City of Jacksonville, Florida

Lenny Curry, Mayor

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ONE CITY. ONE JACKSONVILLE.

February 26, 2018

03/07/18 15:21:25
Procurement Division

TO: Gregory W. Pease, Chairman
Professional Services Evaluation Committee

THRU: John P. Pappas, P.E.
Director

FROM: Tom Fallin, P. E.
Chief, Engineering and Construction Management Division

Robert Skalitzky, Chief
Natural and Marine Resources

SUBJECT: P-52-17 Professional Services for Dock Inspections and Designs
Contract # 8567-02 Amendment 1
RPWF165-06505---AFA017-01

Based on the assessment of the current condition of the damaged caused by Hurricane Matthew for the County Dock facility, Taylor Engineering, Inc. is to provide final engineering design and permitting to construct a replacement timber dock that will match the current dock's existing layout within the existing footprint. Negotiations with the consultant for these services have resulted in the attached Scope of Services, Exhibit C and Fee Summary, Exhibit D. The City's JSEB program is not applicable to this project.

Accordingly, this is to recommend that Contract # 8567-02, originally executed November 14, 2017, between the City of Jacksonville and Taylor Engineering, Inc. for Professional Services for Dock Inspections and Designs, be amended to incorporate the attached Scope of Services identified as Exhibit "C" and Fee Summary identified as Exhibit "D", to increase the lump sum amount for Dock Inspections and Design by $114,619.71 to a new total of $214,541.20, thereby increasing the maximum indebtedness to the City by $114,619.71 to a new maximum of $214,541.20, with all other terms and conditions of the Agreement remaining unchanged.

TF/lw

Attachment: Exhibits C & D

cc: Lori West, Contract Specialist

EXHIBIT C

Scope of Work
For
City of Jacksonville
County Dock
Engineering and Permitting Services

INTRODUCTION

In 2016, Hurricane Matthew brought strong winds and coastal conditions that severely damaged the timber dock at the County Dock facility in the City of Jacksonville (COJ). Through a previous qualification-based selection process, the COJ has chosen Taylor Engineering, Inc. (TAYLOR) to provide all professional services necessary to perform inspections; prepare condition reports, including recommendations for repair and/or replacement; prepare final design and bid documents; and provide post design construction phase support to repair or replace these facilities as necessary. As a continuing phase of this work, the COJ has requested TAYLOR provide this proposal for engineering and permitting services to replace the timber dock at the County Dock facility.

This scope of work entails providing final engineering design and permitting to construct a replacement timber dock that will match the current dock's existing layout within the existing footprint. Also, this scope of work assumes the entire existing timber dock will be demolished and no existing features will be reused.

Assumptions

- The project does not include shoreline armoring or another shoreline treatment.
- The renovated dock will remain within (or only minimally outside of) the existing dock footprint and have the same, or fewer, amenities as previously existed.
- The project will avoid wetland and submersed resource impacts or create only temporary impacts that do not require mitigation.
- TAYLOR will field locate wetland and submersed resources using sub-meter accuracy GPS equipment. No registered land surveyor verification of the GPS data will be required.
- The State of Florida requires authorization of an Individual Permit for this process. The timber dock replacement project will not qualify for exemption because the storm damage occurred over a year ago. Due to the size of the structure (>2,000 SF of surface area), County Dock will not meet Noticed General Permit requirements.
- The last state permit for maintenance and improvements to the dock authorized use of SSL under "Consent of Use". Therefore, no easement survey or easement request is required as part of the permit application.
- The USACE will review the application for authorization as a standard 404/401(b) Permit. The project does not qualify for a Nationwide Type 3 Maintenance Permit due to the dock's current lack of serviceability and relatively long period that the dock has remained in that non-serviceable state.
- The COJ will pay all permit fees.
- The COJ will be the permit applicant. TAYLOR will serve as the Engineer of Record and Agent for the permit applications.

- TAYLOR does not guarantee, warranty, or otherwise ensure that the agencies will authorize the permits requested by COJ.

If any of the above assumptions prove incorrect, TAYLOR will consult with COJ and, as necessary or appropriate, modify this scope of services and fee.

SCOPE OF WORK

TASK 1 – DATA COLLECTION

Through this task, TAYLOR and its subcontractors will conduct field investigations and collect necessary data to support engineering design and permitting for a replacement timber dock at County Dock facility in Jacksonville, Florida. For each of the subtasks below, TAYLOR will coordinate field activities with COJ such that the work does not interfere with any other activities.

Task 1.1 – Topographic and Hydrographic Survey

TAYLOR's subconsultant — Arc Surveying and Mapping, Inc (Arc) — will complete topographic and hydrographic survey of the site. The survey will include:

- Topographic survey 200 ft upland of shoreline
- Bathymetric survey within 100 ft of timber dock footprint
- Mean High Water (MHW) line identification
- Existing conditions/ structure survey of the timber dock and associated features

Task 1.2 – Geotechnical Exploration

TAYLOR subconsultant — ECS Florida (ECS) — will conduct geotechnical exploration at the site. The objective of the geotechnical exploration is to provide site and subsurface information to evaluate the subsurface conditions at the site for the proposed construction. The team will conduct the field investigations summarized by the table below.

Location	Number of Borings	Depth of Borings Below Ground Surface
Water side borings adjacent to timber dock[1]	3 SPT[3]	40 ft (below river mudline)
Land side borings adjacent to timber dock[2]	1 SPT[3]	30 ft

[1] Proposed Locations: a) Adjacent to Bent 22, b) Riverward of T-Dock, c) Adjacent to Dock House
[2] Proposed Locations: a) As close as possible to the timber dock and shoreline
[3] Standard Penetration Test

ECS will perform laboratory classification and index property tests on selected soil samples obtained from the exploration.

A geotechnical engineer, licensed in the State of Florida, will direct the geotechnical exploration and provide an engineering evaluation of the site and subsurface conditions with respect to the planned construction and imposed loading conditions. The results of the exploration and engineering evaluation

will then be documented in a deliverable report containing the following:

1. A brief discussion of the understanding of the planned construction and imposed loading conditions.
2. A presentation of the field and laboratory test procedures used and the data obtained.
3. A presentation of the existing on-site conditions, such as topography, surface vegetation, etc. as they relate to the planned construction.
4. A presentation of the encountered subsurface conditions, including subsurface profiles and measured groundwater levels, estimated seasonal high groundwater levels, and estimated geotechnical engineering properties (as necessary).
5. A geotechnical engineering evaluation of the site and subsurface conditions with respect to the planned construction.
6. Geotechnical design recommendations for foundation design parameters, including estimate of the performance of recommended pile foundation systems.
7. Installation recommendations for timber piles.

Task 1.3 Environmental Fieldwork and Desktop Assessments

Fieldwork

Two TAYLOR environmental scientists will conduct a one-day field visit to identify, characterize, and map any existing emergent wetlands or submersed resources (e.g. eelgrass, *Vallisneria americana*) which occurs in the project area and may occur within the project work footprint. The project design will avoid and minimize any impacts to these resources. A two-person crew will perform the necessary work within one day. All resources will be mapped with sub-accuracy GPS field instruments.

Desktop Assessments

The permit applications (see Task 3 below) require identification of any wetlands present within the work footprint, wetland impacts, impact avoidance and minimization, and mitigation for unavoidable impacts. We have assumed that the project will incur no impacts that require mitigation. The federal permit application also requires an assessment of project impacts on listed and candidate species, and an alternatives analysis for the project. We will develop environmental narratives for the FDEP and USACE applications including results of the fieldwork and the necessary information for each agency based on the permit application guidance and discussions with the agency staffs.

TASK 2 – PRELIMINARY DESIGN (60%-Complete)

Through this task, TAYLOR will apply the data collected in Task 1 to complete preliminary engineering design for the replacement timber dock.

Task 2.1 – Coastal Conditions Analysis

TAYLOR will evaluate the historical and FEMA storm data for the area near the project site and modify and apply a previously developed two-dimensional model to determine water levels and current speeds at the site for the desired return period storms. We will determine wave heights at the site from FEMA wave model results and compare these to fetch-limited model wave heights based on ASCE 7-16 wind speeds. We will then apply these conditions to estimate the design hydraulic loads on the pier and document the

results. Applying this information, TAYLOR will recommend a new dock elevation as a FEMA Hazard Mitigation strategy. TAYLOR will document tide and storm water levels, wind speeds, wave heights and wave periods, and recommended dock elevation in a coastal conditions report.

Task 2.2 – Preliminary Design Engineering

Based on previously collected data, TAYLOR will develop a preliminary structural design for the replacement timber dock within the current footprint. Preliminary engineering will consider upland site conditions, geotechnical conditions, and anticipated coastal conditions. During this task, TAYLOR will consider potential substructure layouts to avoid the existing timber piles and identify the need for cross braces along the dock. TAYLOR will work to identify a constructible, cost-effective, and resilient structural form for the replacement of the timber dock.

The task deliverable will include preliminary drawings; these drawings will depict plan arrangement, typical cross-sections, deck elevations, anticipated pile specifications, and embedment depths. The designer will also provide an updated opinion of probable costs based on 60%-complete level of design.

Once the preliminary engineering design is complete, TAYLOR will coordinate with COJ to schedule a meeting to review the preliminary design and receive comments. TAYLOR will make one revision to the preliminary design to incorporate those comments received from COJ.

TASK 3 – ENVIRONMENTAL PERMITTING SUPPORT

TAYLOR will assist the COJ in obtaining necessary state and federal environmental permit authorizations for the proposed reconstruction of the timber dock.

Task 3.1 – Preliminary Draft Permit Application

The USACE has recently redefined their environmental resources permit (404/401b) application process completely separating it from the state process for environmental resource permits. As soon as the COJ approves the preliminary design (Task 2), TAYLOR will develop draft permit application packages for FDEP and USACE review. These draft packages, including the preliminary design plans, will provide the basis for the preapplication meetings.

Task 3.2 – Preapplication Meeting

As soon as COJ approves a preliminary design, TAYLOR will work with the COJ to coordinate and facilitate a preapplication meeting or meetings to present and discuss the proposed project with the state and federal lead permitting agencies. A two to three-week lead time for the meeting date may be expected. We will discuss a joint meeting with both agencies. However, we have budgeted for two meetings in case this is not possible, or an agency prefers a separate meeting. In preparation for the meeting, we will prepare and submit a project description package to the agencies one to two weeks prior to the meeting. The package is a standard agency request for their meeting preparation and allows full teleconference participation by anyone requesting that alternative. For COJ and agency review, we will submit a meeting summary of each meeting. The meeting summary(ies) will focus on agency recommendations for the application contents.

Task 3.3 – Permit Application Package Completion and Submittal

We will modify the design and permit application packages based on input received during the preapplication meetings and submit the revised packages for COJ approval. After making any final changes to the application packages, we will submit one each to the FDEP and USACE.

Task 3.4 – Response to Requests for Additional Information

Due to the relatively simple nature of the project and the minimal environmental impacts that the project may incur, we expect to and have budgeted for responses to one request for additional information (RAI) from the FDEP. The USACE review process includes several steps: completion review, public noticing, response to public comments, and NEPA (National Environmental Policy Act) coordination. Under NEPA, the USACE must coordinate with other federal agencies – for this project likely the NMFS and the USFWS. We have budgeted for responses to one RAI letter as part of the USACE application completion review, responses to public comments, and one response effort for questions and comments provided by sister federal agencies as part of (NEPA) coordination. In total, TAYLOR has budgeted $5,400 for all RAI responses. If agency request requires efforts expected to generate fees beyond this limit, TAYLOR will inform COJ and provide a proposal for the required additional services.

TASK 4 – FINAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS

TAYLOR will complete structural analysis and develop the final detailed structural design. During structural design, we will verify the main structural elements, develop detailed structural connections between these elements, and document the design through a set of engineering calculations.

In parallel with this final design effort, TAYLOR will incorporate the comments from the regulatory agencies to prepare the 90%-complete design submittal. TAYLOR will deliver the 90%-complete submittal in electronic (PDF) format. The 90%-complete design package will include updated design calculations, construction drawings, project technical specifications, and opinion of probable cost.

TAYLOR will coordinate with COJ to incorporate the project technical specifications within COJ's standard "front-end" documents (bid documents, contract agreements, general and specific condition, forms, etc.). However, COJ will retain the right and responsibility to develop, review, and finalize all project manual components beyond those technical specifications prepared by TAYLOR.

TAYLOR will address all comments received from COJ and finalize project documents. TAYLOR will develop final signed and sealed construction drawings and technical specifications. We will prepare and provide a proposed schedule of bid items and a final updated opinion of probable cost.

DELIVERABLES

TASK 1 – DATA COLLECTION

- Signed and sealed topographic and hydrographic survey
- Signed and sealed geotechnical exploration report
- Summary of environmental fieldwork and desktop analysis

TASK 2 – PRELIMINARY DESIGN (60%-Complete)

- 60%-complete design package (drawings, technical specifications, and opinion of probable cost)

TASK 3 – ENVIRONMENTAL PERMITTING SUPPORT

- Preliminary draft permit application
- Preapplication meeting notes
- Final permit application packages (FDEP and USACE)
- RAI Responses

TASK 4 – FINAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS

- 90%-complete design package (drawings, technical specifications, calculations, and opinion of probable cost)
- Signed and sealed construction drawings and technical specifications
- Final opinion of probable construction cost
- Schedule of bid items

SCHEDULE

TAYLOR intends to complete the project on the timeline outlined below.

No.	Task	Months from Start Date											
		1	2	3	4	5	6	7	8	9	10	11	12
		Task Timelines											
1	DATA COLLECTION												
2	PRELIMINARY DESIGN												
3	PERMITTING SUPPORT*												
4	FINAL DRAWINGS AND SPECIFICATIONS												

* Note – Permitting timeline is estimated. TAYLOR has no control over agency review timelines.

EXCLUSIONS

The following tasks are excluded from this Scope of Work unless later included through issuance of an amendment or additional authorization for work:

- Boundary survey, or additional topographic or bathymetric surveying services beyond those included within this Scope of Work;
- Geotechnical investigations beyond those described herein;

- Additional natural resource, wetland surveys, or existing environmental condition assessments (e.g., water quality or sediment quality assessments, etc.) beyond those described herein;
- Numerical wave transformation, hydrographic, or sediment transport/morphologic modeling to assess hydrodynamic flushing, wave/structure interactions, long-shore and cross-shore sediment transport, or the potential impacts to adjacent shorelines or property;
- Upland planning, site layout, or design;
- Development of multiple conceptual structure alternatives beyond those described above;
- Cost comparison for multiple project alternatives;
- Bidding or construction phase services.

FEES

TAYLOR will complete the work on a fixed fee basis for task-by-task fees as summarized in the table below. Exhibit B outlines these fees in the Contract Fee Summary Format, Engineering Division, City of Jacksonville.

Task	Fee
TASK 1 – DATA COLLECTION	$37,209.54
TASK 2 – PRELIMINARY DESIGN (60%-Complete)	$24,331.53
TASK 3 – ENVIRONMENTAL PERMITTING SUPPORT	$21,494.86
TASK 4 – FINAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS	$31,583.78
TOTAL	$114,619.71

EXHIBIT D

Fee

Summary

EXHIBIT D

CONTRACT FEE SUMMARY FORMAT FOR ENGINEERING DIVISION
CITY OF JACKSONVILLE, FLORIDA

PART I - GENERAL	
1. Project COJ County Dock Design Engineering	2. Proposal No. / Contract No. P-52-17 / 8567-02
3. Name of Consultant Taylor Engineering, Inc.	4. Date of Proposal 2/2/2018

PART II - LABOR RELATED COSTS				
5. Direct Labor (Limiting Amount)	Hourly Rate	Estimated Hours	Estimated Cost	TOTAL
Principal Engineer	$ 67.87	13	$ 882.31	
Senior Professional	$ 55.41	243	$ 13,464.63	
Staff Professional	$ 31.48	283	$ 8,908.84	
Sr. CAD Manager	$ 45.90	124	$ 5,691.60	
Program Manager	$ 60.82	6	$ 364.92	
TOTAL DIRECT LABOR	$ 43.82	669		$ 29,312.30
6. Overhead (Combined Fringe Benefit & Administrative) Overhead Rate	175 % x Total Direct Labor			$ 51,296.53
7. SUBTOTAL: Labor + Overhead (Items 5 & 6)				$ 80,608.83
8. PROFIT: Labor Related Costs (Item 7)		x	10%	$ 8,060.88

PART III - OTHER COSTS		
9. Miscellaneous Costs (Reinmbursable/NTE)		
	$	
	$	
	$	
	$	
MISCELLANEOUS DIRECT COSTS SUB-TOTAL		$ -
10. SUBCONTRACTS (Reimbursable/Not to Exceed)		
Arc Surverying	$ 8,750.00	
ECS Geotechnical	$ 17,200.00	
SUB-CONTRACT SUB-TOTAL (Reimb/NTE)		$ 25,950.00
11. REIMBURSABLE COSTS (Limiting Amount)		
	$	
	$	
	$	
SUB-TOTAL REIMBURSABLES		$ -

PART IV - SUMMARY	
TOTAL AMOUNT OF CONTRACT (Lump Sum Plus Reimbursables / Not To Exceed) (Items 5, 6, 8, 9, 10, and 11)	$ 114,619.71