



## STATEMENT OF WORK

# PORT AND MARINE SERVICES TASK #76: A DOCK SURVEYING, CIVIL ENGINEERING DESIGN, ELECTRICAL ENGINEERING DESIGN, ENVIRONMENTAL PERMITTING, BID SUPPORT, AND CONSTRUCTION SERVICES

Key West, FL

This proposal has been prepared in accordance with the current General Environmental Engineering Services Agreement between the City of Key West and Tetra Tech, Inc, Resolution No. 20-039, dated March 24, 2020. The work described herein will be performed on a Time & Materials or Lump Sum basis by task in accordance with the fee schedule established in this agreement. Fees shall be not-to-exceed unless approved in writing by the City of Key West. This proposal is valid for a period of 90 days from the date on this page.

Prepared by: TETRA TECH, Inc.  
September 5<sup>th</sup>, 2024



TETRA TECH, INC.

759 South Federal Highway, Suite 314 Stuart, FL 34994  
Tel 772.781.3400 Fax 772.781.3411 [www.tetrattech.com](http://www.tetrattech.com)



## PROPOSAL / STATEMENT OF WORK

Tetra Tech will work with the City of Key West Port and Marine Services (City) to perform Surveying, Civil Engineering Design, Electrical Engineering, Environmental Permitting, Bid Support, and Construction Services for the replacement of the A-Dock, located within the Key West Bight near the Half Shell Raw Bar in Key West, FL.

### PROJECT LIMITS FOR A DOCK



Insert 1: Project Limits for A Dock Replacement

### Project Understanding

The City of Key West is planning to replace the 432 LF length of A Dock inclusive of the eight finger piers for a total of approximately 6,800 square feet of dock. A Dock is comprised of a fixed timber dock system of pilings, bents, stringers, and Ipe decking. Tetra Tech will seek to replace A Dock within its existing footprint. Utilities found on the dock are understood to be water, sewer, fire and electric service. These utilities will be replaced in-kind with matching sizes and materials unless otherwise directed by City staff.

### Task 1 – Surveying

Tetra Tech will work with Florida Keys Land Surveying (FKLS) to provide the following Surveying services:

1. Field locate the limits of A Dock.
2. Field locate the utilities and utility lines along A Dock, where accessible.
3. Field locate the existing utility pedestals and fire cabinets.
4. Field locate all existing pilings, including mooring pilings.
5. Bathymetric Data taken from the existing dock where accessible.
6. Horizontal coordinates will be referenced to grid north, based on the 2011 Adjustment of the North American Datum of 1983 (NAD 83/2011), of the Florida State Plane Coordinate System (Transverse Mercator Projection), East Zone.
7. Elevations will be in feet and based on the National Geodetic Vertical Datum of 1929 (NGVD 1929).

**(1) Surveying: \$ 7,123**



### **Task 2 – Civil Engineering Design**

Tetra Tech proposes to perform the following Structural Engineering services:

1. Conduct a site visit to measure and note the locations of existing timber pilings supporting the existing dock along with fender pilings surrounding the dock as well as the locations of existing utilities. Existing utilities are assumed to be sewer pumpouts, watermain, and fire line. Electrical utilities will be handled under Task 3.
2. Coordinate with Port & Marine Services for project design requirements.
3. Develop construction-level plans for dock replacement inclusive of product specifications to support the future bid process. Plans will identify the location of existing pilings supporting the dock. The intent will be to replace the pilings in their existing locations and reconstruct the entire dock within the same footprint. Water, Sewer pumpout, and fire line utilities will be disconnected and reconnected in their current locations with current sizes.
4. Perform structural calculations for the dock system.
5. The project will seek to utilize Southern Yellow Pine timbers for pilings, Ipe decking, and stainless-steel hardware.
6. Plans will denote the presence of existing utilities within the project limits and their replacement in-kind with matching materials and diameters unless otherwise directed by the City. Utilities will be replaced waterward of the seawall; no replacement landward of the seawall is proposed with this proposal.

**(2) Civil Engineering Design:                      \$ 29,532**

---

### **Task 3 – Electrical Engineering Design**

Tetra Tech proposes to contract with SEC Engineering Consultants, Inc. (SEC) to perform the following Electrical Engineering scope of services:

1. Initial site visit and review of project drawings
2. Electrical design for the replacement of existing electrical systems and pedestals within A dock. This design includes the re-routing of conduits and wiring to the existing distribution panels feeding A Dock as necessary. The design will include the replacement/upgrade of existing electrical service and distribution equipment found to be in poor condition within the limits of A Dock and will not extend landward of the seawall unless to the next pullbox.
3. Submit 90% and 100% (final) plans and specifications. Respond to comments and revise the 90% submittal as requested.
4. Please note that construction phase services will require an additional authorization.

SEC will prepare contract documents, suitable for bidding, permit, and construction, including plans and specifications. During the Construction Phase, SEC will perform the following services:

1. Review electrical equipment shop drawings.
2. Respond to contractor requests for information (RFIs) and review change order requests.
3. Conduct one (1) construction observation site visit during construction
4. Perform a final inspection and prepare a punch list.

**(3) Electrical Engineering Design:                      \$ 20,247**

---



#### **Task 4 – Environmental Permitting**

**Note:** *The City of Key West currently possesses FDEP (137939-027 EE) and USACE [SAJ-2021-00839(RGPJTS)] permits which authorize the replacement of City-owned pilings within the Key West Bight. We have sent inquiries to those agencies requesting clarification on whether those permits allow for the replacement of A Dock. In the event that they do allow replacement of A Dock, we will charge the City for only the time and expenses used to confirm that information. If a separate permitting effort is required, the scope and fee below are presented to apply for and process the permit applications.*

Upon completion of the 60% permitting drawings, Tetra Tech will prepare and submit a permit application for a Verification of Exemption to the Florida Department of Environmental Protection (FDEP) and an application for a Nationwide Permit (NWP-28) to the U.S. Army Corps of Engineers (USACE). Tetra Tech will provide the USACE package to FKNMS-NOAA to expedite their portion of the USACE review. This fee includes up to a total of \$500 in permit application fees (paid by Tetra Tech) at the time of submittal.

After submitting permit applications to the Florida Department of Environmental Protection (FDEP) Marathon, FL office and to the Army Corps of Engineers (USACE), Tetra Tech will process the permit applications. Tetra Tech will respond to up to 2 rounds of RFIs per agency. Recent work performed by Tetra Tech in the Key West Bight has indicated that a benthic assessment of the vicinity has not been required by the National Oceanic and Atmospheric Administration (NOAA) Florida Keys National Marine Sanctuary (FKNMS). Accordingly, no scientific diving, benthic assessment, or coral relocation services is proposed as part of this scope of services. A budgetary fee of \$5,000 is provided for coral mitigation, if such a fee is necessary. However, should any of the excluded services be required by the permitting agencies, a separate scope and budget can be prepared.

Tetra Tech cannot guarantee the permits will be issued or the length of the review process. It is expected that the permit processing could take over six months to complete. This application processing task includes time for the permit processing of the applications and preparation of one (1) round of required requests for additional information (RFIs).

**(4) Environmental Permitting:** \$ 22,448

#### **Task 5 – Bid Support**

Tetra Tech will provide the following level of effort to support the City of Key West during the procurement phase:

1. Format the City's standard front-end documents.
2. Add technical specifications, bid tabs, and assist the City with bid package preparation.
3. Provide a word and PDF version of the bid documents.
4. In-person attendance at one (1) pre-bid meeting. Preparation of agenda & minutes.
5. Review of prospective bidder RFIs & assist the City in responding via addenda.
6. Assistance in evaluation of submitted bids for completeness and recommendation for award of the contract.

**(5) Bid Support:** \$ 10,012





#### **Task 6 – Construction Services**

Tetra Tech will provide the following level of effort to support the City of Key West during the construction phase:

1. Tetra Tech will review shop drawings, submittals, RFIs, schedules, results of materials testing, and related construction documentation for conformance with the plans & specifications. Tetra Tech will provide responses to RFIs as applicable. Tetra Tech will attend periodic progress meetings via teleconference, to be administered by the contractor.
2. Tetra Tech will perform up to a total of four (4) construction inspections throughout the course of construction to catalog the work effort and observe construction for conformance with the project's construction documents. Photos will be taken and an inspection report will be produced for each site visit. A photo log will be maintained and submitted to the City upon project completion.
3. Upon Substantial Completion, Tetra Tech will assist the City in producing a punch list of outstanding items for Final Completion.
4. Tetra Tech will conduct a Final Completion (the fourth of four inspections) walk-through to confirm completion of the punch list. Tetra Tech will rely upon survey data and measurements provided by the contractor's professional, state-licensed land surveyor to determine if the project can be certified as constructed in accordance with the plans and specifications. Upon completion of construction, Tetra Tech will review as-builts and related close-out documents. Provided those documents are acceptable, Tetra Tech will furnish a letter of certification for project close-out.

**(6) Construction Services:** \$ 34,128

#### **PROJECT ASSUMPTIONS**

1. All submittals will be in electronic/digital format.
2. The project will rely upon existing geotechnical reports previously performed within and surrounding the Key West Bight for an understanding of the underlying strata and pile embedment depth requirements.
3. The project will not require a benthic assessment to support permitting.
4. We assume the existing water and fire suppression systems meet the Fire Marshall's criteria for pressure and water supply.

#### **PROJECT EXCLUSIONS**

This proposal does not include the following services, which may be provided under separate authorization:

- Construction phase services for electrical work
- Temporary access to the dock
- Boundary or MHW Survey
- Geotechnical testing or investigation
- Scientific Diving
- Benthic Assessment
- Coral mitigation fees beyond \$5,000
- Coral relocation services





**City of Key West Port & Marine Services, Key West Bight**  
A Dock Surveying, Civil Engineering Design, Electrical Engineering Design,  
Environmental Permitting, Bid Support, and Construction Services

---

- Modification to the Submerged Land Lease
- Inspections greater than 4.
- Pressure testing or hydraulic calculations for water, sewer, or fire.

Task	Description	Amount	Terms
1	<b>Surveying</b>	\$ 7,123	LS
2	<b>Civil Engineering Design</b>	\$ 29,532	T&M
3	<b>Electrical Engineering Design</b>	\$ 20,247	LS
4	<b>Environmental Permitting</b>	\$ 22,247	T&M
5	<b>Bid Support</b>	\$ 10,012	T&M
6	<b>Construction Services</b>	\$ 34,128	T&M
<b>TOTAL</b>		<b>\$ 123,490</b>	





A Dock - Design, Permitting, Bid Support and Construction Services										TOTAL													
SURVEYING			CIVIL ENGINEERING DESIGN			ELECTRICAL ENGINEERING			ENVIRONMENTAL PERMITTING			BID SUPPORT			CONSTRUCTION SERVICES								
NAME			TITLE			UNIT RATE			QTY			PRICE			QTY			PRICE					
TOTAL TRUCK STAFF																							
Dove Problem			Senior Consultant I			\$ 215.00			5.0			\$1,075			60.0			\$12,900					
Francisco Martinez			Eng/Sci/Planner Senior Staff I			\$ 155.00			-			\$0			100.0			\$15,500					
Betsy Serna			Senior Principal			\$ 245.00			-			\$0			-			\$0					
Lori Baheng			Project Support Services III			\$ 124.00			2.5			\$310			2.0			\$248					
Carpenter Warren			Project Support Services IV			\$ 145.00			4.5			\$653			-			\$0					
Nicole Goble			Eng/Sci/Planner Staff V			\$ 140.00			-			\$0			-			\$0					
Ana McDonald			Project Support Services Manager			\$ 172.00			-			\$0			-			\$0					
Arianna Boyd			Eng/Sci/Planner Senior Staff I			\$ 155.00			-			\$0			-			\$0					
Taylor Garrett			Eng/Sci/Planner Senior Staff I			\$ 155.00			-			\$0			-			\$0					
-			-			\$ -			-			\$0			-			\$0					
-			-			\$ -			-			\$0			-			\$0					
-			-			\$ -			-			\$0			-			\$0					
EXTERNAL LABOR COST																							
EXTERNAL SUBCONTRACTOR			12.0			\$2,038			162.0			\$28,648			18.0			\$3,247					
FMLS Bureau			1.0			\$5,085			-			\$0			-			\$0					
SEC (Electrical Engineer)			-			\$17,000.00			-			\$0			1.0			\$17,000					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
TOTAL EXTERNAL SUBCONTRACTOR																							
1.0			\$5,085			-			\$0			1.0			\$17,000			-			\$0		
TRAVEL																							
R/T Airfare			-			\$ 500.00			-			\$0			-			\$0					
Mileage			-			\$ 0.67			-			\$0			-			\$0					
Rental Car w/Fuel			-			\$ 80.00			2.0			\$160			-			\$0					
Misc. Travel Costs (gas, parking, tolls)			-			\$ 50.00			4.0			\$200			-			\$0					
Lodging			-			\$ 130.00			2.0			\$260			-			\$0					
Meals & incidental Expenses			-			\$ 66.00			4.0			\$264			-			\$0					
TOTAL TRAVEL COSTS																							
OTHER DIRECT COSTS / RENTAL EQUIPMENT/LABORATORY			-			\$0			-			\$884			-			\$0					
Shipping			-			\$ 10.00			-			\$0			-			\$0					
Misc. Equip & Supplies			-			\$ 100.00			-			\$0			-			\$0					
Permit Fee Budget			-			\$ 500.00			-			\$0			-			\$0					
Cont Mitigation Fee			-			\$ 5,000.00			-			\$0			1.0			\$5,000					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
TOTAL OTHER DIRECT COSTS																							
TOTAL TRUCK OWNED EQUIPMENT			-			\$0			-			\$0			-			\$5,500					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
-			-			\$0			-			\$0			-			\$0					
TOTAL TR EQUIPMENT																							
-			-			\$0			-			\$0			-			\$0					
GRAND TOTAL																							
-			-			\$7,123			-			\$29,532			-			\$20,247					
-			-			\$23,448			-			\$5,500			-			\$10,012					
-			-			\$34,128			-			\$5,504			-			\$123,490					