Work Plan

CMG and Pathways Climate Institute are collaborating on the largest long-term adaptation program in the Bay Area, the Port of San Francisco's Waterfront Resilience Program, developing long-term adaptation alternatives for 7.5 miles of the Port of San Francisco's shoreline that address earthquake risks as well as increasing coastal, groundwater, and stormwater flood risks driven by climate change.

This collaborative planning effort includes coordination across multiple City departments, USACE, state and federal regulatory agencies to develop a cost-effective long-term plan that delivers comprehensive benefits to the City of San Francisco, its residents, and businesses. Over the course of our work together we have learned many lessons about the complexity of scoping and delivering complex adaptation projects. In terms of contract management and project delivery, one of most notable lessons is that an adaptive approach is intrinsic to the planning process. Throughout the process we will gather new information, we will learn from each other and the community, initial analyses will lead to new insights, and the stakeholder and community engagement process will inform our work.

If selected, the CMG team can leverage our WRP experience and develop a transparent adaptation planning process that recognizes competing needs, complex shoreline infrastructure, multiple hazards, and long-term uncertainties to help drive wise investments in climate adaptation. We expect to collaborate with the San Leandro OLU Working Group to refine and further develop the scope of work outlined below and as noted above, we believe an adaptive approach to the contracting and project delivery process is merited. With that in mind, we have added a scope refinement co-creation task as a precursor to contract execution.

Our proposed work plan is predicated on advancing all three Parts as part of an integrated process. We are open to the possibility of working on one or more of the Parts, however we would likely need to adapt our approach and scope accordingly.

Project Scoping Task

Under this precursor task, CMG team task leads will work with select Working Group members to refine the scope outlined below. It is important to agree on the major tasks and workflow from the outset to establish a transparent process that invites collaboration and communication across the Working Group and the consultant team. This project scoping task is anticipated to include two working sessions with the City of Alameda and select Working Group members, combined with revisions and responses to comments on the draft scope of work and budget. This precursor task may include coordination with BCDC to maximize compatibility with BCDC's ongoing development of regional adaptation planning guidance.

PART A: Long Term Adaptation Plan

Objectives:

Our objectives for Part A are to design planning and decision-making processes that allow for representation across the OLU, including feedback from community members and stakeholders. Communities within the OLU have varied backgrounds, with many communities facing systemic inequalities due to histories of red lining and disinvestment. With this in mind, the processes must:

- Embed equity goals throughout the process.
- Build community trust.
- Build off existing efforts.
- Lead a process that aspires to transformational change and provides benefits today and in the future.

Task A.1 - Project Coordination, Governance + Regional Agency Liaising

a. **Project Management**: Participate in project kick off and facilitate monthly project management meetings with the Project Partners to guide the development of the project.
   - Prepare and update project schedule.
   - Prepare and update RACI (Responsibility Assignment Matrix) to ensure consistent coordination and appropriate engagement of Working Group members, Project Partners, and the Consultant Team.
   - Prepare monthly project summary update across tasks with % completion and critical path tasks; communicate with Project Partners about potential delays, concerns, successes.
   - Prepare Project Charter outlining team goals, values, and communication protocols.
   - Facilitate team building workshop with select Working Group members and Community Partners to foster strong collaborative relationships from the outset.

b. **Sub-Regional Organizational Structure:** Collaborate with the Working Group to co-create a sub-regional organizational structure to accelerate and streamline implementation of adaptation projects. We propose the following process as a starting point for discussion with the Working Group. These tasks will be completed incrementally throughout the process.
   - Interviews with each Working Group member, including framing questions for the Working Group regarding subregional governance expectations and goals.
   - Hold a kickoff workshop focused on:
     - Co-creation process for subregional organizational structure(s).
     - Models for regional and state support.
     - Establishing guiding principles for the project.
     - Developing overarching equity goals and an equity statement.
   - Research on the relevant organizational structure options and matrix development showing the pros and cons of different options, ranked according to the ability to meet the needs and goals of the Working Group; build off lessons learned from Santa Clara County, San Mateo, Marin, Sonoma, and other national models.
     - Identify potential conflicts between Working Group member cities or agencies, if required, to support Working Group transformation into a governance structure.
     - Evaluate the nexus between different jurisdictions and entities and their joint vulnerabilities and provide preliminary guidance on the type and scale of potential subregional organizational structure(s)/ governance entities.
     - Develop an outline for recommended governance structure(s). This outline will be clear on whether the governance structure can be implemented within the existing statutory authority of members or if special state legislation is required.
   - **Assumption:** Implementation of the organizational structure is beyond the scope of Part A. If the Working Group agrees to pursue a specific organization structure, the CMG team can assist through a contract modification. However, additional resources will be required.

c. **Regional, State, Federal Agency Coordination:** Coordinate with regional agencies to identify needs and opportunities for regional support and engagement, and to share information, lessons learned and best practices for adaptation planning processes in other OLUs, which includes the upcoming BCDC regional shoreline adaptation guidelines.

- RFP includes coordination with regional agencies. We recommend the addition of state and federal agencies (consistent with Working Group membership).
- Meet with BCDC on progress towards regional shoreline adaptation guidance.
- Conduct interviews with regional, state, and federal agencies.
    - Develop a list of interviewees and topics and vet with Project Partners.
- Prepare a memo summarizing interview findings and presenting recommended approach for agency coordination.
    - Consider developing a Regulatory Working Group to establish a mechanism for regional and other agencies to contribute to the project.
    - Invite regional agencies to provide updates to the Working Group, if applicable.
- Complete a best practice review and series of presentations for the Working Group
    - Summarize best practices and recommendations in a short memo and series of presentations.
    - Educate the Working Group through a collaborative learning process; discuss topics as they emerge.
    - Promote alignment on alternative development, evaluation, and the recommended approach for the OLU.

Task A.1 Deliverables

- **Project Charter + Team Building Workshop**
- **Project Management**: Monthly meeting leadership including agendas, notes and schedule and progress updates..
- **Subregional Organization Schedule**: White Paper and supporting documentation summarizing the findings and recommendations for the organizational structure(s).
- **Regional Support + Engagement**: Memo summarizing the findings and recommended approach for agency coordination and support.
- **Best Practices**: Memo and supporting presentations summarizing best practices for regional and state support for locally driven, regionally supported OLU-based adaptation planning.

Task A.2 - Public + Stakeholder Outreach (in coordination with projects in Parts B +C): *Community Engagement will occur throughout the entire project, concurrent with Tasks 3 and 4. Therefore we suggest moving this task up to support developing the community engagement plan shortly after the project kickoff.*

a. **Plan**: Co-develop with Community Partners and Working Group members a public and stakeholder outreach and engagement plan and a communications strategy to build Community Partner capacity to lead outreach within the San Leandro OLU, to communicate the impacts of sea level and groundwater rise, and to gather input on adaptation needs, priorities, and solutions. The community engagement plan will be built with equity in mind and will seek to advance diverse strategies to reach vulnerable, traditionally underserved communities and California Tribes.

- The CMG team will support the Working Group and Community Partners in the co-development of stakeholder outreach materials, engagement plan and communications strategy. We envision a community driven approach that addresses the following critical questions:
    - How can resilience planning efforts advance a culture of democratic engagement within existing governmental systems, as well as form new ones?
    - In what areas of planning can community members have a real impact?
    - How do we open the full range of solutions available to impacted communities, including solutions that are restorative and regenerative?
    - How do we ensure that planning processes lead to meaningful outcomes that build on community assets and meet real needs?
    - How do we create the conditions necessary for successful implementation?
- Co-design the stakeholder and community engagement process to maximize inclusivity and participation with available resources.
- Update the plan as the project evolves. The plan needs to respond to what we learn through each step of the process, and should be considered a living document.
- **Assumption:** The Working Group and Community Partners will take the lead on developing the outreach and engagement plan and communications strategy.

b. **Toolkit**: Fact sheets, press releases, articles, social media posts, presentations and talking points for Working Group members including multilingual versions.

- The consultant team will support the Working Group by providing content for the above communications.
- **Assumptions:** Consultant Team will provide content, messaging and talking points to the Working Group and Community Partners and they will finalize and disseminate the materials. The Community Partners will provide multilingual translations of the materials.

c. **Engagement**: Conduct community engagement in two rounds of outreach. The first round will focus on draft vision, goals, vulnerabilities, preliminary concepts, and governance options. The second round will focus on the Draft Long-term Adaptation Plan. The Working Group will provide a forum for input and the Consultant will refine the products and plans based on community input.

- We expect that the Engagement Plan will include a combination of:
    - Creative/Multigenerational Town Hall Meetings that incorporate art and culture along with technical information and interactive planning games to educate, inform, explore, and evaluate solutions.
    - Pop Up Events (within communities)
    - Multilingual Surveys
    - Engagement with Youth and Youth Leaders
    - Consider creating Adaptation Hubs within different communities.
- As a baseline for planning purposes, we assume the following for each round of engagement.
    - (2) Townhall Style Meetings including online and in-person events.
    - (4) Pop Up Events (within communities)
    - (2) Youth Events
    - Online and Hard-copy Survey Coordination
- In each case we will co-develop or support the following elements:
    - Agenda and program including creative and interactive methods of participation and communication.
    - Relevant messages and narrative
    - Questions for the community
    - Technical materials and interactive tools
    - Compilation of key findings and input from the community, clearly communicating how input is used to inform the process and plan.
    - CMG team members can support meeting and activity facilitation and provide subject matter experts.

Task A.2 Deliverables

- Community Outreach and Engagement Plan (supporting role).
- Communications Toolkit Materials.
- Community Outreach and Engagement Summary and Results.

Task A.3 - OLU Planning + Implementation

a. **Vulnerability + Needs Assessment Survey**: Review existing vulnerability and needs assessment reports, and supplement where needed, to determine existing conditions and the hazards

associated with sea level and groundwater rise such as erosion, flooding, habitat loss, contamination, and liquefaction. The needs assessment will include gaps in data and will prioritize next steps and projects or studies to achieve the vision. Coordinate reviews with Parts B and C to support efficient use of resources.

- Review and build off available studies and documents from prior activities including the 2015 Baylands Ecosystem Habitat Goals Science Update, Estuary Blueprint, the Port of Oakland's Sea Level Rise Assessment (2019), the City of Alameda's Climate Action and Resiliency Plan (2019), Response of the Shallow Groundwater Layer and Contaminants to Sea Level Rise (2020), and additional studies.
- Data Gathering and Document Review (including but not limited to):
    - Equity data gaps / equity considerations
    - Sea level rise (coastal), groundwater, stormwater (precipitation) flooding hazard layers and vulnerability assessments
    - Precipitation changes with climate change
    - Sensitive habitats and habitat restoration efforts
    - Sediment flows, erosion, and habitat loss
    - Contaminated sites (include engagement with DTSC and Water Board on changing regulations for remediation, including re-evaluation of closed sites)
    - Liquefaction (coordinate with USGS on latest findings and strategies related to groundwater rise and liquefaction risk)
    - Built infrastructure (condition, infrastructure type, review SFEI's shoreline typology data)
    - Current plans and visions from the Working Group, partner cities and Port of Oakland/ Oakland Airport.
    - Current and planned development projects and other projects that may impact or intersect with shoreline adaptation plans (e.g., City projects, developer interest, Caltrans plans).
    - Compile GIS base files based on existing data sets, including assets and vulnerabilities.
    - Identify information gaps and finalize GIS base file and inventory of assets and vulnerabilities.

b. **Co-Create Adaptation Vision, Goals + Planning Principles**: Co-create a shared long-term adaptation vision, including goals and planning principles for the San Leandro OLU that align with other local and regional plans.

- Facilitate (2) World Café Style workshops with Working Group members, Technical Advisors, Community Partners, including equity leaders and CBO representatives.
    - Review existing conditions data, opportunities, and constraints
    - Establish SLR planning criteria and adaptation parameters (flood thresholds by shoreline zone)
    - Start to build out a shared vision of the future (build on what the working group has developed)
    - Co-create adaptation vision, goals, and planning principles.
- To maximize Working Group participation and expertise while recognizing time constraints, consider creating subgroups to move forward specific goals, such as governance/financing, regulatory/permitting, nature-based solutions, equity, etc.
- Finalize SLR adaptation planning criteria, thresholds and trigger points based on SLR projections aligned with State and Regional policy (recognizing that the State is in the process up updating their SLR policy to align with the 2022 Federal Interagency SLR Task Force report.

c. **Preliminary Adaptation Pathways + Feasibility Assessment**: Synthesize lessons learned from case studies around the world, with a focus on innovative long-term adaptation plans and solutions to facilitate necessary transformations in the San Leandro OLU. Develop preliminary adaptation pathways and alternatives. Complete a high-level feasibility assessment of preliminary adaptation pathways including short and long-term measures and nature-based solutions in highly urbanized shorelines.

- Synthesize lessons learned from around the world. Note that CMG, Pathways, and Moffatt & Nichol have assembled a wide range of adaptation strategies and plans from around the world from our work on the San Francisco Waterfront Resilience Program and many other projects.
- Build on existing resources and studies, identify subzones for adaptive watersheds, existing shoreline conditions, sea level rise and groundwater flood risks, watersheds and stormwater flood risk, surrounding land uses, potential for nature-based solutions, etc.
- Develop preliminary adaptation pathways and alternatives for each zone/watershed.
- Complete a high-level feasibility assessment of adaptation strategies by subzone to guide development of the long-term adaptation plan. The feasibility assessment will include the following factors:
    - Engineering feasibility
    - Environmental and regulatory feasibility
    - Community and co-benefits
    - Ecological and regenerative potential
    - Relative cost
- **Assumptions**: The level of granularity and number of adaptation alternatives and the feasibility assessment will be calibrated to available funding resources.

Task A.3 Deliverables

- Vulnerability and Needs Assessment Summary Report
- Compiled GIS geodatabase and base maps using existing data sets including assets and vulnerabilities
- Adaptation planning subzone designations
- Summary presentation of best practices for long-term adaptation planning
- Summary of SLR adaptation planning criteria, thresholds, and trigger points.
- Summary presentation of alternatives and preliminary adaptation pathways
- Feasibility assessment summary memo.

Task A.4 - Long-term Adaptation Plan

a. **Adaptation Prioritization Framework**: Facilitate a process with the Working Group to develop a prioritization framework with criteria that value the benefits to fish and wildlife, community, and the economy. Leverage existing tools and frameworks, including the San Francisco Bay Shoreline Adaptation Atlas (Atlas), and the SLR CHARG and ART frameworks to develop multi-benefit criteria and identify priority assets and solutions.

- Establish strawman multi-benefit prioritization framework based on a review of Atlas and ART Frameworks, and the San Francisco Waterfront Resilience Program/USACE approach developed to maximize comprehensive benefits while meeting community goals.
- Hold Working Group workshop to refine criteria and establish assessment and prioritization tool. The prioritization tool, whether an excel workbook or dashboard, should allow Working Group members and stakeholders to evaluate competing priorities, such as an emphasis on habitat benefits vs. public recreation vs. economic growth to support transparent decision making and community messaging. Pathways collaborated with the City and County of San Francisco to develop a multi-benefit criteria framework across 8 overarching goals, and an associated dashboard to support decision making.
- Finalize framework and assessment tool based on workshop outcomes. Beta testing with select Working Group members and/or Community Partners may be required depending on the complexity of the selected tool.
- Evaluate preliminary adaptation pathways and alternatives using the prioritization tool.
- **Assumption:** Evaluation and prioritization of adaptation pathways and alternatives will be completed at a high-level with an emphasis on identification of next steps for further analysis and evaluation.

b. Implementation Plan: Develop an implementation plan including critical implementation tasks.

- The implementation plan will include a summary of next steps for:
  - Development of a subregional organizational/governance structure(s)
  - Short-term projects
  - Long-term adaption planning
- Provide a high-level overview of major federal, state, and regional grant funding sources and matrix them with potential short and long-term adaptation projects. Summarize the local share funding mechanisms legally available to each public entity member of the Working Group with vulnerable facilities, and matrix those funding mechanisms to each potential project component.

c. Long-Term Adaptation Plan: The Long-term Adaption Plan will detail key steps and actions to take as the shoreline changes, identifying trigger points and costs for each of the outlined pathways. The plan will identify innovative strategies that enable the San Leandro OLU's adaptation to rising seas and provide collective benefits to coastal communities and wildlife, protect groundwater and ecosystems, restore marsh, upland, and transitional habitat, and enable effective shoreline and wastewater management. Following community consultations, the CMG team will prepare a final version of the Long-term Adaptation Plan for adoption across the San Leandro OLU.

- Compile draft long-term adaptation plan summarizing and compiling outcomes from tasks A.1 - 3.
- Compile Draft Review comments and revise plan.
- Issue Draft for Administrative Review
- Revise and Prepare Final Plan for review and approval.

Task A.4 Deliverables

- Draft Adaption Plan (Working Group Review)
- Administrative Draft
- Final Adaption Plan
- Preparation for and attendance at Council Hearings

PART B: Oakland-Alameda Estuary Adaptation Project

Task B.1 Existing Conditions

a. Project Management and Coordination (for the duration of the project).

- Prepare and update project schedule.
- Prepare and update RACI (Responsibility Assignment Matrix) to ensure consistent coordination and appropriate engagement of Working Group members, Project Partners, and the Consultant Team.
- Prepare monthly project summary update across tasks with % completion, identify critical path tasks, communicate with Project Partners about potential delays/concerns/successes.
- Manage and coordinate the CMG team and project delivery.
- Project Management including facilitation of meetings with Working Group, Technical Advisors and permitting agencies.

b. Data Collection and Review: Compile and review all relevant data including.

- Prepare Information Needs Request for Working Group
- GIS data and files, including topographic surveys.
- Existing survey information and base files
- Geotechnical investigation data and reports
- Previous studies
- Environmental reports
- Alameda CARP
- Downtown Oakland Specific Plan

c. Site Visits: Conduct site visits of the project areas to understand the project approach, and opportunities and constraints to be considered in the design. Identify potential locations within the watershed for green infrastructure, nature-based solutions, storm water retention/detention, public access and open space. Identify opportunities for multi-benefit solutions.

d. Base Maps: Prepare and refine base maps/plans to fully capture the extent of the project area and to include any additional information useful to the project.

e. Existing Conditions Memorandum: The Consultant Team shall prepare an existing conditions memorandum documenting site conditions and identifying additional information needs including the need for any additional topographic, bathymetric surveys, or geotechnical field investigations or borings.

Task B.1 Deliverables

- Project Management: Monthly meeting leadership including agendas, notes and schedule and progress updates.
- Base Maps and Plans
- Draft and Final Existing Conditions Memorandum
- **Assumptions**: Survey and/or geotechnical borings and reports are excluded from the base scope. If required, we will work with the City/ Working group during the final project scoping process to determine the best approach for provision of these services.

Task B.2 Analysis

a. Develop and Analyze Alternatives: Identify the types of shoreline protection appropriate for each project area based on feasibility, project goals and sea level rise adaptability. This analysis includes "living levees," vegetated berms, sheet pile walls, concrete walls, or hybrid combinations, and specifies which options are feasible in specific locations along the project alignment. The feasibility analysis will include engineering and construction feasibility and the ability to incorporate nature-based solutions. Facilitate meetings for Community Partners, Working Group members and other stakeholders to provide input on and review the alternatives analysis.

- Develop and confirm SLR adaptation planning criteria, thresholds, and trigger points based on levels of SLR aligned with state and regional policy.
- Compile and map assets and vulnerabilities building on work completed to date.
- Complete high-level review of existing environmental conditions, habitats, and biological resources.
- Identify opportunities for nature-based solutions.
- Analysis of public access, Bay Trail configuration, pedestrian and bicycle circulation, and open space/recreational opportunities and constraints.
- Develop adaptation pathways and alternatives for each shoreline zone and type based on SLR planning criteria.
- Develop structural/nature-based alternatives for berm and floodwall types, alignments, and methods of adaptability.
- Co-develop evaluation criteria based on project goals and develop multi-benefit prioritization framework (coordinated with Part A to maximize consistency across the projects)
- Co-develop a process and methodology to evaluate alternatives.
- Facilitate evaluation of alternatives and compile results
- Identify preferred adaptation strategies and alternative.
- Prepare Order of Magnitude Cost Estimate for selected for alternatives.

b. Green Infrastructure Alternatives: Develop green infrastructure alternatives for the project watershed drainage area and promote multi-benefit designs to increase community resiliency. This analysis will develop alternatives within the watershed to reduce peak discharge rates, reduce required storm drain system capital improvements, and improve water quality.

- Identify and confirm extent of watersheds to include in study. This proposal assumes that the study area will be limited to watersheds directly adjacent to the study area.
- Complete high-level storm drain system and flood risk analysis and identify opportunities for green infrastructure alternatives within designated project area.

c. **Conduct 1st Round of Outreach:** Refer to Task B.3

d. **Structural/nature-based alternatives:** This task is included as part of Task B.2.A

e. **Conduct 2nd Round of Outreach:** Refer to Task B.3

Task B.2 Deliverables

- Compiled Assets and Vulnerabilities Map
- Biological Resources Summary
- Open Space and Public Access Analysis – Summary Report
- Storm Drain System/Green Infrastructure Analysis
- Adaptation Pathways and Alternatives including nature-based, structural, and hybrid solutions.
- Evaluation Criteria and Alternative Selection – Matrix
- Order of Magnitude Cost Estimate for Selected Alternatives.

Task B.2 Public Outreach

a. **Develop a community engagement strategy with Community Partners and Working Group using a variety of formal and informal community engagement methods to facilitate grassroots community input and to build awareness of the project.**

- Engagement Plan and Communications Strategy: Refer to Task A.2.A

b. **Sub Tasks b, c, and d are included below**

- Engagement: We expect that the Engagement Plan will include a combination of:
  - Creative/Multigenerational Town Hall Meetings that incorporate art and culture along with technical information and interactive planning games to educate, inform, explore, and evaluate solutions.
  - Pop Up Events (within communities)
  - Multilingual Surveys
- As a baseline for planning purposes, we are assuming the following for each round of engagement.
  - (2) Townhall Style Meetings including online and in-person events.
  - (4) Pop Up Events (within communities)
  - Online and Hard-copy Survey Coordination
- In each case we will co-develop the following:
  - Agenda and program including creative and interactive methods of participation and communication.
  - Development of key messages and narrative.
  - Identify key questions for the community.
  - Technical materials and interactive tools.
  - Facilitation of meetings and activities.
  - Compilation of key findings and input from the community.
  - Clearly communicate how input is being used.
- Develop an alternatives selection matrix that includes public input, and refines the alternatives based on comments received from the outreach effort to provide guidance on a draft and final concept.

Task B.3 Deliverables

- Co-development of Engagement Strategy and Plan
- Preparation and Coordination of Outreach Materials
- Co-facilitation of engagement events.
- Alternatives Matrix

Task B.4 Advisory Committee Meetings

a. **Advisory Committee members to represent the Oakland-Alameda estuary focus area within the San Leandro OLU will be selected with Consultant input to ensure a comprehensive approach that considers a broad perspective and that engages a variety of stakeholders, including CBOs, agencies such as Caltrans, utilities, transportation providers, adjacent property owners, and others.**

b. **Facilitate up to five Advisory Committee meetings to ensure transparency and communication at the following project stages:** 1) kick-off, 2) existing conditions/preliminary alternative options, 3) preliminary concept, 4) draft concept, and 5) final concept.

c. **Investigate and identify regulatory compliance requirements and strategies.**

Task B.4 Deliverables

- (5) Advisory Committee meeting agendas
- Meeting Minutes, Action Items and Supporting Documents
- Summary of regulatory compliance requirements and strategies

Task B.5 Draft and Final Concept

a. **Develop a Basis of Design/Next Steps Report to document necessary information and specifications required for design including a shoreline concept, the use of inland detention facilities, green infrastructure, and nature-based solutions.**

b. **Develop 10 percent design drawings, planning level cost estimates and project schedule.** These documents will be made available for the Advisory Committee, agency and public review for further comments and input. Input will be incorporated into the final concept.

- Prepare Draft 10% design documentation for review.
- Compile document review comments from Stakeholders and Technical Advisors.
- Respond to comments and finalize 10% design documents and Basis of Design Report.
- Prepare Planning Level Cost Estimate

Task B.5 Deliverables

- Draft and Final Basis of Design Report
- Draft and Final 10% Design Documents
- Draft and Final Planning Level Cost Estimate

Task B.6 City Council - Cities of Alameda and Oakland

a. **Present the recommended concept to the City Councils of Oakland and Alameda.** Along with the recommended concept, the City Councils also will review the other completed deliverables from this grant effort such as the finalized existing conditions memo, the alternatives analysis, the Basis of Design/Next Steps memo and a summary of community member and stakeholder involvement and comments. The City Councils will be asked to weigh in on next steps such as grant writing, environmental clearance and permitting, the plans, specifications, and cost estimate and then construction.

Task B.6 Deliverables

- City Council Agendas, presentations, meeting minutes with City Council direction. Final Concept Design Documents (10% design).

PART C: Bay Farm Island Adaptation Project

Task C.2 Existing Conditions

a. **Project Management and Coordination**

- Prepare and update project schedule.
- Prepare and update RACI (Responsibility Assignment Matrix) to ensure consistent coordination and appropriate engagement of Working Group members, Project Partners, and the Consultant Team.
- Prepare monthly project summary update across tasks with % completion, identify critical path tasks, communicate with Project Partners about potential delays/concerns/successes.
- Use of SharePoint for collaborative file sharing between the team and with the Project Partners.
- Prepare Project Charter outlining team goals, values, and communications.
- Manage and Coordinate the Consultant Team and project delivery.

b. **Data Collection and Review:** Compile and review all relevant data including.

- Prepare Information Needs Request for Working Group
- GIS Data and Files
- Existing Survey Information and Base Files
- Geotechnical Investigation Data and Reports
- Groundwater Data

- Previous Studies of Near-Term Improvements
- Environmental Reports
- Alameda CARP

c. **Site Visits:** Conduct site visits of the project areas to understand the project approach, and constraints to be considered in the design. Identify potential locations within the watershed for green infrastructure, nature-based solutions, and storm water retention/detention will be identified and reviewed. Identify public access and open space opportunities and constraints and opportunities for multi-benefit solutions.

d. **Base Maps:** Prepare and refine Base Maps/Plans for both the Near-term Northshore Improvements and the Long-term Adaptation Planning Concepts.

e. **Existing Conditions Memorandum:** The Consultant Team shall prepare an existing conditions memorandum documenting site conditions and identifying additional information needs including the need for any additional topographic, bathymetric surveys, or geotechnical field investigations or borings.

f. **Geotechnical Investigation:** The geotechnical investigation will include file review, review of historic aerial photography, review of relevant geotechnical reports and boring data from existing sources including the EBMUD geotechnical report.

g. **Archaeological Investigation for Northern Waterfront Design:** Provide archaeological monitoring during geotechnical investigations that extend below Bay Mud to report on existing site conditions and determine the presence or absence of buried archaeological resources. Based on ESA's knowledge of the area, the project vicinity is sensitive for buried archaeological resources, buried below the Bay Mud layer.

h. **Cultural Resource Report for Northern Waterfront Design:** Complete a cultural resources assessment to support compliance with Section 106 of the National Historic Preservation Act. The assessment will include a records search at the Northwest Information Center of the California Historical Resources Information System to identify previously recorded cultural resources in the vicinity, a review of geologic and historic maps, and a request to the Native American Heritage Commission for information on known sacred sites in the project vicinity. ESA will prepare a technical report that identifies historic properties and meets the requirements of Section 106 of the National Historic Preservation Act. Recommendations for additional work will be provided and could include monitoring during project implementation and/or actions to follow in the event of an inadvertent discovery of cultural materials or human remains.

Task C.2 Deliverables

- Project Charter
- Project Management: Monthly meeting leadership including agendas, notes and schedule and progress updates.
- Existing Conditions Memorandum
- Base Maps and Plans
- Geotechnical Report
- Archaeological Investigation Summary Memorandum
- Cultural Resource Assessment Report

Assumptions:

- Additional surveys and/or geotechnical borings and reports are excluded from the base scope. If required, we will work with the City/Working group during the final project scoping process to determine the best approach for provision of these services.
- We assume that no archaeological resources such as midden soils or artifacts will be identified. We assume that no built historic resources will be identified. This assumption is consistent with our understanding of the site's history and conditions, and our prior recent cultural resources records searches that include the entire project area.
- Archaeological monitoring of geotechnical investigations (borings) that extend below Bay Mud will be completed in a one-day effort. Additional days of monitoring can be provided for additional scope and fee.

Task C.3 Feasibility Alternatives and Design

a. **Feasibility Analysis:** Develop project goals, purpose and needs using a pathways and phased approach to sea level rise adaptation and assess options for addressing the needs and potential costs. Consider groundwater and liquefaction impacts and options for habitat enhancement and nature-based solutions such as submerged aquatic vegetation (eel grass) for wave attenuation and erosion control as well as other nature- based solutions. The analysis also includes developing green infrastructure alternatives for the project watershed, and options for raising/re-locating a bike/pedestrian bridge that lands on Veterans Court.

- Develop and confirm SLR adaptation planning criteria and trigger points based on levels of SLR aligned with State and Regional policy.
- Compile and map assets and vulnerabilities building on work completed to date.
- Complete storm drain system and flood risk analysis and identify opportunities for green infrastructure alternatives.
- Refine and develop groundwater flood risk analysis based on geotechnical considerations and work completed to date.
- Complete high-level review of existing environmental conditions, habitat, biological resources.
- Identify opportunities for nature-based solutions.
- Analysis of public access, Bay Trail configuration, pedestrian and bicycle circulation, and open space/recreational opportunities and constraints.
- Develop adaptation pathways and alternatives for each shoreline zone and type based on SLR planning criteria.

b. **Analyze Alternatives:** to identify the types of shoreline protection appropriate for each Bay Farm Island project area based on feasibility, project goals and sea level rise adaptability. This analysis includes "living levees," green infrastructure, vegetated berms, sheet pile walls, concrete walls, or hybrid combinations, and specifies which options are feasible in specific locations along the project alignment.

- Co-Develop evaluation criteria based on project goals and develop multi-benefit prioritization framework.
- Co-develop a process and methodology to evaluate alternatives.
- Facilitate evaluation of alternatives.
- Compile results of evaluation.
- Identify preferred adaptation strategies and alternatives.

c. **Community Engagement:** Co-develop the community engagement plan and strategies with Community Partners, Scientific Advisors and Working Group. As a first round of outreach, present existing conditions, and preliminary alternative options under consideration. As a second round of outreach, present the preliminary concepts including both short- and long-term concepts. Coordinate the two rounds of community engagement with Parts A and B of this RFP.

- Engagement Plan and Communications Strategy: Refer to Task A.2.A
- Engagement: We expect that the Engagement Plan will include a combination of:
  - Creative/Multigenerational Town Hall Meetings that incorporate art and culture along with technical information and interactive planning games to educate, inform, explore, and evaluate solutions.
  - Pop Up Events (within communities)
  - Multilingual Surveys
- As a baseline for planning purposes, we are assuming the following for each round of engagement.
  - (2) Townhall Style Meetings including online and in-person events.
  - (4) Pop Up Events (within communities)
  - Online and Hard-copy Survey Coordination
- In each case we will co-develop the following:
  - Agenda and program including creative and interactive methods of participation and communication.
  - Development of key messages and narrative.

- Identify key questions for the community.
- Technical materials and interactive tools.
- Facilitation of meetings and activities.
- Compilation of key findings and input from the community.
- Clearly communicate how input is being used.

d. **Northern Waterfront Design:** Develop basis of design report, 30 percent design drawings, cost estimate and project schedule for a short-term project in the northern waterfront area - including the shoreline park, the lagoon outfall, and Veterans Court - that would transition well into a long-term project. Evaluate structure types and alignments for the bicycle/pedestrian paths, tie-ins to existing waterfront path and upgrades of the fishing pier. Coordinate with permitting agencies, and then refine plans to include additional details up to 100 percent design drawings in compliance with all applicable federal, state, and local requirements. Develop draft and final Benefit Cost Analysis. Conduct peer review.

- Confirm scope of short-term improvements for the Northern Waterfront, based on outcomes from Tasks C.2, C.3 and C.4.
- Prepare a habitat assessment and aquatic resources delineation to support the project environmental analysis and regulatory permits.
- Assess the feasibility for nature-based solutions along the northern shoreline, such as: gravel beach options to rip rap, vegetated berms, marsh creation, oyster reef placement and oyster tiles, enhanced rip rap planting (vegetated "crown"), and eelgrass enhancement through planting.
- Develop Basis of Design Report and submit for review and comment.
- Prepare Draft 30% design documentation for review.
- Prepare Draft Benefit Cost Analysis
- Compile document review comments from Stakeholders and Technical Advisors.
- Respond to comments and finalize 30% design documents and Basis of Design Report
- Prepare Final Benefit Cost Analysis
- Develop an approach to project environmental review to evaluate compliance with the California Environmental Quality Act.
- Attend 2 joint agency meetings and 2 meetings with the City on CEQA approach with two staff.
- Submit 30% design documents to permitting agencies for review and coordination.
- Prepare draft applications and supporting documentation for permits and authorizations, expected to be required from the U.S. Army Corps of Engineers (USACE), San Francisco Bay Regional Water Quality Control Board (RWQCB), San Francisco Bay Conservation and Development Commission (BCDC), U.S. Fish and Wildlife Service (USFWS), and National Oceanic and Atmospheric Administration (NOAA) Fisheries, commensurate with 30% design.
- Project Management including facilitation of meetings with Working Group, Technical Advisors and permitting agencies.

Task C.3 Deliverables

- Feasibility Analysis and Alternatives Report
- Alternatives Analysis Report and Matrix
- Community Engagement Materials
- Concept design for Northern Waterfront (10% design)
- Draft and Final Basis of Design Report for Northern Waterfront
- Draft and Final 30% Design Documentation for Northern Waterfront
- Draft and Final Benefit Cost Analysis for Northern Waterfront
- Permitting Agency Coordination and Draft Permit Applications (as defined above).

Assumptions:

- The team will advance one or more short-term projects in the northern waterfront area to 30% design. Depending on the complexity and scope of the projects the team will coordinate with the City to determine whether the design can be advanced beyond the 30% design and the number and type of early actions selected for 30% design will be confirmed and may be adjusted to be achievable within the allocated budget.
- The project will qualify for a USACE Nationwide Permit; an Individual Permit will not be required. An Alternatives Analysis for the RWQCB 401 certification will not be required. The project will not require formal consultation with USFWS or NOAA-Fisheries or a 2081(b) Incidental Take Permit from California Department of Fish and Wildlife.
- Note: Refined plans to include additional details up to 100 percent design drawings in compliance with all applicable federal, state, and local requirements is not included in the current scope of work or budget but can be negotiated with the WG after a preferred option has been identified.

Task C.4 Long-term Concept Development – Bay Farm Island

a. **In conjunction with Part A of this RFP "Long-term Adaptation Plan," Consultant will: (1) develop long-term adaptation concepts for Bay Farm Island to address rising bay waters and groundwater, inclusive of nature- based solutions, managed retreat, living levees, submerged aquatic vegetation, and green infrastructure; (2) identify structure types and alignments for the bicycle/pedestrian trail system; (3) prepare concept design drawings and cost estimates; and (4) prepare Benefit Cost Analysis.**

- Refer to Tasks A.1, A.3, and A.4 for a detailed description of the Long-Range Planning process and deliverables.
- Based on results of Task A, prepare Draft concept design drawings
- Prepare Draft Cost Estimate
- Compile document review comments from Stakeholders and Technical Advisors.
- Respond to comments and finalize concept design documents.
- Prepare Final Cost Estimate
- Project Management including facilitation of meetings with Working Group, Technical Advisors and permitting agencies.

b. **EHP and Permitting: Coordinate with permitting agencies to understand requirements; develop documentation needed to obtain permits; perform additional data collection and studies.**

Assumptions:

- Based on our review of the scope and grant schedule we do not believe that it is feasible to complete EHP Documentation for the entire Bay Farm Island Project Area. We are proposing to complete EHP Documentation for the Northern Waterfront Design scope as identified above and as required to initiate the permitting process.
- The environmental and cultural resources assessments and permitting in the prior tasks will largely address the FEMA EHP requirements. This scope includes preparation of initial FEMA consultations and approach.

Task C.4 Deliverables

- Draft and Final Concept Design Documents
- Draft and Final Planning Level Cost Estimate

Assumptions:

- We anticipate that the scope of the Concept Design Documents will need to be developed based on the Results of Part A Long-Term Planning, as there will likely be multiple pathways/projects based on different SLR scenarios and advancing multiple adaptation projects based on different scenarios is not likely to be feasible with available funding.

Proposed Project Schedule