

October 3, 2023

Jessica Kahn
Public Works Director
City of Capitola
420 Capitola Avenue
Capitola, CA 95010

Subject: Cliff Drive Resiliency Project – Planning, Environmental, Design, PS&E, and Construction Support Services”

Dear Ms. Kahn:

Please find attached our fee proposal to support the planning, permitting, and design effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Stevens', with a long horizontal flourish extending to the right.

Robert Stevens, PE, TE
Principal

WORK PLAN

The Capitola community is seeking a strategy to maintain Cliff Drive as an access corridor for vehicles, pedestrians, and bicyclists seeking to travel to and from Capitola Village. However, the eroding bluff composed from the Purisima foundation is eroding compromising the integrity of Cliff Drive. Climate induced sea level rise will likely increase the rate of erosion.

The City has received funding from the California Coastal Commission (CCC) through the Local Coastal Program Local Assistance Grant Program as well as the FHWA's Emergency Relief Program. The CCC funds the alternatives analysis while the FHWA grant supports the process to finalize construction documents.

Various agencies have identified that bicycle and pedestrian access requires improvement along this segment of the coastline. Santa Cruz County is currently studying options to transform the existing rail alignment into a multi-use trail. The segment along Cliff Drive is known as Segment 11 and ends to the west of the Soquel Creek overcrossing. Continuing this pathway to Capitola Village along Cliff Drive is an objective. Thus, integrating improved pedestrian and bicycle access in coordination with the proposed trail segment will be a key goal in amending the City's existing Local Coastal Program.

From the big picture perspective, there are two basic alternatives to evaluate related to protection and a managed retreat strategy. Within these strategies, there are a series of options that can generally be related to the expected life of the facility. The following summarizes the options:

1. Protection Strategy. Cliff Drive remains in its existing location. If so, there are the following potential options:
 - a. Slope reinforcement fabric as a short-term solution.
 - b. Add additional rip rap at the base and install rock anchors in the bluff for a short to mid-term solution.
 - c. Install a full-face tieback with shotcrete soil nail wall for a longer-term solution.
 - d. Install a secant pile concrete wall, with a concrete deck that allows Cliff Drive to cantilever for a long-term solution.
 - e. Install Cliff Drive on a causeway (side hill viaduct) for a long-term solution.
2. Managed Retreat Strategy. Cliff Drive is relocated inland, and the existing roadway is open to pedestrians and bicyclists until it erodes.
 - a. Re-using the railroad corridor as a transportation link.
 - b. Re-route traffic to Capitola Road with a bridge crossing Soquel Creek.
 - c. Re-route traffic to Clares Street with a bridge crossing Soquel Creek.
 - d. State Route 1 with exits at 41st and Bay Avenues become the link.

From discussions with the community and stakeholders, we plan to investigate the options noted above. For our scope of work, we assume the project will protect Cliff Drive in-place and include a shotcrete anchor wall that supports the terrace deposits above the siltstone Purisima formation. To slow the rate of erosion of the siltstone, the project would reinforce the rock slope protection and add anchors with netting. Where

Cliff Drive Resiliency Project Work Plan

feasible, the project would cantilever the sidewalk to add additional width for a sidewalk and for closing the gap in the multi-use pathway with Capitola Village. The attached figure illustrates a potential solution that is the basis of our design effort.

The following team members will support the evaluation of options for Cliff Drive.

- CSW/ST2 will be the project manager, transportation engineer, develop the alternatives analysis, and surveyor for the project.
- Biggs Cardosa will be the structural engineer leading the evaluation of structural options for bluff stabilization.
- CivicKnit will lead the approach to public outreach as well as collaboration with the Coastal Commission.
- ENGEO will lead the geotechnical engineering approach and provide input for wall design options.
- Moffatt and Nichol will lead the coastal engineering approach and support coordinating with the Coastal Commission.
- Northgate Environmental will lead the assessment of biological and cultural resources as well as prepare the CEQA IS/MND and support the NEPA technical studies.
- Walter Crampton of ENGEO will serve as our independent quality control representative.

The following scope of work separates the project into two basic phases which are summarize as follows:

Phase 1. In this phase, we develop an understanding of the existing conditions and opportunities and constraints associated with Cliff Drive. This process culminates in the development of a series of project alternatives which are refined through community and stakeholder outreach to develop a preferred alternative for review under CEQA/ NEPA.

Phase 2. With a formal project description, we will complete the environmental review process, which will allow for acquisition of permits from the environmental regulatory agencies as well as the California Coastal Commission. As we work through the approval process, our team will develop final plans for bidding and construction.

Our scope of work to support the resiliency planning of Cliff Drive includes the following elements:

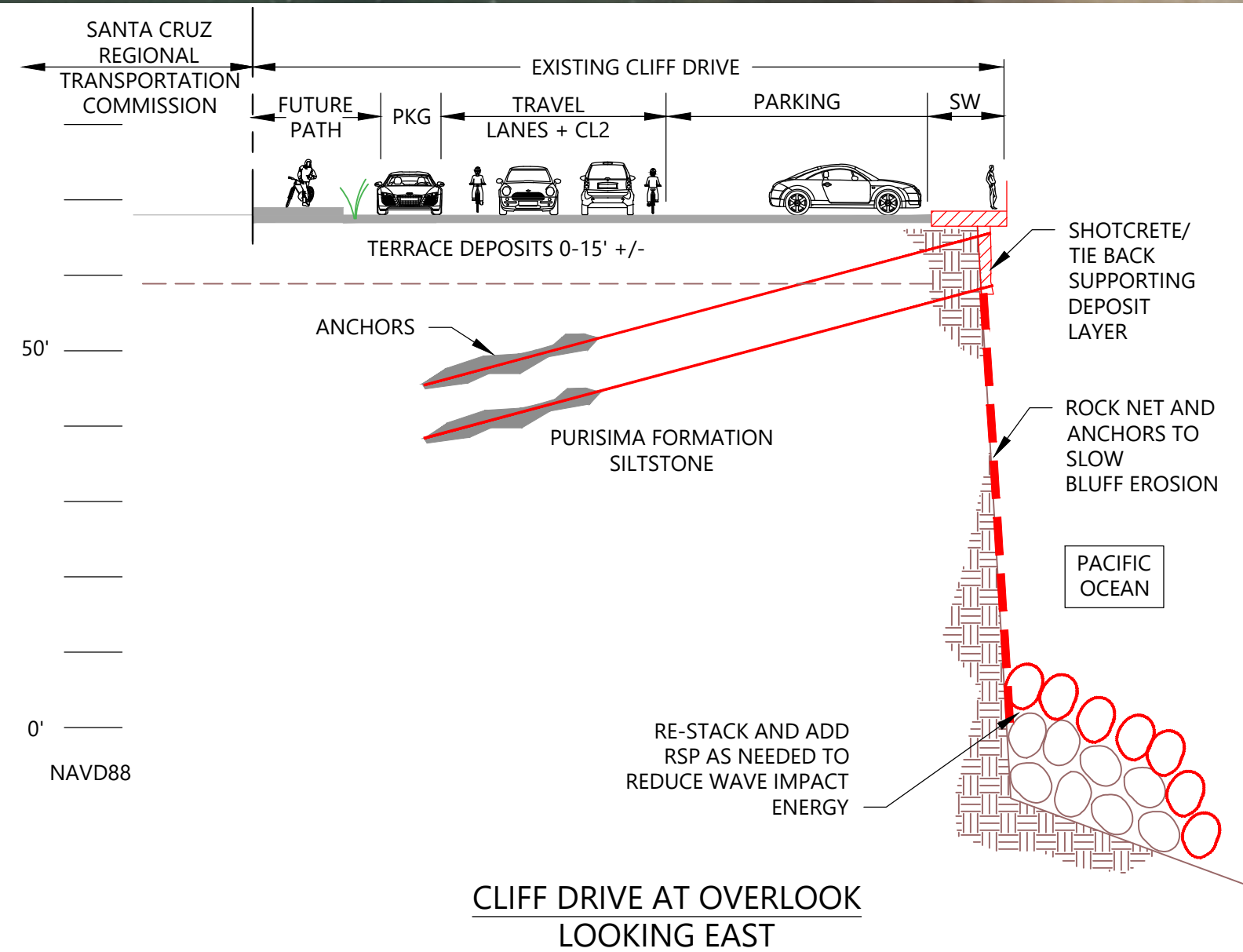
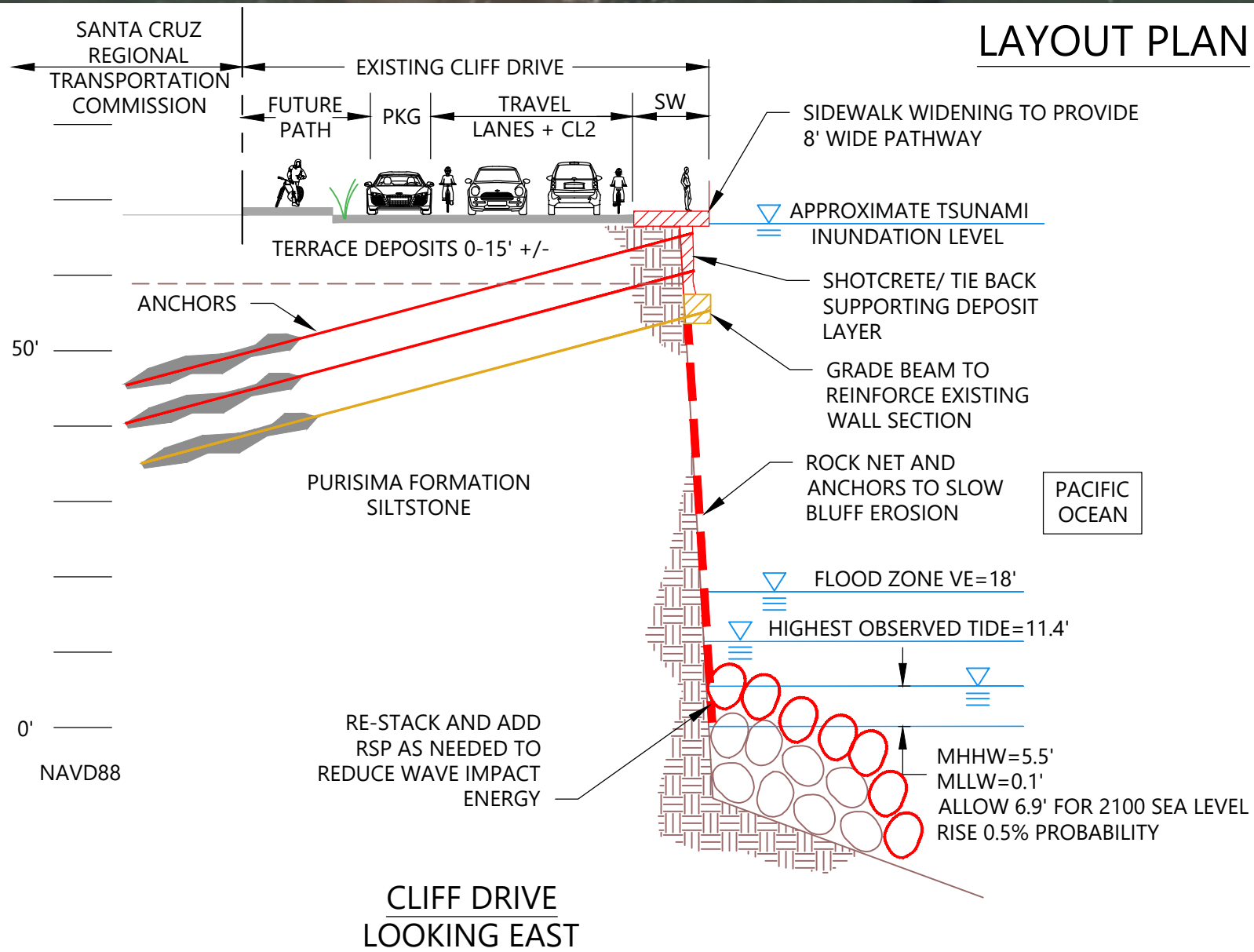
TASK 1: PROJECT MANAGEMENT AND COMMUNITY/ STAKEHOLDER ENGAGEMENT

In this initial phase, our team will work with City staff to review project goals and develop a process for stakeholder outreach.

1.1 Project Kickoff. Key members of our team will meet with City staff to review the goals and objectives of the project. During this meeting, we will review opportunities to refine our outreach strategy and finalize the schedule for Phase 1.



LAYOUT PLAN



1.2 Outreach Strategy Plan. We will refine the outreach strategy plan including a schedule, description of each engagement activity, level of engagement, and list participants to be invited to outreach events. We propose to develop several groups to present comments and seek feedback including:

- A. Technical Working Group.** We propose to establish a technical working group that includes key project stakeholders such as City staff, fire, police, Santa Cruz County Regional Transportation Commission (SCCRTC), Local Assistance Environmental Group, and Caltrans.
- B. Regulatory Agencies.** We will coordinate second group of agencies who have authority or potentially could fund the project including: Coastal Conservancy, United States Army Corps of Engineers (USACE), Central Coast Regional Water Quality Control Board (CCRWQCB), CA Fish & Wildlife (CDFW), Monterey Bay National Marine Sanctuary, and California State Lands Commission (CSLC).
- C. Community Stakeholders.** We will work with the City to identify potential Community Partners who can advise the team on engagement and serve as ambassadors to their communities. At a minimum, this will include coordination with the Surfrider Foundation, Save the Waves Coalition, Capitola Soquel Chamber of Commerce, and the Santa Cruz County Cycling Club.
- D. California Coastal Commission.** Our team believes that working meetings with the Coastal Commission staff are critical to advance the project's planning. We have included several meetings with staff throughout the planning process.

In addition to these components, the outreach strategy will also develop an online presence. This will involve the creation of a community-wide online survey, establishing an engaging project website, and utilize various social media platforms for electronic messaging.

1.3 Project Budget. Implementing a major bluff stabilization will be expensive. Our team will develop a preliminary budget for discussion with the City to confirm there is adequate internal and external funding to support the project. If not, we will review alternative options and establish baseline budgets for consideration.

1.4 Quality Management Plan. We will prepare a project specific plan to manage quality for the project's development. This plan will use the Caltrans Article 9 template to serve as a basis. Criteria that the plan will address include documentation of existing conditions, geometrics, drainage, utility clearance, wall structure, bike and pedestrian safety, cost control, and constructability.

1.5 Contract Management. CSW/ST2 will be responsible for overall management of our design team including the following:

- A. Project Management.** We will manage the design team as well as track progress, schedule, and budget. We will be responsible for documenting decisions and keeping an official record of the project. Furthermore, we will submit monthly progress reports identifying tasks completed, budget status, and issues status.
- B. Quality Control/ Assurance.** Walter Crampton of ENGEO will perform an independent quality control review of the team's documents prior to submittal.
- C. Meetings.** In addition to the kickoff meeting, we will attend two meetings during this phase to coordinate the activity.

Task 2 Opportunities and Constraints Assessment

During this initial phase our team will review existing studies and complete additional analysis to develop an opportunities and constraints map for use in developing alternatives.

2.1 Document Review. Our team will review the existing documents developed by the Capitola, Santa Cruz County, and others for the area. This would include a review of similar coastal permits to understand the precedent for allowing such critical transportation infrastructure to remain in historic locations, access considerations, and what will be necessary to mitigate for bluff armoring.

2.2 Existing Conditions Mapping. Our team will compile an existing conditions map of the Cliff Drive and the bluff including the following:

A. Property Boundary and Record Monuments: Our team will develop the right of way for Cliff Drive as well as adjoining private parcels including APN: 034-081-01, 034-051-07, and 034-052-14 based upon Santa Cruz County's standards. Santa Cruz County will share the right of way for future trail segment 11. For the other locations, we will research property data and complete a boundary resolution. If the boundaries require resolution, we will file up to three (3) Records of Survey consistent with California law.

B. Monument Preservation: We will locate and preserve record monuments in accordance with the Business & Professions Code §8771; Streets & Highways §732 & §732.5, §1492.5, §1810.5; and Penal Code §605. We will locate these monuments and develop special provisions requiring the contractor to file a pre-construction corner record with Santa Cruz County showing three reference control points that are tied to the monument.

C. Survey: Our team will collect topography using both traditional and drone methods. This will include buildings, sidewalks, curbs, pavement grade breaks, surface utilities, and the face of the bluff. We will depict the asphalt's surface and drainage patterns with spot elevations and contour data at 1-foot intervals. Our team will create a three-dimensional model of the bluff's face to accurately model surfacing options. We will collect utility records as well as measure the depth of gravity systems and water valves to establish horizontal and vertical data.

D. Prepare Base Map: CSW/ST2 will develop a detailed base map integrating topography, boundary, and utility information.

2.3 Geology. Using the existing site geotechnical investigation supplementing the Haro, Kasunich and Associates investigation dated July 1995 and other information, ENGEO will support the team in assessing bluff stability and options to attenuate erosion.

2.4 Coastal Analysis. Moffatt and Nichol will complete a coastal analysis that supplements the original work prepared by the firm for the Capitola Beach Jetty Rehabilitation project in 2018 for Coastal Development Permit application 3-18-0814. We will evaluate the following elements:

A. Sea Level Rise. We will establish both the near- and long-term sea level rise scenarios for the project site using the Federal Emergency Management's base flood elevation and guidance from the California Coastal Commission and Ocean Protection Council. This analysis will also consider the changes in MHHW and MLLW due to sea level rise to establish a basis of design for bluff stabilization.

- B. Wave Run-up Study.** Capitola is exposed to both wind waves and Pacific swell. Because Capitola is sheltered, winds from the northwest, north, and northeast will not generate waves along the bluff. The headlands of Pleasure Point further shelter the coastline. Winds blowing from the east, southeast, and south have limited fetch to generate large waves. The greatest wind-induced wave heights occur from winds blowing from the southwest, which occur about 24% of the time. Our team will assess the data, estimate wave height, and impact energy to support the design process.
 - C. Sand Supply.** A 1971 report entitled "Sand Budget for Capitola Beach" concluded that if all the bluffs were faced with concrete, there would be 3,800 CY reduction of sand which is about 1% of average annual littoral transport. Based upon the geotechnical investigation, we will determine the overall volume of sand supply lost by the project should the bluff be fully armored. This value will result in a mitigation fee levied by the Coastal Commission. In some cases, this fee can be waived by offering the equivalent public access improvements.
 - D. Tsunami Hazard.** We will evaluate the impact of Tsunami Hazards on the bluff related to a project with or without stabilization. The current Tsunami mapping illustrates that the wave heights are below Cliff Drive.
- 2.5 View Corridor.** Our team will visit the site and develop a photographic log of existing conditions, helping understand preferred view corridors.
 - 2.6 Hydrology.** Our team will review the project area topography to develop watersheds and flow paths as well as generate runoff rates.
 - 2.7 Biological Resources.** Northgate will prepare a technical memorandum summarizing biological resources known to occur in the project vicinity and potential constraints to bluff stabilization. The primary purpose will be to identify habitats suitable for special-status plant and/or animal species, special-status natural communities, and/or jurisdictional features (e.g., wetlands or other waters of the United States) that may be affected by the project.
 - 2.8 Cultural Resources Assessment.** Northgate will provide 1) a Cultural Resources Technical Report (during Phase 1) to assist the City in assessing and ranking of project alternatives; 2) an Archaeology Survey Report (ASR) using the template provided in Caltrans Standard Environmental Reference, Volume 2 (for Section 106 Compliance) that discusses the paleo-environment, archaeology, ethnography, and history of the project area; and 3) and a Historic Property Survey Report (HPSR) that is the summary document used by Caltrans to document its Section 106 consultation and decision-making processes for federal undertakings.
 - 2.9 California Coastal Commission.** We will coordinate a meeting with Coastal Commission staff to review their jurisdictional limit and discuss the process to advance the approval process including the approach to amending the Local Coastal Program.
 - 2.10 Opportunities and Constraints Map.** Using data collected by the City as well as information developed by our team, we will prepare an opportunities and constraints map that illustrates topography, boundary, environmental and cultural resources, geologic hazard, and view corridors. This map will illustrate existing coastal access, amenities, and observation points. Our team will use this map as the basis for planning the alternatives.

2.11 Contract Management. CSW/ST2 will complete the tasks as defined in Task 1 as well as attend two (2) meetings during this phase.

Key Deliverables. We will provide electronic (PDF and native format) of the following documents:

- a) Biological and Cultural Resources Technical Memoranda
- b) Coastal engineering memorandum
- c) Existing Conditions Topography
- d) Opportunities and Constraints Map
- e) Coastal Development Permit approval process memoranda

Task 3. Alternatives Analysis

Using the data collected, our team will evaluate several alternatives with the primary goal of preserving multi-modal circulation to and from Capitola Village.

3.1 Alternatives Analysis. Using data developed in Task 2, our team will evaluate the above-listed alternatives as well as others generated by stakeholders. Alternatives will require consideration of design life; constructing improvements within the Coastal Commission's jurisdiction generally requires a life of 75 to 100 years. To support the evaluation, we will compile the following:

A. Exhibits. The improvements included in each alternative will depend on their scope, but generally will include the following elements:

- i. Roadway alignment including vehicle, bicycle, and pedestrian accommodation.
- ii. Parking
- iii. Bluff Stabilization, plan, and section
- iv. A vehicle parking area potentially located along Highway 1 or within the site.
- v. Site amenities lookouts, benches, and interpretive elements
- vi. Right of way requirements

B. Analysis. For each alternative, we will provide the following analysis:

- i. Fatal flaw assessment
- ii. Improvements to coastal access
- iii. Estimated design life and resiliency to sea level rise
- iv. Transportation delay impact
- v. Habitat protection and enhancement
- vi. Construction as well as operations and maintenance costs
- vii. Permitting and environmental review considerations
- viii. Right of way acquisition
- ix. Visual impact

C. Comparison. The CCC will require a detailed assessment of the alternatives comparing their relative merits with the policy. We will prepare a draft memorandum summarizing the analysis of this first round of assessment.

- 3.2 Outreach – Alternatives Evaluation.** Based upon the outreach strategy developed in Task 1, we will complete the following:
- A. Online Platform.** Our team will establish a webpage within the City’s website that provides information related to the project including the development schedule. This site will offer an opportunity for visitors to offer project feedback. We will use this as a tool to provide responses to community concerns. Our team will also create a community-wide online survey to capture community opinions about the bluff stabilization project. This survey can remain active throughout the engagement process. Finally, we will utilize various social media platforms for electronic messaging.
 - B. Project Development Team.** We will host a working meeting with the technical advisory team to review alternatives and discuss their relative merits. This will include a discussion of our assessment of fatal flaws, which will help to advance the alternatives for refinement.
 - C. Stakeholders.** Our team will coordinate a meeting with project stakeholders to review their initial comments on the options.
 - D. Community Meeting.** We will host a public meeting in Capitola inviting the community’s input on the project, alternatives, and process to advance the project.
- 3.3 Alternatives Refinement.** Based upon the results of outreach, our team will refine at least three of the alternatives that are feasible, providing further analysis details described in Task 3.1.
- 3.4 Outreach – Preferred Alternative.** We will host meetings with the project development team and stakeholders as detailed in Task 3.2 to review the alternatives. At the close of this process, we expect to have a preferred alternative that can be advanced to the preliminary engineering stage.
- 3.5 Alternatives Report.** Based upon the discussion held in Task 3.4, we will document all alternatives as well as the process to develop a preferred option.
- 3.6 LCP Amendment.** According to the California Coastal Trail map, this stretch of Cliff Drive is identified as a “Primary California Coastal Trail - Needs Improvement” and it has featured prominently in the local rail to trail discussion. During this task, our team will work with staff and the Coastal Commission to amend the existing Local Coastal Program to reflect potential changes in the Public Access Component, which generally relates to a multi-use trail and coastal overlook along Cliff Drive.
- 3.7 Contract Management.** CSW/ST2 will complete the tasks as defined in Task 1 and attend two (2) meetings during this phase.

Key Deliverables. We will provide electronic (PDF and native format) of the following documents:

- a. Concept alternative plans, exhibits, and narratives
- b. Preferred alternative plans, exhibits, and narratives
- c. Outreach agendas, presentations, and minutes
- d. Content for online platforms
- e. Final alternatives report
- f. LCP Amendment

Task 4. Preliminary Engineering

Our team will develop the preferred alternative to the 35% level of design for use in environmental review and permitting based upon the near-term option as shown in the attached figure.

4.1 Geotechnical Analysis: ENGEO will complete a site geotechnical investigation supplementing the Haro, Kasunich and Associates investigation dated July 1995. The scope of the geotechnical services will include the following:

A Pre-Field Activities. We will coordinate with Santa Cruz County to obtain the required encroachment permits necessary to access the trail and public right-of-way areas. ENGEO will notify local utility agencies of our planned explorations through Underground Service Alert. Our explorations will be backfilled with cement grout in accordance with the County's standards.

B Field Investigation. We will drill, log and sample up to four (4) bores to a depth of 100 feet (or practical refusal) along Cliff Drive. We will determine the exact number and depth after the completion of Task 3.

C Laboratory Testing. To evaluate the engineering properties of site soil, the following laboratory tests are anticipated:

- i. In-situ Moisture/Density tests, American Society for Testing and Materials (ASTM) D7263 Test Procedure
- ii. Grain Size Distribution tests, ASTM D1140 and D422
- iii. Atterberg Limit tests, ASTM D4318
- iv. Soil Corrosion Testing, including pH, Chloride, Sulfate, and Resistivity (ASTM and Caltrans test methods)
- v. Direct shear tests, ASTM D3080

D Engineering Analysis and Report Preparation. We will prepare a report that summarizes our interpretation of the onsite soil conditions and provides geotechnical design parameters and recommendations for various wall options including shotcrete tie back and secant pile walls.

4.2 Utility Survey: We will conduct a ground-penetrating radar (GPR) survey at key locations to characterize the existence and extent of underground utilities.

4.3 35% Design. Based upon the preferred alternative, our team will prepare the following documents:

A. Plans

- i. Title sheet and vicinity map
- ii. Resource Protection Plan
- iii. Public Utility Relocation Plan
- iv. Site Clearing Plan
- v. Wall General Plan and Sections
- vi. Rock Net and Anchor Plan
- vii. Rock Slope Protection Layout
- viii. Roadway Layout, Paving, and Striping Plan
- ix. Site Drainage and Storm Water Control Plan
- x. Utility Plan for non-potable water, electricity, and communications
- xi. Amenities plan

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- B.** Renderings.
 - i. Full color site plan
 - ii. At least four axiomatic renderings of the proposed plan
- C.** Additional Documentation
 - i. Cost analysis
 - ii. Right of way requirements

4.4 Public Utilities. Our team will coordinate with the public utilities including PGE, Comcast, ATT, Soquel Creek Water, and the Sewer Division of Santa Cruz County Public Works to ensure their infrastructure is integrated into the design and consistent with the Utility Certification requirements of Local Assistance. This will include the following items:

- A.** Preliminary Notice. Our team will prepare a formal notification, also known as A Letters, to the utilities. This will include a coordination meeting at the City's office (or online) to discuss the project and schedule.
- B.** Detailed Coordination. As we advance the design, our team will submit plans at the 35%, 65%, and 95% levels of completion also known as the B and C Letters/Plans. This will include a coordination meeting and summary of next steps with the process.

4.5 Outreach. We will host meetings with the project development team and stakeholders as detailed in Task 3.2 to review the alternatives. At the close of this process, we expect to have a project description that can be advanced to the preliminary engineering stage.

4.6 Contract Management. CSW/ST2 will complete the tasks as defined in Task 1 as well as attend two (2) meetings during this phase.

Key Deliverables. We will provide electronic (PDF and native format) of the following documents:

- a. A draft and final version of the 35% PSE
- b. Public outreach exhibits
- c. Outreach agendas, presentations, and minutes
- d. Content for online platforms

Task 5. Environmental Review and Permitting

Northgate will prepare environmental documentation pursuant to the California Environmental Quality Act (CEQA) with Capitola as the lead agency. We will prepare a Mitigated Negative Declaration (MND) supported by an Initial Study (IS) to complete the CEQA review. During this process, we will support the City in completing the NEPA analysis.

5.1 Project Description. Upon completion of the 35% PSE for the proposed project, Northgate will initiate an environmental review for the proposed project. CSW/ST2 and NGEM will develop a project description that will describe the components of the proposed project as well as the environmental setting for the project area.

5.2 Administrative Draft Initial Study/Mitigated Negative Declaration. Northgate will prepare an Initial Study in accordance with the CEQA Checklist (Appendix G of the CEQA Guidelines). The IS will include

all the checklist topics and include a response to each checklist question. Environmental analysis will be based on available information and additional technical studies prepared as part of the proposed project, including the technical work conducted during the planning process. A MND will be prepared and attached to the accompanying Administrative Draft IS.

5.3 Revised Initial Study/Mitigated Negative Declaration Document. Northgate will amend the Administrative Draft IS/MD based on a single set of consolidated non-contradictory comments from the City. We will submit a revised version of the document for approval. The purpose of the pre-print review will be to verify that Capitola is satisfied with the new and revised text.

5.4 Public Review Draft Initial Study/Mitigated Negative Declaration Document. Presuming that a Mitigated Negative Declaration is determined to be the appropriate level of environmental review, Northgate will produce a total of 20 copies of the Public Review Draft IS/MND, along with a PDF digital file suitable for electronic distribution. Northgate will also coordinate with Capitola to distribute the Draft IS/MND pursuant to CEQA and Capitola review procedures.

5.5 Response to Comments/Final Draft Initial Study/Mitigated Negative Declaration Document. Northgate will review public and agency comments received on the IS/MND during the public review period, and prepare responses in a memorandum format, as necessary. Northgate will also prepare a Mitigation Monitoring and Reporting Program (MMRP) using the City's preferred format. The MMRP will list mitigation measures that are recommended in the IS/MND and provide standards and timelines for monitoring these mitigation measures. The MMRP will be submitted as an appendix to the Final IS/MND.

5.6 Meetings and Public Hearing. Northgate will be available throughout the IS/MND process to discuss the project and strategize the environmental documentation.

5.7 NEPA Support. We will support the City and Local Assistance in the preparation of a NEPA categorical exclusion. This will include the following documents generally derived from the CEQA analysis:

- a. Traffic Memorandum related to construction impacts.
- b. Noise Memorandum related to construction impacts.
- c. HazMat Memorandum. Geotracker shows no known contaminated areas along this segment of Cliff Drive. The primary concern will likely be contaminated soil.
- d. Natural Environment Study (Minimal Impacts)
- e. 4f Memorandum as the project should promote access to public resources, this should fall within the CE category.
- f. Visual Memorandum. We will provide visual simulations of bluff stabilization options matching the Opal Cliff's geology.
- g. Relocation Memorandum (TCE/ acquisitions). Based upon the PES in the project description, the project should only require subsurface anchor easements.
- h. Community Memorandum (parking space, utility)
- i. Cultural Resource (APE/ HPSR/Asr) which will be based upon the CEQA document.

5.8 Contract Management. CSW/ST2 will complete the tasks as defined in Task 1 as well as attend two (2) meetings during this phase.

Key Deliverables. We will provide electronic (PDF and native format) copies of the following documents:

- a. Administrative Draft IS/MND
- b. Public Draft IS, NOI, and NOC to the State Clearinghouse
- c. Administrative Final IS/MND
- d. Final IS/MND, including the MMRP
- e. The NOD
- f. Electronic versions of the NEPA technical studies

Task 6. Permitting

With certification of the CEQA document by Capitola's City Council, our team will coordinate to secure permits to construct the project.

6.1 Environmental Permitting Strategy. Based upon the 30% design documents, results of our wetland delineation and biological surveys, and botanical surveys (as needed), our team will prepare a summary of the permits that will be needed to implement the project. This summary will include key agency issues that will need to be addressed, probable timelines for agency review and processing, application fee amounts, and descriptions of all associated documentation required by the agencies. Potential documents needed to support environmental permitting may include:

- A. Federal Endangered Species Act Section 7 Biological Assessment
- B. CDFW Section 1602 Lake and Streambed Alteration Agreement applications
- C. Habitat Mitigation and Monitoring Plan
- D. National Historic Preservation Act Section 106 (Section 106) Cultural Resources Assessment
- E. USACE Section 404 Nationwide Permit or Individual Permit
- F. RWQCB Section 401 Water Quality Certification
- G. USACE Alternatives Analysis (Section 404(b)(1) or State Wetland Procedures), if needed, based on the applicable USACE permit
- H. Restoration Plan
- I. Mitigation Plan

A site restoration plan will be prepared for any temporary project impacts, as needed. We will prepare an approach to mitigate wetland and riparian impacts associated with the project, which may include either the creation of on-site and/or off-site wetland and riparian mitigation and/or purchase of credits from a wetland mitigation bank.

6.2 Regulatory Permit Applications. Our team will prepare the permit applications and supporting documentation needed for regulatory review and approval of impacts within the five segments. This will include all the associated documentation stated in Task 6.1 above. We will secure approval for the following: USACE Clean Water Act (CWA) Section 404 Nationwide Permit or Individual Permit; RWQCB CWA Section 401 Water Quality Certification (WQC); and California Department of Fish and Wildlife (CDFW) Section 1602 Streambed Alteration Agreement.

Upon completion of 50% design, Northgate will prepare environmental impact mapping figures that show potential waters of the U.S. and state, sensitive habitat features, and potential listed species habitat impacts. Draft environmental permits will be provided with the 75% design.

6.3 Coastal Development Permit. While the project may seek approval through the Local Coastal Program, we would expect that an appeal to the Coastal Commission could occur. Thus, we propose to complete an application and secure approval with the State. This would include providing the narratives, exhibits, and studies necessary for the public hearing. Our team will support staff in preparing a presentation and attending the hearing to secure approval of the project. This will include reviewing the Commission's proposed mitigations and offering edits to alleviate liabilities for the City including options for sand supply fees.

6.4 Contract Management. CSW/ST2 will complete the tasks as defined in Task 1 as well as attend two (2) meetings during this phase.

Task 7. Final Design

With the conclusion of the environmental review process, our team will prepare final documents for use in bidding and construction.

7.1 Final Design. Our team will prepare final documents at the 65%, 95%, and final level of design including the following:

- A. Plans**
 - i. Title sheet and vicinity map
 - ii. Resource Protection Plan
 - iii. Public Utility Relocation Plan
 - iv. Site Clearing Plan
 - v. Wall Layout Plan and Sections
 - vi. Rock Net and Anchor Plan
 - vii. Rock Slope Protection Layout
 - viii. Roadway Layout, Paving, and Striping Plan
 - ix. Site Drainage and Storm Water Control Plan
 - x. Amenities plan
 - xi. Erosion Control Plan
- B. Structural calculations**
- C. Specifications and bid schedule consistent with the Capitola's standards with modifications for federal funding should it be available.**
- D. Storm Water Pollution and Prevention Plan**
- E. Cost estimate and bid schedule**

7.2 Local Assistance. We will support staff in assembling documents to Local Assistance including:

- A. Right-of-Way Certification.** CSW/ST2 will complete the following to support the certification.
 - i. **Notices to Owners.** Consistent with Task 4.2, we will complete and submit a Notice to Utility Owners informing them of the project and their need to relocate facilities in conflict

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at their cost.

- ii. **Form 13-B.** We will complete Local Assistance Form 13-B "Right of Way Certification" for the project documenting that the City has permanent rights-of-way as well as utility clearances to construct the project. We assume this will be a Certification Number 1.
 - iii. **Right to Enter.** While the contractor may need to enter private property to complete the work, it is for the benefit of the private property owner, which can be completed through a standard right of entry process. We will prepare two (2) right of entry documents.
- B. Request for Authorization.** With completion of the 100% documents as well as satisfaction of the right-of-way and environmental process, we will submit the following:
- i. Request for Authorization Form and Cost Estimate (LAPM 3-A)
 - ii. PS&E Certification and Checklist (Exhibit 12-D)
 - iii. Contract Goal Methodology (Exhibit 9-D)
 - iv. Plans and Specifications

7.3 Contract Management. CSW/ST2 will complete the tasks as defined in Task 1 as well as attend two (2) meetings during this phase.

Key Deliverables. We will provide electronic (PDF and native format) of the following documents:

- a. Plans, specifications, and support documents in PDF and hardcopy formats
- b. Public outreach exhibits
- c. Meeting agenda and minutes
- d. Final documents in PDF, hardcopy, and AutoCAD format

TASK 8: BIDDING AND CONSTRUCTION SUPPORT

We will provide a fee upon completion of construction documents.

8.1 Bidding Support. Our team will assist during the bidding phase by assisting in outreach, attending the pre-bid meeting, responding to contractor requests for information, and preparing two (2) bid addenda if necessary.

8.2 Construction Support. During construction, the team will review submittals, respond to contractor questions, provide technical guidance, and prepare a punch list near the completion of construction. Finally, we will prepare as-built documents based upon the contractor's markup in Acrobat format.

Key Deliverables. We will provide electronic (PDF and native format) of the following documents:

- a. Response to contractor bid requests
- b. Bid addenda
- c. Electronic drawings to the contractor for layout
- d. Narrative from site observation visits
- e. Review of submittals
- f. Punch list when near completion of construction
- g. As-built documents

SCHEDULE

We propose to deliver our services as illustrated in the attached schedule.

COMPENSATION

CSW|ST2 agrees to provide our services as described above on a time and expense basis in accordance with direct cost-plus approved multiplier. We have attached a summary of the labor effort for all team members.

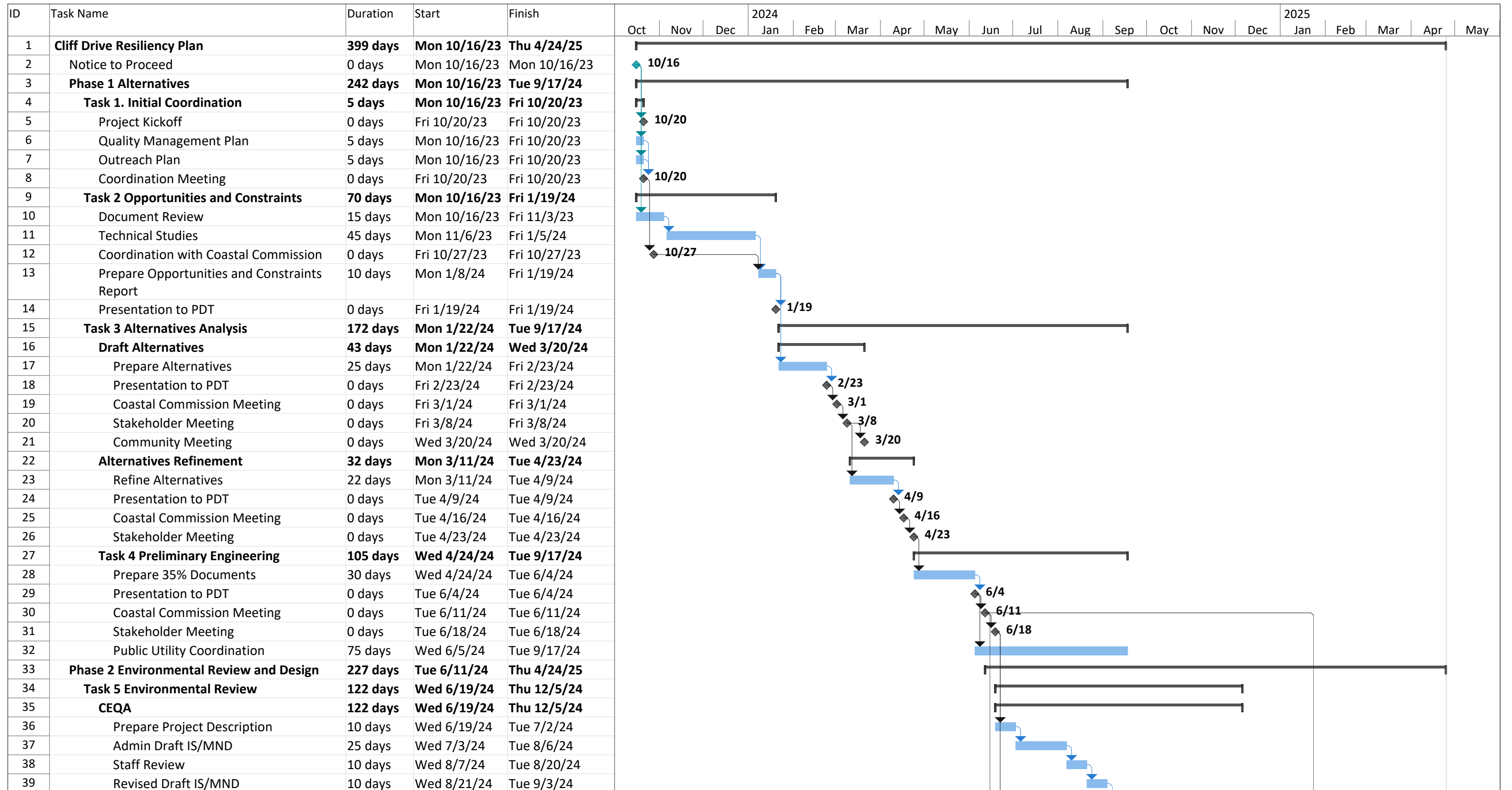
ASSUMPTIONS

In preparation for our scope of work, we have made several assumptions to establish our team's labor effort.

1. The project will be completed in general accordance with the schedule provided.
2. The limit of the project is the bluff and Cliff Drive between APN 34-081-01 and 34-52-14.
3. The project's construction valuation is about \$15 million.
4. Santa Cruz County will share boundary and alignment data in a vector-based format for future Coastal Trail Segment 11.
5. We will invoice subconsultants without markup but have added a small management fee on our fee worksheet to process their payments.
6. Bidding and construction support are not included in the proposal.

SERVICES AND STANDARD OF CARE

CSW/ST2's services shall be limited to those expressly set forth above. We shall have no other obligations or responsibilities for the project except as agreed to in writing, or as provided in this agreement. CSW/ST2's services shall be provided consistent with, and limited to, the standard of care applicable to such services. CSW/ST2 shall provide its services consistent with the professional skill and care ordinarily provided by consultants practicing in the same or similar locality under the same or similar circumstances.



Project: msproj11 Date: Fri 9/22/23	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only		Manual Progress	
	Summary		Inactive Task		Duration-only		Finish-only			

CLIFF DRIVE RESILIENCY PROJECT
SUMMARY OF PROJECT COSTS

10.3.2023

Task 1. Project Management and Community/ Stakeholder Engagement	
CSW ST2	\$ 10,516
BIGGS CARDOSA	\$ 1,536
CIVIC KNIT	\$ 5,800
ENGEO	\$ 13,908
MOFFATT AND NICHOL	\$ 4,758
NORTHGATE ENVIRONMENTAL	\$ -
BESS TEST LABS	\$ -
Subtotal	\$ 36,517

Task 2. Opportunities and Constraints Assessment	
CSW ST2	\$ 38,327
BIGGS CARDOSA	\$ 10,376
CIVIC KNIT	\$ 14,800
ENGEO	\$ 66,718
MOFFATT AND NICHOL	\$ 72,121
NORTHGATE ENVIRONMENTAL	\$ 4,343
BESS TEST LABS	\$ 9,257
Subtotal	\$ 215,941

Task 3 Alternatives Analysis	
CSW ST2	\$ 81,191
BIGGS CARDOSA	\$ 40,853
CIVIC KNIT	\$ 46,000
ENGEO	\$ 9,171
MOFFATT AND NICHOL	\$ 31,253
NORTHGATE ENVIRONMENTAL	\$ -
BESS TEST LABS	\$ -
Subtotal	\$ 208,468

Task 4 Preliminary Engineering	
CSW ST2	\$ 29,863
BIGGS CARDOSA	\$ 60,321
CIVIC KNIT	\$ 7,450
ENGEO	\$ -
MOFFATT AND NICHOL	\$ 32,599
NORTHGATE ENVIRONMENTAL	\$ -
BESS TEST LABS	\$ -
Subtotal	\$ 130,233

Task 5 Environmental Review and Permitting	
CSW ST2	\$ 4,663
BIGGS CARDOSA	\$ -
CIVIC KNIT	\$ -
ENGEO	\$ -
MOFFATT AND NICHOL	\$ 18,991
NORTHGATE ENVIRONMENTAL	\$ 78,927
BESS TEST LABS	\$ -
Subtotal	\$ 102,581

Task 6 Permitting	
CSW ST2	\$ 10,139
BIGGS CARDOSA	\$ 1,532
CIVIC KNIT	\$ 14,450
ENGEO	\$ -
MOFFATT AND NICHOL	\$ 28,234
NORTHGATE ENVIRONMENTAL	\$ 27,007
BESS TEST LABS	\$ -
Subtotal	\$ 81,362

Task 7 Final Design	
CSW ST2	\$ 56,397
BIGGS CARDOSA	\$ 118,116
CIVIC KNIT	\$ -
ENGEO	\$ -
MOFFATT AND NICHOL	\$ 62,514
NORTHGATE ENVIRONMENTAL	\$ -
BESS TEST LABS	\$ -
Subtotal	\$ 237,026

Task 8 Bidding and Construction Support	
CSW ST2	\$ -
BIGGS CARDOSA	\$ -
CIVIC KNIT	\$ -
ENGEO	\$ -
MOFFATT AND NICHOL	\$ -
NORTHGATE ENVIRONMENTAL	\$ -
BESS TEST LABS	\$ -
Subtotal	\$ -

Reimbursable Expenses	
CSW ST2	\$ 1,000
BIGGS CARDOSA	\$ -
CIVIC KNIT	\$ 900
ENGEO	\$ -
MOFFATT AND NICHOL	\$ 400
NORTHGATE ENVIRONMENTAL	\$ 69,788
BESS TEST LABS	\$ 500
Subtotal	\$ 72,588

TOTAL FEE		
CSW ST2	\$ 232,095	19%
BIGGS CARDOSA	\$ 232,734	20%
CIVIC KNIT	\$ 89,400	7%
ENGEO	\$ 126,340	11%
MOFFATT AND NICHOL	\$ 250,869	21%
NORTHGATE ENVIRONMENTAL	\$ 251,580	21%
BESS TEST LABS	\$ 9,757	1%
Total	\$ 1,192,774	100%

DISADVANTAGE BUSINESS ENTERPRISE		
NORTHGATE ENVIRONMENTAL	\$ 110,277	9%
BESS TEST LABS	\$ 9,757	1%
ALBION ENVIRONMENTAL	\$ 50,223	4%
SUNSET ECOLOGICAL SOLUTIONS	\$ 69,788	20%
Total DBE Value: \$ 240,044		
DBE Participation: 20%		

CERTIFICATION OF DIRECT COSTS:

I, the undersigned, certify to the best of my knowledge and belief that all direct costs identified on the cost proposal(s) in this contract are actual, reasonable, allowable, and allocable to the contract in accordance with the contract terms and the following requirements:

1. Generally Accepted Accounting Principles (GAAP)
2. Terms and conditions of the contract
3. Title 23 United States Code Section 112 - Letting of Contracts
4. 48 Code of Federal Regulations Part 31 - Contract Cost Principles and Procedures
5. 23 Code of Federal Regulations Part 172 - Procurement, Management, and Administration of Engineering and Designee Related Services
- 6 48 Code of Federal Regulations Part 9904 - Cost Accounting Standards Board (when applicable)

All costs must be applied consistently and fairly to all contracts. All documentation of compliance must be retained in the project files and be in compliance with applicable federal and state requirements. Costs that are noncompliant with the federal and state requirements are not eligible for reimbursement.

Local governments are responsible for applying only cognizant agency approved or CALTRANS accepted Indirect Cost Rate(s).

Prime Consultant

Name: Robert Stevens

Title: President

Signature:



Date: 10.1.2023

Email: rstevens@cswst2.com

Phone Number: 415.533.1864

Date of Certification: 01.20.22


CLIFF DRIVE RESILIENCY PROJECT		CSW ST2									Total Hours	Total Base Fee
		Project Manager, Engineer, and Surveyor										
SUMMARY OF PRIME CONSULTANT LABOR EFFORT		Robert Stevens PM and PIC	Varies Senior Project Manager	Josh Woelbing Survey Manager	Varies Party Chief	Varies Survey Apprentice	Varies Engineer 3	Varies Engineer 2	Varies Engineer 1	Varies Landscape Architect		
2023 Hourly Rate (\$/ hour)		60.00	75.00	75.00	59.50	34.50	59.00	48.75	38.00	48.00		
Fringe		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Overhead		175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%		
Profit		10%	10%	10%	10%	10%	10%	10%	10%	10%		
Multiplier		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Billable Rate (Overhead & Profit) (\$/ hour)		182.14	227.68	227.68	180.62	104.73	179.10	147.99	115.36	145.71		
PHASE 1												
Task 1. Project Management and Community/ Stakeholder												
1.1	Project Kickoff	4									4	\$729
1.2	Outreach Strategy Plan	8									8	\$1,457
1.3	Project Budget	8					16				24	\$4,323
1.4	Quality Management Plan	8									8	\$1,457
1.5	Contract Management											
	General Project Management	10									10	\$1,821
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		42	0	0	0	0	16	0	0	0	58	\$10,516
Task 2. Opportunities and Constraints Assessment												
2.1	Document Review	8					8				16	\$2,890
2.2	Existing Conditions Mapping			30	20	20			60		130	\$19,459
2.3	Geology										0	\$0
2.4	Coastal Analysis										0	\$0
2.5	View Corridor								20		20	\$2,914
2.6	Hydrology						16				16	\$2,866
2.7	Biological Resources										0	\$0
2.8	Cultural Resources										0	\$0
2.9	California Coastal Commission	8									8	\$1,457
2.10	Opportunities and Constraints Map	8					8	10			26	\$4,370
2.11	Contract Management											
	General Project Management	20									20	\$3,643
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		48	0	30	20	20	32	10	60	20	240	\$38,327
Task 3 Alternatives Analysis												
3.1	Alternatives Analysis	16	20				30	20	20		106	\$18,108
3.2	Outreach Strategy Plan											
	Online	8							8		16	\$2,380
	PDT	4									4	\$729
	Stakeholders	6									6	\$1,093
	Community Meeting	4	8				10	10	8		40	\$6,744
3.3	Alternatives Refinement	20	30				50	50	40		190	\$31,442
3.4	Outreach Strategy Plan											
	Online	4									4	\$729
	PDT	4									4	\$729
	Stakeholders	6									6	\$1,093
3.5	Alternatives Report	10	16				20	10			56	\$10,526
3.6	LCP Amendment	8					10				18	\$3,248
3.7	Contract Management											
	General Project Management	20									20	\$3,643
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		114	74	0	0	0	120	90	76	0	474	\$81,191
PHASE 2												
Task 5 Environmental Review and Permitting												
5.1	Project Description	4									4	\$729
5.2	Admin Draft IS/MND								8		8	\$1,166
5.3	Revised Draft IS/MND								4		4	\$583
5.4	Public Review IS/MND										0	\$0
5.5	Response to Comments/ Final IS/MND										0	\$0
5.6	Public Hearing										0	\$0
5.7	NEPA Support										0	\$0
5.8	Contract Management											
	General Project Management	8									8	\$1,457
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		16	0	0	0	0	0	0	0	12	28	\$4,663
Task 6 Permitting												
6.1	Permit Strategy	4									4	\$729
6.2	Regulatory Permit Applications										0	\$0
6.3	Coastal Development Permit	20					20				40	\$7,225
6.4	Contract Management											
	General Project Management	8									8	\$1,457
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		36	0	0	0	0	20	0	0	0	56	\$10,139
Task 7 Final Design												
7.1	Final Design											
	65% PSE	4	12				40	40	40	10	146	\$22,616
	95% PSE	4	10				30	30	20	8	102	\$16,291
	Final Design		4				8	10	10	4	36	\$5,560
7.2	Local Assistance Support	12					30				42	\$7,559
7.4	Contract Management											
	General Project Management	20									20	\$3,643
	QA/QC										0	\$0
	Meetings	4									4	\$729
SUBTOTAL		44	26	0	0	0	108	80	70	22	350	\$56,397


CLIFF DRIVE RESILIENCY PROJECT SUMMARY OF PRIME CONSULTANT LABOR EFFORT		CSW ST2 Project Manager, Engineer, and Surveyor								Total Hours	Total Base Fee	
		Robert Stevens PM and PIC	Varies Senior Project Manager	Josh Woelbing Survey Manager	Varies Party Chief	Varies Survey Apprentice	Varies Engineer 3	Varies Engineer 2	Varies Engineer 1			Varies Landscape Architect
2023 Hourly Rate (\$/ hour)		60.00	75.00	75.00	59.50	34.50	59.00	48.75	38.00	48.00		
Fringe		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Overhead		175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%	175.97%		
Profit		10%	10%	10%	10%	10%	10%	10%	10%	10%		
Multiplier		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Billable Rate (Overhead & Profit) (\$/ hour)		182.14	227.68	227.68	180.62	104.73	179.10	147.99	115.36	145.71		
Task 8 Bidding and Construction Support												
8.1	Bidding Support										0	\$0
8.2	Construction Support										0	\$0
SUBTOTAL		0	0	0	0	0	0	0	0	0	0	\$0
TOTAL LABOR COST:		332	120	34	20	20	326	238	246	54	1390	\$231,095
Reimbursable Expenses												
1	General Expenses											\$1,000
SUBTOTAL												\$1,000
TOTAL PROJECT COST:												\$232,095



CLIFF DRIVE RESILIENCY PROJECT SUMMARY OF SUB CONSULTANT LABOR EFFORT		BIGGS CARDOSA Structural Engineer									Total Hours	Total Base Fee
		Tom Swayze PM and PIC	Varies Associate	Varies Engineering Manager	Varies Senior Engineer	Varies Project Engineer	Varies Staff Engineer	Varies Assistant Engineer	Varies Sr. Computer Drafter	Varies Admin		
2023 Hourly Rate (\$/ hour)		98.08	85.00	76.00	66.00	57.00	48.00	45.00	53.00	45.00		
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Overhead		158.90%	158.90%	158.90%	158.90%	158.90%	158.90%	158.90%	158.90%	158.90%		
Profit		10%	10%	10%	10%	10%	10%	10%	10%	10%		
Multiplier		2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8		
Billable Rate (Overhead & Profit) (\$/ hour)		279.32	242.07	216.44	187.96	162.33	136.70	128.16	150.94	128.16		
SUBTOTAL		0	0	0	0	0	0	0	0	0	0	\$0
TOTAL LABOR COST:		230.5	0	330	36	362	0	0	208	0	1167	\$232,734
Reimbursable Expenses												
1	General Expenses											
SUBTOTAL												\$0
TOTAL PROJECT COST:												\$232,734



CLIFF DRIVE RESILIENCY PROJECT		CIVIC KNIT Outreach Coordination		Total Hours	Total Base Fee
		Steve Kinsey	Breeze Kinsey		
 <p>2023 Hourly Rate (\$/ hour)</p> <p>Fringe</p> <p>Overhead</p> <p>Profit</p> <p>Multiplier</p> <p>Billable Rate (Overhead & Profit) (\$/ hour)</p>		275.00	150.00		
		0.00%	0.00%		
		0.00%	0.00%		
		0%	0%		
		1.0	1.0		
		275.00	150.00		
PHASE 1					
Task 1. Project Management and Community/ Stakeholder					
1.1	Project Kickoff	2	4	6	\$1,150
1.2	Outreach Strategy Plan	6	16	22	\$4,050
1.3	Project Budget			0	\$0
1.4	Quality Management Plan			0	\$0
1.5	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings		4	4	\$600
SUBTOTAL		8	24	32	\$5,800
Task 2. Opportunities and Constraints Assessment					
2.1	Document Review	8	24	32	\$5,800
2.2	Existing Conditions Mapping			0	\$0
2.3	Geotechnical Analysis			0	\$0
2.4	Coastal Analysis	6	14	20	\$3,750
2.5	View Corridor			0	\$0
2.6	Hydrology			0	\$0
2.7	Biological Resources	2	2	4	\$850
2.8	Cultural Resources	2	2	4	\$850
2.9	California Coastal Commission	6	3	9	\$2,100
2.10	Opportunities and Constraints Map	2	2	4	\$850
2.11	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings		4	4	\$600
SUBTOTAL		26	51	77	\$14,800
Task 3 Alternatives Analysis					
3.1	Alternatives Analysis	8	20	28	\$5,200
3.2	Outreach - Alternatives Evaluation			0	
	Online	2	48	50	\$7,750
	PDT	4	4	8	\$1,700
	Stakeholders	4	16	20	\$3,500
	Community Meeting	6	16	22	\$4,050
3.3	Alternatives Refinement	2	2	4	\$850
3.4	Outreach - Preferred Alternative				
	Online		8	8	\$1,200
	PDT	4	4	8	\$1,700
	Stakeholders	4	4	8	\$1,700
3.5	Alternatives Report	2	8	10	\$1,750
3.6	LCP Amendment	32	48	80	\$16,000
3.7	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings	0	4	4	\$600
SUBTOTAL		68	182	250	\$46,000
Task 4 Preliminary Engineering					
4.1	35% Design	2	4	6	\$1,150
4.2	Public Utilities			0	\$0
4.3	Outreach Strategy Plan			0	
	Online		18	18	\$2,700
	PDT		6	6	\$900
	Stakeholders		18	18	\$2,700
4.4	Contract Management			0	
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings			0	\$0
SUBTOTAL		2	46	48	\$7,450
PHASE 2					
Task 5 Environmental Review and Permitting					
5.1	Project Description			0	\$0
5.2	Admin Draft IS/MND			0	\$0
5.3	Revised Draft IS/MND			0	\$0
5.4	Public Review IS/MND			0	\$0
5.5	Response to Comments/ Final IS/MND			0	\$0
5.6	Public Hearing			0	\$0
5.7	NEPA Support			0	\$0
5.8	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0

CLIFF DRIVE RESILIENCY PROJECT		CIVIC KNIT Outreach Coordination		Total Hours	Total Base Fee
		Steve Kinsey	Breeze Kinsey		
 <p>2023 Hourly Rate (\$/ hour)</p> <p>Fringe</p> <p>Overhead</p> <p>Profit</p> <p>Multiplier</p> <p>Billable Rate (Overhead & Profit) (\$/ hour)</p>		275.00	150.00		
		0.00%	0.00%		
		0.00%	0.00%		
		0%	0%		
		1.0	1.0		
		275.00	150.00		
Meetings			0	\$0	
SUBTOTAL		0	0	0	\$0
Task 6 Permitting					
6.1	Permit Strategy			0	\$0
6.2	Regulatory Permit Applications			0	\$0
6.3	Coastal Development Permit	28	45	73	\$14,450
6.4	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings			0	\$0
SUBTOTAL		28	45	73	\$14,450
Task 7 Final Design					
7.1	Final Design				
	65% PSE			0	\$0
	95% PSE			0	\$0
7.2	Local Assistance Support			0	\$0
7.3	Contract Management				
	General Project Management			0	\$0
	QA/QC			0	\$0
	Meetings			0	\$0
SUBTOTAL		0	0	0	\$0
Task 8 Bidding and Construction Support					
8.1	Bidding Support			0	\$0
8.2	Construction Support			0	\$0
SUBTOTAL		0	0	0	\$0
TOTAL LABOR COST:		132	348	480	\$88,500
Reimbursable Expenses					
1	General Expenses				\$500
2	Travel Expenses				\$400
SUBTOTAL					\$900
TOTAL PROJECT COST:					\$89,400

CLIFF DRIVE RESILIENCY PROJECT		ENGEO									Total Hours	Total Base Fee
		Geotechnical Engineer										
SUMMARY OF SUB CONSULTANT LABOR EFFORT		Jeanine Ruffoni PM and GE	Walt Crampton GE and QA/QC	Gene Spineto Senior Designer	Varies Assoc Eng/Geo	Varies Staff Eng/Geo	Varies Lab Technician	Varies CAD Specialist	Varies Project Assistant	Varies GIS Analyst		
2023 Hourly Rate (\$/ hour)		92.00	96.00	67.00	77.00	52.00	40.00	40.00	37.00	44.00		
Fringe		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Overhead		260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%		
Profit		10%	10%	10%	10%	10%	10%	10%	10%	10%		
Multiplier		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Billable Rate (Overhead & Profit) (\$/ hour)		364.32	380.16	265.32	304.92	205.92	158.40	158.40	146.52	174.24		
PHASE 1												
Task 1. Project Management and Community/ Stakeholder												
1.1	Project Kickoff (one 4-hr in-person meeting and coordination)	24	8	8							40	\$13,908
1.2	Outreach Strategy Plan										0	\$0
1.3	Project Budget										0	\$0
1.4	Quality Management Plan										0	\$0
1.5	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		24	8	8	0	0	0	0	0	0	40	\$13,908
Task 2. Opportunities and Constraints Assessment												
2.1	Document Review	8			8						16	\$5,354
2.2	Existing Conditions Mapping	8				8					16	\$4,562
2.3	Geotechnical Analysis (see reimbursable expenses)	40	8	8	16	80	16	16	8	8	200	\$48,724
2.4	Coastal Analysis										0	\$0
2.5	View Corridor										0	\$0
2.6	Hydrology										0	\$0
2.7	Biological Resources										0	\$0
2.8	Cultural Resources										0	\$0
2.9	California Coastal Commission (geotech input limited to 8 hrs)	8	8	8							24	\$8,078
2.10	Opportunities and Constraints Map										0	\$0
2.11	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		64	16	16	24	88	16	16	8	8	256	\$66,718
Task 3 Alternatives Analysis												
3.1	Alternatives Analysis (geotech input on alternatives)	11	8	8							27	\$9,171
3.2	Outreach Strategy Plan										0	\$0
	Online										0	\$0
	PDT										0	\$0
	Stakeholders										0	\$0
	Community Meeting										0	\$0
3.3	Alternatives Refinement										0	\$0
3.4	Outreach Strategy Plan										0	\$0
	Online										0	\$0
	PDT										0	\$0
	Stakeholders										0	\$0
3.5	Alternatives Report										0	\$0
3.6	LCP Amendment										0	\$0
3.7	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		11	8	8	0	0	0	0	0	0	27	\$9,171
Task 4 Preliminary Engineering												
4.1	35% Design (geotech input and plan review)	8	8								16	\$5,956
4.2	Public Utilities										0	\$0
4.3	Outreach Strategy Plan										0	\$0
	Online										0	\$0
	PDT										0	\$0
	Stakeholders										0	\$0
4.4	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		8	8	0	0	0	0	0	0	0	16	\$5,956
PHASE 2												
Task 5 Environmental Review and Permitting												
5.1	Project Description										0	\$0
5.2	Admin Draft IS/MND										0	\$0
5.3	Revised Draft IS/MND										0	\$0
5.4	Public Review IS/MND										0	\$0
5.5	Response to Comments/ Final IS/MND										0	\$0
5.6	Public Hearing										0	\$0
5.7	NEPA Support										0	\$0
5.8	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		0	0	0	0	0	0	0	0	0	0	\$0
Task 6 Permitting												
6.1	Permit Strategy										0	\$0
6.2	Regulatory Permit Applications										0	\$0
6.3	Coastal Development Permit										0	\$0
6.4	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		0	0	0	0	0	0	0	0	0	0	\$0
Task 7 Final Design												
7.1	Final Design										0	\$0
	65% PSE (geotech review)	8									8	\$2,915
	95% PSE (geotech review)										0	\$0
7.2	Local Assistance Support										0	\$0
7.3	Contract Management										0	\$0
	General Project Management										0	\$0
	QA/QC										0	\$0
	Meetings										0	\$0
SUBTOTAL		8	0	0	0	0	0	0	0	0	8	\$2,915
Task 8 Bidding and Construction Support												
8.1	Bidding Support										0	\$0
8.2	Construction Support								8		8	\$1,172

CLIFF DRIVE RESILIENCY PROJECT SUMMARY OF SUB CONSULTANT LABOR EFFORT		ENGEO Geotechnical Engineer									Total Hours	Total Base Fee
		Jeanine Ruffoni PM and GE	Walt Crampton GE and QA/QC	Gene Spineto Senior Designer	Varies Assoc Eng/Geo	Varies Staff Eng/Geo	Varies Lab Technician	Varies CAD Specialist	Varies Project Assistant	Varies GIS Analyst		
2023 Hourly Rate (\$/ hour)		92.00	96.00	67.00	77.00	52.00	40.00	40.00	37.00	44.00		
Fringe		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Overhead		260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%	260.00%		
Profit		10%	10%	10%	10%	10%	10%	10%	10%	10%		
Multiplier		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Billable Rate (Overhead & Profit) (\$/ hour)		364.32	380.16	265.32	304.92	205.92	158.40	158.40	146.52	174.24		
SUBTOTAL		0	0	0	0	0	0	0	8	0	8	\$1,172
TOTAL LABOR COST:		115	40	32	24	88	16	16	16	8	355	\$99,840
Reimbursable Expenses												
1	Geotech Exploration - drill, traffic control, permit fees, disposal, etc											\$24,000
2	Prevailing wage related - overtime hours, per diem											\$2,500
SUBTOTAL												\$26,500
TOTAL PROJECT COST:												\$126,340



CLIFF DRIVE RESILIENCY PROJECT

SUMMARY OF SUB CONSULTANT LABOR EFFORT



2023 Hourly Rate (\$/ hour)

Fringe

Overhead

Profit

Multiplier

Billable Rate (Overhead & Profit) (\$/ hour)

MOFFATT AND NICHOL

Coastal Engineer

Dilip Trivedi PIC/Lead Coastal Engineer	Mads Jorgensen Sr. Coastal Engineer	Neil Nichols PM/Design Lead	Cheng-Feng Tsai Coastal Modeler	Justin Estrada Engineer I	CADD Phu Minh Hua
110.50	95.45	84.50	75.25	46.50	47.50
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
179.80%	179.80%	179.80%	179.80%	179.80%	179.80%
9%	9%	9%	9%	9%	9%
3.0	3.0	3.0	3.0	3.0	3.0
337.01	291.11	257.71	229.50	141.82	144.87

Total Hours

Total Base Fee

PHASE 1

Task 1. Project Management and Community/ Stakeholder

1.1 Project Kickoff	8		8				16	\$4,758
1.2 Outreach Strategy Plan							0	\$0
1.3 Project Budget							0	\$0
1.4 Quality Management Plan							0	\$0
1.5 Contract Management								
General Project Management							0	\$0
QA/QC							0	\$0
Meetings							0	\$0
SUBTOTAL	8	0	8	0	0	0	16	\$4,758

Task 2. Opportunities and Constraints Assessment

2.1 Document Review	4	12	8	24			48	\$12,411
2.2 Existing Conditions Mapping			4				4	\$1,031
2.3 Geotechnical Analysis							0	\$0
2.4 Coastal Analysis	16	48	24	100			188	\$48,500
2.5 View Corridor							0	\$0
2.6 Hydrology		8	4				12	\$3,360
2.7 Biological Resources							0	\$0
2.8 Cultural Resources							0	\$0
2.9 California Coastal Commission	4		8				12	\$3,410
2.10 Opportunities and Constraints Map							0	\$0
2.11 Contract Management								
General Project Management			4				4	\$1,031
QA/QC	4						4	\$1,348
Meetings			4				4	\$1,031
SUBTOTAL	28	68	56	124	0	0	276	\$72,121

Task 3 Alternatives Analysis

3.1 Alternatives Analysis	2	8	16	8		4	38	\$9,542
3.2 Outreach Strategy Plan								
Online							0	\$0
PDT							0	\$0
Stakeholders							0	\$0
Community Meeting	8		8				16	\$4,758
3.3 Alternatives Refinement	4	6	12			8	30	\$7,346
3.4 Outreach Strategy Plan								
Online							0	\$0
PDT							0	\$0
Stakeholders							0	\$0
3.5 Alternatives Report	4	8	8	2			22	\$6,198
3.6 LCP Amendment							0	\$0
3.7 Contract Management								
General Project Management							0	\$0
QA/QC							0	\$0
Meetings	4		8				12	\$3,410
SUBTOTAL	22	22	52	10	0	12	118	\$31,253

Task 4 Preliminary Engineering

4.1 35% Design	8	24	40		24	40	136	\$29,189
4.2 Public Utilities								
4.3 Outreach Strategy Plan								
Online							0	\$0
PDT							0	\$0
Stakeholders							0	\$0
4.4 Contract Management								
General Project Management							0	\$0
QA/QC							0	\$0
Meetings	4		8				12	\$3,410
SUBTOTAL	12	24	48	0	24	40	148	\$32,599

PHASE 2

Task 5 Environmental Review and Permitting

5.1 Project Description	4	8	8				20	\$5,739
5.2 Admin Draft IS/MND	4	4					8	\$2,512
5.3 Revised Draft IS/MND							0	\$0
5.4 Public Review IS/MND		4					4	\$1,164
5.5 Response to Comments/ Final IS/MND	2	4	8	4			18	\$4,818
5.6 Public Hearing							0	\$0
5.7 NEPA Support							0	\$0
5.8 Contract Management								
General Project Management							0	\$0
QA/QC							0	\$0
Meetings	8		8				16	\$4,758
SUBTOTAL	18	20	24	4	0	0	66	\$18,991

Task 6 Permitting

CLIFF DRIVE RESILIENCY PROJECT

SUMMARY OF SUB CONSULTANT LABOR EFFORT

NORTHGATE ENVIRONMENTAL CEQA, NEPA, and Permitting

	Sam Merrill PM and QA/QC	Richard Grassetti CEQA Specialist	Geoff Hornek MND Support (AQ/GHG)	Megan Aikawa Graphics Support	Megan Aikawa Admin
2023 Hourly Rate (\$/ hour)	90.98	132.00	110.00	58.41	27.04
Fringe	0.00%	0.00%	0.00%	0.00%	0.00%
Overhead	155.00%	15.91%	16.36%	155.00%	155.00%
Profit	10%	10%	10%	10%	10%
Multiplier	2.3	2.0	2.0	2.3	2.3
Billable Rate (Overhead & Profit) (\$/ hour)	209.25	264.00	220.00	134.34	62.19



Total Hours

Total Base Fee

PHASE 1

Task 1. Project Management and Community/ Stakeholder

1.1 Project Kickoff						0	\$0
1.2 Outreach Strategy Plan						0	\$0
1.3 Project Budget						0	\$0
1.4 Quality Management Plan						0	\$0
1.5 Contract Management							
General Project Management						0	\$0
QA/QC						0	\$0
Meetings						0	\$0
SUBTOTAL	0	0	0	0	0	0	\$0

Task 2. Opportunities and Constraints Assessment

2.1 Document Review						0	\$0
2.2 Existing Conditions Mapping						0	\$0
2.3 Geotechnical Analysis						0	\$0
2.4 Coastal Analysis						0	\$0
2.5 View Corridor						0	\$0
2.6 Hydrology						0	\$0
2.7 Biological Resources	8				8	16	\$2,172
2.8 Cultural Resources	8				8	16	\$2,172
2.9 California Coastal Commission						0	\$0
2.10 Opportunities and Constraints Map						0	\$0
2.11 Contract Management							
General Project Management						0	\$0
QA/QC						0	\$0
Meetings						0	\$0
SUBTOTAL	16	0	0	0	16	32	\$4,343

Task 3 Alternatives Analysis

3.1 Alternatives Analysis						0	\$0
3.2 Outreach Strategy Plan							
Online						0	\$0
PDT						0	\$0
Stakeholders						0	\$0
Community Meeting						0	\$0
3.3 Alternatives Refinement						0	\$0
3.4 Outreach Strategy Plan							
Online						0	\$0
PDT						0	\$0
Stakeholders						0	\$0
3.5 Alternatives Report						0	\$0
3.6 LCP Amendment						0	\$0
3.7 Contract Management							
General Project Management						0	\$0
QA/QC						0	\$0
Meetings						0	\$0
SUBTOTAL	0	0	0	0	0	0	\$0

Task 4 Preliminary Engineering

4.1 35% Design						0	\$0
4.2 Public Utilities							
4.3 Outreach Strategy Plan							
Online						0	\$0
PDT						0	\$0
Stakeholders						0	\$0
4.4 Contract Management							
General Project Management						0	\$0
QA/QC						0	\$0
Meetings						0	\$0
SUBTOTAL	0	0	0	0	0	0	\$0

PHASE 2

Task 5 Environmental Review and Permitting

5.1 Project Description						0	\$0
5.2 Admin Draft IS/MND		116				116	\$30,624
5.3 Revised Draft IS/MND		20				20	\$5,280
5.4 Public Review IS/MND		20				20	\$5,280
5.5 Response to Comments/ Final IS/MND		68				68	\$17,952
5.6 Public Hearing		16				16	\$4,224
5.7 NEPA Support						0	\$0
5.8 Contract Management							
General Project Management	45			10	10	65	\$11,382
QA/QC	20					20	\$4,185

CLIFF DRIVE RESILIENCY PROJECT		NORTHGATE ENVIRONMENTAL					Total Hours	Total Base Fee
		CEQA, NEPA, and Permitting						
SUMMARY OF SUB CONSULTANT LABOR EFFORT		Sam Merrill PM and QA/QC	Richard Grassetti CEQA Specialist	Geoff Hornek MND Support (AQ/GHG)	Megan Aikawa Graphics Support	Megan Aikawa Admin		
	2023 Hourly Rate (\$/ hour)	90.98	132.00	110.00	58.41	27.04		
	Fringe	0.00%	0.00%	0.00%	0.00%	0.00%		
	Overhead	155.00%	15.91%	16.36%	155.00%	155.00%		
	Profit	10%	10%	10%	10%	10%		
	Multiplier	2.3	2.0	2.0	2.3	2.3		
	Billable Rate (Overhead & Profit) (\$/ hour)	209.25	264.00	220.00	134.34	62.19		
Meetings							0	\$0
SUBTOTAL		65	240	0	10	10	325	\$78,927
Task 6 Permitting								
6.1	Permit Strategy						0	\$0
6.2	Regulatory Permit Applications			52			52	\$11,440
6.3	Coastal Development Permit						0	\$0
6.4	Contract Management							
	General Project Management	45			10	10	65	\$11,382
	QA/QC	20					20	\$4,185
	Meetings						0	\$0
SUBTOTAL		65	0	52	10	10	137	\$27,007
Task 7 Final Design								
7.1	Final Design							
	65% PSE						0	\$0
	95% PSE						0	\$0
7.2	Local Assistance Support						0	\$0
7.3	Contract Management							
	General Project Management						0	\$0
	QA/QC						0	\$0
	Meetings						0	\$0
SUBTOTAL		0	0	0	0	0	0	\$0
Task 8 Bidding and Construction Support								
8.1	Bidding Support						0	\$0
8.2	Construction Support						0	\$0
SUBTOTAL		0	0	0	0	0	0	\$0
TOTAL LABOR COST:		146	240	52	20	36	494	\$110,277
Reimbursable Expenses								
	ALBION ENVIRONMENTAL	Cultural Resources						\$50,223
	ECOLOGICAL CONCERNS	Botanical						\$9,292
	SUNSET ECOLOGICAL SOLUTIONS	Permitting						\$69,788
	RCH GROUP	Noise						\$12,000



CLIFF DRIVE RESILIENCY PROJECT SUMMARY OF SUB CONSULTANT LABOR EFFORT 2023 Hourly Rate (\$/ hour) Fringe Overhead Profit Multiplier Billable Rate (Overhead & Profit) (\$/ hour)	BESS TEST LABS			Total Hours	Total Base Fee
	Utility Locating				
	Varies PM a	Varies Field Crew	Varies Technician		
	55.00	160.00	45.00		
	10.00%	10.00%	10.00%		
	165.00%	165.00%	165.00%		
	10%	10%	10%		
	3.0	3.0	3.0		
	166.38	484.00	136.13		
	PHASE 1				
Task 1. Project Management and Community/ Stakeholder					
1.1 Project Kickoff				0	\$0
1.2 Outreach Strategy Plan				0	\$0
1.3 Project Budget				0	\$0
1.4 Quality Management Plan				0	\$0
1.5 Contract Management					
General Project Management				0	\$0
QA/QC				0	\$0
Meetings				0	\$0
SUBTOTAL	0	0	0	0	\$0
Task 2. Opportunities and Constraints Assessment					
2.1 Document Review				0	\$0
2.2 Existing Conditions Mapping	16	8	20	44	\$9,257
2.3 Geotechnical Analysis				0	\$0
2.4 Coastal Analysis				0	\$0
2.5 View Corridor				0	\$0
2.6 Hydrology				0	\$0
2.7 Biological Resources				0	\$0
2.8 Cultural Resources				0	\$0
2.9 California Coastal Commission				0	\$0
2.10 Opportunities and Constraints Map				0	\$0
2.11 Contract Management					
General Project Management				0	\$0
QA/QC				0	\$0
Meetings				0	\$0
SUBTOTAL	16	8	20	44	\$9,257
Task 3 Alternatives Analysis					
3.1 Alternatives Analysis				0	\$0
3.2 Outreach Strategy Plan					
Online				0	\$0
PDT				0	\$0
Stakeholders				0	\$0
Community Meeting				0	\$0
3.3 Alternatives Refinement				0	\$0
3.4 Outreach Strategy Plan					
Online				0	\$0
PDT				0	\$0
Stakeholders				0	\$0
3.5 Alternatives Report				0	\$0
3.6 LCP Amendment				0	\$0
3.7 Contract Management					
General Project Management				0	\$0
QA/QC				0	\$0
Meetings				0	\$0
SUBTOTAL	0	0	0	0	\$0
Task 4 Preliminary Engineering					
4.1 35% Design				0	\$0
4.2 Public Utilities					
4.3 Outreach Strategy Plan					
Online				0	\$0
PDT				0	\$0
Stakeholders				0	\$0
4.4 Contract Management					
General Project Management				0	\$0
QA/QC				0	\$0
Meetings				0	\$0
SUBTOTAL	0	0	0	0	\$0
PHASE 2					
Task 5 Environmental Review and Permitting					
5.1 Project Description				0	\$0
5.2 Admin Draft IS/MND				0	\$0
5.3 Revised Draft IS/MND				0	\$0
5.4 Public Review IS/MND				0	\$0
5.5 Response to Comments/ Final IS/MND				0	\$0
5.6 Public Hearing				0	\$0
5.7 NEPA Support				0	\$0
5.8 Contract Management					
General Project Management				0	\$0
QA/QC				0	\$0

CLIFF DRIVE RESILIENCY PROJECT		BESS TEST LABS			Total Hours	Total Base Fee
		Utility Locating				
SUMMARY OF SUB CONSULTANT LABOR EFFORT		Varies PM a	Varies Field Crew	Varies Technician		
	2023 Hourly Rate (\$/ hour)	55.00	160.00	45.00		
	Fringe	10.00%	10.00%	10.00%		
	Overhead	165.00%	165.00%	165.00%		
	Profit	10%	10%	10%		
	Multiplier	3.0	3.0	3.0		
	Billable Rate (Overhead & Profit) (\$/ hour)	166.38	484.00	136.13		
	Meetings				0	\$0
SUBTOTAL		0	0	0	0	\$0
Task 6 Permitting						
6.1	Permit Strategy				0	\$0
6.2	Regulatory Permit Applications				0	\$0
6.3	Coastal Development Permit				0	\$0
6.4	Contract Management					
	General Project Management				0	\$0
	QA/QC				0	\$0
	Meetings				0	\$0
SUBTOTAL		0	0	0	0	\$0
Task 7 Final Design						
7.1	Final Design					
	65% PSE				0	\$0
	95% PSE				0	\$0
7.2	Local Assistance Support				0	\$0
7.3	Contract Management					
	General Project Management				0	\$0
	QA/QC				0	\$0
	Meetings				0	\$0
SUBTOTAL		0	0	0	0	\$0
Task 8 Bidding and Construction Support						
8.1	Bidding Support				0	\$0
8.2	Construction Support				0	\$0
SUBTOTAL		0	0	0	0	\$0
TOTAL LABOR COST:		16	8	20	44	\$9,257
Reimbursable Expenses						
1	General Expenses					\$500
2						\$0
SUBTOTAL						\$500
TOTAL PROJECT COST:						\$9,757