Erickson Consulting Engineers, Inc.

SUPPLEMENTAL WORK ORDER #1 INITIATION FORM for the CITY OF CLEARWATER

Date: June 1, 2018

Consultant Project Number: 17-344

City Project Number: 18-0001-MA

City Plan Set Number:

1. PROJECT TITLE:

Clearwater Harbor Marina Floating Concrete Docks and Wave Attenuators.

2. SCOPE OF SERVICES:

ENGINEER is currently under contract (PO ST114701) to provide design and construction phase services for the City of Clearwater Harbor Marina's floating dock wave attenuator system where the north facing 100 ft segment failed during Hurricane Irma's passing near the marina and the south facing segment sustained damage during this storm and the frequent occurrence of southerly wind-wave exposure. The supplemental services described here are additional and identified as necessary following the completion of Tasks 1-5 from the original work order.

Based on the findings of the failure assessment and the site investigations conducted therein, onsite work by the Contractor will not be a single discrete event to remove and replace the attenuator. Instead the following phases of construction are required:

- Pre-Construction Site Investigations & Submittals – prior to issuance of final construction documents additional physical and geotechnical site investigations and examination of utilities and related easements are required to document existing conditions.
- Construction Phase 1: Removal of Existing Damaged Attenuator and Piles – the existing damaged attenuator is wedged on top of the corner of the adjacent floating dock. Removal of the attenuator to assess the severity of damage to the floating dock and method and requirements of repair, or replacement, is urgent. In addition, extraction and examination of the existing failed piles will provide valuable design information for the replacement attenuator.
- Construction Phase 2: Wave Attenuator (with Piles) Installation – mobilization and execution of works to install the new wave attenuator and piles.

The additional services required for these phases are described in more detail below.

I. FINAL DESIGN PHASE

Task 7A. Pre-Construction Site Investigations & Submittals

The following services will be provided.

- Engineer will develop a scope of work for a bathymetric and topographic survey to document the post-storm, existing conditions and dock structures locations in the vicinity of the north and south wave attenuators. Engineer will coordinate with the City's surveyor to facilitate execution of the survey and delivery of documents.
- Engineer will develop a scope of work for geotechnical core borings to document the sub-strata for pile design to 30 ft below grade. Engineer will coordinate with the City's geotechnical consultant to facilitate execution of the borings and delivery of documents. Engineer will be present during the execution of the borings to make observations and document findings.
- Engineer will coordinate with the City for siting of the geotechnical borings and wave attenuator piles so as to avoid existing utilities (e.g. RCW and other directionally drilled utilities) in the vicinity.

II. CONTRUCTION DOCUMENTS PHASE

Task 8A. CM @ Risk Contracting

Engineer will assist the City in the development and facilitation of a work order to a CM at Risk firm for the wave attenuator removal and replacement. Specifically, Engineer's scope includes:

- Prepare scope of work for CM at Risk work order
- Coordinate CM at Risk Firm, Suppliers and Contractors (meetings, scoping, etc) to facilitate contract execution
- Prepare supplementation conditions to the CM at Risk Contract for marine-based works
- Prepare payment terms for the CM at Risk Firm
- Review/assess and make recommendations on CM at Risk and Sub-Consultant Insurance requirements for marine-based work
- Identify pre-construction submittals requirements and timeline
- Prepare project/site specific general specifications to supplement the CM at Risk Contract

I. CONSTRUCTION PHASE

Task 9A Pre-Construction Submittals Review (Additional Services)

The Structural Engineer (Sub-Consultant) shall provide the following additional services during the pre-construction submittals phase:

- Review contractor means and methods including site visit to on-going project by same contractor to review pile installation procedures and equipment.
- Review splice/weld criteria, steel and coating specifications, and related pre-construction submittals and shop drawings related to the piles, etc.

Task 9G Structural Inspections

The Structural Engineer (Sub-Consultant) shall provide the following additional services during the construction phase:

- Review condition of damaged piles and attenuator after removal and incorporate findings into final pile design for replacement attenuator.
- Review condition of adjacent floating docks to determine if repair or replacement is required and render preliminary recommendations.
- Conduct site visit(s) to monitor steel pile installation. Provide consultation as required.

Task 13. Construction Management Services

Engineer will assign a senior coastal engineer to serve as the Site Representative for this project to perform a daily site observations and contract administration (assumed an average of 4-6 hours/day) when work is occurring onsite. This daily site observation includes the documentation of construction progress, collection of site photographs, review of production logs prepared by the contractor, respond to contractor questions, and prepare daily observation reports to protect in the event of a claim, track contractor delays, notify City and State regulatory agencies as appropriate in accordance with issued permit authorizations. In addition, the Site Representative shall additionally liaison with the Structural Engineer daily during pile installation, coordinate surveys, provide construction data to the contractor, and maintain detailed field logbooks and construction files (notebooks). These observations and documentation are required to ensure that construction is in compliance with construction plans, contract documents, and permit authorizations granted for the work. The work duration is assumed to be 2 days for Phase 1 and 14 days for Phase 2 construction.

3. PROJECT GOALS:

Deliverables will include:

- Electronic (PDF) copies of all submittals via email.

4. BUDGET:

This price includes all labor and expenses anticipated to be incurred by Erickson Consulting Engineers, Inc. for the completion of these tasks in accordance with Professional Services Method "B" – Lump Sum – Percentage of Completion by Task **for an amended fee not to exceed One-Hundred Fourteen Thousand Six Hundred Dollars ($114,600.00).**

As the regulatory approvals are expected to qualify for an exemption, the scope does not include the remittance of any permit fees by the consultant. If permit application fees are required they may be paid by the consultant using the contingency allowance.

5. SCHEDULE:

The project is to be completed **210 days** from issuance of notice-to-proceed. The project deliverables are to be phased as follows:

Failure Assessment & Design Recommendation Report	**45 calendar days**
Permitting / Final Construction Documents / Construction & Contracting Recommendations	**45 calendar days**
Construction Phase	**90 calendar days**
Post-Construction Report & Certifications	**30 calendar days**

The permitting schedule is dictated based upon a de-minimis exemption, or if a permit modification is required a 90-day time clock for agency review will extend the time. The final schedule for the construction phase will be dictated and refined based upon the recommended project and Construction Contractor's permitted contract time.

6. STAFF ASSIGNMENT (Consultant):

Karyn Erickson, MS, PE, DCE – Principal Engineer / Engineer-of-Record
Christin Perkinson, PhD, PE, DCE – Senior Project Manager
Leaf Erickson, PhD, EI – Senior Engineer

7. CORRESPONDENCE/REPORTING PROCEDURES:

ENGINEER's project correspondence shall be directed to:
Christin Perkinson, Senior Project Manager

All City project correspondence shall be directed to:
Ed Chesney, PE, Marine and Aviation Director, with copies to others as may be appropriate.

8. INVOICING/FUNDING PROCEDURES:

For work performed, invoices shall be submitted monthly to the:

City of Clearwater, Marine & Aviation Department
Attn. Louis Christou, Senior Accountant
25 Causeway Blvd.
Clearwater, Florida 33767

Contingency services will be billed as incurred only after written authorization provided by the City to proceed with those services.

City Invoicing Code **1817525-561300-98610**

9. INVOICING PROCEEDURES

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

A. Purchase Order Number and Contract Amount.
B. The time period (begin and end date) covered by the invoice.
C. A narrative summary of activities completed in the time period

D. Contract billing method is Lump Sum (All Tasks except Task 6) and Cost Times Multiplier (Task 6)
E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
F. If Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of $50 or greater or cumulative monthly expenses greater than $100).
G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. SPECIAL CONSIDERATIONS:

The consultant named above is required to comply with Section 119.0701, Florida Statutes (2013) where applicable.

PREPARED BY:

_____
Karyn M. Erickson, PE, DCE
President
Erickson Consulting Engineers, Inc.

_____
Date

APPROVED BY:

_____
Edward Chesney, P.E.
Marine & Aviation Director
City of Clearwater

_____
Date

CITY OF CLEARWATER
ENGINEERING DEPARTMENT

WORK ORDER INITIATION FORM
CITY DELIVERABLES

1. FORMAT

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. DELIVERABLES

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20’ unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address Tom.Mahony@myClearwater.com.

All electronic files (CAD and Specification files) must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

SUPPLEMENTAL WORK ORDER INITIATION FORM
PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
	Final Design			
7A	Pre-Construction Investigations		$5,500	$5,500
	Contracting			
8A	CM @ Risk Contracting		$7,200	$7,200
	Construction Phase			
9.0	Engineer of Record Services in the Construction Phase			
9A	Review Pre-Construction Submittals and Drawings (Structural)	$800		$800
9G	Structural Inspections During Construction	$3,000		$3,000
13.0	Construction Management Services		$12,300	$12,300
Subtotal, Labor and Subcontractors – Supplemental Work Order #1				**$28,800**
Initial Work Order				**$85,800**
Grand Total				**$114,600**