



# PROPOSAL STATEMENT OF WORK

## CITY OF KEY WEST MALLORY SQUARE WHARF INSPECTION

Key West, FL

This proposal has been prepared in accordance with the current General Engineering Services Agreement between the City of Key West and Tetra Tech, Inc, dated March 29, 2023. The work described herein will be performed on a Time & Materials basis 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.  
April 22, 2025  
Rev 1



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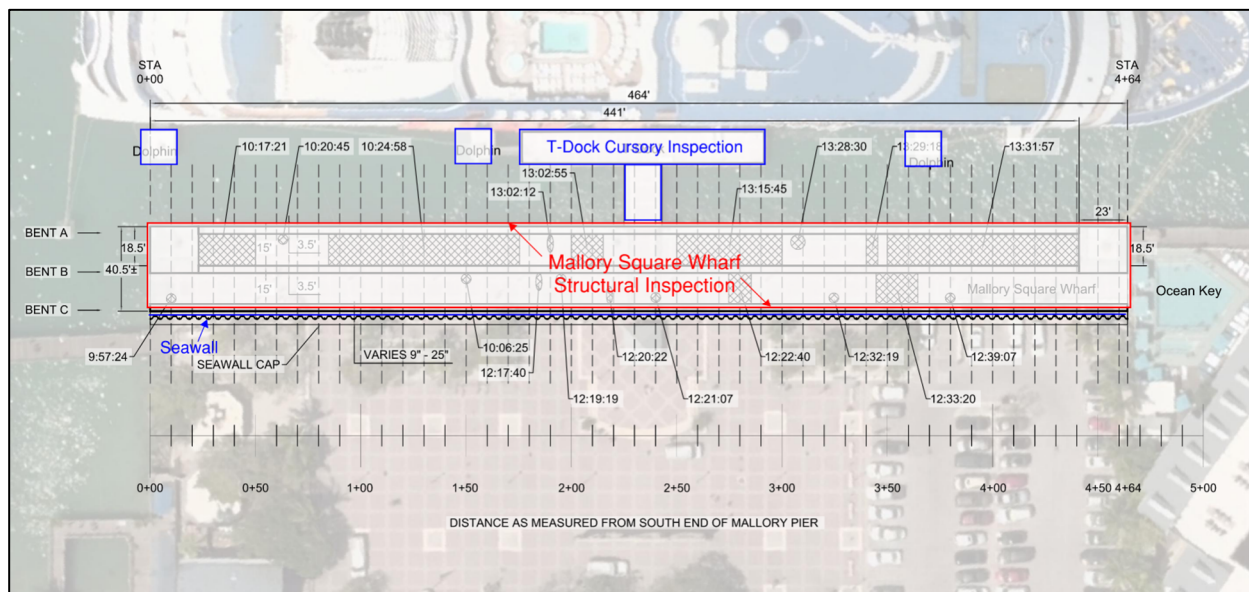
## PROPOSAL / STATEMENT OF WORK

Tetra Tech understands that the City of Key West wishes to perform an underwater Level I (non-destructive) structural condition assessment of the Mallory Square Wharf.

Tetra Tech will work with the City of Key West's Engineering Department (City) and our subconsultants, EMC Divers, Inc., and WGI, Inc., to perform a Structural Diving Inspection and develop a Structural Condition Assessment Report for the 465 LF of wharf along and adjacent to Mallory Square. The structural inspection portion of this proposal is limited to the portions of Mallory Square Wharf highlighted in (red) Insert 1.

The divers will also perform a swim-by inspection (blue) of the adjacent seawall, the T-Dock, three mooring dolphins, and the wharf termination points on either end of pier. The swim by will be cursory in nature to collect a visual reference of current condition.

### PROJECT LIMITS FOR MALLORY SQUARE SEAWALL INSPECTION



Insert 1: Limits of Field Work

### Task 1 – Project Planning, Support, and Administration

The Tetra Tech team will review existing wharf plans, site conditions, past dive information, and related photos and prepare a dive plan suitable to perform the work safely and efficiently. This task also includes project quality control and administration.

(1) Project Planning, Support, and Administration: \$ 21,188

### Task 2 – Structural Diving Inspection

(rev 1) Prior to mobilization, Tetra Tech will reach out to the Coast Guard and issue a Broadcast Notice to Mariners (BNM) for the area. It is understood that Key West Harbor is one of the only harbors in Florida that does not have a speed limit, or no wake zone in the middle of the harbor, and Charter boats can throw large wakes at Mallory.



They can reach the Coast Guard District 7 Office here:

<https://www.uscg.mil/home/Unit-Display/Article/1561446/southeast-d7/> or via phone at: (305) 415-6739. The local Coast Guard Command Center phone number in case of emergency is: (305) 292-8727.

Tetra Tech will mobilize a team of commercial divers to perform an underwater structural inspection of the visual sections of the underside of the wharf including the (93) support piles and (3) continuous bents. The inspection will also include a visual inspection of the underside of the deck panels and catalog any changes to their condition since the swim-by inspection that was performed in April of 2024. Tetra Tech will document the wharf's condition, including locations of observed deficiencies. Tetra Tech will take measurements, where possible, of the spalling that has occurred to the concrete pile, bents, and panels. If possible, the divers will measure the size of any exposed reinforcing so that the section loss can be approximated, and the development length of typical reinforcing that may be visible due to the concrete spalls. The divers will also measure the separation distance between the seawall cap and the pier pile cap on the north and east sides of the wharf. Measurements will be taken at a minimum, at approximately 15' intervals, to line up with each row of pilings.

(rev1) The engineer will work with the City or Port staff, to have a few areas of the wharf's decking to be exposed by removing the brick paver overlay to facilitate a visual inspection of those areas. The removal and replacement of the pavers will be completed by City or Port personnel.

The inspection team will be led in the field by an on-site professional engineer who will direct the diver to help identify areas of interest. The engineer will be present during the entire inspection and will be responsible for the preparation of the report. Dive rates have been provided for working weekdays only and assume the underwater inspection will be conducted in five (5) consecutive weekdays with mobilization on a Sunday and demobilization on Saturday following completion of the inspection.

(2) Structural Diving Inspection: \$ 91,011

### Task 3 – Structural Condition Assessment Report

Tetra Tech's subconsultant (WGI, Inc) will provide structural engineering services for the assessment of the Mallory Square Wharf. The assessment will consist of visual observation of approximately 41 feet by 464 feet wharf decking and the wharf substructure consisting of concrete pile cap and piles. As part of the assessment a review of the seawall condition, T-dock, and dolphins will be performed by the dive team to observe their condition. Based on the site observations, WGI will prepare an assessment report. Visual observation and non-destructive testing of the wharf is to be performed by Tetra Tech divers in coordination with onsite WGI personnel. Divers may be asked to scrape marine growth from the piles, and occasionally tap on the exposed rebar or concrete and observe its soundness depending on the local conditions. Because the concrete has already spalled in some locations and is delaminated in others, any testing (tapping with a hammer or measurements) must be performed cautiously and safety of the divers must be the top priority.

The report will entail photo and video documentation of the findings, overall integrity of the wharf, the extent of any damage and/or deterioration of the wharf, [recommendations for repair and/or replacement](#), and provide our opinion on how the existing components will perform following repair and/or replacement. The report will also provide an inspection map, and other exhibits as needed to convey the issues that were observed. WGI will provide an engineer's opinion of the probable construction cost of repair and/or replacement. This fee does not include repair design and construction documents or associated permitting.





It is anticipated the underwater/diving inspection will be completed in 5days by Tetra Tech. The assessment report will be completed within 3-4 weeks after all the video and other data have been processed. (rev 1) The dive is expected to take place Monday April 28 and Friday May2. Data processing is expected to take 3 days and be completed by May 7<sup>th</sup>. The report should be completed by June 4<sup>th</sup>, 2025.

(2) Structural Condition Assessment Report: \$ 32,852

### SCHEDULING & ACCESS

The inspection will be contingent upon the absence of cruise ships moored at Mallory Square Wharf for the duration of the inspection and suitable access to Mallory Square to stage our dive trailer and equipment.

### PROJECT ASSUMPTIONS

1. The City of Key West will furnish Tetra Tech with the design plans for the Mallory Square, inclusive of those performed by Moffatt & Nichol, Sasaki, and CH2MHill. Tetra Tech will reserve the right to rely upon those plans.
2. Observations will be limited to those that can be seen with the naked eye. Physical testing will be limited to scraping to remove marine growth, and possibly light tapping on exposed structural elements with a hammer. No other testing, either destructive or non-destructive, will be performed.
3. This proposal is contingent upon:
  - a. The absence of cruise ships moored at Mallory Pier for the duration of the inspection.
  - b. Suitable access to Mallory Square to stage our dive trailer and equipment.
  - c. Five (5) consecutive ten (10) hour workdays.
4. The City will provide Tetra Tech with a securely fenced parking location for overnight parking of the dive trailer.
5. If the work cannot be performed in five (5) consecutive days, additional funding may be required via change order.

### PROJECT EXCLUSIONS

This proposal does not include:

- Wall repair design options
- Boundary, Topographic, MHW or Other Survey
- Geotechnical Investigation
- Benthic Assessment
- Permitting
- Coral relocation
- Preparation of construction documents
- Final engineering
- Utility engineering
- Bid support
- Services during construction



Task	Description	Amount
1	Project Planning, Support, and Administration	\$ 21,188
2	Structural Diving Inspection	\$ 91,011
3	Structural Condition Assessment	\$ 32,852
<b>TOTAL</b>		<b>\$ 145,051</b>



COST MODEL

CITY OF KEY WEST		TASK 1		TASK 2		TASK 3		TOTAL	
MALLORY PIER CHANGE ORDER		PROJECT SUPPORT		UNDERWATER INSPECTION		REPORT			
NAME	TITLE	UNIT RATE	QTY	PRICE	QTY	PRICE	QTY	PRICE	QTY
TETRA TECH STAFF									
B. Serra	Senior Consultant II	\$ 243.00	16.0	\$3,888	24.0	\$5,832	16.0	\$3,888	56.0
S. McGhee	Principal I	\$ 276.00	16.0	\$4,416	24.0	\$6,624	16.0	\$4,416	56.0
C. Warren	Senior Staff II	\$ 151.00	12.0	\$1,812				\$1,812	12.0
L. Boberg	Project Staff II	\$ 109.00	12.0	\$1,308				\$1,308	12.0
P. Zuloga	Senior Consultant I	\$ 232.00	24.0	\$5,568				\$5,568	24.0
M. Mardom	Project Staff V	\$ 134.00	-		120.0	\$16,080			120.0
L. Canty	Senior Staff V	\$ 177.00	-		40.0	\$7,080			40.0
F. Marthner	Senior Staff IV	\$ 169.00	16.0	\$2,693			24.0	\$4,032	40.0
S. Kishore	Project Staff IV	\$ 126.00	8.0	\$1,008			16.0	\$2,016	24.0
TOTAL LABOR COST			104.0	\$20,688	208.0	\$35,616	72.0	\$14,352	384.0
EXTERNAL SUBCONTRACTOR									
WCI	Lump Sum	\$ 37,000.00			0.5	\$18,500	0.5	\$18,500	1.0
EMC Divers	Lump Sum	\$ 28,300.00			1.0	\$28,300	-		1.0
TOTAL EXTERNAL SUBCONTRACTOR			-		1.5	\$46,800	0.5	\$18,500	\$65,300
TRAVEL									
R/T Airfare		\$ 300.00			1.0	\$300			1.0
Mileage		\$ 0.70			600.0	\$420			600.0
Rental Car w/Fuel		\$ 80.00			10.0	\$800			10.0
Misc. Travel Costs (gas, parking, tolls)		\$ 50.00			10.0	\$500			10.0
Lodging		\$ 350.00			10.0	\$3,500			10.0
Meals & incidental Expenses		\$ 100.00			10.0	\$1,000			10.0
TOTAL TRAVEL COSTS						\$6,520			\$6,520
OTHER DIRECT COSTS / RENTAL EQUIPMENT / LABORATORY									
Shipping		\$ 10.00							-
Misc. Equip & Supplies		\$ 100.00	5.0	\$500	5.0	\$500			10.0
TOTAL OTHER DIRECT COSTS				\$500		\$500			\$1,000
TETRA TECH OWNED EQUIPMENT									
Dive Trailer		\$ 315.00			5.0	\$1,575			5.0
TOTAL TT EQUIPMENT						\$1,575			\$1,575
GRAND TOTAL				\$21,188		\$91,011		\$32,852	\$145,051