project corridor by improving what are currently small or non-existent shoulders for cyclists, providing pedestrian access via a new public access bridge separated from the main Highway bridge, and creating multiple public access improvements, including a new off-highway braid of the California Coastal Trail.

Together, these highway improvements are intended to protect Highway 1 within the project limits and provide for the monitoring and adaptive triggers that can keep it open

² See SLR analysis below for future bluff retreat projections based on various sea level rise projection scenarios.

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for at least the anticipated lifespan of the project, until about 2100. As estimated under current SLR projections, it is anticipated that increased coastal erosion and SLR from climate change will likely necessitate larger changes to the Highway 1 corridor throughout this region. These future adaptations will necessarily require larger corridor-wide strategies, based on updated science and analysis, that address larger portions of Highway 1 in Sonoma County. In the meantime, this project has been designed to protect this most critically vulnerable section of highway.

Primary Project Elements

The proposed project will undertake managed retreat from the forces of coastal erosion by realigning Highway 1 inland, spanning Scotty Creek with a bridge, and making several other highway infrastructure improvements to improve public access, update highway infrastructure, and provide for habitat improvements and habitat mitigation efforts. (**Exhibit 3** provides an overview of project components.) The proposed project would affect Highway 1 from postmiles 15.1 to 15.7. Specific project components are described below.

New Roadway

The project involves the relocation of approximately 0.7 miles of the highway east of the existing alignment. The realignment would branch off from the existing roadway at the south end at Post Mile (PM) 15.1, just north of the Sereno del Mar residential subdivision, and re-connect with the existing roadway at PM 15.7, just south of Duncan's Landing and Rock Point Beach. The new alignment would follow a curvilinear path, varying in distance inland from the existing alignment up to approximately 370 feet at its maximum distance. The design and shape of the curve was determined by erosion projections and highway safety standards, along with an attempt to conform the route to existing topography to minimize visual impacts. The realigned highway would traverse across the existing private Ballard Ranch property on right-of-way already acquired by Caltrans.

The previous stretch of highway was 3,200 feet long, while the new alignment will be 3,700 feet in length. The existing highway is a two-lane roadway with 11-foot traffic lanes in both directions and 0 to 2-foot shoulders. The new highway alignment would consist of two 12-foot traffic lanes with 8-foot wide shoulders (4 feet paved adjacent to the travel lane and the remainder unpaved). This new alignment in the southern section, designed for maximum speeds of 40 miles per hour, will require some slope re-contouring to the east side of the existing alignment. The northern end of the realigned highway also includes three new locations for highway drainage from this section of roadway between PM 15.6 and 15.7 that are intended to reduce erosion impacts.

Scotty Creek Bridge

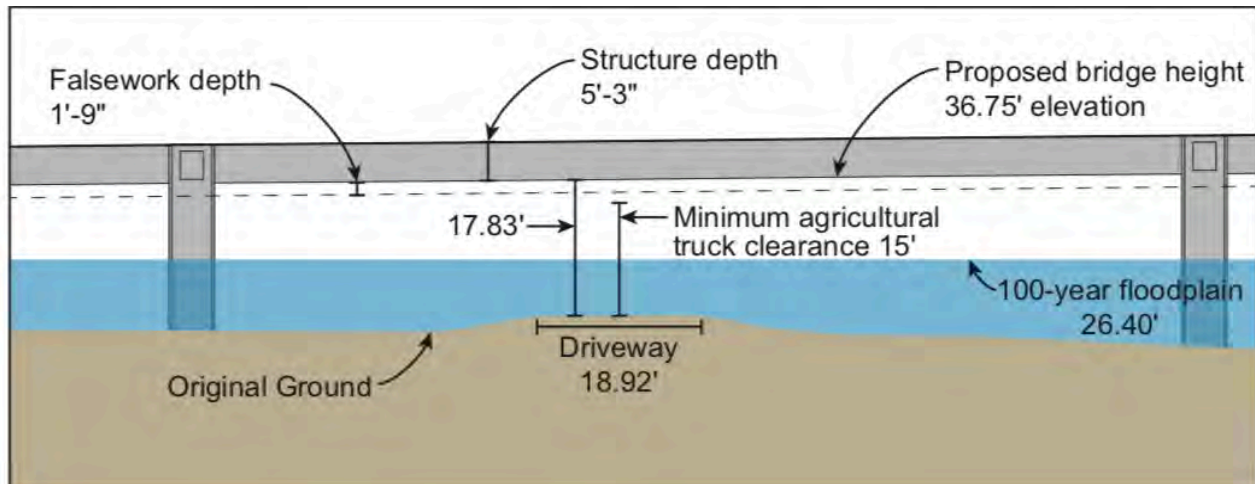
Highway 1 currently crosses Scotty Creek on a roadway prism and set of concrete box culverts constructed in 1956, as described above. The culverts currently route Scotty Creek water under the roadway and allow for passage of traffic over Scotty Creek (**Exhibit 5**). The roadway prism and culverts manage and restrict stream flow, which diminishes the historic natural salmonid habitat.

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As stated above, this project provides for the managed retreat of the highway by relocating the highway inland. To secure the highway from coastal erosion, including with projected SLR impacts, necessitates shifting Highway 1 inland. This in turn, requires the new highway to cross Scotty Creek approximately 100-190 inland from its current location. There are no alternatives to relocate further inland and avoid Scotty Creek, since that would involve major relocation above the Scotty Creek watershed far from the coastline. Caltrans could rebuild essentially the roadway as it is now – a roadway fill prism and box culverts for the creek. However, this approach would require substantial acres of wetland fill from a long roadway prism, essentially the same length as the new bridge at about 800 feet long. The fill area would be defined by an approximately 40-foot roadway, supported on a prism of approximately 2:1 slopes, creating a substantial footprint. As shown in **Exhibit 12**, such a design would place significant fill in wetlands, ESHA, and coastal waters because of the required long roadway prism when crossing the Scotty Creek floodplain. The creek would also continue to be impeded by a roadway prism with the culverts or a small bridge opening, and a new second set of riprap would be required at the crossing of Scotty Creek. Most importantly, the roadway would remain at the essentially the same grade as the existing roadway and would therefore continue to be subject to potential flooding, and dramatically so, with SLR. A realigned Highway 1 at the same grade would be within the 1% (100 year) flood threat in the current day, before SLR is even considered as a factor. There would also be potential impacts to cultural resources on the site. Additionally, the new roadway prism alternative would itself be a substantially large berm in the landscape with its own significant visual impacts. Instead, Caltrans proposed to cross Scotty Creek with a new bridge. The proposed vehicular bridge would span Scotty Creek across the complete width of its potential 100-year flood plain. The bridge would also allow for the removal of the existing culverts. Removal of the culverts will daylight over 60 feet of creek bed and return it to a more natural open channel.

The proposed bridge over Scotty Creek will be located approximately 90 feet inland of the existing highway and will be approximately 850 feet long, 49 feet in width, with 12-foot traffic lanes and 6- to 8-foot shoulders. **Exhibit 13** shows the current design of the bridge, and an older design on the same alignment in a before and after comparison. Exhibit 15 also provides visuals of the proposed bridge. The bridge also includes a 6-foot wide protected pedestrian walkway on the west side of the bridge along the southbound traffic lane. The bridge will be comprised of 8 spans each on columns and piles. All pile footings would be outside the creek channel, but most within the floodplain. The bridge will sit on piers and is designed with a maximum height of 28 feet above ground, at an elevation of 36 feet above sea level.

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Scotty Creek Bridge Elevation Requirements (Caltrans, 2020).

The proposed height of the bridge is necessary for several reasons. Most importantly, the new height of the bridge ensures safety from flooding with SLR considerations and will be situated above the estimated 100-year flood height (at a 26.4-foot elevation). By comparison, the current highway is well below that height. The bridge also spans the full width of Scotty Creek's estimated 100-year flood range, which further influences the structure's height. And finally, the proposed height of the bridge is necessary to provide clearance for the passage of agricultural hauling equipment on the access road below to the Ballard Ranch (i.e., given the elevation of the ranch access road is near 19 feet above sea level, an additional 15 feet in elevation is needed for vehicular access to the ranch). This is necessary to maintain existing access and minimize agricultural conversion impacts. Together, the requirements result in the height of the structure being as much as 28 feet from the lowest elevation of original ground near Scotty Creek to the top of the bridge. In addition, to minimize view impacts, the bridge has been designed with see-through railings, namely the Type 85 Bridge railings, meeting federal safety standards and having been employed in other recent Caltrans bridge projects approved by the Commission. The bridge has a fairly utilitarian design so as to avoid detracting from the public viewshed while still including architectural elements to reflect the rural agrarian landscape, responding, in part, to public input received by Caltrans at local public meetings about the project.

Public Access Improvements and the California Coastal Trail

A significant portion of the remnant sections of Highway 1 will be repurposed as a new strand of the California Coastal Trail (CCT) (**Exhibit 14**). Currently, cyclists and pedestrians use the narrow roadway shoulders or the travel lanes themselves to traverse through the project corridor. Under this project, the initial CCT strand will be aligned to employ repurposed portions of the existing Highway 1, on a trail separated from the realignment traffic; the new strand also will be designed to facilitate connections to the CCT to the north and south of the project area. Portions of the existing Highway 1 not needed for residential and public access vehicular traffic, or for the CCT and other public access purposes, will be removed and revegetated by Caltrans.

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Access to the CCT will be provided at the ends of the realignment and through the new access driveways from the Highway 1 realignment. These east-west access connections will be of the narrowest width necessary to meet County standards to service both the public and blufftop residences and legal lots. As such, portions of the repurposed existing Highway 1 will accommodate the access roads and CCT with appropriate buffers between the two. The north portion of repurposed Highway 1 will begin at the terminus with the new realignment near postmile 15.7 and end just north of Scotty Creek, with a public loading and unloading area with a turn around. South of Scotty Creek, the existing Highway 1 will be repurposed to terminate just south of the restored Scotty Creek channel, where it will provide connections to the CCT, public parking, and public access to the sandy beach, and continue to the southern terminus of the new realignment near postmile 15.1 (**Exhibit 14**). The proposed terminus of the existing Highway 1 south of Scotty Creek will also continue to provide access to the four residences south of Scotty Creek, as well as to the driveway connecting to the Ballard Ranch.

Through funds being provided by Caltrans via cooperative funding agreements to Sonoma County, a new approximately 120-foot long pedestrian trail bridge will provide CCT access over the creek from north to south, along with a number of other public access amenities. Passage onto the sandy beach will be provided directly south of Scotty Creek. The existing informal parking spaces along the Highway 1 at Scotty Creek, many of which sit on the double box culverts, will be reduced to approximately four, depending on the results of a public coastal access planning process. Space for a minimum of 16 new informal parking spaces will be provided along the shoulders of the new access road configurations.

A revetment is also proposed at the southern beach access point to protect the Scotty Creek terminus of existing Highway 1 from flooding and erosion along approximately 200 linear feet. Rock was historically installed in this area to protect Highway 1 along the beach, but such rock has generally been washed away or buried over time and the existing Highway 1 is frequently threatened during winter storms. Any remaining rock will be removed and, if suitable for reuse, employed for the proposed protection of the residential and public access road, parking and CCT south of Scotty Creek. The revetment will be placed along the north end and western and eastern end sides of the proposed ending of the existing Highway 1 roadbed (**Exhibit 14, p. 1**). The revetment will be covered in soil and jute and planted with appropriate native plants to soften visual impacts and, according to Caltrans, to help support riparian habitat.

Prior to this project, public access to the Gleason Beach area at Scotty Creek had occurred over property that was privately owned. As part of this project, Caltrans has already acquired an approximately 0.7-acre portion of a parcel providing beach access to the mean high tide line at Scotty Creek on behalf of Sonoma County, thereby perfecting public access rights to this beach, its tidelands, the State Coastal Conservancy and State Parks parcels here, in perpetuity. This fulfills a significant aspect of the Sonoma County LCP vision for the Gleason Beach area and is an important feature of this realignment project.

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At the completion of the project, Caltrans will also transfer to Sonoma County all lands, easements, and other property interests it owns that may be used for public access purposes between the western edge of the new right-of-way for the realignment of Highway 1 and the western edge of the right-of-way for the existing Highway 1, for long-term ownership and maintenance of the CCT and other public access amenities, as well as the residential and public access roads discussed below. Thus, Sonoma County will own all the public access improvements proposed under the project, and the underlying existing right-of-way. To address long-term issues of SLR and ongoing erosion, the project provides for the CCT to move inland as necessary for continuous connectivity on the parcels being transferred from Caltrans to Sonoma County, and on any other publicly-owned parcels westward of the new Highway 1 realignment, if coastal erosion requires such relocation.

Access Roads

Thirteen private residences remain on the west side of the existing Highway 1 in the area that will be realigned, including nine just north of the Gleason Beach area at Scotty Creek and four just south. Under the California Streets and Highway Code (see e.g., Article 1 Section 8330 & 8330.5), Caltrans cannot realign and close an existing highway in a way that cuts off all access to someone's property that is existing prior to the realignment. Given this requirement to provide continued access for these homes and legal lots, as well as to connect to public access improvements described above, Caltrans will construct three new access roads from the realigned highway (**Exhibit 3**). These access roads will be generally perpendicular to the existing and proposed north-south Highway 1 alignment. The northern most of these, between existing PMs 15.5 and 15.6, will provide residential access to the three existing homes and legal lots on the blufftop and public access to an existing State Parks vista point and dirt pull over, the future CCT, and the other future public access amenities. A central access road, just north of Scotty Creek, will provide residential access to seven remaining blufftop residences there and public access to the CCT, Scotty Creek Beach, and the other public access amenities. The access road network to the north of Scotty Creek will also provide shoulder area for public parking as well as public connection to a loading and turn around area in the existing Highway 1 to be repurposed for these uses. Finally, a short access road near post mile 15.1 will enter from the southern terminus of the realignment to connect to existing Highway 1 to allow residential access to the existing structures in that area and to the Ballard Ranch drive, and to provide continued public access to Gleason Beach and connect to the CCT. The final siting of the replacement public parking will be decided through a future public access planning process guided by special conditions under this CDP.

Scotty Creek Restoration

Historically, Scotty Creek provided habitat to Coho and Steelhead salmon populations. Natural flows of the creek are now limited because the creek flows through a concrete double box culvert under the existing Highway 1. Caltrans is proposing restoration of the creek channel by removing the box culverts and highway prism and reestablishing a natural flow, which will provide greater connectivity to the ocean and allow passage for spawning salmon once again. The creek area is proposed to be daylighted to the

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maximum extent feasible, to a southern end limit of the existing private driveway access and to a north end limit at the rocky bluff ground level edge south of the existing private residences there. In addition to the removal of the existing double box culvert and daylighting the Creek, this project will include restoration and enhancement of riparian habitat and wetland areas around the Scotty Creek corridor with revegetation with native plants. Cattle grazing adjacent to and in Scotty Creek has also contributed to bank erosion and degraded water quality. The project is also planned to include a conservation easement precluding cattle grazing in and along the creek, and, regulating grazing elsewhere in the easement areas.

ESHA and Wetland Enhancement and Restoration

The project entails unavoidable permanent and temporary impacts to coastal terrace prairie ESHA, wetlands, coastal bluff scrub habitat, and coastal waters from fill and grading activities for construction of the new highway, bridge, and other construction activities. These impacts also include potential impacts to sensitive species including the endangered Myrtle's silverspot butterfly, the California red-legged frog, and salmon species. In addition to the riparian and wetland restoration at Scotty Creek, the project therefore includes restoration of temporary impacted areas on site by remedial grading if necessary, removal of non-natives, and replanting with appropriate native plants. The project also includes the following mitigation projects to address permanent impacts: 1) wetlands mitigation with wetlands creation and wetlands enhancement; 2) restoration of coastal terrace prairie habitat and Myrtle's silverspot butterfly larval habitat and foraging habitat; 3) restoration of coastal bluff scrub habitat; and 4) the formation of open space conservation easement for the purpose of protecting and restoring or enhancing natural resources, including coastal terrace prairie, Myrtle's silverspot butterfly habitat, wetlands, riparian habitat, coastal bluff scrub, and aquatic habitat important to salmonids and the California red-legged frog. The mitigation measures also include the development of a long-term coastal terrace prairie habitat management plan with a grazing management element to allow continued agricultural grazing while protecting coastal terrace prairie habitat.

Bluff and Beach Enhancement and Restoration

As described above, the blufftop and shoreline in this area are currently strewn with debris from eroded or deteriorating residences, protective structures and failed Highway 1 repairs. Caltrans proposes mitigation for visual impacts associated with the new highway bridge over Scotty Creek by entering into an in-lieu fee program with Sonoma County, under which Caltrans will fund the restoration of approximately 864 linear feet of bluff and beach adjacent to the existing Highway 1. Sonoma County will undertake the proposed restoration through the cleanup of the structural debris field that currently covers the bluff and shoreline area in the identified "Coastal Hazards Mitigation Area" (see **Exhibit 28**). The project also includes a long-term plan for the phased removal of previous Caltrans road stabilization efforts and emergency repairs.

Construction Scheduling

Construction is anticipated to begin in spring-summer 2021, and work is anticipated to last three years. Highway 1 will remain open during the entire period of construction. Construction activities in Scotty Creek will occur only during the dry season (April to

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November) to minimize impacts to biological resources.

Community Meetings

Beginning in March 2014, Caltrans hosted multiple community gatherings to obtain feedback on the project, with subsequent community meetings in July 2015, April 2016, February 2017, November 2017, and May 2019. Additionally, in April 2018, the Sonoma County Board of Supervisors considered the project at a local public hearing while approving the Consolidated Permit Request. More recently, on October 20, 2020, the Sonoma County Board of Supervisors received an update on the project and expectations for the coastal development permit conditions of approval covering the project mitigation funds to go to the County. For a summary of Caltrans' meetings, the community input received, and Caltrans responses, refer to the [FEIR](#) or the summary of the project webpage [here](#). Planned in-person 2020 community meetings in the early part of the year were postponed due to the Covid-19 pandemic, but because of the desire to review the current details of the project and seek additional community input, Caltrans hosted a virtual community meeting on October 14, 2020. (A video of this meeting is available on YouTube, [here](#).) Collectively, these various public meetings ensured that public participation, particularly at the local level, was not substantially impaired by the Commission's processing of the requested permit consolidation, consistent with Section 30601.3 of the Coastal Act.

Key issues identified at these community meetings included concerns for: maintaining the operation of the highway through storm seasons, the visual impacts of the bridge, public parking (with different perspectives of the need for parking verses management requirements and visual impacts from increased parking), knowing more about the plans for the California Coastal Trail, maintaining access to residences along the bluff, cleaning debris along the shoreline, minimizing construction impacts, the need for improved cycling access, and ensuring the restoration of Scotty Creek.

Caltrans states that they used the community input to consider other alternatives and create a more sensitive bridge design. Specifically, Caltrans explains that in 2017 they refined the bridge design into a more contextual, historic, design that “evokes the classic Bixby Bridge style and seeks to complement the natural surroundings and provide a cohesive, regional design aesthetic.” (**Exhibit 13** shows the change in bridge design.) Based on public feedback from the beginning, Caltrans continued to analyze other alternatives, ultimately concluding a bridge was the only feasible alternative for the long-term protection of sensitive resources and ensuring stability of the highway through anticipated flooding and coastal erosion in light of climate change. Since that time, Caltrans has worked to minimize the bridge design presence in the landscape. Future community input into the public access improvements will take place through a Gleason Beach Public Access Taskforce to be led by Sonoma County, as described more below.

Local Government Participation

As is evident above, this project was developed through significant collaboration with the local government, Sonoma County, and relies heavily on Caltrans' partnership with the County for project development and long-term implementation. The creation of this

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managed retreat project reflects more than 15 years of discussions and negotiations not only between Caltrans, the County and Coastal Commission staff, but also the community and interested parties about how to best adapt this stretch of highway to coastal erosion and realize the public access and resource protection benefits of adaptation, consistent with the Coastal Act and Sonoma County LCP policies. At the conclusion of this complex realignment project, Caltrans will relinquish to Sonoma County all property interests that it owns in the project area west of the new Highway 1 that may be used for public access purposes. Given that the County will own the public access properties, and because the County has local government authorities and a direct ability to interact with the local public, it is appropriate that Sonoma County be Caltrans' partner responsible for long-term management of the public access and phased debris clean-up operations over time. It is worth highlighting that the County's collaboration in the development of this project, and its willingness to be an active and supportive partner in leading the State's efforts to proactively adapt to climate change and sea level rise challenges, has been essential.

The importance of this project was underscored and described by the Sonoma County Board of Supervisors in its 2018 Authorization (**Exhibit 17**) approving a consolidated permit in this matter, including the substantive elements of this project, "Caltrans, the Coastal Commission, and Sonoma County worked in partnership to draft a Coastal Permit mitigation agreement," that includes appropriate public access, beach and bluff clean-up, and habitat restoration efforts. The County Board of Supervisors further stated that: "this project is an exemplary model of interagency coordination and cooperation working under various State mandates to create a major transportation infrastructure project that effectively addresses climate change, sea level rise, and protection of coastal resources." Lastly, as reflected by the County authorization, "the final project will serve as an exemplary model of how to effectively meet various State mandates to address climate change, particularly sea level rise, in infrastructure planning, design, construction and operation." The collaboration between the County, Caltrans, and the Commission, represent an important example of the partnerships necessary to build coastal resilience, as reflective of the State Sea Level Rise Principles Principal 2 "Build Coastal Resilience Partnerships."

C. Standard of Review

The proposed project area is located within both Sonoma County's coastal permit jurisdiction and the Coastal Commission's retained CDP jurisdiction area. Pursuant to Coastal Act Section 30601.3, Caltrans, the County, and the Commission (through its Executive Director) have all agreed to process the required CDP as a consolidated CDP application before the Commission. Thus, the standard of review for this proposed project is the Coastal Act, with Sonoma's County's LCP being used as non-binding guidance.

D. Coastal Hazards

1. Applicable Coastal Act Provisions

Coastal Act Section 30253 requires that new development minimize risk to life and property in areas of high flood hazard areas, ensure long-term stability and structural

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integrity, and avoid landform altering protective measures such as coastal armoring. Additionally, Section 30235 requires the Commission to allow shoreline armoring in limited circumstances with restrictive measures. Sections 30235 and 30253 (in applicable part) state:

Section 30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

Section 30253. New development shall do all of the following:

- (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that will substantially alter natural landforms along bluffs and cliffs.

Similarly, the Sonoma County LCP cites Coastal Act Section 30253 and also has policies in its Environment Chapter relating to hazards and the application of development buffers (p.37):

Environmental Hazards Recommendation 2: Prohibit development within 100 feet of a bluff edge or within any area designated unstable to marginally stable on Hazards maps unless a registered engineering geologist reviews and approves all grading, site preparation, drainage, leachfield and foundation plans of any proposed building and determines there will be no significant impacts.

2. Consistency Analysis

Coastal hazard problems at Gleason Beach are the primary reason for the proposed project. The intent of the project is to minimize risk to life and property from geologic and flood hazards and maintain a safe and reliable transportation system for the State. The highway realignment will increase the stability and protect critical highway infrastructure while limiting armoring as much as possible.³ The proposed project will move existing highway development currently within 100 feet of a bluff edge, or soon to be within 100 feet of a bluff edge, and place it at a much greater distance from the bluff edge, providing substantially increased protection from erosion hazards for the expected lifespan of the project. This project also provides follow-up CDP authorization for previous emergency work to stabilize the bluff and protect the highway, through a long-term removal program for the emergency repairs.

³ As indicated earlier, a revetment is proposed not for the realigned highway, but rather to protect an existing driveway and public access point on an existing section of the non-realigned roadway.

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Flooding Hazards

The proposed project area crosses the Scotty Creek 100-year floodplain. As discussed in more detail below in [Section J](#), the length and height of the bridge has been specifically designed to span over and avoid the 100-year floodplain of Scotty Creek, as well as flooding from anticipated SLR projections. Indeed, the very height and size of the bridge is directly related to the need to avoid flooding hazards. As designed, the bridge is not threatened by flooding hazards.

The project proposes to leave a remnant end of existing Highway 1 and terminate the roadway just below Scotty Creek, where it will serve as a public access beach point, CCT connection, and public parking spot. This point is subject to potential flooding impacts. Here, Caltrans proposes to install riprap on the north, east, and west sides of the roadway terminus to protect the repurposed Highway 1. Analysis of the consistency of this project element with flooding hazards is discussed below in the coastal erosion hazards section.

Seismic Hazards

The project is in an area subject to major earthquakes, and a large earthquake on one of the active faults in the region has the potential to cause high intensity ground-shaking at the project site during the lifespan of the proposed development. Based on an evaluation of the local fault lines, Caltrans determines a Maximum Credible Earthquake (MCE) for the project area. Caltrans then used its engineering criteria to guide the design of the structural project components to withstand the seismic hazards, including ground-shaking and liquefaction, associated with the MCE. The highway realignment and bridge elements of the project have been designed to standard Caltrans seismic design criteria related to the potential impacts from the MCE at this location. Lastly, though the project area is located within a tsunami inundation area, the proposed project will not increase the dangers associated with the effects of a tsunami and by moving the highway inland, will improve tsunami resilience for the operating Highway 1 corridor. Moreover, the increased elevation of the bridge will reduce the threat of tsunami dangers to Highway 1.

Coastal Erosion Hazards

A. Highway Realignment and Coastal Erosion

Exhibit 18 (Caltrans/WRECO 2020) provides a Geotechnical Analysis developed by Caltrans documenting historical erosion, the potential impacts of SLR, and how the proposed project could be affected by future bluff erosion. Although the geology here is very complex, in general, the area is known as a Franciscan Complex mélange geologic unit, which is generally characterized by weakly formed material that is easily erodible. Bluff erosion rates in the project area have been estimated at approximately 1-foot per year (Caltrans/WRECO 2020, p.9). Importantly, while the average annualized rates of erosion give some guidance, periodic episodic erosion events, particularly during significant winter storms, can result in much greater episodic bluff loss in any particular time frame.

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The geotechnical analysis also finds that the north end of the project realignment at approximately postmile 15.7 is receding, but at a relatively slower rate, as are the adjacent sections of Highway 1 to the north. The center of the proposed area for realignment is receding at a very fast rate, over one foot per year. The southern end of the project area in the vicinity of postmile 15.1 is receding more slowly at this time, at about 0.3 to 0.5 feet per year. (See Caltrans/WRECO 2020, pp.18, 31.)

Erosion, House Losses, and Emergency CDPs

Ongoing bluff instability has threatened both existing houses and Highway 1. A total of twenty-one parcels lay adjacent to and just west of the existing Highway 1 in the Gleason Beach subdivision north of the Gleason Beach area at Scotty Creek and south of the State Park parcels and the north Gleason Beach area. Eleven of the residences that were once on those parcels have been lost to coastal erosion including in extreme storm events or when removed by property owners due to hazardous conditions. Of the remaining ten homes, at least one is already tagged as unfit for occupancy because of erosion by Sonoma County. Most of the remaining homes are also subject to ongoing erosion and potential loss. Many of the demolished homes and existing homes attempted to rely on shoreline armoring, some of which, as discussed below in **Section M**, were largely unpermitted development. With multiple failures over the years, there is now a debris field along the bluff and on the public beach that creates public health and safety concerns as well as impacts to natural resources, including constraints to public access and degradation of visual resources (**Exhibit 1** and **Exhibit 9**).

Coastal erosion has also repeatedly threatened or closed portions of the highway in recent decades. Caltrans began analyzing the problem of coastal erosion in the late 1990s. Since then, Caltrans has had to chronically respond to winter storms that closed Highway 1, which necessitated costly emergency storm damage repairs. These emergency storms and repairs resulted in closures to Highway 1, the main highway link for coastal communities in the area, including full or lane closures, until emergency repairs could be completed. In 2004, unstable and collapsing coastal cliffs from several years of storm events required the installation of an 84-foot soldier pile wall to keep the highway from eroding. In 2016-2017, winter storm action caused a washout, exposed most of the outboard soldier pile wall, and undermined the cliff causing the roadway to crack. Caltrans strengthened the wall with soil nails, protected the face of the outboard wall with shotcrete, installed additional micro piles and injection grouting along the roadway, and placed riprap along the southbound shoulder with directional drainage to use the riprap as a spillway to avoid further erosion. In 2019, heavy winter storms and wave action caused a collapse of the southbound lane and lane closures (**Exhibit 11**). The collapse required the installation of 350 feet of piles and a slight realignment of the roadway inland by widening the inland side of a portion of the highway up to 11 feet. All emergency repair projects were within the existing State Right of Way (see **Exhibit 10** for a visual overview of these repairs).

Sea Level Rise

All these ongoing erosion trends are magnified by SLR resulting from human-induced climate change. Increased sea levels will increase the impact of erosion on the coastal bluffs in the project corridor and increase the extent of coastal inundation at Scotty

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Creek. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore, which will result in increased flooding, erosion, and storm impacts to coastal areas. In the case of structures or infrastructure that remains fixed in location on the shoreline, an increase in sea level will increase flood and erosion risks to the structures. Changing conditions could also alter the anticipated impacts of development upon coastal resources. In particular, coastal resources such as beaches and wetlands that are located just inland of the sea could disappear if they are squeezed between rising sea levels and a fixed line of development on the shoreline, thus impacting habitats, public access, recreation, visual, and other coastal resources. Therefore, to be consistent with the Chapter 3 policies of the Coastal Act, proposed development must be sited, designed, and conditioned in such a way that considers the impact of the development upon coastal resources over its full design life, avoiding and minimizing and mitigating those impacts as required by the Coastal Act.

As discussed in numerous recent Commission CDP findings, the State of California has undertaken significant research to understand how much sea level rise to expect over this century and to anticipate the likely impacts of such sea level rise. Primarily, state agencies, including the Coastal Commission, utilize the findings and projections of the Ocean Protection Council's (OPC) Science Advisory Team and their State of California Sea-Level Rise Guidance 2018 Update. This Guidance document provides high-level, statewide recommendations and projections for state agencies and other stakeholders to follow when analyzing SLR. Although SLR projections are inherently uncertain, especially as far out as the 2100 time-frame for the anticipated life-span of major infrastructure projects, the OPC guidance and projections provide the current best available science on SLR for California planning. The Coastal Commission's [Sea Level Rise Policy Guidance](#), updated in 2018 ("Commission SLR Guidance"), relies on and recommends using the OPC guidance.

The OPC Guidance provides sea level rise projections for twelve California tide gauges and recommends using the projections from the tide gauge closest to the project site. In this case, the Point Reyes tide gauge is the closest gauge in the OPC recommendations. The following table depicts the projected SLR at the Point Reyes tide gauge under low-risk, medium-high risk, and extreme risk aversion scenarios, as included in the Commission's SLR Guidance Appendix G, shown in the figure below.

Given the range of many uncertainties incorporated into the models, these projections are not precise, but are intended to reflect a precautionary approach. The low-risk aversion scenario is estimated to have a 17% probability of being exceeded, and the medium-high risk aversion scenario has an estimated 1 in 200 chance, or a 0.5%, probability of being exceeded. The extreme risk accounts for the extreme ice loss scenario and does not have an associated probability at this time. The physical processes that will lead to the extreme scenario of sea level rise are predicted to be unlikely to occur before the latter part of the century. As shown in the figure, the current SLR projections for the project area in 2100, the anticipated life-span of the project are

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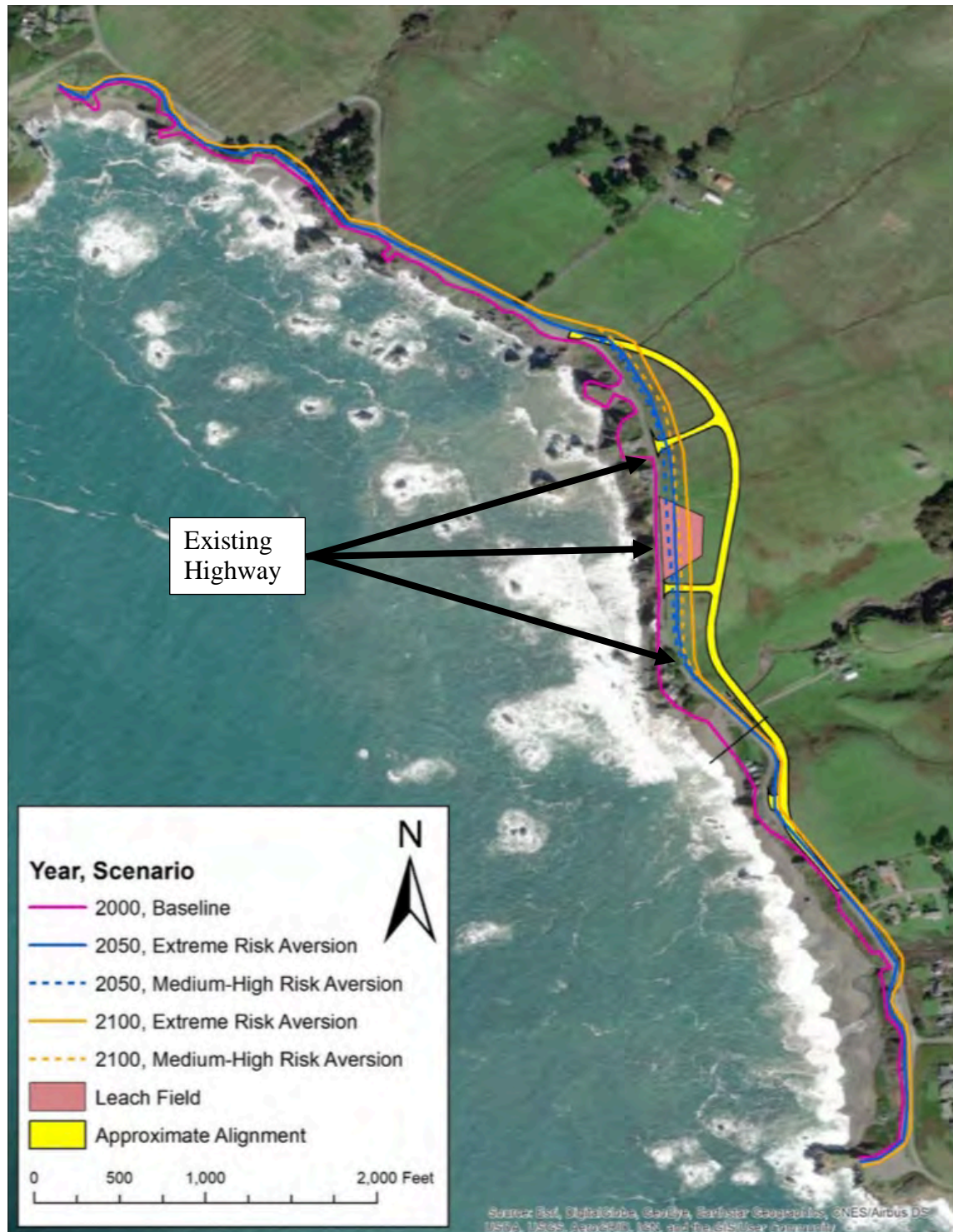
3.5 feet under the Low Risk Aversion Scenario, 7.0 feet under the Medium-High Risk Aversion Scenario, and 10.3 feet under the Extreme Risk Aversion Scenario.

Projected Sea Level Rise (in feet): <i>Point Reyes</i>			
	Probabilistic Projections (in feet) (based on Kopp et al. 2014)		H++ Scenario (Sweet et al. 2017)
	Low Risk Aversion	Medium-High Risk Aversion	Extreme Risk Aversion
	<i>Upper limit of "likely range" (~17% probability SLR exceeds...)</i>	<i>1-in-200 chance (0.5% probability SLR exceeds...)</i>	<i>Single scenario (no associated probability)</i>
2030	0.6	0.8	1.0
2040	0.8	1.3	1.8
2050	1.1	2.0	2.8
2060	1.5	2.7	3.9
2070	1.9	3.5	5.2
2080	2.4	4.6	6.7
2090	2.9	5.6	8.3
2100	3.5	7.0	10.3
2110*	3.6	7.3	12.0
2120	4.2	8.6	14.3
2130	4.7	10.1	16.6
2140	5.3	11.5	19.2
2150	5.9	13.1	22.0

OPC SLR Projections at Point Reyes Tide Gauge

While uncertainty will remain with regard to exactly how much sea levels will rise and when, the direction of sea level change is clear, and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high or even extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal California. Here, the highway improvements comprise critical infrastructure serving the public where failures could have significant coastal resource consequences. In such cases, the OPC Guidance and Coastal Commission SLR Guidance recommend that applicants for critical infrastructure understand the risks associated with the medium-high risk aversion scenario and extreme risk aversion scenario and anticipate the need to plan for those scenarios.

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Anticipated Bluff Top Retreat (Caltrans/WRECO 2020)

The figure above depicts the estimated magnitude of bluff retreat under the developed analysis. In this case, combining modeling for historical erosion rates, wave impacts and wave run-up, and incorporating SLR projections, Caltrans' geotech analysis provides a baseline of the bluff edge in 2000 and estimates the erosion of the bluff edge in 2050,

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and 2100 (**Exhibit 18**). The report provides further detail on the methodology of developing the erosion analysis, and potential erosion impacts, which are not summarized here. The report considered the medium-high risk aversion scenario and extreme risk aversion scenario in developing a projected bluff edge.

As evident in the graphic above and analysis in the report, parts of the existing highway border the year 2000 bluff top line (highlighted in purple) and most of the highway is alongside or west of the projected 2050 bluff top line, under either medium-high risk aversion or extreme risk aversion scenarios. Thus, using the SLR projections and modeling in other coastal erosion factors, segments of the existing highway do not currently minimize risks to life and property and do not currently assure stability and structural integrity, and the majority of the highway section is not projected to meet either criteria by 2050.

Highway Realignment

The proposed realignment is designed to set the majority of the relocated highway segment far back from these projected bluff edges, up to 370 feet inland. The Caltrans/WRECO (2020) bluff erosion analysis concludes that the proposed setbacks would be sufficient to assure the stability of most segments of the realigned highway until at least 2100, the lifespan of the project. As a managed retreat project, it is evident how the inland movement reduces exposure to erosion hazards and provides protection from SLR for a longer future than other alternatives. Based on these projections, the proposed project will ensure consistency with the LCP Environmental Hazards Recommendation 2 because it will move existing development currently within 100 feet of a bluff edge, or soon to be within 100 feet of a bluff edge, and place it outside of that limit for the expected lifespan of the project. In addition, moving Highway 1 from an area that is immediately threatened by coastal erosion will substantially reduce the potential need for future remedial measures over the life of the project, such as shoreline armoring, that would require alterations of the bluffs or interfere with shoreline sand supply.

However, it must be noted that the future bluff erosion and retreat projections contained in the Caltrans/WRECO (2020) analysis remain uncertain due to inherent uncertainty of bluff erosion here and the report's reliance on specific assumptions about the historical bluff retreat rate, how frequently high-water levels will occur during future storm events, and the degree to which marine processes (i.e., wave attack) influence the bluff retreat rates in the project area in comparison to other non-marine factors. The Commission's staff geologist and coastal engineers have reviewed the Caltrans/WRECO (2020) analysis, and while they agree that Caltrans' bluff retreat projections provide a reasonable picture of a range of potential future conditions, they also have concluded that greater amounts of bluff retreat could occur, and that it is not possible to rule out future scenarios in which bluff retreat, under high SLR conditions, could threaten larger portions of the realigned highway within the expected project life, most particularly the tie-in segments to the existing Highway 1 corridor as it continues to the north and south from the project limits. Overall, in order to assure the stability and structural integrity of the project in light of uncertainty around erosion projections, and to avoid the future need for shoreline protective devices that would have adverse effects on coastal

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resources, it will be necessary to carefully monitor the progression of SLR and bluff retreat during the anticipated project life, and provide for managed retreat, corridor adaptation planning, and take actions to assure the resilience of the highway realignment before shoreline protective devices are needed. The following sections discuss specific elements of the realignment project that may potentially have vulnerability prior to 2100 and the relevant special conditions to meet the above objectives.

Public Access Improvements

The proposed project includes the approval of certain public access improvements, a segment of the California Coastal Trail on the coastal bluff in the area of the existing Highway 1 alignment and west of the proposed realignment. Included in these improvements are the access roads that will provide public access to the CCT alignment from the new highway and public shoulder parking (and also provide residential access), which are also subject to the terms of the special conditions described in this section. As shown in the Figure above and in the WRECO analysis (**Exhibit 18**), these areas of the existing highway alignment are generally potentially threatened by erosion within the 2050 timeframe.

As discussed more fully below in **Section E**, Caltrans will transfer to Sonoma County all property interests that have public access utility seaward of the western right-of-way for the new realignment, including the areas of the existing Highway 1 that will be repurposed for the California Coastal Trail and the residential and public access connection roads. Thus, Sonoma County will own all the public access improvements proposed under the project, and the underlying existing right-of-way. (Existing private parcels, including the parcels west of the current highway, remain private at this time.) As also discussed below in this section and in **Section J** regarding Visual Resources, the County will additionally implement a clean-up of coastal hazards along the shoreline in this central area to remove prior structural armoring debris, including prior Caltrans emergency repairs that will continue to support the initial strand of the CCT until conditions change and the trail system will need to relocate inland.

As part of both those efforts, and as required by **Special Conditions 4 and 5** that will guide Caltrans' cooperative funding agreements, the County will undertake a coastal erosion monitoring program for the bluff edge portions of the project area that will be relinquished to it (i.e., the entire shore and bluff area west of the realigned existing Highway 1 between the realignment end points where the new highway will tie-back into the existing Highway 1 that continues to the north and south of the project limits). Guided by **Special Condition 4(b)(7)**, through a Final Phase I and II Gleason Beach Coastal Access Plan, the County will also lead the development of a managed inland retreat strategy for timely relocation of the CCT and other access improvements (including any access roads desired to be retained) for continuous connectivity and public use. Provisions for the removal of unused elements as retreat occurs, based on the monitoring plan undertaken pursuant to **Special Condition 5. Special Condition 4(b)(7)** also require that the managed retreat program ensures that any retained public access improvements can be maintained without reliance on shoreline armoring.

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Realignment Ends (Tie-ins)

Although most of the highway realignment is anticipated to be safe from coastal erosion for the expected lifespan of the project, as shown in the figure above, the northern and southern termini of the realignment will remain in close proximity to the edge of the bluff, and are potentially subject to erosion before 2100, the end of the project's anticipated lifespan, as early as 2050 under the SLR projections. These areas of the realignment that tie-back into the existing Highway 1 to the north and south will remain under Caltrans' ownership and are therefore a somewhat near-term or medium-term concern for Caltrans to address.

As should be apparent, for various fiscal and logistical reasons, any given highway realignment project must have beginning and end points and cannot include the entire Sonoma County coastline. In this case, the realignment project protects the most vulnerable sections of the highway towards 2100, but the highway must also reconnect with the Highway 1 alignment outside the project corridor. Thus, at those points, there is the heightened potential for vulnerability within the expected life of the project.

From a broader perspective, the predictable vulnerability of the realignment where it reconnects with the existing Highway 1 demonstrates the statewide need for larger corridor-wide planning for SLR and climate change. In the case of critical highway infrastructure, the longer-term solutions for coastal resilience need to come from planning that considers larger highway corridors or regions, rather than on a limited project-by-project basis. In this regard, Caltrans has several state and district efforts underway, including various statewide SLR planning efforts, the District 4 SLR Vulnerability Assessment (2018), the forthcoming District 4 SLR Vulnerability Priorities Assessment (2020), and upcoming Transportation Corridor Plans that will include SLR considerations. These efforts will inform how Caltrans adapts to SLR along Highway 1 up and down the coast, including this specific project corridor. Moreover, adapting major highway infrastructure requires integration with the local government's land use planning and LCP updates for SLR adaptation, a complex process that also continues to evolve.

As with most of the California coast, predicting the future of erosion here is uncertain. The Caltrans/WRECO analysis of erosional trends suggests that blufftop erosion will occur more slowly in the northern and southern end segments than in the central part of the alignment. However, the analysis also suggests that in addition to road segments immediately north and south of the project area, some 200 feet of the northern terminus and 500 feet of the southern terminus could be undermined by bluff erosion by 2050. Moreover, as noted above, coastal bluff erosion typically proceeds episodically, and the tie-in portions of the realignment could rapidly become threatened by just a few large bluff failure events, which could occur at any time during a strong winter storm season but are impossible to predict. Due to a variety of topographic and resource constraints, the chosen northern and southern end points were necessary for this current project. As a result, the vulnerability of the realignment tie-ins is potentially a somewhat near-term or medium-term concern that must be addressed in order for the project to be found consistent with Coastal Act Section 30253.

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Due to the identified risk to the road segment immediately north and south of this highway project, it is highly likely that these areas will need to be part of a corridor planning effort. A number of Caltrans statewide and district SLR planning efforts are underway, however, it is uncertain whether this planning effort will be completed for the subject area before the tie-in segments of this project become at risk. Therefore, the Commission is including **Special Condition 18** to preclude reliance on shoreline armoring here (discussed in detail below), and **Special Condition 6** provides for monitoring and adaptation planning of the end segments of the realignment and specifies that the monitoring information should be applied to the adjacent connecting segments of Highway 1 to the north and south. **Special Condition 6** also requires the submittal of a baseline report by November 30, 2021, which will identify monitoring methodology, reference monument points to evaluate blufftop retreat west of the realignment tie-in segments, and will use of annual photogrammetric mapping and high definition oblique aerial imaging through aerial photography or drones. In addition, **Special Condition 6** requires biennial reports on coastal erosion to regularly track the same information and document any changes in erosion rates or significant erosion events.

Given that the County will be monitoring bluff top erosion of the central portions of the project corridor as part of their cooperative funding agreement with Caltrans, it is logical for that monitoring to be coordinated with the monitoring for the project ends as provided in **Special Condition 5**. At the same time, the new tie-in segments of the highway realignment—as well as the connecting portion of Highway 1—are under Caltrans purview and responsibility and Caltrans will need to develop and implement (in coordination with the County and other entities), a long-term adaptation solution, particularly in light of the predictions of advancing blufftop erosion, including the influences of sea level rise. Therefore, **Special Condition 6** requires Caltrans to ensure the submittal of the biennial reports and additionally requires Caltrans to evaluate the biennial monitoring reports for the road tie-in segments. Considering the updated bluff retreat rates, significant erosion events, and other data, Caltrans will then submit a written determination to the Executive Director based on an evaluation of whether or not the north and south realignment tie-ins and Highway 1 generally in the project corridor remains safe from coastal erosion and are anticipated to remain safe for the next 15 years. With those written evaluations, Caltrans will also submit any updates on general SLR corridor planning undertaken relevant to the Gleason Beach project area.

Under **Special Condition 6**, once a written determination indicates that adverse impacts to any section of the realigned Highway 1 from coastal bluff erosion are anticipated within 15 years or less, Caltrans must submit evidence that appropriate corridor-wide SLR adaptation plans are underway or are being initiated to safely adapt those sections of Highway 1 before the estimated time period that adverse impacts will become significant (e.g., lead to emergency repairs or road closures). **Special Condition 6** also works in combination with **Special Condition 18** that prohibits future shoreline armoring in these areas and thus requires a proactive, safe, adaptation strategy to be implemented without reliance upon shoreline armoring for long-term protection. In sum, special conditions applied to this permit ensure that monitoring and

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adaptation planning processes will be in place to assure the future stability and structural integrity of the tie-ins without requiring shoreline protection, barring potential episodic events that may require temporary emergency repairs to maintain the functionality of Highway 1 in the interim.

Central Access Road above Scotty Creek

As discussed above, the project will include three access roads proposed in the project that provide residential access and public access to the CCT, Gleason Beach, public parking, and other public access improvements (**Exhibit 3**). These roads are subject to monitoring and retreat provisions described above. However, there are specific issues with the middle access road that provides access just north of Scotty Creek and is expected to include the public parking component. The initial project design developed by Caltrans for this residential and public access road proposed terminating the road just north of the remaining residential houses (approximately PM 15.4 and APN 101-120-049) at a point along the bluff where the house has already eroded away. This area is among the most unstable of the entire bluff line in the project area, does not appear a suitable terminus for an access road, and would potentially require protective armoring in the future, contrary to Coastal Act Section 30253(b). Working with Commission staff, Caltrans has drafted a conceptual alternative that will move the terminus of this access road to the south, ending behind the group of houses that sit behind a rocky formation, which is more stable than the rest of the bluff area. However, this new route will cross a wetland and slightly increase wetland impacts. Additionally, the exact final location of this access road, and all the access roads, needs to be determined in conjunction with the development of the final Public Access Plan and exact final location and design of the California Coastal Trail, as described below in **Section E**. Therefore, **Special Condition 16** requires the submittal of final construction plans for the access roads, prior to or upon the Executive Director's approval of the Phase I Gleason Beach Coastal Access Plan (required under **Special Condition 4.C.3**). **Special Condition 16** requires a revised location of the middle access road that relocates the western terminus southward to approximately PM 15.38 or farther south to avoid reliance upon shoreline armoring, while minimizing impacts to wetlands to the greatest extent feasible. To reduce potential impacts from increased road run-off, **Special Condition 16** also requires that the access roads be planned for permeable materials and meet Sonoma County standards.

B. Phased Removal of Emergency Repairs

To ensure consistency with Section 30253 and comply with the conditions of previously issued emergency permits, the project also provides for the removal of the shoreline armoring materials that Caltrans placed in prior years to address coastal erosion in the same highway segment. This includes the above referenced emergency repairs in 2004, 2017, and 2019 and covers approximately 450 linear feet of the bluff (**Exhibit 19**). Thus, this project provides the consolidated and required follow-up CDP review of these emergency repairs, including specifically, Sonoma County Emergency Coastal Development Permits CPH16-0010 and ZPE19-0103.

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As discussed below in **Section J**, Caltrans proposes to incorporate mitigation for visual impacts of the new bridge structure, into this project by entering into an in-lieu fee program with Sonoma County to undertake the cleanup of a debris field from collapsed private residences, shoreline armoring, and eroded highway structures along an 864-foot long stretch of the coastal bluff and shoreline west of existing Highway 1. The in-lieu fee program will be consistent with the conceptual plan in **Exhibit 28** and guided by **Special Condition 5**. As the local government with jurisdiction over the area, including LCP and building permit authorities, Sonoma County has partnered with Caltrans to correct code compliance issues, protect the health and safety of County residents, and safeguard coastal resources and public access through the clean-up of the structural debris field along this segment of the coastal bluff.

As described in more detail in **Section E** below regarding public access, all Caltrans property interests west of the western edge of the new Highway 1 realignment right-of-way to the western edge of the existing Highway 1 right-of-way in the project area that can be used for public access purposes (e.g., excluding utility easements) will be transferred to Sonoma County to be managed for long-term public access. This includes the area on which the prior Caltrans repairs sit (**Exhibit 10**). The in-lieu fee program between Caltrans and the County incorporates the cleanup of the previous emergency highway repairs in a manner that will support safe use of the CCT and other access amenities in that location for as long as possible until conditions require the managed retreat of the trail to maintain its long-term connectivity. In addition to the failed emergency repair materials on the bluff, Caltrans also has emergency repair structures that remain in place in the existing Highway 1 corridor on the blufftop, all of which the County will be addressing through its hazards cleanup program. By doing this through the in-lieu fee program, the County will be conducting the removal of the former Highway 1 repairs on behalf of Caltrans as part of this permit that also serves as the follow-up CDP to the previous emergency repair permit and in a way that benefits the County's management of the initial alignment of the CCT.

Special Condition 5 guides the development and implementation of this in-lieu fee program. As required by the condition, and before commencement of construction, Caltrans will enter into an in-lieu fee program cooperative funding agreement with Sonoma County and provide \$5 million to the County for the program. The in-lieu fee amount was jointly developed in partnership between Caltrans and Sonoma County based on development of preliminary removal concepts and estimated costs prepared by experienced Caltrans engineers in consultation with County staff and includes a contingency amount. The overall mitigation proposal was memorialized in several documents (the County's April 17, 2018 Board Resolution Number CPH17-0003, Caltrans District Director 4 Tony Taveres' April 18, 2020 letter to Sonoma County Supervisor Linda Hopkins and Caltrans Project Manager Lilian Acorda's September 14, 2020 letters to Commission and County staff) and is the basis of the conceptual plan in **Exhibit 28**.

Through the in-lieu fee program, removal of the emergency repairs will be conducted in phases to extend the utility of the existing Highway 1 corridor for public access and to avoid landform alterations until necessary. All currently visible and exposed highway-

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related debris on the shoreline and bluff will be removed in the first phase of clean-up, along with the private debris removal. However, some of the emergency structures are embedded in the highway prism and are providing protection from bluff erosion. Immediate removal of these structures would require construction operations with extensive grading of bluff areas that could create impacts to coastal resources. Additionally, as also discussed in **Section E**, the project will transform the existing Highway 1 into a public access coastal trail segment of the California Coastal trail (CCT) system with supporting access amenities. The Commission has long prioritized alignment of the CCT as close to the shoreline as feasible, including where it can be safely sited on bluff-tops within the sight, sound and smell of the sea. In the short and intermediate term, the existing highway emergency repairs will continue to help provide protection to the CCT and other access amenities and support public use of the existing Highway 1 alignment for coastal recreation. The current situation presents a different scenario than the placement of blufftop protection for a public access trail, rather it is a question of how and when to best remove existing emergency protection structures while minimizing impacts to coastal resources and maximizing public access opportunities.

As erosion exposes portions of these structures, they will be removed by the County through the in-lieu fee program and consistent with the Final Gleason Beach and Bluff Hazards Clean Up Plan specified in **Special Condition 5**. Eventually, all emergency structures will be removed, however, this will be accomplished over time as the forces of coastal erosion naturally expose the repair elements, rather than through an immediate removal program that would require substantial excavation and landform alteration and also undermine significant recreational opportunities

In sum, the project does not propose new blufftop armoring for a highway or for a public access trail, and as conditioned, such protection is prohibited in the future, except as a short-term emergency action; also, the project will phase the removal of armoring already placed as part of emergency repairs over a period of time that will be dependent on actual erosion at the site, and thereby avoid landform alteration and preserve coastal recreation and the CCT along the existing Highway 1 alignment for as long as feasible.

C. No Future Shoreline Armoring and Assumption of Risk

As discussed above, as a managed retreat project, this highway realignment proposal generally intends to set the majority of Highway 1 away from the threat of coastal erosion for the life of the project, through 2100. However, sections of the highway realignment, namely the roadway tie-ins, as well as many corollary improvements such as the initial public access improvements and access roads, remain subject to coastal erosion and are potentially threatened in the somewhat near-term or medium-term, as early as 2050 potentially. Coastal Act Section 30253 requires that new development assure stability and structural integrity and prohibits shoreline protective devices for new development. Aspects of the project as proposed therefore are not fully consistent with Sections 30253.

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While the realigned roadway, except for the tie-in areas of the project, is generally set back a sufficient distance such that it is not expected to be threatened by shoreline erosion for the anticipated life of the project, other smaller features incorporated into the project package are forecast to be subject to coastal erosion sooner. Therefore, **Special Condition 5(b)(2)(g)** provides that Caltrans' cooperating funding agreement with Sonoma County will ensure erosion monitoring along all the area of coastal bluff the length of the existing Highway 1 alignment to be repurposed as the California Coastal Trail. Additionally, **Special Condition 6** requires long-term monitoring of the realignment tie-in areas. Through Caltrans cooperating funding agreements, **Special Condition 4 (b)(7)** provides for the managed retreat of the CCT and public access amenities along the existing Highway 1 alignment. This latter condition recognizes that coastal trails have a shorter design life and can be much more easily relocated in smaller steps through a managed retreat program that is consistent with Section 30253. **Special Condition 6** provides for long-term adaptation planning of the tie-in segments along through highway corridor planning. And lastly, **Special Condition 19** prohibits future construction of shoreline armoring (other than the revetment described below at Section D) to protect any of the improvements authorized under this CDP.

Considering the aforementioned hazards, the Commission also attaches **Special Condition 19**, which requires the Caltrans to assume the risks of flooding and geologic hazards to the property and waive any claim of liability on the part of the Commission. Given that Caltrans has chosen to implement the project despite flooding and geologic risks, Caltrans must assume the risks. **Special Condition 19** notifies the Applicant that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires indemnification of the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards.

Taken together, and as conditioned, the proposed managed retreat of Highway 1 in this project is consistent with the Coastal Hazards section of the Coastal Act.

D. Proposed Revetment

The project does propose, however, to construct an approximately 200 linear foot revetment (including using whatever existing rock that as previously placed for armoring and that can be found in the beach area) as part of the plan for daylighting and restoring Scotty Creek and providing for public access to the beach. Once the existing double box culvert and roadway over Scotty Creek is removed, existing Highway 1 will terminate on either side of the creek, to the north and the south.

Both sides will serve as ends of the public access CCT trail, and a CCT trail bridge is planned to cross the creek, approximately in the location where the existing highway will be removed. The southern end of Highway 1 also provides necessary continuing access for the private driveway to the Ballard ranch, and public beach access parking and direct access to the beach. Scotty Creek is subject to winter flooding and wave run up from winter storms that can also impact the existing roadway at Scotty Creek. Thus, the

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remaining ends of existing Highway 1 here are potentially subject to flooding and erosion.



Proposed revetment at the end of existing Highway 1 (future required CCT bridge not shown).

To protect the existing public access and existing residential driveway connection, Caltrans proposes the revetment along the new southern terminus of the existing Highway 1 at the southern side of Scotty Creek, along the western, eastern, and north sides of the remaining highway stub. Along with ensuring an area of public beach access and public parking, the reuse of the existing Highway 1 roadway provides a landing area for the pedestrian CCT bridge crossing Scotty Creek. The proposed revetment includes 68 linear feet along the north end of the road terminus and bank of Scotty Creek, 110 linear feet on the west side, and 24 linear feet along the eastern end of the roadway. The revetment in total would occupy approximately 4,700 square feet.

Importantly, the revetment is needed in part to protect public access features, including a component of the CCT and existing public parking. The CCT and all public access components are subject to requirements for monitoring and long-term managed retreat, to be implemented through a Caltrans' cooperating funding agreement with Sonoma County and pursuant to **Special Conditions 4 and 5**. Ownership of the revetment and the Caltrans right-of-way will be transferred to Sonoma County at the completion of the realignment project. As Sonoma County undertakes monitoring of the bluff retreat and erosion in the project corridor, it will plan and implement managed retreat solutions for the CCT and public access improvements, per the cooperative funding agreements with Caltrans, with phased migration on to land or easements being provided by Caltrans east of the existing highway alignment and west of the new realignment or on other publicly-owned lands. Thus, as Sonoma County implements this managed retreat solution, it will also contemplate the future of the revetment either when it is no longer necessary or at the expiration of the authorization of the revetment in thirty years, whichever comes first, and will either remove the revetment or seek a CDP to extend it.

Although the revetment will protect public access in some areas in the short-term to medium-term, the revetment is not consistent with the various public access provisions of the Coastal Act, because it will reduce beach areas available to public use, impair the natural migration of beach inland, and impinge beach sand supply. The revetment is also inconsistent with visual protection policies of the Coastal Act in Section 30251

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because it will add artificial rock along a beach and disturb beach views and scenic views inland. However, the revetment may be nonetheless approvable under Section 30235 of the Coastal Act.

30235 Four Part Test

Under Coastal Act Section 30235, the Commission is required to allow construction of shoreline armoring that is otherwise inconsistent with the Coastal Act if the following test is met: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline altering construction is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply.

Existing Structure

The first Section 30235 test is whether a structure for which a shoreline protective device is proposed is considered “existing,” meaning existing prior to the effective date of the Coastal Act on January 1, 1977. In this case, Highway 1 is an existing highway with public beach access parking, beach access, and private driveway access to the Ballard Ranch. All of these elements were existing before 1977. Although some sections of the highway and some parking spaces will be removed, sections of the existing roadway and parking will remain. The revetment will protect the existing roadway, the existing access it provides to the private driveway to the ranch, and the existing public access parking and beach access. As such, the revetment meets the first Section 30235 test.

Danger from Erosion

The second Section 30235 test is whether the existing structure is in danger from erosion. In this case, the erosion analysis submitted by Caltrans shows that the existing highway is subject to erosion from flooding by wave run-up and from flooding by Scotty Creek, and that these impacts will be exacerbated by SLR. Without protection, the existing roadway will erode away and/or be subject to flooding, and could be lost in one storm season. In past projects, the Commission has interpreted ‘in danger’ temporally to mean within the next 2 to 3 storm seasons, and thus the revetment meets the second test of Section 30235.

Required/Only Feasible Alternative

The third test of Section 30235 is whether the proposed armoring is “required” to protect the existing structures in danger from erosion. In other words, shoreline armoring shall only be permitted if it is the only feasible alternative capable of protecting the existing endangered structures. Other alternatives to shoreline protective devices typically considered include the “no project” alternative, managed retreat (including abandonment and demolition of threatened structures), relocation of threatened structures and/or portions thereof, beach and sand replenishment programs, foundation underpinning, drainage and vegetation measures, and combinations of each. Additionally, if shoreline armoring is determined to be the only feasible alternative, this test also requires that the chosen structural design of the shoreline protective device be

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the least environmentally damaging option, including being the minimum necessary to protect the endangered structure in question.

Caltrans considered other alternatives, but they generally had increased impacts to coastal resources. The no-project alternative would mean not realigning the highway. As discussed in more detail below in **Section H** (ESHA), **Section I** (Wetlands), and **Section L** (Conflict Resolution), the no project alternative would leave Highway 1 subject to coastal erosion, increased temporary road closures, and eventually a complete closure of Highway 1. The no project alternative here would also not daylight Scotty Creek and realize those significant benefits to coastal stream habitat and the restoration of threatened salmon habitat (see **Section H** (ESHA)). Additionally, the no project alternative would leave a significant amount of rock that already exists on the beach, but is scattered around the existing Scotty Creek culverts, rather than clean-up and relocate these rocks.

Another alternative would be to realign the threatened sections of the existing highway rather than protect it with the proposed revetment. This would also entail the immediate removal of the existing Highway 1 alignment rather than its repurposing for public access purposes. However, this would interfere with existing rights and uses – namely, the existing public access that would be lost given that the public would now have no direct access to Gleason Beach, and the loss of existing private driveway access that Caltrans is required to maintain under the California Streets and Highways Code. There would also be increased impacts to wetlands caused by the excavation of the roadway and/or the relocation of the vulnerable section of remnant highway inland, which would also be in wetlands; and there are increased potential impacts to cultural resources that are located near the existing alignment, and this alternative would not fully remove the roadway from the flooding threats of Scotty Creek.

Another alternative includes removing the remnant end of existing Highway 1 from the vulnerable area and provide a new access road for the Ballard Ranch and eliminating the existing driveway and its connection to the existing Highway 1. However, all variants of this approach require substantial cut and fill to create a new access road on the steep hillside, with greatly increased potential impacts to wetlands, ESHA, cultural resources, and almost all required larger structures with larger impacts to visual resources. All would also likely diminish public access opportunities by removing or relocating back the beach public access point, and eliminating the CCT bridge across Scotty Creek, breaking the CCT trail connectivity.

Caltrans considered the construction of a vertical armoring structure to protect such existing development, however, this alternative was not selected because it increased impacts to coastal resources and would be more difficult to remove over time.

Thus, the revetment proposed represents the least environmentally damaging feasible alternative, including because it allows for the planned phased adaptation of the structures protected by this armoring, including removal, over time.

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Mitigation of Adverse Impacts

The fourth test that must be met in order for shoreline armoring to be approved under Section 30235 is that such armoring must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.⁴ Caltrans has minimized the revetment to eliminate adverse impacts as much as feasible. Specifically, the revetment that was originally proposed for the north side of the remnant end of Highway 1 has been removed from the project plans, and the revetment on the southern end has been reduced by eliminating sections of the revetment on the inland side and reducing the extent of the revetment towards the south. Importantly, the project will also remove existing historic rock scattered along the existing Highway 1 beach access and parking areas all along Scotty Creek. **Special Condition 7(a)** limits the extent of revetment placement to the amount proposed here – up to 200 linear feet and 4,800 square feet.

In instances of engineered shoreline armoring on a beach, the Commission attempts to quantify the impacts to sand supply, including: (1) the loss of the beach area on which the structure is located; (2) the long-term loss of beach that will result when the back-beach location is fixed on an eroding shoreline; and (3) the amount of material that would have been supplied to the beach if the bluff and back-beach were to erode naturally.

As to the first consideration, shoreline protective devices are physical structures that occupy space that would otherwise be unencumbered. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used by the public. This generally results in a loss of public access and recreational opportunity as well as a loss of sand and areas from which sand generating materials can be derived. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint. In this case, proposed revetment would be 200 linear feet total, with about 110 linear feet fronting the beach at some 5-10 feet in width (the proposed width is variable at this time). However, at least some of that area is already occupied by rock or steep roadway shoulders that will be reconfigured as the roadway is repurposed for public access. For these purposes here, the revetment is assumed to occupy 110 feet by 8 feet of beach area, or 880 square feet of direct encroachment.

As to the second consideration, when the backshore of a beach is encompassed by a hardened, protective structure such as a revetment or a seawall, the beach can no longer migrate inland. Beach areas are diminished as the beach is compressed between the ocean migrating landward and the fixed backshore. This is known as passive erosion or the "coastal squeeze". Such passive erosion impacts can be calculated over the time the proposed armoring is expected to be in place. Consistent with past practice, the Commission has established a methodology for calculating passive erosion, or the long-term loss of beach due to fixing the back beach. The area of beach lost due to long-term erosion is equal to the long-term average annual erosion

⁴ To be approvable under the Coastal Act it also needs to meet other coastal resource protection tests (e.g., for beach access, views, etc.),

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rate multiplied by the number of years that the back beach or bluff will be fixed, multiplied by the width of the property that will be protected.

In this case, decisions about the removal of the public access features at Scotty Creek will be undertaken through a managed retreat plan to be developed by the Gleason Beach Public Access Taskforce led by Sonoma County, and will be based on ongoing erosion monitoring. As discussed above, the WRECO report estimates the average annualized erosion rate at about 0.3 to 0.5 feet per year at this specific location at Scotty Creek Beach. The WRECO report also indicates that under most SLR scenarios (see above) the area of the remnant end of Highway 1 will be threatened by erosion by 2050, at which time the public access improvements would be relocated and the revetment here removed (see discussion below on duration of revetment). Therefore, although a rough estimate, this analysis assumes a 30-year lifespan for the revetment. Applying a conservative 0.5 feet per year average annual rate of erosion over the first 30 years of the 110-foot long seawall being present, 1,650 square feet of beach will have been lost through the next 30-year period due to armoring here. **Special Condition 7** also provides that if the revetment is in place longer than 30 years, Caltrans or the future property owner will have to submit a CDP amendment application to remove the revetment.

As to the third consideration, engineered shoreline armoring can lead to the loss of sand and sand generating materials otherwise generated by the natural interchange of ocean and shoreline, among other natural interchanges that can influence sand supply. When the bluff/shoreline is armored with a shoreline protective device, the natural exchange of material from the armored area to the beach and shoreline is interrupted, and, if the armored bluff area would have otherwise eroded, there will be a measurable loss of material provided to the beach and shoreline, contributing to a loss of sandy beach. Based on rough estimates of the beach quality material in the roadway shoulders, the proposed revetment would lead to a loss of an estimated 2.04 cubic yards of sand per year, or 61 cubic yards over 30 years.

In sum, using rough estimates, the project's proposed revetment could result in the loss of 2,530 square feet of beach and an additional 61 cubic yards of sand supply over the next 30 years.

Some of these impacts are mitigated by project design. For example, daylighting of Scotty Creek is likely to help allow more sediment to make it to the sand supply system. Scotty Creek historically, and to some extent currently, contributes to sand replenishment of Gleason Beach. That replenishment, however, has been impaired by the presence of the culverts which restrict and capture sediment transport.⁵ Exactly, how much additional sand the project's proposed daylighting of Scotty Creek will create is uncertain; however, it appears that at least some more sand will be provided to the system as a result, helping to offset the identified impacts.

⁵ And Caltrans notes that it has had to clear sediment from these culverts in the past.

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In past projects, based on research of sand cost and transport, the Commission has ascribed a \$50 - \$100 per cubic yard cost to deliver beach quality sand to the beach. If that were applied to the 61 cubic yards, it would equate to \$3,050 - \$6,100, and here the Commission applies the conservative principle to arrive at \$6,100. As to the 2,530 square feet of lost beach over 30 years, the most obvious in-kind mitigation for these impacts would be to create a new 2,530 square-foot area of beach/shoreline to replace that which will be lost over the first 30 years with an identical area of beach/shoreline in close proximity to the lost beach/shoreline area. While in concept this would be the most direct mitigation approach, finding an area that can be turned into a beach and ensuring it does so appropriately over time is very difficult in practice. At the same time, the calculations of affected area do provide a means to identify an appropriate relative scale for evaluating alternative mitigations. For example, in the past the Commission has looked at several ways to value such lost beach and shoreline areas in order to determine appropriate in-lieu mitigation fees, including evaluating the recreational value of the beach/shoreline in terms of the larger economy, as well as the real estate value of the land that would have otherwise gone to public beach/shoreline use.

In terms of the recreational beach and shoreline value, the Commission has recognized that in addition to the more qualitative social benefits of beaches and shoreline areas (recreational, aesthetic, habitat values, etc.), beaches and shoreline areas provide significant direct and indirect revenues to local economies, the state, and the nation. It is well-recognized that the ocean and the coastline of California contribute greatly to the California economy through activities such as tourism, fishing, recreation, and other commercial activities.⁶ There is also value in just spending a day at the beach and having wildlife and clean water at that beach, and being able to walk along a stretch of beach and shoreline. Society also benefits from access to beach and shoreline areas, including through contribution to the local community and the broader regional social fabric and cultural identity, though this value is more difficult to quantify. In addition, the loss of access to a sandy beach raises the issue of environmental justice that is similarly challenging to put a price tag on (see also environmental justice discussion in the Public Access and Recreation findings that follow).

Thus, these recreational impacts are, in many cases, difficult to quantify, including at sites such as this where visitation data needed for certain economic impact models are lacking. In other cases (including cases where visitation data was also lacking), the Commission has found that using a real estate valuation method as a basis for identifying mitigation allows for objective quantification of the value of lost beach and shoreline area and that this valuation is appropriate both in terms of the scope of the impacts and the rational basis for applying such methodology.⁷ This method requires an evaluation of the cost of property that could be purchased and allowed to erode and turn

⁶ See Coastal Commission's [Adopted Sea Level Rise Policy Guidance](#): "Just over 21 million people lived in California's coastal counties as of July 2014 (CDF 2014), and the state supports a \$40 billion coastal and ocean economy (NOEP 2010)."

⁷ See, for example, CDPs 2-10-039 (Land's End seawall), 2-11-009 (City of Pacifica shoreline armoring), A-3-PSB-12-042 and A-3-PSB-12-043 (Pismo seawalls), and 3-16-0345 (Honjo seawall).

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into beach naturally to offset the area that will be lost due to the construction and continued placement of the armoring over time.

Toward this end, the market values of representative blufftop properties near the project area supply a means to identify what it might cost to purchase such property and allow it to erode in this way to create offsetting beach/shoreline recreational space. Specifically, this review was conducted by looking at the sales of blufftop property in this specific area within the last three years. This value is then divided by the property square footage to arrive at a price per square-foot. The price per square-foot calculation serves as a way to gauge the cost of acquiring an equivalent blufftop property area that could be allowed to erode to provide an equivalent amount of beach and shoreline area to that which will be lost over the 30-year mitigation timeframe.

In other projects, Commission staff has evaluated a range of properties for which sales information was available within the vicinity of the proposed project in order to create an averaged estimate of the value of beach space. In this case, however, there is a direct source for such an estimation available. Caltrans has already acquired a portion of a beach parcel on Scotty Creek, which it transferred to the County for public access and recreation. Caltrans acquired that beach area earlier in this year (2020) based on an appraisal and fair market value.⁸ The beach area acquired was 0.7 acres, or about 30,490 square feet, at a cost of \$144,000, which equates to \$4.72 per square foot. Applying this per-square-foot land acquisition value to the identified 30-year square-foot impact results in an estimated monetary value of \$11,942 for the loss of beach and shoreline use areas (i.e., 2,530 square feet x \$4.72/square foot = \$11,942). The Commission finds that this impact valuation amount is most closely tied to specific property values in the vicinity of the project and is thus both reasonably related and roughly proportional to the anticipated impacts of the approved armoring on beach and shoreline use areas through the up to 30 years it is in place and could be applied as a mitigation fee for the those impacts.

In total, through the 30-year mitigation timeframe, these sand supply and related beach/shoreline loss impacts associated with the armoring would result in a required mitigation fee of \$18,042 (i.e., \$11,942 + \$6,100 = \$18,042). Based on the above analysis, such a figure is both reasonably related and roughly proportional to the quantifiable impacts of the approved armoring. However, rather than requiring a mitigation fee of \$18,042 to facilitate possible beach and shoreline access acquisition and/or improvements as a means of offsetting this identified impact, a series of immediate public access improvements nearby the project site, described in more detail below, can most effectively offset such impacts. Through this project, Caltrans will provide \$1.2 million in funds for these public improvements, far more than the \$18,042, including acquiring fee title for the public of 0.7 acres of direct beach area on Gleason

⁸ The portion of the parcel purchased by Caltrans had extensive history of public access, and while prescriptive rights had not been formally recognized on the site, it was generally acknowledged that there were likely such rights on this site. Additionally, the beach parcel portion was entirely sandy, with no additional development rights.

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Beach at a cost of \$80,000. (The County also provided \$64,000 for this purchase.)

When viable, the Commission has historically offset identified impacts via in-kind public access improvement projects. Because this option is generally only available with public agency applicants, in this case there is a unique opportunity for Caltrans to provide for a series of improvements that together can appropriately offset these beach and shoreline area recreational access impacts as part of an overall mitigation package in place of a fee. Such mitigation strategies can allow for mitigation benefits to be realized in the near term and in the area of the impacts, as opposed to fees that might not be spent for many years, and mitigation not timely realized as a result. The idea is to acknowledge that the value of a fee diminishes over time in terms of what it can result in, and improvements only become more expensive over time, and to place a premium on improvements that can be realized in the near term

As discussed below in **Section E** (public access), the proposed project includes substantial public access and beach improvements that can appropriately and proportionately offset these impacts. As mentioned above, these improvements include contributing \$80,000 to purchase 0.7 acres of beach land directly on Scotty Creek, which permanently secures public beach access rights, connects to beach property owned by the State Coastal Conservancy, and provides access to public trust lands and close by State Parks beach parcels. The public access package also includes multiple other public access improvements such as a new segment of the California Coastal Trail (CCT), a new CCT bridge over Scotty Creek, new, widened roadway shoulders and a pedestrian crossing of the new highway bridge, new public access parking, and provisions for transferring Caltrans right-of-way to Sonoma County for ownership of the public access improvements and additional space for the managed retreat of the CCT over time. In total, Caltrans is providing \$1.2 million for public access on or directly adjacent to the area impacted.

Additionally, as described in **Section J**, the project overall will be removing riprap that has historically been placed around Scotty Creek and the debris from private shoreline armoring along an 864-foot long stretch of the coastal bluff and shoreline directly north of the revetment (see **Exhibit 28**). While arguably such removal and restoration should be required because the armoring was largely unpermitted, the shoreline armoring was placed by other private parties and the removal of the debris, along with realignment of the highway, will greatly reduce the need for future shoreline armoring over much of this bluff shoreline, freeing up beach areas and allowing natural processes of beach formation to return for most of the project area. At one time, the beach at Gleason Beach ran from the Scotty Creek area (where the revetment is proposed) to the north end of the project corridor where the small inaccessible Gleason Beach cove now sits. The private residential shoreline armoring for the Gleason Beach subdivision led to a reduction of sand supply and beach area directly in front of this bluff area. Since then, erosion has significantly increased in this stretch, as seen by the loss of houses and impacts to the highway. Although being undertaken as visual mitigation for visual impacts, the removal of the shoreline armoring debris, in conjunction with the highway realignment, under this project will also allow for the resumption of normal beach

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processes. If Gleason Beach is able to return to its historical shape, that would return some 1,200 linear feet of beach to the coast here.

Therefore, the public access improvements, removal of shoreline armoring, and minimization measures all constitute an appropriate and adequate compensatory mitigation package to offset the impacts identified above, and to be able to find the project consistent with Coastal Act Section 30235.

Duration of Armoring Authorization & Maintenance and Monitoring Requirements

Lastly, the proposed revetment should be considered in the context of the overall proposed managed retreat solution here. As coastal erosion advances and threatens the public access improvements, they will be relocated back to a safe distance. When the public parking, CCT bridge, and CCT trail connection at Scotty Creek are no longer safe from erosion or can no longer connect to the CCT, they will be removed and relocated. At that time, the revetment will also be removed (see **Special Condition 7**).

Section 30235 only requires authorization of shoreline protection devices when necessary to serve a coastal-dependent use or protect an existing structure in danger of erosion. Therefore, when existing structures or coastal-dependent uses are no longer present or no longer require armoring, the rationale for authorizing the shoreline protection device disappears. Shoreline armoring impedes public access to and along the shoreline, adversely impacts beaches and shoreline recreational areas, potentially increases erosion on adjacent properties, and visually impairs this coastal area. Therefore, it is necessary to ensure that the shoreline protection as constructed is not allowed to outlast the structure/use it was designed and approved to protect, including the CCT.

Under **Special Condition 7**, the revetment is only authorized so long as the protected infrastructure exists and/or requires the revetment, or thirty years, whichever is sooner. At such a time, the then owner of the revetment (e.g., Sonoma County) shall submit a plan to remove the revetment and appropriately restore the underlying beach and bluff areas to natural conditions in a manner with the least coastal resource impacts, or may apply for a new CDP to allow for the existing or a reconfigured revetment to remain at that location. If the owner of the revetment elects to apply for a new CDP, then that application must demonstrate that the proposal meets all policies of the Coastal Act and the LCP. Additionally, to provide long-term structural stability and ensure that the proposed project is properly maintained, **Special Condition 7** requires monitoring and related reporting at five-year intervals. Monitoring of the revetment will be undertaken by the County through the monitoring program it has committed to for all public access amenities along the coastal bluff consistent with the requirements of **Special Conditions 4 and 5**. **Special Conditions 7** requires the property owner to maintain the rock revetment placed at Scotty Creek in its approved state. **Special Condition 7** also authorizes ongoing maintenance and repair of the revetment to ensure the revetment remains structurally sound, consistent with the layout in the approved plans of this CDP, and that there is retrieval and clean-up of any loose rock materials that move seaward of the approved footprint to minimize impacts to the beach or beach access. Any

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maintenance and repair work are subject to certain limitations, including that notice be provided before repair work, that Caltrans be in general compliance with this CDP, and that the repair authorization is limited by five-year review periods under which the Executive Director will ensure ongoing compliance with this CDP and the terms of **Special Condition 7**.

Visual Mitigation

Lastly, the project as conditioned includes minimization measures to reduce the visual impacts of the revetment. Except for some of the rocks around the ends of the proposed roadway terminus, under **Special Condition 7(b)**, the rocks will be covered in soil, non-plastic erosion control materials if needed, and planted with appropriate native vegetation.

Conclusion

The proposed realignment of the highway, as conditioned herein, will increase coastal resilience and reduce reliance on shoreline armoring and is the least environmentally damaging feasible alternative. If Caltrans continued the approach of installing emergency bluff armoring in response to erosion hazards, it will not effectively minimize risks to life and property in areas of high geologic hazards, assure structural integrity, or protect this popular visitor destination. Eventually erosion at this location would become unmanageable. In a “no project” scenario, the highway would ultimately fail, with impacts to public safety, public access, public views, and coastal waters. This approach would also rely on continued shoreline armoring inconsistent with Section 30253.

Instead, this proposed managed retreat project will route Highway 1 inland, to a location further away from the threat of coastal hazards and out of such harm’s way. Therefore, the proposed realignment will prevent the need for new shoreline armoring and will ensure that the new alignment of Highway 1 is more consistent with Section 30253. The project does, however, include some new shoreline armoring. This armoring is limited in extent and with the proposed project elements to remove all the existing emergency armoring over time, as well as other derelict armoring and related debris from the beach and shoreline, the impacts of this armoring are minimized and mitigated, and the other requirements of Section 30253 are met.

The proposed project also fulfills one of the principles of the Commission’s [Sea Level Rise Policy Guidance](#) related to coastal hazards that prioritizes soft adaptation strategies, like managed retreat, that ensure long-term protection of both major infrastructure and coastal resources like public access and habitat. Principle 12 calls for a long-term approach that maximizes natural shoreline values and processes, and in turn, avoids the expansion and use of shoreline armoring. Despite the complex planning involved, managed retreat of the highway is used as the primary approach in this project to keep the road safe from erosion, a severe and ongoing problem that will be aggravated by sea level rise. Managed retreat also allows for significant opportunities – including the restoration of Scotty Creek through the removal of box culverts and the highway, and for increased public access through various public access improvements and new segments of the California Coastal Trail. Most importantly, managed retreat

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will allow natural coastal processes to continue, thus meeting the dual goals highlighted in the Sea Level Rise Policy Guidance of protecting both important infrastructure and coastal resources. In sum, as conditions, the proposed project represents an appropriate measure to ensure the continued reliability of Highway 1.

Finally, the conditions imposed on the proposed project require the phased removal of prior emergency repair structures installed by Caltrans, provide for monitoring and future adaptation planning, set limits of the placement of the revetment as well as requiring monitoring and maintenance of the revetment, and prohibit the use of future shoreline armoring devices.

Therefore, as proposed and conditioned, the project is consistent with the coastal hazards policies of the Coastal Act.

E. Public Access and Recreation

1. Applicable Coastal Act Provisions

The Coastal Act places a fundamental and critical emphasis on public access and recreation, particularly as it relates to prime visitor destinations such as the Sonoma Coast. The Coastal Act protects and affirmatively requires provision of maximum public access and recreational opportunities. In many instances, the Commission has considered providing a statewide coastal trail along the shoreline as a key means of fulfilling a number of Coastal Act public access policies. Applicable Coastal Act public recreational access provisions state:

Section 30210. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212(a). Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway. ...

Section 30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...

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Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Further, Coastal Act Section 30240(b) protects sensitive habitat, as well as parks and recreation areas, such as the adjacent beach:

Section 30240(b). Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

And finally, although not a Chapter 3 policy, Section 30609.5 is relevant when a state entity transfers the ownership status of public highway, public easement, or other public lands seaward of the first public road, stating:

Section 30609.5. ... no state land that is located between the first public road and the sea, with an existing or potential public accessway to or from the sea, or that the commission has formally designated as part of the California Coastal Trail, shall be transferred or sold by the state to any private entity unless the state retains a permanent property interest in the land adequate to provide public access to or along the sea. In any transfer or sale of real property by a state agency to a private entity or person pursuant to this section, the instrument of conveyance created by the state shall require that the private entity or person or the entity or person's successors or assigns manage the property in such a way as to ensure that existing or potential public access is not diminished. The instrument of conveyance shall further require that any violation of this management requirement shall result in the reversion of the real property to the state.

Although not enumerated here, a number of provisions of Sonoma County's LCP and related county planning documents also support protecting and enhancing public access along the shoreline of the Sonoma Coast. These provisions include specific support for public access at the Gleason Beach area, as variously cited below.

These overlapping policies clearly protect access to and along the shoreline and to offshore waters for public access and recreation purposes, particularly free and low-cost access. In particular, Section 30210 of the Coastal Act requires the Commission to provide the general public maximum access and recreational opportunities, while

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respecting the rights of private property owners. Section 30211 prohibits development from interfering with the public's right of access to the sea where acquired through use or by legislation. In approving new development, Section 30212 requires new development to provide access from the nearest public roadway to the shoreline and along the coast, save certain limited exceptions, such as existing adequate nearby access. Section 30213 speaks to ensuring that free and low-cost options are available to coastal visitors. And Sections 30220 through 30223 protect coastal areas suited for water-oriented activities, oceanfront land suitable for recreational use, and upland areas needed to support recreational uses, all of which are applicable in this case.

Finally, it is noted here that the Coastal Act Section 30210 direction to maximize access represents a different threshold than to simply provide or protect such access, and is fundamentally different from other like provisions in this respect: it is not enough to simply provide access to and along the coast, and not enough to simply protect access; rather such access must also be maximized. This terminology distinguishes the Coastal Act in certain respects, and provides fundamental direction with respect to projects along the California coast that raise public access issues, like this one. Therefore, it is also critically important that the Commission ensure that the project maximizes public access and recreational opportunities over the time period when the project remains and that it includes measures to avoid (and where unavoidable appropriately mitigate) potential public recreational access impacts.

2. Consistency Analysis

Highway 1 provides the essential transportation corridor along the Sonoma County coast and is considered one of the state's premier recreational travel routes. As it runs generally through the project corridor, from north to south, Highway 1 connects the town of Jenner along the Russian River to the town of Bodega Bay about 10 miles away. At both Jenner and Bodega Bay, relatively major rural roadways connect inland to the major north-south freeway Highway 101, approximately 30 miles away. Except for some minor, very small and often steep, twisty rural roads, no inland routes exist in the general project area. For most of the local community and visitors alike, Highway 1 provides the only feasible route up and down the coast for reaching beaches and scenic viewpoints along this part of the coast. As this key coastal corridor runs along the coastline, hugging steep coastal bluffs, dipping down for coastal streams or beach access points, through a largely rural and undeveloped setting, coastal Highway 1 provides incredible coastal vistas and is itself a coastal visitor destination, providing a form of coastal recreation for drivers, cyclists, and general visitors.

Coastal Highway 1 in and adjacent to the project corridor also provides several nearby popular Highway 1 pull-out locations that provide scenic viewpoints, access to trails, or for access to pocket beaches or rocky coves. Most of these pull-out spots are largely undeveloped and informal highway dirt or gravel pull overs. From just north of the project corridor, Highway 1 passes the mouth of the Russian River, Goat Rock and Sonoma Coast State Park, Duncan Landing, Shell Beach and the Kortum Coastal Trail, and Rock Point Beach. At the north end of the project corridor is the beach formally known as Gleason Beach. At one time, Gleason Beach ran all the way along the base of the bluff to the beach at Scotty Creek discussed below. However, because of erosion

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the beach has almost completely eroded away in between the two remaining beach sections. Because of the steep bluffs, the northern remnant of Gleason Beach is essentially inaccessible at most tides. The California Department of Parks and Recreation (“State Parks”) owns a parcel here that includes much of the bluff, Gleason Beach, and the actual fee parcel on which a segment of existing Highway 1 runs. The highway runs southward along the top of the steep bluffs and past the Gleason Beach area at Scotty Creek, discussed immediately below. South of the project corridor are additional beaches and pull-overs, including Portuguese Beach, Schoolhouse Beach, and Carmet Beach as the highway continues to Bodega Bay.

No existing developed coastal trails connect these beaches or otherwise provide access to trails along the bluffs, and no developed segments of the California Coastal Trail (CCT) exist in or near the project corridor, other than along the shoulder of Highway 1 itself. The existing Highway 1 also has narrow (less than 2 feet) or nonexistent shoulders, which makes cycling through the corridor less safe, and small (as narrow as 10-foot in places) lanes, which compresses the shoulder space for cyclists and pedestrians further.

The central beach access point in the project corridor is an informal pull-out area adjacent to the southern remaining end of Gleason Beach (also referred to as Scotty Creek Beach), a recreational beach area at the mouth of Scotty Creek (**Exhibit 5**). Visitors to Gleason Beach area at Scotty Creek currently make use of gravel shoulders on the north and southbound Highway 1 traffic lanes to access the beach (**Exhibit 6**). Caltrans estimates that approximately 16 informal parking spaces currently line the highway. However, the area is subject to erosion, both from the creek and from ocean wave run-up, and the amount of informal parking has often appeared less over time because of erosion.

To reach to the sandy beach, some visitors park on the east side of Highway 1, cross the highway and oncoming highway traffic, and then scramble down an 8 to 12-foot eroded berm. This main access point onto Gleason Beach area has long taken place over land that is privately owned (APN 101-120-058). However, the public has long used the access point and the Sonoma County LCP describes this location as probably having prescriptive public access rights. Absent purchase, costly and uncertain litigation is necessary to permanently secure such public access rights. In an effort to perfect the public’s beach access rights as part of this project, Caltrans entered into a partnership to jointly acquire a portion of APN 101-120-058 with Sonoma County. That transaction has been completed and the County accepted title to the property on February 11, 2020. This is an extremely important purchase of a parcel area that will ensure the public’s ability to access the mean high tide line and other public beach areas. Adjacent to the newly-acquired parcel is an up-coast sandy beach parcel owned by the State Coastal Conservancy. Two parcels downcoast are owned by State Parks and include sandy beach areas.

Potential Impacts

The first impact to consider is what happens if the realignment project is not undertaken. Although emergency shoreline armoring could keep Highway 1 open in the near-term,

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along with the negative impacts to coastal resources of such an approach, it will not prevent the erosion and loss of Highway 1 in the relatively near future. Even in the immediate future, temporary lane or full highway closures will occur with erosion events and to allow emergency repair work. As discussed in **Section E** above, on occasion, erosion has already undermined portions of the highway, larger portions are at risk, and SLR projections show that by 2050 virtually all the highway in the project corridor will be undermined. The loss of Highway 1, whether for temporary periods in the short-term and especially in the long-term, will have severe negative impacts to public access and recreation along the Sonoma coast. There are no nearby alternative routes, except for detours far to the inland. Through access north and south will be lost, greatly limiting access to reach the many coastal recreation areas north and south of the project corridor. The ability of Highway 1 to function as a scenic coastal resource itself would also be significantly impacted.

Thus, overall, the realignment project alone has significant public access benefits by ensuring that Highway 1 remains open and safe, providing essential travel for residents and visitors to the Sonoma Coast and ensuring continued access to multiple public access points.

However, the project will have some direct negative impacts to public access. First, the informal parking areas at Scotty Creek will be impacted, which could also impact direct access to the beach. Currently, the informal shoulder parking sits above the culverts and roadway prism. During the construction period, the existing highway alignment and beach access will remain open to public use. Once the new highway alignment is complete, the existing double box culvert across Scotty Creek and the roadway prism and fill blocking the creek will be removed to allow the creek to restore to its natural flow pattern. As discussed below, a segment of this highway section will remain with the existing parking. However, there will be some loss of existing parking at this location.

Second, there may be some impacts to through traffic and through cycling access on Highway 1 related to construction delays. However, those will be limited in this case because the new realignment will be constructed while the existing alignment remains in place and open.

Third, there could be some loss of beach area caused by the restoration of Scotty Creek and the placement of a beach public access point there. The restored creek may spread out water flows and render some sandy areas inaccessible. Conversely, it is also possible that the restoration of Scotty Creek and its tidal interchange is likely to lead to the restoration of original natural conditions and additional sand benefits, which may create more sand beach area.

Finally, the placement of a 200 linear foot of revetment is necessary to protect the roadway end and public parking will have public access impacts. Specifically, 110 linear feet of the revetment would be placed on the western beach side, where it will encroach on 880 square feet, or 0.02 acres, of beach, compared to a typical directly accessible beach size of 2.2 acres. The revetment is also estimated to lead to a loss over an anticipated 30-year life of an estimated 1,650 square feet (0.04 acres) of beach and 61

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cubic yards of sand from the system (i.e., it is estimated that it will be removed before then as part of the planned managed retreat of facilities here). The encroachment and estimated beach loss area totals 2530 square feet (0.06 acres) As stated above (see previous section), this impact has been quantified as a \$18,042 impact were there to be a mitigation fee requirement.

Mitigation & Minimization Measures

The proposed project includes a number of direct public access improvements and measures to alleviate these impacts and to ensure that the overall project is multi-modal and consistent with many of Caltrans transportation system goals (**Exhibit 14**). **Special Condition 3** and **Special Condition 4** require the completion of a Gleason Beach Public Access Package with various improvements, described in more detail below. Per the commitments outlined in the Gleason Beach Conceptual Public Access Plan (**Exhibit 19**), Caltrans has incorporated a number of public access enhancements into the overall construction project. Overall, Caltrans is providing \$1.2 million dollars in funding for public access improvements as part of this project.

First, to minimize impacts during construction, the project would limit road and lane closures and ensure that through bicycle access (and pedestrian, albeit expected to be limited) is maintained. The project will include roadside push-buttons for cyclists and pedestrians to provide warnings to traffic of their presence. **Special Condition 2** requires that Caltrans submit a final Traffic Management Plan that demonstrates lane closures are the minimum necessary and that such cycling and pedestrian access is protected.

Secondly, the project includes a proposed Gleason Beach Public Access Package with several key components. Four aspects of this package are incorporated directly into this project and are briefly discussed immediately below, and the most significant feature, a new braid of the California Coastal Trail (CCT), is covered in more detail in the next sub-section.

The first improvement proposed in the Gleason Beach Public Access Package is to restore and improve public parking. The existing public access parking at Scotty Creek is estimated to allow for approximately sixteen vehicles. While the existing highway roadway will continue up to a new termination just south of Scotty Creek to allow for the CCT and related public access and to maintain access to an existing private access to the Ballard Ranch, most of the sixteen spaces will be lost. At this new terminus of the existing Highway 1, Caltrans proposes to retain approximately four parking spaces to continue to provide direct beach access, but more planning for the overall parking strategy is needed. Per a cooperating funding agreement, Caltrans is transferring funding to Sonoma County to develop a Final Phase I and II Coastal Access Plan in consultation with a Gleason Beach Coastal Access Taskforce to be convened by Sonoma County. This effort will determine the final configuration of parking within the access road network and result in a new total area to accommodate 16-20 automobiles. Parking spaces located north of Scotty Creek will accommodate the vehicles of visitors to the CCT and other access amenities, and Gleason Beach itself via a new CCT bridge over the old alignment crossing the restored Scotty Creek channel. In addition, the

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drivers of these vehicles will also be able load and unload their items at a vehicle turn around just north of Scotty Creek on the repurposed existing Highway 1. The new blufftop parking areas will also be more secure from erosion and winter storm waves and thus more consistently available. Additionally, one of the spots (either on the bluff top or south of Scotty Creek on the access road) is proposed to be ADA accessible, increasing public access accessibility here. Thus, overall the project provides a net improvement in available parking.

A second improvement proposed in the Gleason Beach Public Access Package is to improve and widen roadway shoulders for improved cycling access. Current road shoulders are either non-existent or under 2 feet. This project proposes 4-foot wide paved roadway shoulders to increase safe public access for cyclists through the corridor, a public access benefit, along with 4-foot unpaved shoulders on the outside providing additional breathing room for cyclists. Across the new proposed bridge, the shoulders will expand to 6 feet for additional safety. Lanes will also be widened to 12 feet from the current 10 feet, which will enhance traffic safety as well as provide further breathing space between cars and cyclists.

A third improvement proposed in the Gleason Beach Public Access Package is to provide a separated 6-foot wide pedestrian sidewalk across the bridge as a new public access amenity for the location that will provide a safe crossing of Scotty Creek for the life of the project (see **Exhibit 15**).

A fourth improvement proposed in the Gleason Beach Public Access Package is to secure public beach access to Gleason Beach. As noted above, Caltrans has already worked with Sonoma County as part of this project to acquire fee title to a portion of a private parcel (Assessor's Parcel Number 101-120-058) that the public has used for access to the beach for decades, and that property is now held by Sonoma County. This secures public access rights to the beach and all its public trust areas in perpetuity. The acquired parcel will be combined with the adjacent State Coastal Conservancy parcel, to form a significant amount of beach area in public ownership and connected to public trust lands below the mean high tide line, all in close proximity to State Parks beach parcels. Caltrans and the County each contributed to the purchase of the parcel portion, and the County accepted fee title on February 11, 2020.

California Coastal Trail

A fifth, and most important, improvement proposed in the Gleason Beach Public Access Package is to complete a new and long-envisioned segment of the [California Coastal Trail \(CCT\)](#) for the Sonoma coastline. The CCT is a vision for all Californians and future generations worldwide that provides for a separated coastal trail running the length of the California coast. The CCT reflects a clear preference for separated pedestrian and bike trails off major highways, as near to the coast as feasible. On numerous occasions, the Commission has urged implementation and expansion of the CCT through defined bicyclist and pedestrian trails separated from highway and road traffic. Additionally, the Coastal Conservancy's Siting and Design Standards manual for the CCT states that, "The CCT should be designed to avoid being located on roads with motorized vehicle traffic where feasible." The vision of the separated CCT has been endorsed by the

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legislature and the governor, who have directed state transportation and other agencies to coordinate development of the CCT, including, where applicable, making lands available for completion of the trail (see, for example, Public Resources Code Section 31408(b), as amended by AB 1396 (2007)).

Currently there is no officially designated separate CCT in this segment of the coast. In areas where there is no existing designated CCT bluff-edge footpath or other such off-road accessways, Highway 1 functions de facto as an informal continuation of the CCT alignment. However, as shoulders bordering the existing Highway 1 alignment along Gleason Beach are either non-existent or only extend to a maximum of two feet, the area does not currently provide adequate safe California CCT access even along the highway, much less as a separated trail.

Commission, Sonoma County and Caltrans staff have worked together over the past several years to develop the Gleason Beach Public Access Package to complete a CCT segment along the repurposed areas of existing Highway 1, along with associated public access improvements such as public beach access, public parking with ADA access, public viewpoints, coastal trail signage, and other related improvements. As described in this report, existing highway 1 currently runs over Scotty Creek on culverts and road prism, which will be removed to daylight Scotty Creek and allow it to return to its natural flow. In order to span Scotty Creek and maintain a connected CCT, the package also includes a pedestrian and bicycle bridge over the restored Scotty Creek channel to connect the new CCT segments to the north and south at the creek bank level. **Special Conditions 3 and 4** guide the implementation of this Gleason Beach Public Access Package, require these elements, and set certain standards and criteria for the public access improvements. Overall, through funding, construction activities, and planning, Caltrans will support Sonoma County as it undertakes implementation of the Gleason Beach Public Access Package consistent with the draft Conceptual Public Access Plan submitted on September 25, 2020 (**Exhibit 19**). Implementation will be guided by a Gleason Beach Coastal Access Taskforce formed by Sonoma County with representatives from Sonoma County, Coastal Commission, State Parks, State Coastal Conservancy, and Caltrans.

Special Condition 3 generally provides for Caltrans obligations under the Gleason Beach Public Access Package. Under **Special Condition 3**, Caltrans is required to enter into a cooperative agreement with Sonoma County and provide a total of \$1.2 million to the County for development, implementation and management of a Gleason Beach Conceptual Public Access Plan providing for the separated off-road CCT, various public access amenities and beach access to Scotty Creek. Additionally, Caltrans is obligated to: participate in the Gleason Beach Coastal Access Taskforce; provide geotechnical, cultural resources, and general planning assistance; complete plans for the repurposing of existing Highway 1 consistent with the final Public Access Plan to be developed by the Gleason Beach Coastal Access Taskforce; construct and/or implement various specified development activities necessary to repurpose existing Highway 1; install the revetment necessary for the Scotty Creek terminus of Highway 1 and the public access parking point; develop and implement a replanting plan for the revetment and areas on the bluff.

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Special Condition 4 guides the development and implementation of a final Gleason Beach Coastal Access Plan in two phases. In Phase 1, Caltrans will transfer \$200,000 to Sonoma County for purposes of initial planning and to form the Gleason Beach Coastal Access Taskforce. The Taskforce will have one year to complete a Phase 1 plan to provide a general overview of the project's locations and designs, and set out an overall timetable. Once a final Phase I Gleason Beach Coastal Access Plan is completed, Caltrans will transfer \$936,000⁹ to the County for final development and construction. The County will then lead the Taskforce to develop, within one year, the final Phase II Gleason Beach Coastal Access Plan, which will have all final designs, locations, construction plans, implementation plan, and management plan. For more details on the Phase I and Phase II plans, see **Exhibit 19**.

Special Condition 4 also sets the requirement for the public access plans to be developed, such that the public access amenities shall include: a continuous CCT coastal trail with a durable and natural surface, a CCT bridge over Scotty Creek for pedestrians and cyclists, public access from the CCT trail (and existing Highway 1) to the Gleason Beach area at Scotty Creek, a public view point, at least 16 parking spaces on any remaining ends of Highway 1 or new access roads, a public access turnaround at the north end of Scotty Creek, and enough auxiliary public access amenities to accommodate expected use (such as benches, signage, bike racks, public restrooms, etc.).

Under **Special Condition 4**, once the Phase 2 plan is final and the full realignment project, with all access features, is completed, Caltrans will then also transfer fee-interest title to all parcels and easements that Caltrans owns that can be used for public access purposes (i.e., excluding any utility or drainage easements Caltrans may own), between the western edge of the new realigned Highway 1 right-of-way and the western edge of the existing Highway 1 right-of-way in the project corridor to Sonoma County. **Special Condition 4** requires that these transfers be consistent with Section 30609.5 of the Coastal Act. Thus, Sonoma County will own all the public access improvements proposed under the project, and the underlying existing right-of-way. (Existing private parcels, including the parcels west of the current highway, remain private at this time.)

Managed Retreat of the CCT

Given that the very purpose of this project is to realign a state highway to avoid the impacts of coastal erosion, there are concerns about repurposing that highway for purposes of a coastal trail. Overall, a crucial aspect of these CCT improvements is that Caltrans has pursued an acquisition strategy to provide for managed retreat of the trail as sea level rise advances (See generally **Exhibit 3**). However, there are a number of reasons to use the existing Highway 1 for the CCT in its present location, at least for the intermediate future. First, there are significant differences between maintaining a public highway for public transportation and maintaining a coastal trail serving pedestrians and cyclists in terms of the design requirements, safety requirements, and ability to

⁹ This balance derives from the total of \$1.2 million minus \$200,000 from the initial fund transfer as well as a subtraction of \$64,000 that Caltrans contributed toward the acquisition of the public beach access on parcel portion on Gleason Beach.

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undertake minor relocations. Second, by their nature coastal trails are best sited as close to the ocean as is possible for their full recreational value. That the development of the CCT and that the trail be as close to the ocean as possible, is supported by several state mandates and provisions of the Sonoma LCP. For instance, California Senate Bill 908 in 2001 mandated production of the document, [Completing the California Coastal Trail](#) (2003). Map 4 of that report depicts the coastal trail as running along the coast in the area of the proposed project, and it is clear that physical access to the ocean and beach areas is emphasized. As stated in the report, the trail should be located "as close to the ocean as possible ..." (see page 8). Another policy in this document states:

Wherever feasible, the Coastal Trail should be within sight, sound, or at least the scent of the sea. The traveler should have a persisting awareness of the Pacific Ocean. It is the presence of the ocean that distinguishes the seaside trail from other visitor destinations." (Page 15.)

Likewise, [Sonoma LCP Recreation](#) Recommendation 56 (V-51, p.107) generally provides for Sonoma coastal trails:

Encourage a coastal trail along the beach, the coastal terrace, the uplands, the ridge roads, or the highway to connect public and private recreation areas and access trails with communities and commercial services.

The Sonoma LCP Access Plan Description and Recommendations Section of the [Recreation](#) Chapter, emphasizes the suitability at this site for the development of access for individuals with disabilities, stating (V-28, p.84):

A unique access point at Gleason Beach, where the sandy beach reaches Highway 1, is probably prescriptive. The possibility of developing handicapped access is excellent here, but area for parking and restrooms is limited. State Parks should prove prescriptive rights or purchase the beach area within the Gleason Beach Subdivision. Develop small parking area with safe ingress and egress. Install restrooms. Construct boardwalk wheelchair ramp.

The LCP further identifies the Gleason Beach area has having the highest priority for acquisition and development (V-28, p.84):

Acquisition Priority I: Begin efforts to acquire immediately through purchase, permit requirements, or other negotiations as required.

Development Priority I: Encourage each agency or association owning or operating designated accessways to allocate funds immediately and develop Priority I accessways within their purview.

The [Sonoma LCP's](#) Recreation Chapter's "Shoreline Access" guidance (V-3, p.59) also sets out the goal of a coastal trail and provides some guidance on the design criteria for such trails:

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Bluff top trails offer hiking and public viewing opportunities as well as shoreline access when connected to stairs or paths to the beach. ... State Coastal Plan Policy 145 calls for establishment of a coastal trail system. The recreation section describes a Sonoma County coastal trail system. . . . A safe, well-defined trail is required at each access open to the public. Often dirt paths will be sufficient. The descent could be paved, stepping stones, or stairways. . . .

Similar support for locating the CCT as close to the ocean as possible can be found in Section 30221 of the Coastal Act, which states that “Oceanfront land suitable for recreational use shall be protected for recreational use and” Thus, together, the Coastal Act, the Sonoma LCP, and other state mandates support the completion of an off-road California Coastal Trail in this area, as close to the ocean as possible.

By repurposing the existing Highway 1 for segments of residential and public access roads along with a fully connected trail, along with replanted buffer areas, the initial CCT alignment will be safely sited to be as close as possible to the sight, sound, and smell of the ocean. The highway can be adapted to more informal use as a Coastal Trail with interspersed access amenities, consistent with the LCP, with less stringent requirements for State highway safety and therefore can be maintained in the face of coastal erosion for a longer period than a State highway.

At the same time, as guided by **Special Condition 4**, provisions for managed retreat have been incorporated into this project and will be further developed during the planning process of the Gleason Beach Coastal Access Taskforce. As shown in **Exhibit 3** in pink, Caltrans currently holds fee title to the existing Highway 1 right-of-way. (With the exception, as shown in **Exhibit 3** in blue, of a small part of the very far north end of existing Highway 1 right-of-way, which is on California State Parks property and Caltrans only holds an easement here.) Between the current highway alignment and the proposed realignment is private ranch land owned by the Ballard Ranch, used for cattle grazing. Caltrans has recently acquired fee title right-of-way for the new highway realignment and the access roads that cross between the two roadways. Under this project, at the conclusion of construction activities, Caltrans will transfer all of its property interests west of the new highway realignment right-of-way to Sonoma County. (Excepting any Caltrans property rights not suitable for public access use such as utility and drainage easements.) (See **Exhibit 3** for a visual depiction and **Exhibit 20** for the proposed plan.)

The transferred property interests will provide space for the CCT as well as for an anticipated managed retreat of that trail over time. At this time, Caltrans continues to negotiate and attempt to acquire the remnant private parcel sections west of the proposed realignment to provide additional areas for managed retreat. Regardless, areas for managed retreat already exist in the existing highway right-of-way that Caltrans will transfer to the County, along with the right-of-way for the access roads that Caltrans will transfer to the County, and, additionally, along the western right-of-way for the new highway alignment. Thus, in the event erosion renders the entire existing Highway 1 right-of-way inoperable for a coastal trail, **Special Condition 4(c)(7)** requires Caltrans to provide the minimum of an 8-foot wide separated trail easement on the

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western edge of the Caltrans right of way for the new Highway 1 alignment to serve as a future north-south multimodal CCT segment. There is sufficient room in the right-of-way to place this trail separate from the highway. This segment, or other future trail segments, can also connect to the vehicular Highway 1 Scotty Creek Bridge and its separate sidewalk along the ocean side, which can become a CCT segment. Thus, as conditioned by this CDP, the final Public Access Plan will include measures to manage the trail long-term and to accommodate the inland migration of the trail alignment as needed to adapt to erosion and other natural forces, thereby continuously maintaining the connectivity of the CCT system in this area.

Conclusion

For nearly a decade, Caltrans and Sonoma County staff, in consultation with Commission staff, the community, and interested parties, have worked together substantially to craft a Conceptual Public Access Plan that lays out many of the details and overall parameters of the public access improvements, underwritten by a \$1.2 million total contribution from Caltrans to Sonoma County. Final plan details providing additional benefits are best worked out by Sonoma County working with direct input from the public, in collaboration with Caltrans, Commission and other agency staff, including anticipating options for future managed retreat of the trail. There is tremendous public benefit in having a trail directly along a coastal bluff and utilizing the existing highway right-of-way that Caltrans owns or is otherwise in State ownership for as long as is feasible.

Given the multiple public access elements that are included, the project appropriately avoids (and where unavoidable minimizes and mitigates) public recreational access impacts, as discussed above, and can be found consistent with the public access provisions of the Coastal Act. These improvements have already been funded, acquired, or incorporated into the project, and Caltrans has committed through this permit to additional funding and participation in an ongoing planning process to finalize the CCT. Given the provision for new parking spaces, there is no net loss of parking, but a slight and potentially larger increase. Through an acquisition, public beach access rights have been perfected. Improved public access for pedestrians and cyclists is incorporated into the new roadway and bridge. The project also includes commitments for funding, the provision of state land, and a planning process to establish a new and significant section of the CCT along with other access amenities, including aspects to address the long-term managed retreat of that trail in the face of coastal erosion. And, overall, a significant highway corridor providing important public access connectivity has been protected into the future.

By securing continued safe transportation along the coast through the realignment of Highway 1 and protecting continued access to the multiple public access points in the project corridor and nearby that Highway 1 provides, along with developing numerous public access improvements including the CCT, the project protects and provides maximum public recreational access opportunities (30210), protects existing public access (30211), provides for public access from the nearest public roadway to the shoreline (30212), protects and provides lower cost visitor and recreational facilities (30213), protects a coastal area suited for water-oriented recreational activities (30220),

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protects oceanfront land suitable for recreational use (30221), and ensures state land remains open for public recreation (30609.5). Thus, as conditioned, the proposed project is consistent with the public recreational access provisions of the Coastal Act.

F. Cultural Resources

1. Applicable Coastal Act Provisions

Coastal Act Section 30244 states:

Section 30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

In addition, the Sonoma County LCP's Environment Chapter also has policies requiring protection of cultural resources, including:

Environmental Resources Recommendation 79. Require an archaeological study when proposed projects are within designated archaeological site areas, and require implementation of reasonable mitigation measures when recommended by the study. (III-18, p.34.)

2. Consistency Analysis

The Sonoma coast possesses a rich cultural history. Pomo and Coastal Miwok Native American Tribes originally inhabited this region, subsisting on the abundance of coastal resources including coastal streams flush with salmon, seafood and shellfish from productive coastal waters and beaches, and diverse bird life native to riparian, wetland, and beach habitats. The project area includes numerous known cultural sites and evidence of Pomo and Miwok settlements can be found throughout this area generally. Undiscovered sites are also likely.

As part of its CEQA process, Caltrans conducted a complete archaeological investigation in 2011-2012. (See pp. 2-98 – 2-108 of [Gleason Beach FEIR](#).) The investigation included archeological field surveys of the entire project area to identify archaeological or architectural resources that might be subject to impacts from the proposed project activities. As discussed in the FEIR, the realignment project does have an impact to the architectural resource of the historic ranch barns because of its change to the character of the area. The potential archaeological impacts of the project are to tribal cultural resources.

Caltrans also reached out to affected tribes through tribal consultation as part of the CEQA compliance process. In 2011, the Applicant initiated consultation with the two federally recognized Tribes culturally affiliated with the proposed project area: The Federated Indians of Graton Rancheria (Graton Rancheria) and the Kashia Band of Pomo Indians of Stewarts Point Rancheria (Kashia Pomo). In 2011, Caltrans began to conduct surveys for buried cultural deposits. Tribal representatives participated in and monitored all archaeological subsurface investigations. In 2012, Caltrans completed their Archaeological Survey Report, an inventory of cultural resources within the area of potential effects. Additional surveys in 2013 and 2014 revealed one new buried

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archaeological site. These surveys and reports are confidential because of their sensitive nature.

Caltrans sought tribal participation in the appropriate treatment of cultural resources, including their avoidance, minimization, and mitigation measures. The Caltrans FEIR adopts several relevant mitigation measures for the project including that Caltrans will: 1) keep archeological and tribal monitors onsite during construction activities; 2) train construction personnel on the protection and avoidance of cultural resources; and 3) commit to a provision that if unidentified cultural materials are discovered during construction work will be halted and an archeologist will assess the find. Additionally, in 2016, Caltrans, tribal representatives from the Federated Indians of Graton Rancheria and the Kashia Band of Pomo Indians, and the State Historic Preservation Officer (SHPO) developed and executed a Memorandum of Agreement (MOA) to mitigate impacts to cultural resources where avoidance is not possible. At the same time, the same entities negotiated and adopted an Archaeological Data Recovery (Phase III) Proposal and Treatment Plan for the project (Gleason Beach Treatment Plans). These agreements detail mitigation efforts for adverse impacts to these resources and procedures for the handling of cultural materials discovered during construction. These agreements are confidential in nature because of the sensitivity of tribal cultural resources.

Among other measures, the MOA and Gleason Beach Treatment Plans include requirements (similar to those in the FEIR) for archeological monitoring by a cultural resources specialist, members of the Graton Rancheria and the Kashia Pomo, and the Native American most likely descendent (MLD) as necessary consistent with California Public Resources Code (PRC) Section 5097; a training session with construction personnel discussing the cultural sensitivity of the area and the protocol for discovery of cultural resources during construction; notice to all qualified local Native American Tribes of the timing of construction and their opportunity to participate in construction monitoring; provisions to halt construction in the event of the discovery of unknown cultural resources and conduct an assessment of the find in consultation with Graton Rancheria, the Kashia Pomo, and the SHPO and in accordance with 36 CFR 800.13(c); and provisions that construction will not restart in the area of the cultural resource find except in compliance with the measures specified in the MOA and Gleason Beach Treatment Plans.

Coastal Act Section 30244 requires that reasonable mitigation measures be employed where development could adversely impact archaeological or paleontological resources. The proposed new roadway is sited to minimize impacts to known cultural resources. However, construction activities could impact unknown archaeological resources. In this case, the adopted CEQA measures, the MOA, and the Gleason Beach Treatment Plans provide substantial mitigation measures for the project to address those concerns. However, given the confidential nature of these documents, they cannot be incorporated here by reference as a public exhibit. There is also the unlikely possibility that they will expire prior to the end of construction. Therefore, to ensure consistency with Coastal Act Section 30244, **Special Condition 11** reiterates certain aspects of the agreements and adds certain additional mitigation measures for the project.

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Consistent with the MOA and Gleason Beach Treatment Plan, **Special Condition 11** specifies that a qualified cultural resource specialist, as well as tribal representatives from the Graton Rancheria and the Kashia Pomo are present on-site to monitor any construction activities that have any potential to uncover or otherwise disturb cultural deposits. **Special Condition 11** also specifies certain procedures applicable to the discovery of any unknown cultural remains or deposits, consistent with the MOA and treatment plans. In such an event, all construction within 60 feet of the discovered materials area must cease. A qualified cultural resource specialist, in consultation with representatives from the Graton Rancheria, the Kashia Pomo, and SHPO must analyze the significance of the find. To recommence construction following discovery of cultural deposits or human remains, Caltrans is required to submit a supplementary archaeological report that shall describe the assessment of the find and the proposed course of action to avoid impacts to the discovered cultural resources. The Executive Director shall have 48 hours to review the plan and determine if the additional mitigation measures are consistent with this CDP or otherwise allowable under other Coastal Act regulations, in which case construction may recommence upon implementation of any necessary additional mitigation measures. If the Executive Director determines that the proposed actions are not permissible under this CDP or other Coastal Act regulations, construction may not recommence until after an amendment to this CDP is approved by the Commission. **Special Condition 11** also requires Caltrans to submit a final archeological report documenting compliance with the MOA and Gleason Beach Treatment Plans, documenting any cultural resources discovered and the adopted subsequent measures enacted, and any impacts to cultural resources.

Lastly, it is worth noting that as well as the required monitoring of construction, the Tribes have requested a role in the Gleason Beach Public Access Taskforce (described in Section E), and the Tribes will hopefully participate in the project going forward.

As conditioned, the project is consistent with Coastal Act Section 30244 regarding the protection of archaeological resources.

G. Air Quality and Greenhouse Gas Emissions

1. Applicable Coastal Act Provisions

Coastal Act Section 30253 states, in part:

New development shall do all of the following: ... (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development. (d) Minimize energy consumption and vehicle miles traveled.

This section of the findings primarily discusses the project's consistency with Section 30253(c) and (d). However, it should be recognized that along with Section 30253, various global climate change effects that result from increases in greenhouse gas (GHG) emissions directly impact numerous coastal resources. Among other things, these impacts can include: (1) coastal flooding and erosion from SLR; (2) inundation of public access and recreation areas from SLR or extreme rainfall events; (3) alterations

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to existing environmentally sensitive habitat areas; (4) impacts to marine species diversity, distribution, and productivity from ocean warming and acidification; (5) increased extreme fire events that can burn coastal habitat or reduce public access through road closures, beach closures, and unsafe smoke conditions; and (6) various other impacts to coastal resources. Thus, actions to reduce GHG emissions and to protect coastal resources at risk from the adverse effects of climate change are consistent with a number of Coastal Act goals and policies, beyond those in Section 30253.

2. Consistency Analysis

For purposes of Section 30253(c), the California Air Resources Board (CARB) is the state air resources board. CARB sets state ambient air quality standards (along with U.S. EPA, which sets National Ambient Air Quality Standards through the Federal Clean Air Act). The Northern Sonoma County Air Pollution Control District is the local air pollution control district; however, that district only regulates stationary sources of pollution, which are not a factor here. CARB regulates all mobile sources of air pollution, including mobile construction vehicles, which is most at issue here. Under multiple state laws and executive orders, CARB is required to develop and implement regulations and strategies to reduce GHG emissions.

A number of state laws and executive orders mandate the reduction of GHG emissions, including AB 32 (California Global Warming Solutions Act of 2006), mandating a 40% reduction in GHG from 1990 levels by 2030.¹⁰ (For other relevant laws and orders see generally this [California Climate Policy Dashboard](#).) Under AB 32, CARB was required to create a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHGs and update the program every five years. CARB adopted a scoping plan in 2008 and updated it in 2014, with another update in 2017 to reflect the increased emissions reductions targets of SB32. Among these steps, CARB staff has also adopted a “Mobile Source Strategy” for greenhouse gas emissions. CARB also implements SB 375, which requires California’s Regional Planning Organizations to develop “Sustainable Communities Strategies” to reduce Greenhouse Gas emissions from driving. Overall, CARB implements a number of state laws that aim to reduce GHG emissions, however, none of these are necessarily affirmative project-specific mandates on Caltrans.

Transportation is California’s largest current source of GHG emissions, typically around 40% of state emissions (Taylor, Legislative Analyst Office, 2018). Moreover, in recent years, while California has reduced emissions in other sectors, transportation emissions have grown with the increase of traditional gas passenger vehicles driving more miles on state roadways. As recognized by Caltrans as an agency, “[g]iven the large contribution of the transportation sector to California’s GHG emissions, Caltrans and other state transportation agencies have an important role to play in fostering

¹⁰ For other relevant laws and orders see the California Climate Policy Dashboard at xxx.

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solutions.”¹¹ Caltrans estimates that 21 percent of all California GHG emissions occur from vehicles on state Caltrans highways, and Caltrans highway construction and maintenance contribute approximately 0.6 percent.

As the lead agency under CEQA, and consistent with state law, Caltrans undertook a study of climate-change impacts of the project consistent with CARB requirements.¹² Under existing CEQA guidelines related to climate change, a project’s implications for climate change should be analyzed not only as individual contributions but also as “cumulative” impacts.¹³ Per Caltrans, the proposed project will realign a two-lane highway, which does not increase VMTs or GHG emissions by itself. The project will not increase the capacity of the highway, or enable new connections that will lead to new commercial or industrial development spurring increased VMTs/GHG. Therefore, the resulting project is not expected to contribute to an increase in GHG emissions.

Some GHG emissions will result from the construction activities of the project, and as acknowledged in the FEIR for the project, GHG emissions are cumulative, and even these relatively small emissions will still contribute to the cumulative load of GHG emissions. Caltrans has identified some mitigation measures to reduce GHG emissions associated with construction activities.¹⁴ These steps include measures designed to reduce the number and duration of idling vehicles, to limit construction activities that will create traffic back-ups and increase idling vehicles, and to require proper maintenance and operation of all equipment. Overall, the new highway by itself is not expected to increase GHG emissions or VMTs, but it will have result in some construction GHG emissions. It should be noted, however, that the realignment project by itself also does not include significant mitigation measures to reduce GHG emissions and VMTs.

At the same time, it should be noted that the project overall includes multiple components to increase multi-modal transportation and public access that should be able to help contribute to a reduction in GHG emissions and VMTs (see **Exhibit 14 & Exhibit 15**). These include funding to complete a segment of the California Coastal Trail on the abandoned roadway and along the new highway alignment in the future; a pedestrian and cycling access bridge over Scotty Creek; new, improved and safer roadway shoulders to support cycling activities; a separated sidewalk over the roadway bridge for pedestrian access; and improved public access to the Gleason beach area at Scotty Creek. Taken together, these efforts will encourage visitors to stop and walk or cycle the CCT segment rather than drive the segment, and perhaps encourage some to stop and recreate here rather than drive farther north or south in search of good recreational activities. The CCT and shoulder improvements will also make cycling safer, which will encourage the use of bicycles for transportation through the corridor as an option instead of cars.

¹¹ See ICF/Caltrans, [Caltrans Greenhouse Gas Emissions and Mitigation Report](#) (August 2020).

¹² See Caltrans’ Gleason Beach FEIR, pages 3-25 – 3-35.

¹³ See CEQA Guidelines Sections 15064(h)(1) and 15130.

¹⁴ See Caltrans’ Gleason Beach FEIR, pages 3-33 – 3-35.

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Overall, the development of multi-modal transportation opportunities is an important effort to reduce GHG emissions. Although the location is not an urban area where improved multi-modal conditions can be of a greater scale that can clearly lead to reduced VMTs, the multi-modal improvements should lead to some reduced VMT effects. The project also includes a number of habitat improvement and restoration efforts, most importantly a conservation easement over a large section of coastal terrace prairie that will protect that land in perpetuity from development, protect restored habitat, and regulate grazing to ensure it is compatible with resource protection. Although an effort was not made to measure the carbon sink potential of these habitat restorations, there should be some decrease in GHGs from the restoration efforts over time as well.

The overall lack of any substantial increase in VMTs or GHG emissions from the project as well as the potential slight, but unquantified decrease in emissions from the multi-modal access improvements and habitat restoration efforts, support the conclusion that this project is consistent with Section 30253(c) and (d), as well as the Coastal Act policies protecting resources that are generally impacted by GHG emissions, and our general need to reduce GHG emissions from our transportation sector.

H. Environmentally Sensitive Habitat Areas

1. Applicable Coastal Act Provisions

Section 30107.5 of the Coastal Act defines environmentally sensitive habitat areas (ESHAs) as areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Coastal Act Section 30240 allows only resource-dependent development in ESHAs, and requires that development adjacent to sensitive habitats be sited and designed so as to not significantly degrade the habitats. Coastal Act Section 30240 states:

Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The Sonoma County LCP also protects sensitive species by incorporating Coastal Act Section 30240, and through Recommendation 58 of the LCP's Environment chapter, which requires that development:

Protect designated sites of rare or endangered plants ... Development should be sited and designed and constructed to prevent impacts of grading, paving, construction of roads or structures, runoff, and erosion from significantly

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degrading rare or endangered plant habitats, and shall be compatible with the continuance of such habitat areas. (III-16, p. 32.)

2. Consistency Analysis

Anticipated Impacts

The proposed new roadway will be located at the base of rolling coastal hills, on the lower slopes and flatter plain that gives way to coastal bluffs dropping steeply to the ocean. Primarily, the project area is undeveloped rural agricultural land, historically comprised of coastal terrace prairie grasslands. The project area also originally supported riparian habitat along Scotty Creek, some of which still exists upstream from the project area, and some limited northern coastal bluff scrub habitat, as well as wetlands discussed in the **Section I** below (see **Exhibit 20** for an overview of biological resources). Where the application of Coastal Act policies overlaps, such as the application of Sections 30240 and 30233 would in this instance, the more specific policy controls over the more generally applicable policies. In this case, Section 30233 is the more specific policy, and any overlapping impacts that are to wetlands are discussed in **Section I** below.

Most of the ESHA habitat is comprised by, or located within, coastal terrace prairie grasslands, which make up approximately 20 acres in the project area and 65 percent of the project site's biological survey area. These coastal terrace prairie grasslands are heavily impacted by long-term ongoing and unmanaged cattle grazing and the spread of non-native species. However, these grasslands still support a significant native component and provide habitat for endangered species. The coastal prairie habitat also contains western dog violet, the obligate larval host plant for the federally-endangered Myrtle's silverspot butterfly (MSB), and generally provides MSB foraging habitat. The coastal terrace prairie also provides suitable upland dispersal habitat for the federally-protected California red-legged frog, as does the aquatic habitat at Scotty Creek. Likewise, Scotty Creek formerly provided habitat to additional listed species, including Central California Coast Steelhead Salmon and Coho Salmon. Each of these ESHA habitats will experience some potential negative impacts from the project, both temporary and permanent.

Exhibit 24 provides a memorandum prepared by the Commission's Senior Ecologist, Dr. Lauren Garske-Garcia, explaining the impact definitions, rationale for various mitigation requirements, and other items of clarification related to the habitat impacts and mitigation needs of this project. For purposes of this project, given that construction will extend over two years and considering the potential of certain areas to recover from limited construction impacts quickly, Commission staff have worked with Caltrans staff to refine definitions of temporary impacts so as to recognize sub-categories of "short-term" and "long-term" for both ESHA and wetland impacts in **Section I** below. In both cases, characterization of an impact as temporary first requires that there be no significant ground disturbance and that the vegetation age classes and/or size structures be replaced by the end of a designated period. Short-term temporary impacts are defined here as those in which restoration of the impacted habitat to its pre-disturbance state will have occurred within 12 months of the onset of construction.

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Long-term temporary impacts are defined here as those which may extend over a two-year period of construction and which restoration to a pre-disturbance state will have occurred within 12 months of the completion of construction impacts to the habitat, thus allowing for restoration completion to take up to a maximum of three years from the onset of construction. In either case, when restoration is not complete by those terms, the short-term temporary or long-term temporary impacts revert to characterization as permanent impacts, with resulting increase in mitigation ratio requirements.

Coastal Terrace Prairie Habitat

The predominant natural community in the project area is coastal terrace prairie, which is a rare habitat that is easily disturbed or degraded by human activities and therefore meets the definition of ESHA under the Coastal Act. Coastal terrace prairies occur in areas where grassland plants can obtain some moisture from fog and are moderated by the cooling influence of the Pacific Ocean. They are characterized by a highly diverse array of grass and forb species.

Coastal terrace prairie is considered by itself as ESHA as it is a highly imperiled native vegetation community.¹⁵ As is the case here, all remaining existing native grasslands in California contain a large proportion of non-native grasses and forbs, which are often the dominant vegetation. To define when such grasslands meet the criteria to be ESHA, the Commission considers coastal grasslands with at least ten percent cover by native grasses and forbs to be coastal terrace prairie and ESHA. At the project site, the grassland has been mapped as coastal terrace prairie with a significant presence of native species such as California oat grass and salt grass. However, the coastal terrace prairie is presently degraded from years of cattle grazing, and numerous non-natives, such as velvet grass and sweet vernal grass, are present.

Exhibit 21 shows the presence of designated coastal terrace prairie ESHA in the project area and the anticipated permanent and temporary impacts. Most of the permanent impacts stem from the roadway realignment and the access roads that will be constructed in existing areas of coastal terrace prairie. Some other permanent impacts will also occur from the bridge piers. Temporary impacts will occur from the removal of the box culverts and construction of bridge piers. Total permanent impacts to coastal terrace prairie are estimated as 5.824 acres, with anticipated short-term temporary impacts at 3.367 and long-term temporary impacts at 0.057 acres.

Northern Coastal Bluff Scrub

The project includes potential impacts to Northern Coastal Bluff Scrub ESHA habitat in the project corridor. One area of Northern Coastal Bluff Scrub ESHA is located on both sides of existing Highway 1 at the southernmost end of project corridor on rocky outcroppings. The other area is located on the coastal side of Highway 1 at the very northern end of the project corridor. The project, primarily through necessary drainage improvements, will have anticipated permanent impacts of approximately 0.289 acres

¹⁵ See Caltrans' Gleason Beach FEIR page 2-155 citing the California Department of Fish and Wildlife (CDFW 2010) and stating that "it is estimated that 99 percent of California's native grasslands have been lost since European settlement (Kraft et al. 2007)."

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and temporary impacts to 0.537 acres of Northern Coastal Bluff Scrub ESHA (see **Exhibit 21** for depiction of the anticipated impacts). Restoration will occur on-site, but some restoration will take longer than the criteria for short-term temporary or long-term temporary impacts and therefore are considered permanent impacts.

Myrtle's Silverspot Butterfly

Myrtle's silverspot butterfly (MSB) (*Speyeria zerene myrtleae*) is a federally endangered species that has been documented within the project site's coastal terrace prairie. Coastal terrace prairie supports the butterfly's obligate larval host plant, the annual western dog violet (*Viola adunca*) and provides necessary foraging species to support its adult life history stage. Butterfly larvae specifically feed on new flowers and foliage of *V. adunca*, and a single larva may require multiple plants for feeding until they reach maturity. Therefore, stands of western dog violet and areas supporting the annual's seedbank are a critical component of the butterfly's habitat. Coastal terrace prairie also supports several plants known to be used for MSB nectaring, including both native and non-native species.

Exhibit 22 shows the presence of general MSB foraging habitat MSB larval breeding habitat with western dog violet and the plant's estimated seed banks, and the anticipated permanent and temporary impacts to these resources. Most of the permanent impacts to MSB habitat stem from the roadway realignment and the access roads. Construction of the realignment and access roads will also have temporary construction impacts to MSB habitat. Short-term and long-term temporary impacts will occur to MSB habitat with the construction of the bridge over Scotty Creek. The table below summarizes the anticipated MSB impacts.

MSB Habitat Type	Short-term temporary	Long-term temporary	Permanent
MSB Foraging Habitat	5.422	0.176	6.663
MSB Larval Breeding	0.085	-	0.061

California Red Legged Frog

Another federally threatened species that may be impacted by the project is the California Red Legged Frog (CRLF) (*Rana draytonii*). The CRLF will lose upland habitat through the permanent direct loss of upland aestivation, foraging, and dispersal habitat, and experience temporary impacts due to construction activities.

Exhibit 23 shows the presence of CRLF dispersal and breeding habitat and the anticipated permanent and temporary impacts. Most of the permanent impacts to CRLF dispersal habitat stem from the footprint of the roadway realignment and access roads. Construction of the realignment and access roads will also have temporary impacts to CRLF dispersal habitat beyond this footprint. Temporary and long-term temporary impacts will occur to CRLF dispersal habitat with the construction of the bridge over Scotty Creek. Anticipated impacts are 6.682 acres of permanent impacts to upland dispersal habitat, 5.072 of temporary short-term impacts, and 0.176 acres of long-term temporary impacts. The removal of the box culverts over Scotty Creek and the

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daylighting of Scotty Creek will also have an estimated 0.117 acres of short-term temporary impacts to the CRLF aquatic habitat in the creek due to temporary stream diversion while removing the culverts.

Salmonids

Scotty Creek historically supported Coho Salmon and they have been observed in the creek. Scotty Creek is a designated essential fish habitat (EFH) by the Pacific Fishery Management Council for Coho Salmon (2000). Central California Coast steelhead were also likely present here and are a federally listed threatened species, though under current conditions they have not been observed and Scotty Creek is not designated as critical habitat for steelhead. In the past, CDFW biologists have found upper reaches of Scotty Creek to provide an excellent spawning and nursery location for salmonids but conditions, have deteriorated over the years, largely because of the culverts reducing stream flows (**Exhibit 16**) and cattle grazing in and near the creek. Along with general impacts of cattle in the creek, the grazing has denuded creek banks and directly contributed to erosion, leading to a significant amount of fine materials in the creek, its channelization, and lack of habitat complexity needed to support salmonids.

The removal of the culverts and road prism to daylight Scotty Creek will provide significant improvements to salmon habitat here by removing fish passage barriers and moderating streamflows along a more natural gradient. However, removal of the culverts will require a temporary stream diversion, which could have negative impacts on salmonids attempting to move upstream. It is currently anticipated that there will be temporary impacts to 0.126 acres of coastal stream habitat, which supports salmonid habitat. The project will also place approximately 60 feet of rock riprap on the proposed terminus of Highway 1 along the edge of Scotty Creek, which provides the public access beach location, parking, CCT bridge landing and CCT trail, and continued private residential access. This riprap will not be placed in existing areas of the creek (it is placed in areas currently occupied by the Highway 1 prism), but as the dispersal area of Scotty Creek potentially enlarges, it is possible that the rock will impinge the free flow of the coastal water.

Allowable ESHA Development

Coastal Act Section 30240 allows only resource-dependent development in environmentally sensitive habitat areas, and requires that development adjacent to sensitive habitats be sited and designed so as to not significantly degrade the habitats. The proposed project is not an allowed resource-dependent development, and thus is inconsistent with Section 30240 and complementary LCP policies.

As described further below in **Section L**, however, though impacts to sensitive habitat will occur, a project is approvable pursuant to the conflict resolution provisions of the Coastal Act, when necessary for compliance with other Coastal Act policies and when approval of the project will, on balance, be most protective of significant coastal resources compared to denial. In such cases, there must be no feasible alternatives available that are consistent with all of the relevant Chapter 3 policies (e.g., avoid ESHA impacts) and the project must include mitigation measures to reduce adverse impacts on coastal resources to the maximum extent feasible.

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Alternatives

There are no other feasible alternatives that meet the purpose and objectives of the project that could avoid the impacts to ESHA. Over the course of planning this project, Caltrans reviewed twenty separate alternatives, and selected three main alternatives for review in the draft EIR for this project. Caltrans found that none of the alternatives could meet the purpose and objectives of the project without impacts to ESHA, and staff concurs. Essentially, given that coastal terrace prairie covers most of the project area, there is no way of realigning the highway to avoid impacts to coastal terrace prairie and the habitat it provides for sensitive species. The realignment chose has the least impact to ESHA, or at least the same, as other realignment routes. Additionally, the impacts to Coastal Bluff Scrub ESHA are unavoidable for the drainage improvements that are required to ensure the project's consistency with the hazards policies of the Coastal Act. Given the steep bluff location, drainage alternatives with fewer impacts do not appear to be feasible.

The only alternative that will avoid impacts to ESHA is the no-build alternative. The no-build alternative is not a feasible alternative because it does not provide protection for Highway 1 from coastal erosion. Without realignment, Highway 1 will continue to be affected by coastal erosion requiring temporary road closures and lane closures in the near-term future, and continued reliance on coastal armoring and emergency repairs. Portions of the highway have at times been undermined by coastal erosion. In the near future, by 2050 under projections according to the Caltrans/WRECO SLR and erosion analysis (**Exhibit 18**), coastal erosion will have eclipsed substantial portions of the existing Highway 1 in the project area and the highway will need to be permanently closed. The construction of a substantial seawall revetment to protect Highway 1 in the long-term is also not feasible because of cost, incomplete erosion protection, and the numerous negative impacts to coastal resources that would stem from such armoring.

At the same time, the various alternatives to the proposed project for realignment of the highway either had greater impacts to ESHA, or negligible differences. Bridge alternatives include no bridge or longer/shorter bridges. No bridge alternatives include the re-construction of an at least 50-foot long concrete box culverts and a roadway prism across the creek, which would greatly increase impacts to ESHA. Longer bridges, or multiple bridge spans, would also not completely avoid ESHA impacts and would have increased visual impacts and decrease public access because connections to public access points would be more difficult and require more fill, which has additional coastal resource impacts. Shorter, or slightly different alignment bridge alternatives had increased ESHA impacts as well as increased wetland impacts.

There are also no other feasible alternatives to the removal of the concrete box culverts and the necessary creek diversion entailed. The no-project alternative, keeping the concrete box culverts in place, will prolong and worsen negative impacts to threatened salmon species because creek flows will continue to be impacted, and a fish barrier will continue to exist. Diversion is also the only feasible means to keep the creek intact while removing the barriers.

Project Design and Construction Mitigation and Minimization Measures

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Caltrans has incorporated a number of minimization and mitigation measures into the adopted CEQA mitigation measures to reduce impacts, restore affected habitat in the project area, and provide additional habitat restoration in the area for impacted habitat and species (Gleason Beach [FEIR, Appendix F](#)). Special conditions reinforce these measures and also provide further mitigation measures. Most relevant for the discussion below, **Special Condition 8** requires the submittal of a final Habitat Mitigation and Monitoring Plan. Caltrans has submitted a Conceptual Mitigation Plan consistent with this condition, attached here as **Exhibit 28**.

General Measures: Several minimization measures provide general protection to ESHA, including: 1) impacts to coastal terrace prairie will be minimized through construction best management practices (**Special Condition 13**) that limit impacts and the submittal of a Storm Water Pollution Prevention Plan (**Special Condition 14**); 2) biological monitoring both before construction and during construction to identify potential sensitive plant or animal species and take specific steps, including halting and delaying construction, until steps are implemented to protect the species (**Special Condition 15**); 3) exclusion fencing will protect habitat from construction impacts and accidental worker trespass (**Special Condition 13**); and 4) workers will be given environmental awareness training on sensitive species and plants (**Special Condition 13**).

MSB Measures: Several specific adopted minimization measures and the special conditions provide protections for the MSB in addition to the general provisions listed above, including: 1) CEQA limits on airborne dust emissions that could impact the MSB; 2) pre-construction surveys will be conducted and western dog violet plants will be avoided to the greatest extent possible, with specific exclusionary fencing around avoidable plants and their seedbanks as identified during pre-construction plant surveys (**Special Condition 13**); and 3) under **Special Condition 4**, the Public Access Plan criteria include that the creation of the California Coastal Trail and other public access amenities avoid impacts to the MSB and its habitat.

Coastal Water Measures: Several specific minimization measures provide protections for salmonids in addition to the general provisions listed above, including that: 1) the removal of the concrete culverts/grade-control roadway structure will constitute a long-term benefit to fish passage of both adult and juvenile Coho and steelhead and habitat enhancement; 2) Caltrans has designed the bridge such that the bridge columns will be located outside of the ordinary high water mark in order to reduce the potential for negative impacts to salmonids; and 3) under **Special Condition 2(b)**, work on removal of the box culverts and the stream diversion will only take place during the dry season, when salmonids are unlikely to be present and those impacts can be avoided.

CRLF Measures: Several specific minimization measures provide protections for the CRLF in addition to the general provisions listed above, including: 1) the bridge design locates columns outside of the ordinary high-water mark in order to greatly reduce the potential for negative impacts the CRLF; and 2) under **Special Condition 13**, biological surveys will identify any CRLFs present and exclusion fencing will be used to protect potential CRLF sites.

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Mitigation Revegetation and Restoration Measures

Caltrans has agreed to a number of habitat restoration efforts on the project site and submitted a Conceptual Mitigation Plan (**Exhibit 28**). And, as discussed above, **Exhibit 29** provides a memorandum by Dr. Garske-Garcia laying out the rationale for key aspects of **Special Conditions 8, 9, and 10**, including the definition of several necessary terms.

Special Condition 8 requires the submittal of a final Habitat Mitigation and Monitoring Plan for review and approval by the Executive Director, including provisions to restore impacted ESHA on-site. Under **Special Condition 8**, the final Habitat Mitigation and Monitoring Plan will include pre- and post-construction surveys to validate actual impacts the various habitats. Those impacts that can be classified as short-term temporary will be restored on-site at a 1:1 mitigation ratio, including significant removal of invasive plant species and revegetation with locally and genetically-appropriate native species. Long-term temporary impacts will also be mitigated on-site at a 1:1 ratio but additionally require another half-acre mitigation per acre impacted (0.5:1) to compensate for the extended duration of functional habitat loss. Monitoring reports will be prepared that must show the successful restoration of each habitat to the pre-impact baseline conditions or better within the designated period (i.e. within 12 months from initial point of construction disturbance for short-term impact characterization, and within 12 months from the final point of construction disturbance for long-term impact characterization). If restoration criteria are not met within the allowed timeframe, the impacts will be considered permanent.

For mitigation of permanent impacts, under **Special Condition 8**, Caltrans will mitigate for ESHA losses at a 3:1 ratio and wetlands at a 4:1 ratio when the restoration is in-kind habitat “creation” or “substantial restoration”. Other mitigation efforts may be undertaken through “enhancement,” “preservation,” or “out-of-kind restoration.” Dr. Garske-Garcia’s memorandum (**Exhibit 24**) describes the different meaning of these terms and the ecological reasoning why each level of restoration requires different mitigation ratios. Mitigation through enhancement will require double the base ratio (e.g., 6:1) and preservation will require triple the base ratio (e.g., 9:1). Out-of-kind enhancement will also be provided at triple the base ratios. Additionally, note that the mitigation effort may necessarily combine the above restoration types provided available opportunities, with creation or substantial restoration employed to the greatest extent feasible. Thus, mitigation can occur primarily through creation/substantial restoration, and any remaining acreage necessary to fulfill the mitigation requirements (described as the “discounted ratios” in the special conditions and **Exhibit 24**) can occur through enhancement or preservation at the increased ratios.

Special Condition 8 requires the submittal of a final Habitat Mitigation and Monitoring Plan that along with specifying the mitigation ratios, sets out a framework for the mitigation efforts, and general requirements for habitat restoration. Caltrans has submitted a Conceptual Mitigation Plan consistent with this condition, attached here as **Exhibit 25**.

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Mitigation of Coastal Terrace Prairie and Myrtle's Silverspot Butterfly Habitat will occur on-site and off-site. Generally, this will include substantial restoration via removal of non-native species from the CTP grasslands followed by revegetation with the appropriate local native species to significantly improve CTP habitat quality. Revegetation efforts will include planting species appropriate for the MSB larval and nectaring habitat at times the number of plants removed by construction, in an area totaling between one and three times the areas impacted to ensure maintenance of existing larval and nectar plant densities in MSB habitat.

Restoration of Northern Coastal Bluff Scrub Habitat will take place on-site, both in the area impacted and in adjacent areas when the existing Highway 1 is reconfigured for the California Coastal Trail.

As referenced above, riparian restoration will occur through the removal of the box culverts and daylighting of Scotty Creek to its natural flow, which will create a significant riparian habitat enhancement, supporting sensitive salmonid species long into the future. Additionally, after the removal, banks will be restored to their natural slopes and revegetation with appropriate riparian and wetland species will occur. Revegetation will extend to an approximately 50-foot-wide riparian buffer around the creek, except where that is not feasible because of the presence of cultural resources, in which case the revegetation buffer will extend out 25 feet.¹⁶

Off-site Location

Given the magnitude of impacts and limits to what space is available within Caltrans' right-of-way, not all mitigation will be completed on-site, and Caltrans has not yet secured a location for off-site mitigation. Therefore, in this case, special conditions are necessary to ensure the mitigation plans are finalized before construction and the impacts to ESHA and wetlands can occur. **Special Condition 8** requires Caltrans to submit a final Habitat Mitigation and Monitoring Plan, including a final mitigation location, prior to the onset of construction. Caltrans intends to begin construction on this project in April 2021, and intends to put the project out for contractor bidding in December 2020. Under **Special Condition 8**, Caltrans will have to secure approval for the final mitigation plan and location before it can begin construction and without that information, construction will have to be delayed. That is not expected in this case, however. Caltrans does have a selected preferred location and is presently in negotiation with the landowner. In the event that Caltrans is not able to complete the current acquisition, Caltrans has already initiated talks with State Parks to carry out mitigation projects on State Parks property in the near vicinity. Other potential private parcels or parcels under ownership by non-profit entities have also been identified that may provide viable options.¹⁷ Caltrans has further provided a letter of assurance demonstrating its commitment to providing the necessary funding to fully compensate

¹⁶ Note that the planting designed to help camouflage the revetment at Scotty Creek does not count toward the mitigation of ESHA habitat but is a separate requirement related to the visual impacts of the revetment.

¹⁷ See the Conceptual Mitigation Plan (**Exhibit 25**) and Dr. Garske-Garcia's Memo (**Exhibit 24**).

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for ESHA (and wetland) impacts, at the ratios required and pursuant to the terms of this CDP (**Exhibit 26**).

Long-term protections

In addition to the compensatory mitigation requirements specified above, **Special Condition 9** requires the submittal of a final Long-term Coastal Terrace Prairie Habitat Management Plan to guide the restoration and long-term management of the coastal terrace prairie habitat (including to benefit MSB and CRLF dispersal) at the final selected off-site location. Moreover, given the historic agricultural use of the area for cattle grazing, that the preferred mitigation location historically has had grazing, and the desire to minimize the impacts of agricultural conversion and burdens on the ranch owners, the mitigation efforts of this project seek to allow cattle grazing in a way balanced with the need to protect habitat. In some cases, when properly managed, cattle grazing can potentially be used as a tool to meet management goals while simultaneously preserving agricultural values. Thus, under **Special Condition 9**, an Adaptive Management Working Group will be formed, with scientific specialists and members from appropriate state and federal agencies with expertise in grazing management, coastal terrace prairie, prairie-associated wildlife, or natural resource restoration and monitoring. Caltrans will provide funding in the form of an endowment, sufficient to support the Adaptive Management Working Group and to support the long-term restoration, enhancement, and maintenance activities to ensure success of the approved Long-term Coastal Terrace Prairie Habitat Management Plan.

Similarly, **Special Condition 10** ensures that the site obtained for future mitigation is protected from development through an Open Space Conservation Easement. This is especially true in this case, in which the final habitat restoration site has not been obtained. Therefore, **Special Condition 10** requires that all habitat mitigation efforts will be protected long-term from any development, other than future additional habitat restoration efforts. **Special Condition 10** also allows for limited agricultural activity within the easement through grazing, when consistent with **Special Condition 8 and 9**. When properly managed and restricted, grazing can be compatible with habitat protection. The Adaptive Management Working Group referenced above will develop recommendations, approved by the Executive Director, to ensure any grazing is compatible with the goals of the habitat restoration.

As discussed above, the special conditions set the necessary baselines for the mitigation project, including the various mitigation ratio requests in **Special Condition 8**, the habitat terms and conditions of **Special Condition 8**, the development of a final Long-term Coastal Terrace Prairie Habitat Management Plan consistent with **Special Condition 9**, and the establishment of an Open Space Conservation Easement for the mitigation area consistent with **Special Condition 10**.

Thus, as proposed and conditioned, Caltrans has committed to adequate measures to minimize and mitigate all project impacts to sensitive species and habitat, including for temporary and permanent losses. Although minimized and mitigated, these project impacts remain inconsistent with Section 30240; however, the proposed project as

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mitigated and conditioned is approvable pursuant to the conflict resolution provisions of the Coastal Act, as described in **Section L** below.

I. Wetlands and Water Quality

1. Applicable Coastal Act Provisions

The Coastal Act protects coastal waters and related habitats such as wetlands, located in the vicinity of the proposed project site. As additionally discussed in this section, the Coastal Act requires that any adverse effects of runoff be minimized to protect the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes. Section 30230 of the Coastal Act states:

Section 30230. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with the surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233 of the Coastal Act provides, in applicable part, as follows (emphasis added):

Section 30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

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(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

...

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. . . .

Coastal Act Section 30108.2 defines “fill” as “earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area.” The Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands and estuaries to be a form of dredging.

In addition to echoing Coastal Act Section 30233, the Sonoma County LCP Environment Chapter (see generally (III-13 to III-14, pp. 29-30; III-17, p. 33) requires special protections for water quality and prohibitions on the dredging and fill of wetlands:

Environmental Resources Recommendation 16. Encourage restoration of marshlands where feasible.

Environmental Resources Recommendation 17. Exclude all motor vehicles from wetlands. Pedestrian and equestrian traffic should be directed to specific areas with facilities provided to eliminate adverse impacts on biological resources.

Environmental Resources Recommendation 18. Prohibit filling, grading, diking, dredging, and construction in wetlands, except under special conditions delineated in the Coastal Act Section 30233. All projects must maintain or enhance the functional capacity of the wetland or estuary. Dredging, when consistent with the provisions of the Coastal Act and where necessary for the maintenance of the tidal flow and continued viability of the wetland habitat, should be subject to the following conditions:

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Prohibit dredging in breeding and nursery areas and during periods of fish migration and spawning.

Limit dredging to the smallest area feasible.

Require protective measures for dredging and excavation such as silt curtains, diapers, and weirs to protect water quality.

Remove structures as soon as possible once they have served their purpose.

Dredge spoils should not be deposited in areas subject to tidal influence or in areas where public access would be significantly adversely affected, as well as certain environmentally sensitive areas.

Environmental Resources Recommendation 19. Minimize construction on land adjacent to wetlands during maximum seasons of breeding bird activity (March 1 to July 1).

Environmental Resources Recommendation 20. Prohibit discharge of wastewater into any wetland unless such discharge maintains or enhances the functional capacity of the wetland and maintains the quality of the receiving water.

Environmental Resources Recommendation 22. Prohibit the diking or filling of seasonal wetlands for the purpose of conversion to agriculture or to accommodate development of any kind.

Environmental Resources Recommendation 24. Prohibit the removal of vegetation from wetlands unless it is shown to be essential to the habitat viability.

Environmental Resources Recommendation 70. Prohibit dredging in all anadromous fish streams.

Sonoma County LCP's Environment Chapter also contains policies related to the protection of water quality as it relates to livestock grazing:

Environmental Resources Recommendation 21. Prohibit grazing or other agricultural uses in designated coastal wetlands. On watershed lands, a fence should be constructed on the outer edge of the wetland.

Environmental Resources Recommendation 23. Encourage the fencing of springs, seeps, and pond areas surrounded by lands used for grazing. Water for livestock should be piped outside of the wetland for use by livestock.

The Coastal Act recognizes the importance and scarcity of wetlands. Section 30233 of the Coastal Act limits the fill of wetlands to specific, enumerated uses, and also requires that any project which results in fill of wetlands (a) be the least environmentally damaging feasible alternative, and (b) provide feasible mitigation measures to minimize

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adverse environmental effects. A project must pass all three tests to be authorized pursuant to Section 30233(a). In addition, Coastal Act Sections 30230, 30231, and 30233 together require that marine resources, the biological productivity and quality of coastal waters, and the functional capacity of wetlands and estuaries be maintained and enhanced.

2. Consistency Analysis

Anticipated Impacts

The project area includes multiple areas of wetlands and Scotty Creek flows through the project area into the ocean. The project thereby includes potential impacts to wetlands and marine resources.

This project will involve the construction and operation of new highway alignment and new highway bridge, new access roads, as well as the creation of public access amenities including a coastal trail, informal parking, and the repurposing of the existing highway for public access and/or the removal of portions of the existing highway. Such development will involve grading, excavation, vegetation removal, and the creation of new impervious highway surfaces. In total, this project element requires 38,000 cubic yards of cut and 11,000 cubic yards of fill.

According to wetland delineations conducted by Caltrans, under Coastal Commission definitions, approximately 2.3 acres of seasonal wetlands and 1.22 acres of freshwater marsh wetlands exist in the project area. These wetlands are interspersed within the coastal terrace prairie and provide valuable habitat and filtering of stormwater run-off. Construction of the new alignment will require grading, dredging, and filling, all of which are anticipated to temporarily disturb approximately 1.42 acres of wetlands during the course of construction (1.299 acres short-term temporary and 0.118 acres of long-term temporary impacts). The project will also result in estimated permanent wetland impacts to almost 0.43 acres of wetlands almost from the newly paved realignment and from the placement of the southern bridge abutment. **Exhibit 27** shows the delineated wetlands in the project area and the areas of anticipated wetland impacts.

If not properly addressed, construction activities associated with the project could also potentially entail further impacts to wetlands and streams and the potential for polluted runoff and sedimentation from construction activities or new impervious surfaces, with impacts to the viability of wetlands and streams. Construction will include ground disturbance such as grading and earth moving activities, stockpiling of soils, and the loading, unloading, and transport of excavated and fill material. Such activities could carry loose soils and pollutants into groundwater. The proposed grading will result in cut and fill that has the potential to alter the existing water table flow pattern and supply. Construction activities can introduce heavy metals associated with vehicle tire and brake wear, oil and grease, and exhaust emissions, the primary pollutants associated with construction equipment. Rainfall could carry loose soils into adjacent waterways, resulting in increased sedimentation and potential impacts to water quality, such as an increase in turbidity. Additional impervious area from new paved areas reduces infiltration into the ground and increases storm water runoff and increased concentrated

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sheet flow. Additional storm water runoff from the realigned highway also has the potential to transport an increased amount of sediment and pollutants into storm water facilities that will drain into Scotty Creek and the Pacific Ocean.

Allowable Use

In this case, the construction of a new highway alignment and a new highway bridge, are projects that do not qualify as an “incidental public service purpose,” or any of the other enumerated allowable uses for fill of wetland specified in Section 30233. As described below, however, a project can be approved under the conflict resolution provision of the Coastal Act, when necessary for compliance with other Coastal Act policies, and when approval of the project will, on balance, be most protective of significant coastal resources compared to denial. Nonetheless, in those cases, the project must still meet the other requirements of Section 30233 to limit fill to cases where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects.

Alternatives Analysis

For projects involving diking, dredging, and filling of wetlands, the Commission must ensure that the proposed project has no feasible less environmentally damaging alternative consistent with Section 30233 of the Coastal Act. Coastal Act Section 30108 defines “feasible” as “...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.”

Over the course of planning this project, Caltrans reviewed 20 separate alternatives, and selected 3 main alternatives for review in the draft EIR for this project. Caltrans found that none of the alternatives could meet the purpose and objectives of the project without requiring some wetland fill, given the presence of wetlands throughout the project area and need to continue the highway through that area, and staff concurs.

No Project Alternative

The only alternative that would avoid impacts to wetlands and coastal waters is the no-build alternative. The no-build alternative is not a feasible alternative because it does not provide protection for Highway 1 from coastal erosion. Without realignment, Highway 1 will continue to be affected by coastal erosion requiring temporary road closures and lane closures in the near-term future, and continued reliance on coastal armoring and emergency repairs. Bluff retreat has already, on occasion, undermined portions of Highway 1 necessitating road closures. In the near future, projected by 2050 according to the WRECO SLR and erosion analysis (**Exhibit 18**), the bluff retreat would eclipse almost all of Highway 1 in this area, and the highway would need to be permanently closed, unless a substantial seawall were to be authorized. Along with causing numerous negative impacts to coastal resources, such a seawall that could protect Highway 1 from erosion in this vicinity does not appear “feasible.”

Realignment Alternatives

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All the realignment alternatives involve impacts to wetlands. Given that the wetlands and coastal streams in the project area generally cross from east to west (see **Exhibit 20**), shifting the realignment further east or further west will not avoid impacts to wetlands and will have negligible difference in the amount of impacts. It is also not feasible to route the new highway farther inland around the watershed in this region given the vast distance inland necessary for such an alignment. Shorter realignments might avoid some wetland impacts, but will leave areas of the roadway subject to coastal erosion and thus not accomplish the purposes of the project. Alternative 19b would move the southern end of the bridge and the realignment east and avoid some of the wetlands in that location. However, this alternative required increased cut and fill of slopes and more significantly cut into the water table at that location, which would increase potential indirect impacts to the wetlands and coastal waters by reducing water flows to the wetlands along Scotty Creek. Alternative 19b also had increased impacts to a private well serving the Ballard Ranch and to archeological resources.

Bridge Alternatives

Bridge alternatives include no bridge or longer/shorter bridges. No bridge alternatives include the re-construction of concrete box culverts and a roadway prism on the realignment. As should be evident, the construction of a 50-foot long roadway prism would greatly increase wetland impacts (estimated to be over 1 acre). The roadway prism and culverts would also increase impacts to coastal waters and preclude the restoration of Scotty Creek, a coastal stream, which would also preclude the improvements to coastal waters and marine resources (salmonid habitat) that the stream restoration begets. Shorter bridges would not completely avoid wetland impacts and would subject the structure to coastal flooding. Longer bridges, or multiple bridge spans, would also not completely avoid wetland impacts and would have increased visual impacts and decrease public access because connections to public access points would be more difficult and require more fill. The three main alternatives selected for the draft EIR included the selected project (alternative 19a), and two slightly different bridge designs. As noted above, the realignment and bridge alternative 19b avoids a significant wetland area, but would likely increase impacts to wetlands and other coastal resources because of the greater cut and fill, additional grading required, and water table impacts. Alternative 20 would have moved the bridge farther inland, but this would also have larger wetland impacts as well as more adverse impacts to the historical resources of the ranch.

Revetment Alternatives

The project will remove the box culvert, existing highway, roadway fill at Scotty Creek, and existing rock for the culverts, allowing the restoration of that creek and its flows. Caltrans has maximized the extent of fill that can be removed adjacent to the culvert while continuing to provide access to private residences and public access to the sandy beach southwest of Scotty Creek, consistent with LCP and Coastal Act access provisions. Due to high flow velocities of Scotty Creek during storm events, armoring in the form of a revetment is needed where the existing Highway 1 terminates at the southern stream bank in order to protect access to the beach, parking opportunities, and the adjacent driveway. Working with Commission staff, Caltrans has eliminated

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riprap from the northern end of the existing Highway 1, from the eastern side of the southern Highway 1 end, and minimized its use as much as feasible. The no-revetment alternative would not protect the existing Highway 1 terminus, which would be subject to coastal erosion and short-term, and eventually long-term, closures of the public access, public parking, and legally required continuance of existing private driveway access. Caltrans also considered the alternative of a retaining wall to maintain the highway end point, but the wall would have greater impacts through increased dispersal of wave forces above and below the structure, greater restrictions on beach migration, and greater impacts from construction and ultimate removal.

Alternatives Conclusion

Of the feasible alternatives reviewed, Caltrans selected the project alternative with the least impacts to wetlands. An evaluation of the three most preferred alternative alignments demonstrated that the difference between impacts to wetlands was negligible, because each of these three structural designs avoided impacts to Scotty Creek and wetlands to a comparable degree, or had slightly greater impacts than the proposed project.

Minimization and Mitigation

Caltrans has incorporated a number of project minimization features and mitigation measures to protect water quality, minimize impacts to wetlands and streams, and provide habitat restoration. As described below, special conditions of this CDP would reinforce these measures and add further mitigation requirements.

Project Design and Construction Mitigation Measures

General Measures: Under special conditions for this CDP and the adopted CEQA mitigation (see Gleason Beach [FEIR, Appendix F](#)) measures for the project, several mitigation measures provide general protection to wetlands and coastal waters, including: 1) impacts will be minimized through construction best management practices (**Special Condition 13**) and the submittal of a Storm Water Pollution Prevention Plan (**Special Condition 14**); 2) biological monitoring both before construction and during construction (**Special Condition 15**); 3) exclusion fencing will protect wetland habitat from construction impacts and accidental worker trespass (**Special Condition 13**); and 4) workers will be given environmental awareness training (**Special Condition 13**).

Protection of Coastal Waters: Of primary importance here is that the project will remove the double box culverts and over 60-feet of roadway prism currently impairing the flows of a coastal water, Scotty Creek and provide for the daylighting of the creek. The bridge itself is a means to cross the coastal water while avoiding the impacts of more conventional roadway prisms and culverts. The bridge spans are designed to avoid placement of footings and columns in the existing creek channel to protect coastal waters. The height of the bridge and placement of the bridge footings are also designed to avoid the 100-year flood plain of the creek. Additionally, the creek diversion necessary to remove the box culverts and open Scotty Creek will only occur during summer dry months when stream flows are limited, to reduce any potential impacts (**Special Condition 2(b)**).

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Protection of Wetlands: The bridge is also designed to avoid wetlands adjacent to Scotty Creek and a large patch of wetlands south of the Ballard Ranch Drive and east of existing Highway 1, to the extent feasible (**Exhibit 12 & 27**). Indeed, the size and height of the bridge is in part due to the need to minimize wetland impacts as much as possible. The FEIR document also includes implementation measures from the Sonoma County LCP to avoid and minimize impacts to wetlands, including: excluding motor vehicles from wetlands except where critical to construction, limiting dredging to the smallest amount feasible, minimizing construction on land adjacent to wetlands, and prohibiting wetland vegetation removal unless it is essential to project implementation (**See Gleason Beach [FEIR, Appendix F](#)**). Staging and access plans will be described in the project specifications and contract bid package and will clearly provide direction on how to avoid unnecessary access through, and work in, wetlands.

Lastly, the project also includes the use of pervious gravel roadway materials for the residential access roads, rather than pavement, to reduce runoff that can interfere with the quality and productivity of coastal waters and wetlands.

On-Site Restoration for Temporary Impacts

As discussed above in **Section I** regarding ESHA, the project will have temporary (including short-term and long-term) and permanent impacts (see **Section I** and **Exhibit 24** for an explanation of these terms). All temporary impacts will be mitigated on-site. **Special Condition 8** requires a final Habitat Mitigation and Monitoring Plan (HMMP) for review and approval by the Executive Director including on-site wetland restoration for all temporary impacts (see **Exhibit 25** for a draft conceptual mitigation plan). The HMMP requires pre- and post-construction surveys to clearly identify the location, size, and condition of wetlands within the project area before and after construction, as well as the final actual short-term temporary, long-term temporary, and permanent impacts. Those wetland impacts that can be classified as temporary will be restored on site at a 1:1 mitigation ratio, including significant removal of all non-native and invasive plant species and revegetation with locally and genetically-appropriate native species. Long term temporary impacts will be restored at a ratio of 1.5:1, with 1:1 on-site and the remaining 0.5:1 off-site nearby. Monitoring reports will be prepared that must show the successful restoration of each habitat to the pre-impact baseline conditions or better within the designated period (i.e. within 12 months from initial point of construction disturbance for short-term impact characterization, and within 12 months from the final point of construction disturbance for long-term impact characterization). If restoration criteria are not met within the allowed timeframe, the wetland impacts will be considered permanent

In terms of impacts to coastal waters, the removal of the box culverts and daylighting of Scotty Creek will have short-term temporary impacts through stream diversion. However, the restoration of the stream to its natural flow will create a significant riparian habitat enhancement, supporting sensitive salmonid species long into the future. Additionally, after culvert removal, banks will be restored to their natural slopes and revegetation with appropriate riparian and wetland species will occur.

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Habitat Restoration Mitigation for Permanent Impacts

For mitigation of permanent wetland impacts, under **Special Condition 8**, Caltrans will mitigate for wetlands at a 4:1 ratio when the restoration is habitat creation or substantial restoration. As discussed above in **Section I** regarding ESHA, restoration may also include enhancement and/or preservation, but at increased ratios. Additionally, in the case of wetlands, there is a no-net loss of wetlands principle, which requires at least 1:1 ratio through wetland creation. As discussed in the conceptual mitigation plan submitted by Caltrans for this project (**Exhibit 25**), wetland creation would be achieved by converting areas adjacent to existing freshwater wetlands with less than 10 percent ground cover of native plants, where hydrology and wetland vegetation can be established through grading, wetland plantings, and other restoration management tools. The remainder of the wetland mitigation will consist of out-of-kind enhancement and riparian habitat restoration to benefit salmonids and CRLF.

As discussed above in **Section I** regarding ESHA, Caltrans is in the process of acquiring the land necessary to mitigate for permanent impacts, which will also include the necessary space for wetland mitigation. As discussed above, special conditions are necessary to ensure that mitigation plan and location is finalized before construction begins, as well as that the mitigation and restoration be consistent with terms already incorporated into this CDP. **Special Condition 8** requires the submittal of a final Habitat Mitigation and Monitoring Plan, with a project location, before construction can begin. Additionally, **Special Condition 10** requires Caltrans to record a Habitat, Agricultural, and Open Space Conservation Easement to ensure any restored or created wetlands are protected into the future, with only habitat mitigation efforts allowed in wetlands. The restored coastal waters of Scotty Creek will also be protected under the conservation easement, including a prohibition on grazing in the creek.

Therefore, as conditioned, the project will ensure the impacts to wetlands are minimized, and that all impacts are mitigated to the maximum extent feasible, consistent with Section 30233 in a conflict resolution context.

Biological Productivity and Functional Capacity

The fourth general limitation set by Section 30233 of the Coastal Act is that any proposed dredging or filling in coastal wetlands or estuaries must maintain or enhance the functional capacity of the wetland or estuary. In addition, proposed development must maintain, enhance, and where feasible, restore the biological productivity and the quality of wetlands and waters consistent with the requirements of Sections 30230 and 30231. The mitigation measures incorporated into the project and required by the special conditions discussed above will ensure that the project will not have significant adverse impacts on coastal waters or wetlands in and around the project vicinity.

Conclusion

The project is not able to meet the allowable use test of Section 30233 of the Coastal Act. As discussed below, the project is still approvable under the conflict resolution policies of the Coastal Act. As proposed and conditioned, the project is consistent with the other tests of Section 30233 to minimize impacts, take all feasible mitigation

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measures, and is the least environmentally damaging feasible alternative. Also, as proposed and conditioned the project is consistent with Section 30230 and 30231 because it includes mitigation measures, the restoration of Scotty Creek, and a managed retreat approach, which will protect, maintain, and enhance the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and help protect and restore marine resources.

J. Visual Resources

1. Applicable Coastal Act Provisions

Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...

Additionally, Section 30254, states that “it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road.”

Likewise, the Sonoma County LCP contains a number of policies to protect visual resources. LCP coastal view protection provisions require visual impacts to be minimized, including the following recommendations, found in the LCP’s Visual Resource Chapter:

1. Prevent development (including buildings, structures, fences, paved areas, signs, and landscaping) from obstructing views of the shoreline from coastal roads, vista points, recreation areas, and beaches.
2. Prohibit development which will significantly degrade the scenic qualities of major views and vista points. ...
4. Minimize visual destruction of natural landforms caused by the cutting, filling, and grading for building sites, access roads and public utilities by: Constructing roads, buildings, and other structural improvements to fit the natural topography. ...
6. Minimize the visual impacts of development on terraces by: Designing structures to be in scale with the rural character of the region.
7. Minimize the visual impacts of development on ridges by: Prohibiting development in rural areas that projects above the ridgeline silhouette. ...
9. Locate and design development to fit the setting and to be subordinate to the pre-existing character of the site.

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10. Design structures to be compatible with existing community characteristics.

The LCP Visual Resources Chapter also provides:

The most important rural design issues are preservation of coastal views, and visual quality and compatibility of development with the natural landscape. (VII-44, p.168.)

Ridgelines are the most visually vulnerable of the landforms in Sonoma County.

Ridgelines are often seen from great distances. The contrast between the land and the sky makes structural intrusions very obvious. (VII-44, p.168.)

2. Consistency Analysis

Travel along the stretch of Highway 1 near Gleason Beach reveals towering coastal bluffs, tucked-away coves, and striking rocky beaches to the west. To the east, views are of a landscape composed of layers of pastoral hillsides, grassy terraces, and conspicuous ridgelines. For the most part, Highway 1 remains a scenic undeveloped two-lane roadway here, occasionally traversing through interspersed small subdivisions. Given the abundance of coastal visual resources in the project corridor, a major highway realignment project means that avoiding all visual impacts is essentially an impossible charge.

This managed retreat project will set a threatened segment of the highway back from the eroding coastline and unavoidably alter existing views. However, Highway 1 will remain a two-lane scenic highway, with only slightly modified shoulders, and the views from the highway, with panoramas westward of the coast and ocean and eastward over the landscape of coastal hillsides and agricultural fields, will remain largely unchanged. The project as proposed would also minimize the visual impacts of the 8-foot roadway shoulders by paving only 4 feet of the shoulders next to the travel lanes and leaving the remainder unpaved. In doing so, the visual impacts of the shoulders are minimized while meeting safety standards thereby avoiding additional conflicts with visual resources and remaining compatible with the existing character of the area. The curvilinear design of the highway further helps conform the roadway in a way that lays more gently on the hilly coastal prairie terrace, as opposed to a straight-line route. Thus, the at-grade realignment portions of the roadway themselves do not create significant conflicts with Section 30251 and 30254.

However, as discussed above, Highway 1 currently crosses Scotty Creek via a low roadway crossing over narrow culverts that have channelized the mouth of the creek flow. In order to allow habitat restoration of Scotty Creek and its natural flows, and avoid the significant fill of ESHA, coastal water, and wetlands that a realigned roadway prism would entail, this project will replace the 1950s era low elevation concrete box culverts and roadway prism fill with a bridge spanning Scotty Creek at a much higher elevation. The proposed bridge would be 850 feet long, 28 feet above the ground (or at 36 feet in elevation above sea level), and 49 feet wide, quite different from the current low and unobtrusive crossing of Scotty Creek (see **Exhibit 13** for visual comparisons). The

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length and height of the bridge are the minimum necessary to avoid flooding impacts from Scotty Creek and from SLR, to provide continued access to the private driveway for agricultural trucks, and to avoid additional impacts to wetlands, ESHA, and cultural resources.

As a large, concrete structure, the new bridge will be of different character from the existing highway and surrounding pastoral landscape. From the bridge roadway, the views of the coast to the west will be expanded, albeit slightly more distant, by being elevated and opening up new views of the restored Scotty Creek. Likewise, the views to the east from the bridge roadway will remain largely the same of coastal hillsides and agricultural lands, though again, from an elevated perspective over a restored Scotty Creek.

However, the views from the beach and from any retained highway elements to be repurposed for public access purposes in the vicinity of the beach looking back east, will be impacted. The proposed 28-foot tall bridge structure will be directly in the foreground of visual features protected by the Coastal Act and the LCP, with the bridge extending above natural topography in full view in an area that is predominantly rural and free of structures (**Exhibits 13 & 15**). There will also be some change to the rural character of the highway as it crosses a large, modern bridge, and views from the future ground level highway realignment and the coastal trail will now include some vistas of the large structural bridge element. At the same time the Commission acknowledges that different people have different opinions about bridges and some people may appreciate the view more, and that even in rural areas many bridges become, especially over time, treasured landmarks. Additionally, the alternative to the bridge would be a new roadway prism along the realignment, which would itself be a substantially large berm in the landscape with its own significant visual impacts. While recognizing these opinions, the Commission here finds that the bridge will detract from the public viewshed and creates significant scenic resource impacts.

Coastal Act Section 30251 requires the protection of the scenic and visual qualities of coastal areas and establishes them as a resource of public importance. This section further dictates that permitted development be sited and designed to protect views to and along the ocean, that landform alteration be minimized, and be visually compatible with the character of surrounding areas. In addition, where feasible, Section 30251 requires restoration and enhancement of visual quality in visually degraded areas. Additionally, the LCP considers this area a “key visual attribute and attraction” to coastal visitors. Because this region is designated with the highest rating (i.e., “outstanding views”) on the LCP’s Visual Resources Map, it is also subject to criteria ensuring that new development design compliments, and is in scale with, the surrounding environment and existing community characteristics.

Visual Minimization Measures

After evaluating numerous alternatives, Caltrans has sited and designed the bridge to protect views to and along the ocean and scenic coastal areas to the greatest extent feasible and with minimal alteration of natural land forms. The mass of the bridge has

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been reduced, and the height of the bridge has been lowered. to the maximum extent feasible, The height of the bridge is primarily dictated by ensuring that it remain safe from flooding and SLR for its projected lifespan and that it allows for the height of agricultural trucks to be able to pass underneath on the existing private access road to the Ballard Ranch, which will maintain existing access and minimize agricultural conversion impacts. The abutments, which are engineered according to the height and length of the bridge, were located to avoid the 100-year flooding area of Scotty Creek, with SLR projections included. The proposed placement of the abutments and bridge piles are also situated to avoid wetland and ESHA impacts to the greatest extent feasible. In an effort to minimize changes that were visually incompatible with the character of surrounding areas, including community design reviews, discussions with Commission and Sonoma County staff, and feedback from community presentations, Caltrans has also developed a bridge design that is more reflective of the historic agricultural context than the originally-conceived more modern designs.

Still, these mitigation measures are not sufficient to bring the structure into compliance with Section 30251 and the LCP policies. It is worth noting that Caltrans' FEIR (dated June 2016) further confirmed that "the proposed project's aesthetic impacts would be significant and unavoidable" and Caltrans therefore made "a mandatory finding of significance under CEQA because the project has the potential to degrade the quality of the environment and could have substantial adverse effects on human beings from a scenic resource standpoint" (FEIR page 3-24). Since there are no other feasible alternatives to avoid visual impacts of the necessary scale and location of the bridge, the structure is inconsistent with the Coastal Act policies that protect visual qualities in the project area. As described in further detail below, the bridge can be approved under the conflict resolution policies of the Coastal Act, however, because it is necessary for compliance with other Coastal Act policies, and approval of the overall project will, on balance, be most protective of significant coastal resources compared to denial of the project.

Visual Mitigation

In this case, the additional mitigation measures proposed by Caltrans are extremely important. Not only is the mitigation required for the impacts of the project, but Section 30251 also states that permitted development, "where feasible, [shall] restore and enhance visual quality in visually degraded areas." Along with the steps described above to minimize the impacts, this project also includes a significant and adequate visual mitigation proposal component through the funding and establishment of an in-lieu fee program.

As described previously, 21 private parcels exist west of the existing Highway 1 in the project corridor above Scotty Creek, each of which at one time had a residence. Over recent decades, the majority of those houses have been damaged or collapsed from severe coastal bluff erosion. Most of those residences had some form of shoreline protection. As houses have been lost, a substantial debris field from the prior shoreline armoring and the damaged houses has heavily impacted the bluff and shoreline west of Highway 1. In addition, several Highway 1 emergency protection measures have failed

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and added additional manmade structures. The debris field includes abandoned and eroded seawalls, riprap, sand bags, concrete debris, retaining walls, pilings and miscellaneous clutter (see **Exhibits 1 & 8** for visual examples of the debris). Along with the substantial visual impairment of this coastal area, the abandoned debris impedes public access, as discussed above in **Section E**.

As mitigation for the visual impacts of the 850-foot long bridge, Caltrans proposes to fund the clean-up of an approximately 864-foot long stretch of coastal bluff and beach through an in lieu fee program of \$5 million dollars. Working in conjunction with Sonoma County, Caltrans has developed and submitted a Conceptual Gleason Beach and Bluff Cleanup In Lieu Fee Program, dated September 25, 2020 (the “In Lieu Fee Program”) (**Exhibit 28**). The beach and bluff hazards clean-up will remove the abandoned debris on the bluff and beach areas, as well as failed highway repair efforts west of existing Highway 1, from a defined “Coastal Hazards Mitigation Area” identified in **Exhibit 28**. These efforts will return the bluff and beach to more natural conditions that resemble the undeveloped, similarly-situated bluff areas to the north of the realignment highway project, that will, along with other benefits, provide a substantial improvement in the visual character of the shoreline.

As the local government with regulatory responsibility for coastal development permitting and County code compliance, and with experience in similar clean-up activities after catastrophic events (e.g., wildfires) or structure abandonment, Sonoma County is well suited for implementing the clean-up. The Program will be funded by a \$5 million in lieu fee that Caltrans will deposit into a special account established by Sonoma County and will be implemented through a Gleason Beach and Bluff Cleanup In Lieu Fee Program Memorandum of Understanding (MOU) between Sonoma County and the Commission. The in lieu fee amount was jointly developed in partnership between Caltrans and Sonoma County based on projected costs prepared by experienced Caltrans engineers with a contingency incorporated. This mitigation commitment was memorialized in the County’s April 17, 2018 Board Resolution Number CPH17-0003, Caltrans District Director 4 Tony Taveres’ April 18, 2020 letter to Sonoma County Supervisor Linda Hopkins, and Caltrans Project Manager Lilian Acorda’s September 14, 2020 letters to Commission and County staff. Per Caltrans and Sonoma County’s future cooperative funding agreement and **Special Condition 5**, the Gleason Beach and Bluff Cleanup In Lieu Fee Program will be guided by a Final Gleason Beach and Bluff Hazards Cleanup Plan (Plan) to be prepared by Sonoma County within eighteen months of finalizing the MOU with the Commission.

As part of the overall in lieu fee bluff and beach cleanup program, Sonoma County has also agreed to undertake the phased removal of Caltrans emergency erosion repair structures that were previously installed in 2004, 2017, and 2019. This is discussed more fully in **Section D** above. In summary, the County will remove exposed elements of the prior Caltrans emergency repair work as part of the debris field clean up. The County will then monitor the bluff and structural repairs within the existing Highway 1 and proceed with removal as they become exposed by erosion over time, with an eye

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toward allowing the safe use of the new CCT within the repurposed Highway 1 for as long as possible.

Special Condition 5 requires the execution of a cooperative funding agreements between Caltrans and Sonoma County for the in-lieu fee program to mitigate the visual impacts of the project and to address Caltrans emergency repairs at the same location. Before the commencement of construction, Caltrans is required to enter into a cooperative funding agreement with Sonoma County and provide \$5 million to the County for the Gleason Beach and Bluff Cleanup In Lieu Fee Program. As the entity accepting the in lieu fee under **Special Condition 5**, Sonoma County will enter into a separate Beach and Bluff Clean Up In Lieu Fee Program Memorandum of Understanding (MOU) with the Commission to guide execution of the overall In Lieu Fee Program.

The provision of a \$5 million in lieu fee to Sonoma County for the clean-up of the identified bluff and shoreline debris field and exposed highway emergency repair works previously installed by Caltrans within the “Coastal Hazards Mitigation Area,” is adequate mitigation that offsets the significant and unavoidable public viewshed impacts of the project. Managed retreat projects can present difficult Coastal Act issues, such as visual resource impacts, in considering the best and most resilient way to adapt to California’s coastline in the face of substantial change from SLR and climate change. This type of solution, developed in collaboration with the County, exemplifies an innovative approach to how local and State entities can collectively work together to address the many complexities associated with responsibly adapting to sea level rise along California’s coast. Thus, Caltrans proposes as part of this project appropriate measures to minimize visual resource impacts and to mitigate on-site for those impacts. Although the visual resource impacts of this project are inconsistent with Section 30251, the proposed project as mitigated and conditioned is approvable pursuant to the conflict resolution provisions of the Coastal Act.

K. Agriculture

1. Applicable Coastal Act Provisions

Coastal Act Section 30242 requires that conversion of agricultural lands be limited to instances where such lands are no longer suitable for agricultural uses, are protective of prime agricultural land, or result in the concentration of development. Section 30242 states as follows:

Section 30242. All other [nonprime] lands suitable for agricultural use shall not be converted to nonagricultural uses unless (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Likewise, Sonoma County LCP Resources Chapter Land Use policies similarly mandate agricultural land protection:

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Resources Recommendation 1. Encourage compatible, resource-related uses on designated resource lands. Such uses should not conflict with resource production activities...

Resources Recommendation 4. Establish resource compatibility and continued productivity as primary considerations in parcel design and development siting.

2. Consistency Analysis

Much of Sonoma County's coastline is dedicated to agricultural production. The landscape here generally is characterized by low and relatively sparsely forested rolling hills, lending itself to sheep and cattle grazing. In addition to containing the Gleason Beach residential subdivision, the proposed project area also overlaps with two large agricultural parcels, both with active cattle grazing operations. Grazing has been taking place in this area for over a century. The agricultural parcels directly border the existing highway to the east.

The realignment of this highway inland, necessary to affect a managed retreat solution, cannot occur without conversion of some of these agricultural lands. All areas east of the current highway in the project area are agricultural lands, so there are no realignment alternatives inland that can realize the project without converting some agricultural lands. Once realigned, the new Highway 1 will convert approximately 16.68 acres of agricultural land, or about 3% of cumulative grazing area available on the two parcels. However, this accounting includes land directly utilized for the new roadway, as well as land to the west of the new alignment that will be available for continued agricultural operations, but separated from the rest of the parcels by the highway. Although available for agricultural use, the potential for grazing on that area will be extremely limited because the highway will bisect them from the other grazing areas, and they will be between the highway and new public access areas. As such, they are considered converted in this analysis.

Coastal Act Section 30242 requires that the conversion of agricultural land to non-agricultural uses can only occur when agricultural use is no longer feasible. In this case, the conversion criteria of Coastal Act Section 30242 cannot be met because the new highway alignment will remove agricultural land from use, both directly in the case of the new roadway, and because the ranch will essentially be prevented from using those converted agricultural areas for grazing. Without the realignment, the agricultural use remains feasible, although access to that use would be in jeopardy. Therefore, the proposed project is inconsistent with the Coastal Act Section 30242 and the LCP's agricultural protection policies.

Although the project is inconsistent with Section 30242, as discussed below, it may nevertheless be approved pursuant to the conflict resolution provisions of the Coastal Act, in part because no feasible alternatives are apparent that can avoid converting agricultural lands. In this instance, Highway 1 is constrained to the west by a continuously eroding bluff, and to the east, all available lands are designated and actively used agricultural land. Any effort to realign the highway, which must move eastward, and protect it from failure will result in conversion of agricultural land. The

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extent of the eastward movement of the highway is also determined by the need to avoid the impacts of erosion for the anticipated life-span of the project (through 2100), and comply with highway safety standards.

Lastly, although the project does not create newly designated agricultural lands, it does minimize the conversion of those lands by providing for continued agricultural operations, including grazing, while preserving those lands from future development. For one, as discussed above, the height of the new realignment bridge has been configured to ensure the continued use of the ranch driveway by agricultural trucks. For two, under **Special Condition 10**, Caltrans is directed to secure and dedicate a Habitat, Agricultural, and Open Space Conservation Easement that shall protect a designated area from future development to protect restored coastal terrace prairie habitat. It is anticipated that this easement will be recorded on agricultural ranch land, thus preserving those areas from development, but additionally, the easement will preserving the ability to conduct agricultural grazing. Under **Special Condition 9**, Caltrans shall form an Adaptive Management Working Group that will develop an anticipated grazing management plans to provide for the long-term protection of coastal terrace prairie habitat and still provide for cattle grazing. Although these lands will be set aside in a conservation easement to protect habitat conservation, the easement is anticipated to be adapted for continued agricultural grazing (in areas outside of Scotty Creek) and thus minimize impacts to agricultural lands. Caltrans has also provided for potential cattle crossings in the FEIR to the newly separated parcels, if cattle grazing is still needed there.

In conclusion, the proposed realignment of Highway 1 to a more inland location will convert and bifurcate agricultural property, rendering a portion of such property no longer available for agricultural purposes, including where the new roadway will exist. Coastal Act Section 30242 limits the ability to convert agricultural lands to nonagricultural uses unless continued agriculture is not feasible, and therefore, the project is not consistent with Section 30242. However, and as described further below, though impacts to agricultural resources will occur, Caltrans proposes measures to minimize such impacts. Although these impacts are inconsistent with Section 30242, the proposed project, as mitigated and conditioned, is approvable pursuant to the conflict resolution provisions of the Coastal Act.

L. Conflict Resolution

1. Applicable Coastal Act Provisions

Section 30007.5. The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

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Section 30200(b). Where the commission or any local government in implementing the provisions of this division identifies a conflict between the policies of this chapter, Section 30007.5 shall be utilized to resolve the conflict and the resolution of such conflicts shall be supported by appropriate findings setting forth the basis for the resolution of identified policy conflicts.

As noted previously in this report, due to the proposed highway realignment, the proposed project is inconsistent with Sections 30251 (protection of visual resources), 30240 (ESHA), 30233 (restriction on fill of wetlands), and 30242 (protection of agriculture) of the Coastal Act. However, as explained below, denying or modifying the proposed project to eliminate these inconsistencies would lead to nonconformity with other Coastal Act requirements, namely Sections 30210 (maximizing public access and providing recreation), 30220 (preservation of coastal areas suitable for recreational uses), 30230 (maintaining and enhancing the marine environment), and 30231 (maintaining and restoring coastal waters and streams), because denying the project would necessitate protecting the existing highway with new shoreline protective armoring in the short-term to medium-term and would likely result in ultimately losing the highway completely. Denial of the project would also fail to protect a lower cost recreational facility (Section 30213) and fail to protect oceanfront land suitable for recreational use (Section 30221). Additionally, the proposed project fulfills one of the principles of the Commission's Sea Level Rise guidance that prioritizes the planned retreat of major infrastructure along the coast; thus, denial of the project would be inconsistent with the Commission's professed goals and policies on SLR adaptation planning.

In such a situation, when a proposed project is inconsistent with one or more Chapter 3 policies, and denial or modification of the project would be inconsistent with one or more other requirements of Chapter 3, Section 30007.5 of the Coastal Act requires the Commission to resolve the conflict in a manner which is on balance the most protective of significant coastal resources.

2. Analysis

Resolving conflicts through application of Section 30007.5 involves the following seven steps:

1. The project, as proposed, is inconsistent with at least one Chapter 3 policy;
2. The project, if denied or modified to eliminate the inconsistency, would affect coastal resources in a manner inconsistent with at least one other Chapter 3 policy that affirmatively requires protection or enhancement of those resources;
3. The project, if approved, would be fully consistent with the policy that affirmatively mandates resource protection or enhancement;
4. The project, if approved, would result in tangible resource enhancement over existing conditions;
5. The benefits of the project are not independently required by some other body of law;

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6. The benefits of the project must result from the main purpose of the project, rather than from an ancillary component appended to the project to “create a conflict”; and,
7. There are no feasible alternatives that would achieve the objectives of the project without violating any Chapter 3 policies.

The proposed development meets all of the above criteria for applying conflict resolution, as follows:

Step 1

First, for the Commission to apply Section 30007.5, a proposed project must be inconsistent with an applicable Chapter 3 policy. Approval of the proposed project would be inconsistent with several Coastal Act policies. First, it would be inconsistent with Section 30251, because the proposed development would not be able to be adequately protective of scenic resources or visually compatible with surrounding areas, because the new 28-foot tall bridge would significantly impose on the natural landscape, affect public views, and affect the rural character of Highway 1. Second, the proposed project would be inconsistent with Section 30240, which protects ESHA, because aspects of the proposed development would be constructed in ESHA, and the highway realignment and bridge project is not a resource-dependent use. Third, the proposed project would be inconsistent with Section 30233, which limits fill of wetlands, because the proposed development includes fill of wetlands but is not an allowable use under Section 30233. And finally, it would be inconsistent with Section 30242, which protects agricultural land, because it would take viable agricultural land out of agricultural use.

Step 2

Second, the project, if denied or modified to eliminate the inconsistency, would affect coastal resources in a manner inconsistent with at least one other Chapter 3 policy that affirmatively requires protection or enhancement of those resources. A true conflict between Chapter 3 policies results from a proposed project which is inconsistent with one or more policies, and for which denial or modification of the project would be inconsistent with at least one other Chapter 3 policy. Further, the policy inconsistency that would be caused by denial or modification of a project must be with a policy that affirmatively mandates protection or enhancement of certain coastal resources.

In order to identify a conflict, the Commission must find that although approval of a project would be inconsistent with a Chapter 3 policy, the denial of the project based on that inconsistency would result in coastal resource effects that are inconsistent with some other Chapter 3 policy. In most cases, denial of a proposal will not lead to any coastal resource effects at all. Instead, it will simply maintain the status quo. The reason that denial of a project can result in coastal resource effects that are inconsistent with a Chapter 3 policy is that some of the Chapter 3 policies, rather than prohibiting a certain type of development, affirmatively mandate the protection and enhancement of coastal resources, such as Sections 30210 (“maximum access...and recreational opportunities shall be provided...”), 30213 (“Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided...”), 30220 (“Coastal areas suited

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for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses...”), 30221 (“Oceanfront land suitable for recreational use shall be protected for recreational use and development...”); 30230 (“Marine resources shall be maintained, [and] enhanced...”), and 30231 (“The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored...”). If there is ongoing degradation of one of these resources, and a proposed project would cause the cessation of that degradation, then denial would result in coastal resource affects (in the form of the continuation of the degradation) inconsistent with the applicable policy. Thus, the only way that denial of a project can have impacts inconsistent with a Chapter 3 policy, and therefore the only way that a true conflict can exist, is if: (1) the project will stop some ongoing resource degradation, and (2) there is a Chapter 3 policy requiring the Commission to protect and/or enhance the resource being degraded. Only then is the denial option rendered problematic because of its failure to fulfill the Coastal Act’s protective mandate.

Without a new alignment, the existing highway would experience ongoing closures and deterioration due to erosion from storms, ultimately suffering a complete closure, likely well before 2050, under current SLR projections. Therefore denial of the project is inconsistent with the affirmative protection policies of Section 30210 (requiring maximize public access and recreational opportunities). Closures of the existing highway due to coastal erosion would be inevitable in the future because of the highly erosive nature of the bluffs on the seaward side of the existing highway. As such, if allowed to remain in its current location, the existing highway would likely become impassible in the near future, necessitating a 27-mile detour from Jenner to Bodega Bay, preventing the public from accessing a significant stretch of the coast that is a primary visitor destination and eliminating the continued safe transportation access needed by the Sonoma County community and the local tourism and agricultural economies.

Likewise, denial of the project would also be inconsistent with the affirmative protection policy of Section 30213, which requires protection of lower cost visitor and recreational facilities. Access to the beach is free, with free parking, as it will continue to be under the project. Thus, beach access here is a lower cost recreational facility. In addition to providing public access to this stretch of the coast, Highway 1 itself is a lower cost visitor and recreational facility for those who wish to drive or bicycle for pleasure along this highly scenic coastal area. Denial of the project would be expected to lead, in the not too distant future, to the closure of Highway 1, which means that the public would no longer be able to access this beach and the coast in this part of Sonoma County. In addition, if the public were to lose access to this beach and section of coast, a coastal area and oceanfront land suitable for recreational use would not be protected, inconsistent with Sections 30220 and 30221. Therefore, if the project were denied, the status quo would be maintained, ultimately leading to the loss of Highway 1 in this part of the coast, inconsistent with the affirmative protection policies of Sections 30210, 30213, 30220 and 30221.

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Denial of the project would also require Caltrans to continue to rely on emergency shoreline armoring to maintain the road, at least for as long as it was able. Without approval of the project, structural debris would remain on the shoreline, further shoreline armoring would be required, and increasingly elaborate shoreline armoring structures would be placed on the shoreline. These devices would impinge the natural interchange of marine waters and the shoreline and prevent natural bluff retreat and the support for a healthy ocean ecosystem that engenders. Together marine resources and the quality of quality of coastal waters would be impaired. These negative impacts to marine resources and coastal waters, would be in violation of the Commission's mandate to protect and enhance marine resources, as required by Section 30230 and 30231.

Step 3

The project, if approved, would be fully consistent with the policies that affirmatively mandate resource protection or enhancement and that would not be met if the project were denied. That is, if denial of a project would conflict with an affirmatively mandated Coastal Act policy, approval of the project would have to fully conform to that policy. If the Commission were to interpret this conflict resolution provision otherwise, then any proposal, no matter how inconsistent with Chapter 3, that offered a slight incremental improvement over existing conditions could result in a conflict that would allow the use of Section 30007.5. The Commission concludes that the conflict resolution provisions were not intended to apply to such minor incremental improvements.

In this case, the project provides safe and long-term public access to the coast along this highly scenic portion of Highway 1, and, as conditioned to ensure completion of the public access amenities, the project is fully consistent with the Coastal Act's public access and recreation policies. Most importantly, the project will provide the continued functioning of Highway 1, the primary public access facility in the area, in a manner that resiliently adapts to sea level rise. Further, as previously discussed, the project will allow for removal of existing and previous shoreline protection, thereby maximizing public access and recreation and enhancing marine resources by removing debris that is negatively impacting those resources, improving visual resources along the shoreline and allowing the shoreline to erode and new beaches to form. Without the project, further emergency and long-term shoreline armoring will be required, which will have negative impacts to marine resources, the biological productivity and the quality of coastal waters, and public access along the shoreline.

Step 4

The project, if approved, will result in tangible resource enhancement over existing conditions. This is the case with the current proposed project for several reasons. First, the realigned roadway will no longer be subject to coastal hazards that would ultimately lead to the need for road closures, further remedial shoreline armoring, and loss of public access. Second, as conditioned, the project will include construction of a separated bike and pedestrian trail, which will provide an enhanced public recreational experience, as compared to the current, limited bike and pedestrian access. In addition, the realigned highway will contain continuous 4-foot paved and 4-foot unpaved shoulders, providing improved access for road bicyclists. The project protects a lower

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cost recreational facility, both the highway itself and the existing beach access (Section 30213) and protects a popular visitor destination (Section 30253(e)).

Moreover, the project as conditioned will result in a restoration of Scotty Creek to the benefit of sensitive species like Coho and Steelhead salmon and the CRLF. Finally, the project allows for the existing shoreline armoring to be removed, as well as enhancements to public access and marine resources, by allowing for safe passage along the shoreline as it naturally erodes at this location.

Realigning the highway to a less hazardous location will assure that the transportation facility needs no further remedial shoreline armoring in the future, which will create tangible benefits to coastal resources.

Finally, the proposed project also fulfills one of the principles from the Commission's adopted Sea Level Rise Policy Guidance of choosing adaptation strategies that will maximize natural shoreline processes and values while also protecting critical public infrastructure. By using planned retreat of the highway as the main approach to keep the road safe from erosion, natural shoreline habitats will be maximized, along with their associated benefits, and the highway will be protected from additional erosion hazards related to accelerating sea level rise.

Step 5

The benefits of the project are not independently required by some other body of law. The benefits that would cause denial of the project to be inconsistent with a Chapter 3 policy cannot be those that a project proponent is already being required to provide pursuant to another agency's directive under another body of law. In other words, if the benefits would be provided regardless of the Commission's action on the proposed project, the project proponent cannot seek approval of a project that would not otherwise be approvable on the basis that the project would produce those benefits – that is, the project proponent does not get credit for resource enhancements that it is already being compelled to provide. For this project, Caltrans has an obligation to keep the highway open but has no obligation from another agency to keep it open in this way – that is to realign the highway farther inland through a managed retreat solution that better protects coastal resources. Nor does Caltrans have any other obligation to provide for any of the other project benefits such as improved public access or sensitive creek habitat enhancements. Caltrans could seek to maintain the highway through continued emergency shoreline armoring, seek to abandon the highway, or seek to realign the highway without all the multiple public access improvements or habitat improvements to Scotty Creek.

Step 6

The benefits of the project must result from the main purpose of the project, rather than from an ancillary component appended to the project to "create a conflict." A project's benefits to coastal resources must be integral to the project purpose. If a project is inconsistent with a Chapter 3 policy, and the main elements of the project do not result in the cessation of ongoing degradation of a resource the Commission is charged with

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enhancing, the project proponent cannot “create a conflict” by adding to the project an independent component to remedy the resource degradation.

The benefits of a project must be inherent in the purpose of the project. If this provision were otherwise, project proponents could regularly “create conflicts” and then request that the Commission use Section 30007.5 to approve projects that cannot otherwise be approvable. The conflict resolution provisions of the Coastal Act could not have been intended to foster such an artificial and easily manipulated process, and were not designed to barter amenities in exchange for project approval.

In this case the benefits of the project result from its primary purpose – a realigned highway that is sited out of harm’s way and no longer requires shoreline armoring; results in a public accessway that will remain open and available for public access; and that will allow for existing shoreline armoring debris blocking access and natural processes to be removed, thereby benefiting public access, as well as, marine and visual resources.

Step 7

There are no feasible alternatives that would achieve the objectives of the project without violating any Chapter 3 policies. Caltrans considered over twenty alternatives for the project and analyzed three of them in detail (Alternatives 19A, 19B, and 20) in the FEIR, along with the no project alternative. Caltrans found that Alternative 19A, the project considered here, had the fewest environmental impacts. The other two project alternatives evaluated in detail (Alternatives 19B and 20) involved a different routing of the realignment. Both created further impacts to wetlands, including the fragmenting of a marsh. They would affect cultural resources to a greater degree and would have increased impacts to Myrtle’s silverspot butterfly and California red-legged frog habitat. The routing alternatives present the same Coastal Act inconsistencies as the subject proposal, as they would also go through ESHA, wetlands, agricultural areas, and scenic lands, with greater impacts. In addition, the analyzed alternative locations would adversely affect, to a greater degree than the proposed project, important cultural resources, inconsistent with Coastal Act policies.

There are no bridge alternatives that could reduce visual impacts. The bridge height is necessary to address SLR and flooding, including to avoid the flood plain of Scotty Creek. The bridge height is also necessary to continue to provide the existing residential ranch access, including a minimum height for the passage of ranching trucks. Non-bridge alternatives such as a new roadway prism will also require extensive fill in wetlands and coastal waters, will not be sufficient to avoid flooding. The new roadway prism would also be a substantial fill and act as a significant berm in the landscape, with its own significant view impacts, undercutting that alternative compared to the bridge.

As further discussed above in the coastal hazards section of this report, the no project alternative is additionally problematic. Constructing shoreline armoring to protect the highway in its current location, as would be required if it is to be maintained even in the fairly short term, would result in inconsistencies with policies related to public access

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and sand supply, as well as visual and marine resource protection policies. A continuing series of emergency actions is infeasible, as temporary fixes will not stop the ongoing and severe erosion.

Based on the above, the Commission finds that the proposed project presents a conflict between Sections 30251, 30240, 30233, and 30242 on the one hand, Sections 30210, 30213, 30221, 30230, and 30231, on the other, that must be resolved through application of Section 30007.5, as described below.

Conflict Resolution

With the conflict among several Coastal Act policies established, the Commission must resolve the conflict in a manner, which, on balance, is the most protective of significant coastal resources. In reaching this decision, the Commission evaluates the project's tangible, necessary resource enhancements over the current state and whether they are consistent with resource enhancements mandated in the Coastal Act. In the end, the Commission must determine whether its decision to either deny or approve a project is the decision that is most protective of significant coastal resources.

Approval of the project is more protective of coastal resources overall than denial. The project is a major managed retreat project and will serve as a preeminent example of SLR adaptation for California's coastline and its critical infrastructure. Realignment will maintain a critical highway connection for California and Sonoma County's coastline, which is essential for ongoing commerce, transportation, and essential to maintain public access in the region. Without the project, temporary lane closures or full lane closures will be required, and ultimately full closure will be needed, which means a loss of public access to this stretch of the coast and beach, inconsistent with the Coastal Act. No alternative access road exists that can provide similar access. Denial of the project will necessitate ongoing emergency shoreline armoring contrary to the Coastal Act and its SLR planning guidance. Additional shoreline armoring would lead to additional adverse impacts such as interference with sand supply, loss of beach, and viewshed deterioration. The project includes significant public access improvements including the construction of major segment of the California Coastal Trail and provision for its migration inland with SLR; construction of a public access bridgeway; dedication of lands to the public for public access and acquisition of a needed beach access parcel; improvements to highway shoulders to improve cycling access; and the provision of bridge sidewalk for pedestrians.

Although there will be some loss of agricultural lands, the project is conditioned for a conservation easement that will also continue to allow grazing (outside of the Scotty Creek area) under new habitat protection restrictions, which is the dominant agricultural use on the existing properties and in the area. Although there are some impacts to wetlands, wetland impacts are also relatively small, mitigated for, and the project includes restoration of temporary wetland impacts onsite and long-term wetland creation and enhancement at a ratio of 4:1 or more. Although there are some impacts to ESHA, ESHA impacts are also relatively small and mitigated for, and the project includes

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restoration of temporary ESHA impacts onsite and substantial long term ESHA creation and enhancement at a ratio of 3:1 or more.

When all of these aspects of coastal resource use are factored in, the balance shifts in favor of ensuring continued coastal access (by permitting the highway realignment), as conditioned, as more protective of coastal resources.

Mitigation/Most Protective

As stated above, the conflict resolution provisions of the Coastal Act require that the conflict be resolved in a manner that on balance is the “most” protective of significant coastal resources. To meet this test, in past actions where the Commission has invoked the conflict resolution provisions of the Coastal Act, the Commission has found it necessary to mitigate adverse impacts on coastal resources to the maximum extent feasible.

As discussed in detail in **Sections H, I, J, and K**, above, the project, as proposed and conditioned in this CDP, includes a numerous mitigation measures. Caltrans is proposing on-site restoration of Scotty Creek, wetlands, northern coastal bluff scrub, and upland coastal terrace prairie habitat ESHA. As described in **Section K** above, an agricultural easement will protect continued agricultural uses and implement a new grazing plan that is protective of wetlands and prairie habitat. In addition, as described in **Sections D and J** above, with implementation of the visual and hazards mitigation in lieu fee program, Caltrans will mitigate visual impacts of the new bridge by restoring almost 1,000 linear feet of bluff and beach, removing earlier emergency armoring structures and debris. Finally, a new public open space recreational area (and potential County Park) and a new segment of the CCT will add recreational value to the area and enhance the safety of pedestrian and bicycle travel. All of these project components and specified measures ensure adverse impacts are mitigated to the maximum extent feasible.

Conclusion

In resolving the identified Coastal Act conflicts, the Commission finds that the impacts on coastal resources from not constructing the project will be more significant than the project’s coastal resource impacts if project is approved, so long as these impacts are minimized and mitigated as proposed and conditioned. Therefore, the Commission finds that approving the project, as conditioned, is, on balance, most protective of coastal resources.

M. Violation Finding

Violations of the Coastal Act and/or the Sonoma County LCP exist in the project area including, but not limited to, the unpermitted placement of armoring structures and devices. As noted above, at one time multiple homes were present on the bluff top seaward of Highway 1. Most of the earlier houses have collapsed from the forces of coastal erosion. Most of the owners of these homes had placed riprap or other forms of shoreline armoring without CDPs, and others placed such armoring under the auspices of an emergency CDP but never obtained the required follow-up CDP. Others may have

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predated CDP requirements or obtained County CDPs, but the abandonment of the debris is still a violation of the Coastal Act. Debris from the shoreline armoring and houses remain on the bluff, bluff-face, and shoreline and have been abandoned by the property owners. The debris includes abandoned and eroded seawalls, riprap, sand bags, concrete debris, retaining walls, and miscellaneous clutter (see **Exhibit 9**). Additionally, some of the debris violations include abandoned debris left on the beach or shoreline that blocks public beach access and at least one public access Offer-to-Dedicate easement area. Some of the violations remain on the blufftop and are in the Sonoma County LCP jurisdiction, while other violations are at the base of the bluff that are in the Commission's retained jurisdiction.

On September 9, 2016, Commission enforcement staff sent Notice of Violation letters to the property owners of approximately 20 of the parcels citing evidence of alleged violations on their respective parcels, and requested that they contact staff directly to apply for CDP for any existing unpermitted development. However, to date, none of these property owners have resolved their violations. In this case, Caltrans is not the party responsible for these violations. However, as described in **Section J** above, through dedication of an in-lieu fee, Caltrans is providing \$5 million for the purpose of cleaning up debris along nearly 900 feet of bluff and beach, including much of the debris related to these violations (see **Exhibit 28**). Caltrans will provide the funds to Sonoma County, which will implement the actual clean up as part of its overall clean up and management of the bluff and public access amenities.

Commission review and action on this CDP does not constitute a waiver of any future Commission enforcement action or other legal action with regard to the alleged violations. Nor does it constitute an implied statement of the Commission's position regarding the legality of any development on the site or in the subject area of this permit.

N. Other Agency Approvals

Other required approvals are from California Department of Fish and Wildlife; U.S. Army Corps of Engineers; Regional Water Quality Control Board; U.S. Fish and Wildlife Service (received 2016); National Marine Fisheries Service (received 2013); Natural Resources Conservation Service (received 2016); California Department of Parks and Recreation (received 2016); State Lands Commission; State Historic Preservation Officer (received 2016); and the Coastal Conservancy (received 2016). To ensure that Caltrans obtains any remaining authorizations or any necessary updated authorizations, **Special Condition 17** requires that all of these permits be obtained and presented to the Commission's Executive Director before any construction begins.

O. Reimbursement of costs and fees

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications (see also Title 14 California Code of Regulations Section 13055(g)). Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application. Therefore, consistent with Section 30620(c), the

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Commission imposes **Special Condition 19** requiring reimbursement of specified costs and attorneys' fees the Commission incurs in connection with the defense of any action brought by a party other than the Applicant/Permittee challenging the approval or issuance of this CDP, the interpretation and/or enforcement of CDP terms and conditions, or any other matter related to this CDP.

P. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with CDP applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

Caltrans served as the lead agency for the project for CEQA purposes. Caltrans approved an Final Environmental Impact Report (FEIR) and a Finding of No Significant Impact (FONSI) under NEPA (No. OA0200/ 04-0000-0129, June 2016). The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of environmental review under CEQA. The preceding CDP findings above, which are incorporated here by reference, discuss the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate modifications to avoid and/or lessen any potential for adverse impacts to said resources. All public comments received to date have been addressed in the findings above, which are incorporated herein in their entirety by reference.

The Commission finds the project as modified and conditioned, is the most protective of significant coastal resources. As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA.

Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

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APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

- Sonoma County LCP
- California Coastal Commission Sea Level Rise Guidance (2015, 2018)
- Caltrans' Gleason Beach FEIR (June 2016)
- Caltrans' Climate Change Vulnerability Assessment Summary Report for District 4 (2019)
- Caltrans' District 4 Adaptation Priorities Report (2020)
- Caltrans' Greenhouse Gas Emissions and Mitigation Report (August 2020)
- California Legislative Analyst's Office, Mac Taylor, "Assessing California's Climate Policies — Transportation" (December 2018)

APPENDIX B – STAFF CONTACT WITH AGENCIES AND GROUPS

- Caltrans District 4
- Sonoma County Permit and Resource Management Department
- Coastwalk California