MEMORANDUM

March 9, 2017

TO: MEMBERS, PORT COMMISSION
Hon. Willie Adams, President
Hon. Kimberly Brandon, Vice President
Hon. Leslie Katz
Hon. Eleni Kounalakis
Hon. Doreen Woo Ho

FROM: Elaine Forbes
Executive Director

SUBJECT: Request Approval to Issue a Request for Proposals for Program Management / Engineering Consultant Services to Support the Seawall Resiliency Project

DIRECTOR'S RECOMMENDATION: Approve the Attached Resolution

EXECUTIVE SUMMARY

Port staff is seeking the Port Commission's authorization to advertise a Request for Proposals ("RFP") for a Program Management / Engineering Consultant ("PMEC") services to lead the Seawall Resiliency Project (the "Project").

This high profile and critical Project for the Port and City requires a wide array of specialized engineering, planning, and environmental expertise in the fields of civil works program development and planning, seismology, marine structural engineering, coastal engineering, civil engineering, geotechnical engineering, utility engineering, historic preservation and architecture, economic analysis, urban design, constructability evaluation, cost estimating, environmental review, and environmental permitting. The PMEC will be chosen based upon qualifications and the final contract scope and fee will be negotiated. It is anticipated that this contract will last 10 years with a budget estimate of $40M. The contract will be phased and include specific tasks during the major phases of the Project (planning, preliminary design & entitlement, and final design and construction). Phases will be awarded as funding allows. The intent of the RFP

is to procure the specialized services needed to complete planning and preferred alternative, advance Project engineering and design to 35% of completion, complete CEQA/NEPA approval, advance environmental and other permitting for construction, develop and recommend final design and construction delivery methods, and to assist with managing and review of final design and construction of the project.

STRATEGIC OBJECTIVE

This contract opportunity will support the goals of the Port's Strategic Plan as follows:

Engagement:
By promoting seawall knowledge using various media and outreach efforts, and by leading an inclusive stakeholder process to develop goals, values, and ensure consideration of all issues during development and implementation of the Seawall improvement program.

Livability:
By increasing the proportion of funds spent by the Port on LBEs and micro-LBEs contracts.

Resiliency:
By leading the City's efforts to address threats from earthquakes and flood risk through research and infrastructure improvements to the Seawall and Port property.

Sustainability:
By enhancing the quality of the Bay water and habitat with the improvements, by limiting construction impacts and waste, and by sustainable design and construction best management practices.

Stability:
By seeking traditional and innovative funding solutions and by maximizing external investment.

BACKGROUND

The Seawall, which stretches approximately three miles from Pier 45 at Fisherman's Wharf to the north bank of Mission Creek at the 3rd St Bridge (Lefty O'Doul Bridge), is vulnerable to damage in the next major earthquake, an earthquake the USGS predicts has a 72% chance of occurring by 2044. During a major earthquake, damage is expected to occur from ground failures below the Seawall, liquefaction of filled land behind the Seawall, and structural damage to pile supported bulkhead walls and wharves that form portions of the wall.

Earthquake damage to the Seawall is likely to exacerbate damage to adjacent infrastructure including utilities, the Embarcadero Promenade and Roadway, the Muni Light Rail, and historic finger piers, wharves and buildings. In addition, Seawall damage is expected to compromise access to ferries, cruise ships, bar pilots, water taxis, and other commercial vessel berthing facilities that are critical to Citywide disaster response and recovery.

In addition to earthquakes, portions of the Seawall have settled compromising flood protection to portions of the City including the area near the BART and Muni entrances. Sea level rise and climate change are expected to significantly increase flood risk over the coming decades and beyond.

The Port of San Francisco, in partnership with the City and County of San Francisco, has formed a team to plan, design, entitle, and implement measures that will significantly improve earthquake safety and performance of the Seawall and associated assets over the next 10 years. In addition, the team will develop strategies and the long term plans to improve flood protection over the next 100 years based on best available science for sea level rise and climate change projections. To assist with this effort, the Port envisions the following consulting opportunities:

Contract Type	Scope	Value ($M)	Term (Years)
Program Management/ Engineering	Program management and controls, engineering, urban planning & design, environmental analysis, CEQA & NEPA Support.	$ 40.0	<10
Communications	Marketing and advertising, strategic communications and public relations, public outreach and project engagement, innovative engagement, photography, graphic design, collateral production and distribution, and translation services.	$ 1.7	5
Final Design	Final Design & Engineering, Bidding, and Design Construction Support for specific projects (multiple).	TBD	2-6
Construction	Construction contracts for specific projects (multiple). Contracts may include traditional Design/Bid/Build, Design/Build, CM/GC.	TBD	2-6
Construction Management	Construction management, testing, and inspection services.	TBD	2-6

Schedule and Budget – Initial $500M Investment

Improvements to address immediate life safety risk are estimated to cost $500 million over the next 10 years.

Phase	Budget	Duration	Start	Finish
Vulnerability Study	$1.0 M	1.5 yr	January 2015	COMPLETE
Planning	$8.5 M	2.5 yr	July 2016	December 2018
Preliminary Design & Environmental	$ 25.5 M	2.0 yr	January 2019	December 2020
Final Design & Construction	$465.0 M	5 yr	January 2021	December 2025

Vulnerability Study: The Vulnerability Study Phase is complete and includes both an Earthquake Vulnerability Study[1] (Port Commission Meeting, 4/13/2016) and Sea Level Rise Vulnerability Study[2] (Port Commission Meeting, 3/22/2016). Information from both of these studies and from Port and City Staff evaluations have been used to advance the Project including budget and scope estimates.

Phase 1 - Planning Phase: The Planning Phase will advance and complete a multi-hazard feasibility study, develop Project alternatives, and culminate in a recommended Project alternative for the initial phase of improvements. The Planning Phase will also advance and recommend an overall vision for subsequent phases and for long-term improvements necessary to protect against sea level rise. Current total estimated costs for long term improvements range from $2 Billion to $5 Billion and total estimated costs for initial improvements is $500 Million. The Planning Phase will advance and potentially alter these estimates. Project funding will be sought and secured during the Planning Phase including a $350 M General Obligation Bond that will go to San Francisco voters in November 2018.

Phase 2 – Preliminary Design & Environmental Approval: This phase will advance the preferred alternatives for initial improvements to 35% design level. It will also start and complete compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). At this point, it is expected that a programmatic (or phased) approach will be used to consider improvements to the entire Seawall on a high level, and then to specifically analyze the initial phase improvements. This strategy will be subject to further consideration and review as the Project advances. Background studies

[1] http://sfport.com/sites/default/files/Commission/Documents/Commission%20Meeting%20Staff%20Reports/2016%20Commission%20Meeting%20Items/APR12/Item%2011A%20Seismic%20Study.pdf

[2] http://sfport.com/sites/default/files/Executive/Docs/Commission/Item%2012A%20-%20Sea%20Level%20Rise%20Action%20Plan%20Final_1.pdf

and engagement with regulatory agencies for environmental permits and approvals will continue during this phase including coordination with the Bay Conservation and Development Commission (BCDC), U. S. Army Corps of Engineers (USACE), San Francisco Bay Regional Water Quality Control Board (Water Board), National Marine Fisheries Service (NMFS), and US and California Fish & Wildlife. It is expected that permits will be secured for project(s) during Phase 3.

Phase 3 – Final Design & Construction: This phase will advance and complete the design, permitting, and construction of the initial improvements. This may be accomplished with a variety of projects and delivery methods (design/bid/build, design/build, CM/GC) that have been established in Phase 2. A goal will include pilot projects that can inform final design/construction (potentially included in Phase 2) and to break out early win projects that can be executed quickly to reduce safety hazards.

CONTRACT SCOPE

The intended scope for the PMEC Contract is to provide the specialized and expert services needed to complete planning studies, develop and assess alternatives, select and define a preferred alternative, advance engineering and design to 35%, complete CEQA/NEPA approval, advance environmental and other permitting for construction, develop and recommend final design and construction project(s) delivery methods, and to assist with managing and review of final design and construction of the project(s). Final design, construction, and construction management will be handled via separate contracts.

The PMEC contract is expected to include the following services:

Phase 0: Program Management and Controls (10 years)
Support the Port's Project Management team by providing the following services:

- Consultant Team Project Manager, single point of contact.
- Technical Team Leaders for: Structural Engineering, Coastal Engineering, Geotechnical Engineering, Civil Engineering, Utility Engineering, Transportation Engineering, Urban Planning and Design, Historic Preservation, Environmental Planning and Permitting
- Quarterly Project Reports
- Monthly Project Updates
- Meeting scheduling and minutes
- Develop and maintain a Risk Register
- Assist the Port in refining and actively managing the Project Management Plan

Phase 1: Planning (2 years)
Lead and carry out all work necessary to complete a multi-hazard feasibility study of the seawall that culminates in a framework to address the dual threats of

seismic and flood risk and a recommendation for initial improvements to be implemented by this Project. Include conceptual designs, cost estimates, construction impacts and schedule, environmental impacts and benefits, economic impacts and benefits.

- Feasibility Study (including USACE requirements)
    - Identify problems and opportunities
    - Inventory and forecast conditions
    - Formulate alternatives
    - Evaluate alternatives
    - Compare alternatives
    - Select a recommended program for initial improvements and a framework for responding to the dual threat of seismic and flood risk.
- Supporting Studies and Scope
    - Condition Assessment of Bulkhead Wall & Wharves, Embarcadero Promenade and Roadway, Light Rail, Utilities.
    - Advance existing screening level earthquake vulnerability assessment including developing and implementing a subsurface exploration program.
    - Advance existing flood assessment including developing coastal modeling, transects for wave run-up and effects, and consideration of sea level rise and other climate change impacts such as storm intensity.
    - Assessing existing environmental conditions and potential impacts and benefits with various improvement concepts.
    - Constructability analysis and impact assessment of various improvement concepts
    - Economic analysis with direct and indirect considerations of various improvement concepts.
    - Developing and supporting the Port to complete a stakeholder engagement process that includes public workshops, engages Port tenants, and key stakeholders.
    - Cost estimating
    - Implementing a project area specific HAZUS analysis with customized inputs for piers, wharves, bulkhead buildings, shed buildings, seawall and geotechnical conditions.

<u>Phase 2: Preliminary Design & Entitlements (2 years)</u>

During this Phase, the consultant will advance design of initial improvements to 35% level and complete both CEQA and NEPA. Specific scope tasks will include:

- CEQA, Programmatic and Initial Improvements
- NEPA, Programmatic and Initial Improvements
- Advance Design & Engineering of Initial Improvements to 35% Level, including Plans, Specifications, Estimate, and supporting Design & Engineering Documents

- Constructability Review and Analysis
- Value Engineering
- Design and Construction Delivery Options and Recommendations
- Develop an approach to permitting pilot studies and initial improvements, develop alternatives analysis, environmental mitigation and enhancement concepts, generate information needed for permitting construction; apply for permits and approvals from BCDC, Water Board, USACE and resource protection agencies. Finalizing environmental permits for construction is expected to continue through Final Design
- Continuation of stakeholder engagement

Phase 3: Final Design and Construction (6 years)

During this Phase, the PMEC consultant will support the Port as other consultants and contractors complete final design, permitting, construction, and mitigation and monitoring plans. Others will also provide construction management services.

- Review final designs and engineering studies, reports, plans, specifications, calculations, cost estimates, and construction schedules completed by the other consultant teams.
- Develop and complete a value engineering process for each project.
- Provide constructability review for each project.
- Design, engineer, and implement for pilot projects (small scale projects that may be necessary to understand design and viability of specific construction techniques).
- Assist in oversight of construction management.

As detailed more fully in Attachment 1, the PMEC shall have expertise in the following areas:

- infrastructure planning, program development, and management
- marine infrastructure assessment, planning, and engineering
- structural engineering
- geotechnical exploration and engineering
- earthquake engineering and seismology
- coastal engineering
- marine construction
- geology
- transportation planning and engineering
- civil engineering
- utility engineering
- waterfront urban design and planning
- historic structures and buildings
- NEPA and CEQA
- environmental assessment and permitting
- economic analysis

- cost estimating
- USACE Civil Works

SELECTION PROCESS

Port staff proposes to issue a RFP to procure the requested services through a fair and competitive process that CMD will facilitate and monitor. Port staff and a CMD representative will convene a selection panel consisting of a least two Port staff member and two non-Port representatives. The selection panel will have substantial expertise in the required fields, knowledge of the project area and objectives, and meet diversity goals that CMD determines. Port staff envisions the selection process to include the following steps:

1. Screening of Written Proposals
   Port and CMD staff will review each proposal to determine if they are responsive and responsible. Proposals will be reviewed for completeness, minimum format requirements, verifiable references, and responsiveness to LBE requirements. Only those proposals that are properly completed, meet the minimum format requirements, and are responsive to LBE requirements will be considered in the written proposal evaluation process.

2. Written Proposal Evaluation, Ranking and Short List
   After Port and CMD staff review proposals for responsiveness, the selection panel will score each written proposal based upon criteria included in the RFQ. Expected criteria include an understanding of services objectives, experience of the firm and project staff, and management approach. Port staff intends to short list the highest ranked consultant teams for oral interviews.

3. Oral Interviews
   Interviews will include responses to a list of standard questions. The selection panel members will individually score each firm based upon the RFP criteria, and a total score will be tabulated. Following the completion of the interviews, Port staff intends to make recommendations to the Port Commission to award a contract to the highest-ranked consulting teams.

4. Contract Negotiation and Award
   Port staff will seek Port Commission authorization to negotiate and enter into an agreement with the highest-ranking firm based on a Port-determined scope of work and budget acceptable to the Port. The agreement will be based on the City's standard agreement for professional services, a copy of which will be included in the RFP. If staff cannot complete successful negotiations with the highest-ranked firm, Port staff may elect to negotiate with the next highest-ranked firm in descending order.

LOCAL BUSINESS ENTERPRISE

It is the goal of the Port to maximize participation of LBE firms in its contracting opportunities. Potential roles for LBEs in this contract include geotechnical engineering, structural engineering, civil engineering, cost estimating, environmental services, and testing / inspection services.

The City's Administrative Code Chapter 14B, the Local Business Enterprise and Non-Discrimination Ordinance empowers CMD to set a project specific goal for LBE subconsultant participation. CMD set the LBE subconsultant goal for this contract at 15% based on the scope and LBE availability data. CMD also determined the availability of Minority Business Enterprise ("MBE"), Woman Business Enterprise ("WBE"), and Other Business Enterprise ("OBE") to perform subconsultant work on this project is as follows: 6% MBE, 3.4% WBE, and 5.6% OBE.

CMD and Port staff reviewed goals for City projects of similar size and scope prior to setting a LBE subcontracting goal for this solicitation. The Sewer System Improvement Program Manager Contract ("SSIP") issued by the San Francisco Public Utilities Commission ("PUC") is a $105 million project to upgrade the City's sewer infrastructure. The SSIP LBE subcontracting goal is 10%. The PUC's Water System Improvement Program ("WSIP") was a $45 million contract to renovate San Francisco's water supply storage and distribution. The WSIP had a 13% Disadvantaged Business Enterprise goal. Port staff believe a 15% LBE subcontracting goal is ambitious given the current availability of LBE firms, however, staff is committed to achieving the goal and will work with the selected proposer to identify LBE subcontracting opportunities.

The City's administrative code does not allow the application of rating discounts to LBE prime contractors or Joint Ventures with LBE prime contractors for contracts in excess of $10 million. LBE bid discounts do not apply for the services procured under this RFP.

OUTREACH EFFORTS

Prior to Port Commission authorization, to advertise this RFP, Port staff held a contract opportunities open house on March 1, 2017. The event provided a networking opportunity for large and small firms to meet and collaborate on upcoming contracting opportunities. Over 180 individuals attended the open house. The Seawall Resiliency Project and this RFP were prominently featured.

Following the Port Commission authorization, Port staff will advertise the RFP opportunity on the Port and Office of Contract Administration websites. Micro-LBE firms certified to provide public relations and marketing services will be contacted directly through phone calls and emails.

Additionally, Port staff will send copies of the RFP to interested parties compiled though industry market research and the contract opportunities open house. The Port will host a pre-submittal conference to review the RFP, answer respondent questions, and provide a networking opportunity for potential bidders. Port staff will also advertise the RFP using the following resources:

- Board of Supervisors Neighborhood Outreach Advertising Newspapers
- Chinese Chamber of Commerce, San Francisco
- City and County of San Francisco Bids and Contracts Database
- Contract Monitoring Division Directory of Certified LBEs
- Hispanic Chamber of Commerce of San Francisco
- LGBTQ Chamber of Commerce, San Francisco (Golden Gate Business Association)
- Local Business Enterprise Advisory Committee, San Francisco
- Port of San Francisco digital magazine
- Port of San Francisco social media platforms
- Port of San Francisco Website
- San Francisco African American Chamber of Commerce
- San Francisco Chamber of Commerce

SCHEDULE

Port staff anticipates the following schedule for the proposed solicitation and award of these contracts.

Activity	Target Date
Port Commission Authorization to Advertise	March 14, 2017
Commence RFP Advertisement	March 20, 2017
Pre-submittal Conference	April 6, 2017
Submission Due Date	April 28, 2017
Port Commission Authorization to Award Contract	June 13, 2017
Board of Supervisors Authorization to Award Contract	July 2017
New Contracts Commence	August 1, 2017

FUNDING

This contract will be initially funded by $8,000,000 included in the FY 2016-17 and 2017-18 Capital Budgets, comprised of $2,000,000 from Port Fund Balance, $4,000,000 from the General Fund, and $2,000,000 from the Planning Department and the Municipal Transportation Agency. Port staff is working diligently with the Mayor's Office and other City partners to identify additional funding required to fully implement the $500 million project.

CONCLUSION

Port staff is ready to seek competitive proposals for a Program Management / Engineering Consultant to lead the Seawall Resiliency Project as described in this report. Therefore, staff requests that the Port Commission approve the attached resolution authorizing staff to advertise a Request for Proposals.

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And

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For: John Woo, Acting Deputy Director
Finance & Administration Division

and

Uday Prasad, Acting Deputy Director of Engineering

PORT COMMISSION
CITY AND COUNTY OF SAN FRANCISCO

RESOLUTION NO. 17-14

WHEREAS, the Port's Seawall, also known as the Northern Waterfront or Embarcadero Seawall, stretches just over three continuous miles from Pier 45 in the north to Mission Creek in the south, and is a significant Port and City asset that stabilizes filled land, provides shoreline protection, and supports historic piers and wharves; and

WHEREAS, the Seawall is of advanced age, has settled and deteriorated, is vulnerable to earthquake damage, and may become functionally compromised as a flood protection structure for adjacent areas due to sea level rise and climate change; and

WHEREAS, the Port, in cooperation with the Mayor and other City departments, established the Seawall Resiliency Project (the "Project"), an effort the Port is leading, to plan, design, entitle, and construct one or more Seawall improvement projects that will significantly lower earthquake safety and flood damage risks; and

WHEREAS, the Port is currently estimating total costs for the Project at $500 million subject to further investigation and planning; and

WHEREAS, staff seek the services of a Program Manager / Engineering Consultant ("PMEC"), a multi-disciplinary engineering and architecture consulting team, to advance the Project from planning through preliminary design and environmental approvals, and to assist the Port with management, oversight and review during final design and construction; and

WHEREAS, the PMEC contract will be approved in phases as funding becomes available, with a term of up to 10 years and a value of up to $40 million; and

WHEREAS, the contract will be initially funded by up to $8,000,000 included in the FY 2016-17 and 2017-18 Capital Budgets, comprised of $2,000,000 from Port Fund Balance, $4,000,000 from the General Fund, and $1,000,000 respectively from the Planning Department and the Municipal Transportation Agency; and

WHEREAS, Port staff is seeking approval from the Civil Service Commission to contract with a private engineering firm for these important consulting services to support the Project; and

WHEREAS, Port staff has drafted a Request for Proposals ("RFP") to solicit consulting services for engineering services required for the Project; and

WHEREAS, Port staff will incorporate a 15% sub-consulting requirement for Local Business Enterprises in the proposed RFP as recommended by the City's Contract Monitoring Division; now, therefore, be it

RESOLVED, that the San Francisco Port Commission hereby authorizes Port staff to advertise a Request for Proposals to solicit engineering consulting services for a program manager / engineering consultant, and for contract award to be recommended at a future Port Commission meeting.

I hereby certify that the foregoing resolution was adopted by the Port Commission at its meeting of March 14, 2017.

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Secretary

ATTACHMENT 1

The PMEC shall have expertise in the following areas:

- Infrastructure Planning, Program Development, and Management
    - HAZUS implementation incorporating non-standard structures
- Marine Infrastructure Assessment, Planning, and Engineering
- Structural Engineering
    - Historic building structures, condition, seismic assessment, and retrofit
    - Historic pier and wharf structures, condition, seismic assessment, and retrofit
    - Bulkhead and retaining wall structures
    - Pile and deep foundations including soil/structure interaction and kinematic loading
    - Displacement ductility analysis
    - Non-linear time history analysis
    - Non-ductile concrete structures
- Geotechnical Exploration and Engineering
    - Landside and Waterside borings, cpt's, and in-situ testing
    - Pseudostatic slope stability analysis techniques
    - Advanced numerical modeling methods for slope stability incorporating structures and non-linear functions for liquefaction and Bay Mud (FLAC, PLAXIS, OPENSEES, UBCSAND), consideration of 3-dimensional effects.
    - Advanced liquefaction prediction methods, field testing and analysis
    - Soil-structure analysis techniques
    - Soil strengthening techniques (Soil Mixing, Jet Grouting, Chemical Grouting)
- Earthquake Engineering and Seismology
    - Site Specific Probabilistic Seismic Hazard Analysis
    - Response Spectra and Matched Time History Generation
    - Third Uniform California Earthquake Rupture Forecast (UCERF3)
- Coastal Engineering
    - Coastal Flood Hazard Analysis for San Francisco Bay
    - Total water levels and wave run-up
    - Shoreline protection analysis
    - Wave and current modeling and forces on structures
    - Sea level rise and climate change science and impact analysis
    - Marine Surveying
- Marine Construction
    - Seawall construction techniques and equipment
    - Pile driving techniques and equipment
    - Concrete repair techniques
    - Tidal construction windows
- Geology
- Transportation Planning and Engineering

    - Traffic Engineering
    - Light Rail Engineering
    - Multi-Use Trails
    - Temporary construction measures
- Civil Engineering
    - Roadway Pavement
    - Stormwater Management and Design
    - Surveying
    - Utility Mapping
- Utility Engineering
    - Combined sewer systems
    - Water Supply
    - Fire water (including AWSS)
    - Natural Gas
    - Telecommunications
- Waterfront Urban Design and Planning
    - Open spaces
- Historic Structures and Buildings
    - National Historic Districts and Resources
    - Section 106 Compliance, State Historic Preservation Office
- Secretary Standards Environmental Assessment and Permitting
    - NEPA (USACE Lead Agency)
        - Programmatic Level EIS for entire seawall program
        - Project level EIS/EA for Initial Project(s)
    - CEQA (SF Planning Department, Lead Agency)
        - Programmatic EIR
        - Project level EIR
    - Biological Assessment
    - San Francisco Bay Ecology
    - NOAA National Marine Fisheries Service Permitting
        - Endangered Species Act
        - Marine Mammal Protection Act
    - US Fish & Wildlife Permitting
    - USACE Permitting
    - San Francisco Bay Regional Water Quality Control Board Permitting
    - BCDC Permitting
- Economic Analysis
    - Replacement Cost
    - Direct and Indirect Impacts
    - USACE Benefit/Cost analysis
- Cost Estimating
    - Roadwork, Utility, Marine Construction, Historic Rehabilitation, Earthquake Retrofit
- USACE Civil Works
    - General Investigation Feasibility Study