



PROPOSAL - STATEMENT OF WORK

SURVEYING, PERMITTING & ENGINEERING SERVICES KEY WEST AQUARIUM BASIN SEAWALL REPLACEMENT

Key West, FL

This proposal has been prepared in accordance with executed General Environmental Engineering Services Agreement between the City of Key West and Tetra Tech, Inc. dated January 13, 2015. The work described herein will be performed on a Time & Expense 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.

Prepared by: TETRA TECH, Inc.
January 16, 2018



TETRA TECH, INC.

759 South Federal Highway, Suite 314 Stuart, FL 34994
Tel 772.781.3400 Fax 772.781.3411 www.tetrattech.com



PROPOSAL / STATEMENT OF WORK

Tetra Tech will work with the City of Key West (City) to collect survey and geotechnical data, prepare permit drawings, submit and process permit applications, and provide final engineering drawings and bid support to replace the approximately 227 FT segment of seawall located on the North and East sides of the Key West Aquarium Basin in Key West, Florida.

VICINITY MAP FOR KEY WEST AQUARIUM BASIN



Insert 1: Limits of Field Survey

Task 18.1.A – Field Survey (Seawall Structure and Elevation Survey)

Tetra Tech proposes to work with a local surveyor (Avirom & Associates, Inc.) for this project and has received a proposal to collect the data. **A copy of the Avirom proposal is attached.** The survey will collect wall feature information and include water depths, locations and configuration of walkways, limited bathymetric data, and utility locations. This survey is necessary for the preparation of engineering plans.

The survey is expected to take **five (5) weeks from notice to proceed (NTP)** to complete, and will include the following:

1. Horizontal and vertical control data for seawall & upland facilities at (15-feet) intervals
2. Horizontal and vertical control data from the seawall toe into the basin (5-feet)
3. Delineation of Mean High Water Line as a contour along the seawall.
4. Establish a minimum of two (2) benchmarks on the site in the National Geodetic Vertical Datum 1929 (NGVD29) and North American Datum (NAD27).
5. Utility Location: Location of utility lines affixed to the seawall.
6. Obtain finished floor elevations of walkways and seawall caps.

18.1. A / Survey Subtotal (Proposal from Avirom): \$ 8,733



Task 18.1.B – Field Survey (Geotechnical Investigation)

Tetra Tech will subcontract a geotechnical firm (Nutting Engineers of Florida, Inc.) to collect limited geotechnical engineering information behind the existing seawall. **A copy of the Nutting proposal is attached.** The geotechnical investigation is necessary to analyze the forces impacting the proposed seawall. This report will help us decide if that wall should go in front of, or behind the existing wall, the type of wall to be used, and its required embedment depth, etc.

The geotechnical investigation is expected to begin within four (4) business days of the **Notice to Proceed** (NTP), and the geotechnical report should be available within approximately 12-15 days after the on-site work is completed. The geotechnical work will include the following:

1. Standard Penetration Tests and Cores at two locations
2. Laboratory work (grain size, organics, moisture, compression, corrosion test)
3. Geotechnical engineering report that will include a replacement geotechnical opinion that will be incorporated into project's engineering report.

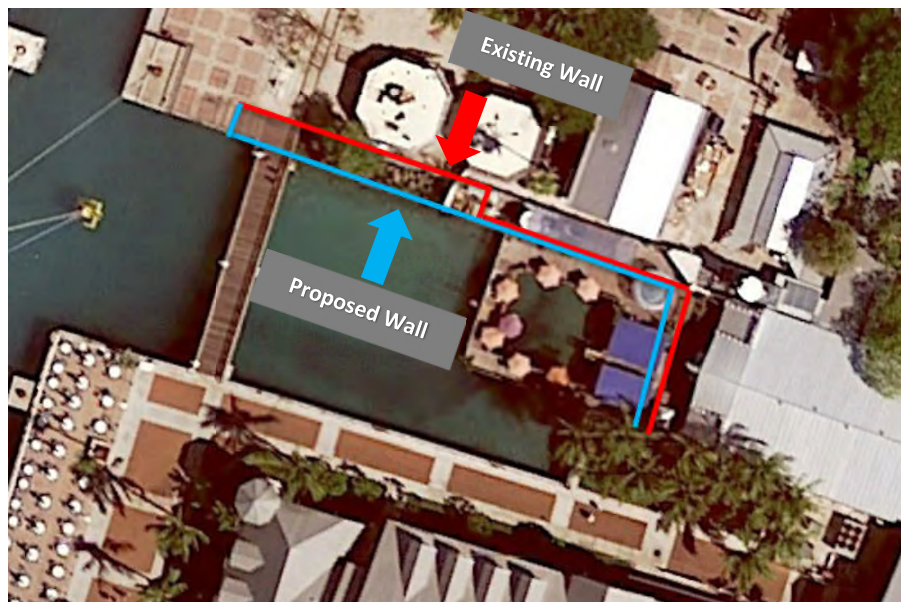
18.1.B / Geotech Subtotal (Proposal from Ardaman): \$ 5,950

(18.1) Field Surveys Total: \$ 14,683

Task 18.2 – Preparation of Permitting Drawings

Tetra Tech will develop a set of permit drawings to be used in the preparation of permit applications. These drawings may be refined later on pending any comments received from the City or the regulatory agencies. Drawings will be focused on the replacement of the seawall with a cantilever steel sheet pile wall with a reinforced concrete cap. The elevation of the cap will be preserved at or above the current seawall cap elevation.

The permit drawings will reflect the straight-line steel sheet pile wall configuration as discussed with City Staff, maintained within the City's lease lines but extending waterward at the west half of the north wall by approximately 9 LF. There is a possibility that this extension may be perceived by FDEP as an encroachment on sovereign submerged lands and therefore subject to a submerged lands lease. However, with the assistance of City Staff and available lease documentation, Tetra Tech will make a case for this arrangement and revise the plans according to regulatory determination and the City's wishes.



Construction of the east wall may require demolition of a portion of the pile supported concrete turtle tanks, and that work will be coordinated with the City. Any work on the east wall will be parceled out as an alternative bid item to keep the Irma damaged north wall segregated from any extra work not considered to be damaged by Hurricane Irma.

The deliverables in this report will include:

1. Permitting Level Engineering Drawings
 - Cover page with location and access
 - Existing conditions survey
 - Limits of construction
 - Cross sections views

(18.2) Subtotal: \$ 14,113

Task 18.3 – Prepare Permit Applications for ACOE and FDEP

Upon completion of the permitting drawings, Tetra Tech will prepare, submit and process the Joint Application for an Environmental Resource Permit for the proposed wall repairs. This fee includes a \$100 permit application fee (paid by Tetra Tech) at the time of submittal.

(18.3) Subtotal: \$ 9,692

Task 18.4 – Application Processing for ACOE and FDEP

It is expected that the permit applications will be submitted directly to the Florida Department of Environmental Protection (FDEP) Marathon, FL office and distributed from there to the Army Corp of Engineers (ACOE). The ACOE will further distribute the application to the National Oceanic and Atmospheric Administration (NOAA) Florida Keys National Marine Sanctuary (FKNMS). At the FKNMS the application will be distributed to the Endangered Species division for additional processing. 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 round of required requests for additional information (RFIs).



Please Note: We have assumed, based upon preliminary discussion with regulatory agency reviewers, that a benthic assessment will not be required, provided permit applications are made by January 28th, 2018. Much of the damage to the seawall is hurricane related, and we assume that the normally required benthic and coral assessment work will be deferred. However, if a benthic assessment or related work is required, it may be provided by Tetra Tech under a separate authorization.

(18.4) Subtotal: \$ 9,692

Task 18.5 – Prepare Final Engineering Drawings & Specifications

Pending the outcome of regulatory review and any revisions required by the City, Tetra Tech will further refine the drawings and incorporate technical specifications to support bidding. Any data acquired from the survey and geotechnical investigation that has not been included will be added to the drawings at this time.

(18.5) Subtotal: \$ 11,044

Task 18.6 – Procurement Services

Tetra Tech will provide the following level of effort to support the City of Key West during the procurement process for the Key West Basin Seawall Project. This phase of the project is expected to last approximately two (2) months and include the following:

1. Project Management and Administration
2. Sixty (60) hours for engineering support during pre-construction. This includes final review of the City's RFP and the review of technical and cost proposals received from bidders.
3. Travel limited to three (3) trips to Key West during this phase.

(18.6) Subtotal: \$ 6,964

PROJECT SUMMARY

This proposal does not include:

- Benthic or coral assessment work
- Coral mitigation fees
- Coral relocation or reporting
- Bridge engineering support
- Preparation of construction documents
- Services during construction

Task	Description	Amount
18.1	Project Survey and Geotechnical Investigation	\$ 14,683
18.2	Preparation of Permit Drawings	\$ 14,113
18.3	Prepare Permit Applications for ACOE & FDEP	\$ 9,692
18.4	Application Processing for ACOE & FDEP	\$ 9,692
18.5	Prepare Final Engineering Drawings & Specifications	\$ 11,044
18.6	Procurement Services	\$ 6,964
	Reimbursable Expenses	\$ 6,536
TOTAL		\$ 72,724



City of Key West KW Aquarium Seawall			Task 18.1.A		Task 18.1.B		Task 18.2		Task 18.3		Task 18.4		Task 18.5		Task 18.6		Task 18.7		TOTAL	
			SURVEY Topo, Utility and Bathymetric		GEOTECH Data Collection & Report		PERMIT DRAWINGS Preliminary Design for Permitting		PERMIT APPLICATIONS ACOE & FDEP w/ Exhibits		PERMIT PROCESSING Coordination with FDEP, ACOE and NOAA		FINAL ENGINEERING DRAWINGS & SPECIFICATIONS		PROCUREMENT SERVICES		PEDESTRIAN BRIDGE ENGINEERING SUPPORT			
BILLING CLASS	NAME	UNIT RATE	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST	UNITS	COST
Tetra Tech Staff																				
Tech Prof II	S. Stotler-Hardy	\$ 123.00																	-	
Tech Prof I	R. Garland	\$ 102.00					4	\$408	2	\$204	2	\$204	2	\$204	2	\$204			12	\$1,224
Tech Prof II	C. Warren - Procurement	\$ 123.00					4	\$492											4	\$492
Sr. Project Manager	S. McGahee	\$ 205.00					3	\$615											3	\$615
Sr. Tech Prof II	D. Frodsham	\$ 169.00					24	\$4,056	32	\$5,408	32	\$5,408	40	\$6,760	40	\$6,760			168	\$28,392
Sr. Tech Prof III	A. McDonald	\$ 191.00					2	\$382											2	\$382
Sr. Tech Prof II	P. Zuloaga	\$ 169.00																	-	
Tech Prof I	M. Mendoza	\$ 102.00																	-	
Sr. Tech Prof I	L. Canty	\$ 134.00																	-	
Sr. Tech Prof III	G. Vince	\$ 191.00																	-	
Tech Prof I	K. Gracie	\$ 102.00																	-	
Tech Prof I	F. Martinez	\$ 102.00					80	\$8,160	40	\$4,080	40	\$4,080	40	\$4,080					200	\$20,400
Tech	C. Sapusek	\$ 74.00																	-	
Tech Prof I	ACAD Tech-TBD	\$ 102.00																	-	
Sr. Tech Prof I	A. Mandujano	\$ 134.00																	-	
Tech	Diver 1	\$ 74.00																	-	
Tech	Diver 2	\$ 74.00																	-	
Tech	Diver 3	\$ 74.00																	-	
																			-	
																			-	
TOTAL LABOR COST			-		-		117	\$14,113	74	\$9,692	74	\$9,692	82	\$11,044	42	\$6,964	-		389	\$51,505
AVIROM Land Surveyors																			1	\$8,733
Surveying		\$ 8,733.00	1	\$8,733															-	
																	1.0		1	
																			-	
NUTTING ENGINEERS (Geotechnical Engineering)					1.0	\$5,950													1	\$5,950
		\$ 5,950.00																	-	
																			-	
TOTAL EXTERNAL SUBCONTRACTOR				\$8,733		\$5,950														\$14,683
																			-	
																			-	
																			-	
EQUIPMENT RENTAL																				
TRAVEL																				
R/T Airfare		\$ 450.00									1	\$450			1	\$450			2	\$900
Mileage/Gas		\$ 0.54									185	\$100			185	\$100			370	\$200
Rental Car w/Fuel		\$ 60.00									3	\$180			3	\$180			6	\$360
Misc Travel Costs		\$ 50.00									6	\$300			6	\$300			12	\$600
Lodging		\$ 204.00									6	\$1,224			6	\$1,224			12	\$2,448
Meals & IE		\$ 69.00									6	\$414			6	\$414			12	\$828
TOTAL TRAVEL COSTS												\$2,668				\$2,668				\$5,336
OTHER DIRECT COSTS																				
Shipping/Postage		\$ 5.00																	-	
Reproduction - B&W		\$ 0.08																	-	
Misc. Equip & Supplies		\$ 25.00					24	\$600					24	\$600					48	\$1,200
Air fills		\$ 6.00																	-	
Dive Equipment		\$ 35.00																	-	
H/S Equipmnet		\$ 100.00																	-	
TetraTech Truck		\$ 100.00																	-	
Restoration materials		\$ 300.00																	-	
Vessel		\$ 400.00																	-	
																			-	
TOTAL OTHER DIRECT COSTS								\$600						\$600						\$1,200
CONTINGENCY																				
GRAND TOTAL				\$8,733		\$5,950		\$14,713		\$9,692		\$12,360		\$11,644		\$9,632				\$72,724



AVIROM & ASSOCIATES, INC.

SURVEYING & MAPPING

October 16, 2017

Via E-Mail: Stuart.McGahee@TetraTech.com

Mr. Stuart McGahee, P.E.
Senior Project Engineer
Tetra Tech
759 South Federal Highway, Suite 314
Stuart, FL 34994

*Re: Key West Aquarium, 1 Whitehead Street, Key West, Florida 33040
Spot Elevations along Retaining Sea Wall; Limited Bathymetric Survey & Upland
Topographic Survey*

Dear Stuart:

Subsequent to your request we will provide location and spot elevations along the retaining sea walls at the above referenced location, comprised of approximately 539 linear feet together with a limited bathymetric survey of the basin and upland topographic survey.

Scope

Limits

The limits of the seawall survey are shown in yellow on the attached Exhibit A (see below), incorporated herein for reference and shall commence from the east edge of the seawall within Key West Harbor, continuing along the north edge of the seawall within the basin of the Aquarium; thence along the east edge of the seawall of the Aquarium's basin; thence along the south edge of the Aquarium's basin to terminate along the east edge of the seawall within Key West Harbor.

The upland limits shall be within the area delineated in blue on the attached Exhibit B (see below), incorporated herein for reference.

The bathymetric survey limits shall be within the area delineated in red on the attached Exhibit C (see below), incorporated herein for reference.

Spot Elevations Along Retaining Sea Wall

The spot elevations shall be taken at 15-foot intervals along the top of the sea wall, at the base of the seawall and 5 feet seaward from the base.

We shall delineate the Mean High Water Line as a contour line along the sea wall. This is not a boundary survey or mean high water line survey and should not be relied as such.

We shall establish a minimum of two (2) National Geodetic Vertical Datum of 1929 (NGVD 29) benchmarks at the site, referenced to a published Benchmark Network by the National Geodetic Survey (NGS). The benchmarks shall also be horizontally referenced to the North American Datum of 1927 (NAD 27), and tied to the National Geodetic Survey Geodetic Control Network.

All work shall be performed in accordance with the Standards of Practice as defined in Chapter 5J-17, Florida Administrative Code.

This survey will not be a Mean High Water Survey pursuant to the Coastal Mapping Act of 1974, Chapter .177, Part II Florida Statutes.

Limited Bathymetric Survey

Data will be collected along transects oriented approximately perpendicular to the north and south seawall of the basin and spaced at twenty-five (25) foot intervals from the previous transect extending from seawall to seawall.

Data shall be recorded along each transect at approximate intervals of ten (10) feet in raw digital format along with other information such as date, time, northing/easting, depth and a summary of all the parameters of the navigation file. Prior to the start of the survey a tide staff will be established in close proximity to the site for use in monitoring water levels during the course of the bathymetric survey operations. Water levels will be recorded at 6-minute intervals. We will establish both horizontal and vertical controls needed for the survey. Upon completion of the data collection activities, raw digital bathymetric data files will be edited and reduced to the proper vertical datum via application of collected tide information. Charts will be prepared in ACAD 2014 format and shall encompass contours and/or plotted plan data. Contours shall be plotted at one (1) foot contour intervals. Contours will be generated via the development of a Digital Terrain Model (DTM) of the data. Final charts will encompass a grid depicting northings (Y) and eastings (X) relative to the project datum. In addition, charts will include a complete description of horizontal and vertical control used for the survey, approximate location of the tide staff and any general notes pertinent to the survey. Charts will be provided to the client on paper media along with digital files in PDF format and AutoCAD 2014 format. In addition to the digital PDF files, the client can be provided with an ASCII file containing the final X, Y, Z data. The depths will be based on elevations relative to the National Geodetic Vertical Datum of 1929 (NGVD 29), with a conversion factor listed to reduce the data to Mean Low Water.

Upland Topographic Survey

Establish a minimum of two (2) National Geodetic Vertical Datum of 1929 (NGVD 29) benchmarks at the site, referenced to a published Benchmark Network by the National Geodetic Survey (NGS) to be utilized during the construction phase. The benchmarks shall also be horizontally referenced to the North American Datum of 1927 (NAD 27). We shall calculate and place the vertical conversion factor from NGVD 29 to the North American Vertical Datum of 1988 (NAVD 88) on the face of the map.

Obtain sufficient elevations to define the existing topography in detail, including significant grade changes in elevations.

We shall locate all above ground improvements including, but not limited to buildings, finish floor, pavement, ramps, driveways, steps, gates, top of curb, bottom of curb, edge of pavement, centerline of pavement, back of walk, face of walk, and above ground evidence of utility. We will obtain rim elevations, pipe size, material and inverts of sewer and drainage structures where possible. Due to the nature of obtaining the data where the structures are in use, the information obtained may be the best approximation of the true measurements. It is the responsibility of the end user to verify the diameter and material utilizing as-built drawings or other resources prior to construction. Utility locations will include fire hydrants, water valves, meter boxes, vaults and electrical outlets, power poles and overhead wires. We will locate wells, main irrigation valves, but will not locate individual sprinkler heads.

There is no provision for the excavation, probing or location of underground utilities structures or improvements. Utilities shall be located to the extent that they are above ground and visible. This proposal does not include the contracting of an underground utility locating service to locate the subsurface utilities.

The survey data will be reported to the nearest 0.05 feet for horizontal locations and for the vertical component, 0.1 feet spot elevations on ground shots and 0.03' spot elevations on paving or hard surfaces, with all work performed in accordance with the Standards of Practice as defined in Chapter 5J -17, Florida Administrative Code.

There is no provision to perform boundary surveys or surveys to resolve conflicts, ownerships or occupation issues relative to the boundary.

This is not a boundary survey and the information should not be relied upon as such. It is strongly recommended that if the design is contingent on accurate boundary placement and especially prior to construction, a boundary survey should be performed to establish the lines. We will not be responsible for the misuse of the topographic survey for purposes it was not intended.

Clarification

- Client shall arrange all access and permission with the Key West Aquarium to have our crew perform the survey along the sea wall, the bathymetric survey and the upland topographic survey. Delays encountered due to access at no fault of Avirom & Associates may incur additional costs, which will be billed at our contracted hourly rates.
- The Mean High Water Line will be displayed for informational purposes only. This is not a Mean High Water Line survey according to Chapter 177, Part II Florida Statutes.
- To obtain the survey data it may be necessary to temporary remove some deck planks which will be replaced in place, immediately after we attain the survey information. The planks are affixed to the support with screws and we will replace the screws with new stainless-steel screws. From past experience this is a very time-consuming process and is reflected in the fee.
- This proposal is based on the absence of the Aquarium's sea life within the basin. It is our intent to launch a Jon-boat within the basin to obtain the soundings and the presence of sea life presents a hazardous condition to our crews. Our crew will be traversing the basin in the Jon-boat using a hand-to-hand motion along a tag line strung from the north seawall to the south seawall, while wearing safety vests. The use of any boat motor is not conducive within this environment because of the confined space.
- This proposal is based on one mobilization by our crew to accomplish the project.
- This proposal is based on the site being free and clear of storm debris. We will not move obstacles to obtain survey data, or if field conditions are considered hazardous to the safety of our crews.

Deliverable

We shall provide four (4) signed and sealed hard copies of the combined surveys, including an electronic PDF file and an AutoCAD 2014 or lower drawing file of the survey.

Time Frame

We can mobilize to the site within one (1) week after receipt of an executed contract and have the project completed within four (4) weeks after the fieldwork, which is anticipated to take three days.

Fee:

The itemized fees to perform the above services are lump sum based on:

1. Spot Elevations Along Retaining Sea Wall

Survey Field Crew - 14 hours @ \$125.00 per hour	\$ 1,750.00
CADD Drafting - 10 hours @ \$85.00 per hour	\$ 850.00
Professional Land Surveyor – 2.0 hours @ \$100.00 per hour	\$ 200.00
Administrative/Billing (Principal) – 0.5 hour @ \$150.00 per hour	\$ 75.00
TOTAL SEAWALL SURVEY.....	
\$ 2,875.00	

2. Upland Topographic Survey

Survey Field Crew – 12.0 hours @ \$125.00 per hour	\$ 1,500.00
CADD Drafting - 10 hours @ \$85.00 per hour	\$ 850.00
Professional Land Surveyor – 2.0 hour @ \$100.00 per hour	\$ 200.00
Administrative/Billing (Principal) – 0.5 hour @ \$150.00 per hour	\$ 75.00
TOTAL TOPOGRAPHIC SURVEY	\$ 2,625.00

3. Limited Bathymetric Survey

Survey Field Crew - 15.5 hours @ \$125.00 per hour	\$ 1,937.50
CADD Drafting - 12 hours @ \$85.00 per hour	\$ 1,020.00
Professional Land Surveyor – 2.0 hours @ \$100.00 per hour	\$ 200.00
Administrative/Billing (Principal) – 0.5 hour @ \$150.00 per hour	\$ 75.00
TOTAL BATHYMETRIC SURVEY	\$ 3,232.50

General Conditions:

- 1. All invoices are due and payable in full upon receipt. Surveyor reserves the right to withhold certified prints and files to client or client's consultants until payment is made in full. If payment is not received within 10 days of the invoice date, a late charge may be added to the invoice in an amount not to exceed 1½ percent per month on the outstanding balance. If payment is not received within 45 days of the invoice date, Surveyor may terminate this agreement or suspend work under the agreement until payments have been made in full. The undersigned agrees to pay reasonable attorney fees up to 50% and all costs and expenses incurred by Avirom & Associates, Inc. in the collection of any past due obligation of the undersigned pursuant hereto.*
- 2. Electronic data files furnished by Avirom & Associates, Inc. in connection with this project are instruments of service. All original instruments of service shall be retained by Avirom & Associates, Inc. and will remain their property, with all common law, statutory and other reserved rights, including copyright, in those instruments. This information provided in the instruments of service is proprietary and will not be shared with others without prior written consent. The client may request reproducible copies, and all original documents upon payment of all outstanding invoices, and expenses.*
- 3. Copies in excess of four prints, Federal Express, deliveries and out-of-pocket expenses will be charged to client at cost. Additional prints will be charged at \$5.00 per print.*
- 4. Revisions to survey requested by governmental agencies that are more stringent than Standards of Practice as set forth in Chapter 5J-17 FAC pursuant to Section 472 Florida Statutes will be an additional expense to client based on our current contracted hourly rates.*

We thank you for the opportunity to submit this proposal and we look forward to working with you on this project.

Should you have any questions or comments, please feel free to contact me.

Respectfully,



Keith M. Chee-A-Tow, P.L.S.
Project Surveyor

If this proposal is acceptable, please execute the signature below and return one (1) copy for our files.

THESE CONDITIONS ARE ACCEPTABLE, AND I HEREBY AUTHORIZE YOU TO PROCEED.

Mr. Stuart McGahee, P.E.
Tetra Tech

Date

Documents\Proposals\Keys\Tetra Tech\Key West Aquarium\Key West Aquarium.docx

EXHIBIT A

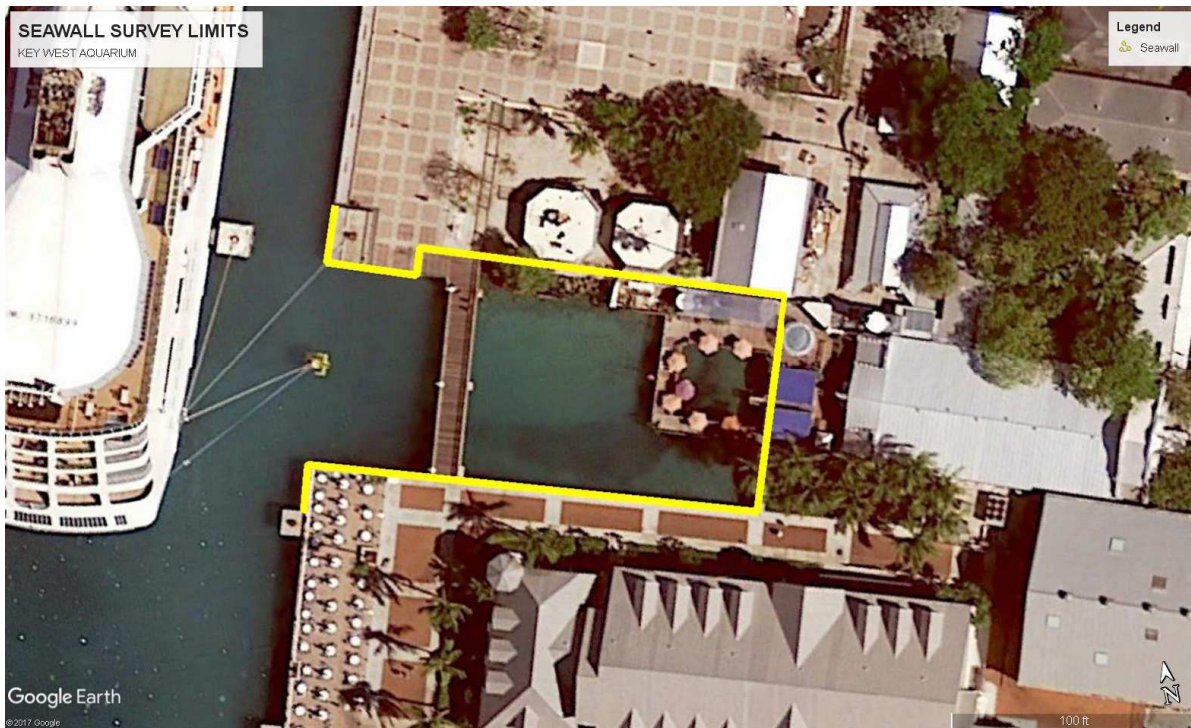
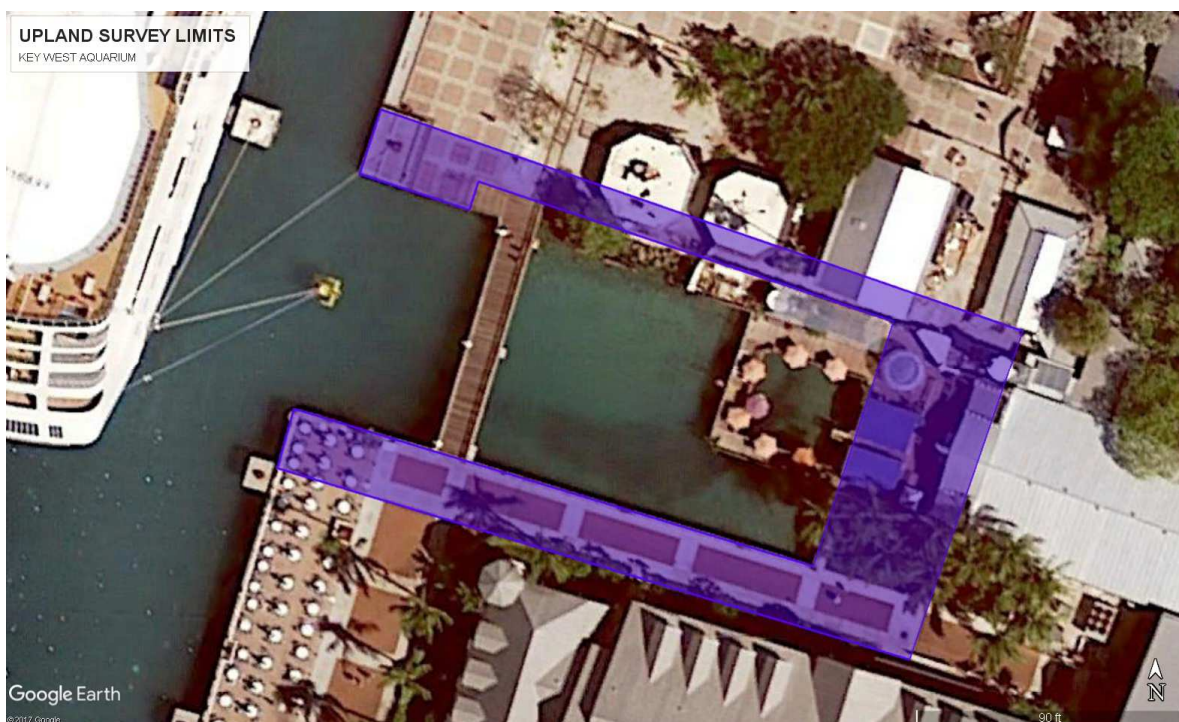
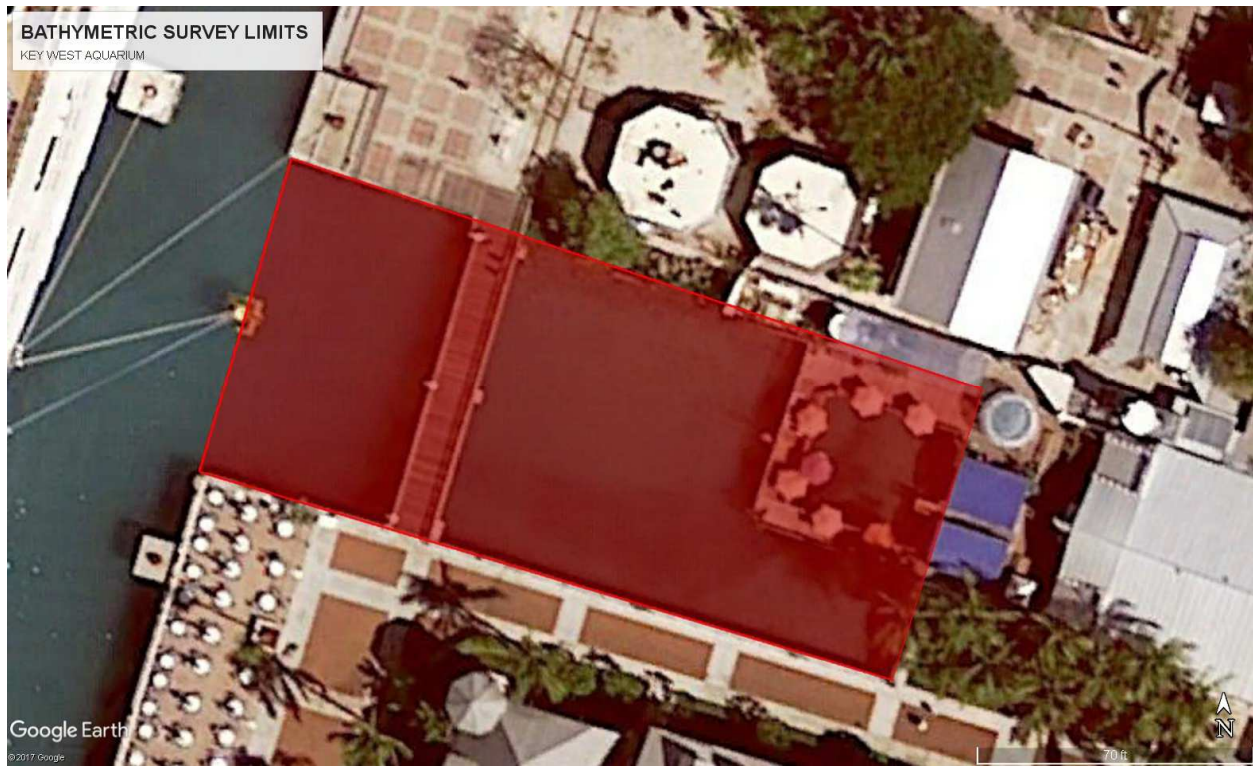


EXHIBIT B



AVIROM & ASSOCIATES, INC.

EXHIBIT C



January 15, 2018

Tetra Tech

Attn: Mr. Dave Frodsham, P.E.

759 S. Federal Highway/ Ste. 314

Stuart, FL 34994

Phone: 772.781.3400/ Cell: 772.380.5491/ Email: dave.frodsham@tetrattech.com

Miami Dade County Tier 2 CBE

Palm Beach County SBE

SFWMD SBE

*Small Business Administration SBE
for Federal Projects*

Re: Proposal/Agreement for Geotechnical Exploration Services
Key West Aquarium
1 Whitehead Street
Key West, FL 33040

Dear Mr. Frodsham:

Nutting Engineers of Florida, Inc. (NE) is pleased to present this proposal/agreement for performing geotechnical engineering services at the referenced project.

Per our conversation on January 12, 2018 and review of the site plan and documents provided, we understand that plans for this project include the redesign and rehabilitation of the existing seawall at the referenced site. Based on your request for proposal and our understanding of the project, we propose the following scope of work and fee schedule.

SCOPE OF WORK

We propose to perform two Standard Penetration Test (SPT) borings in general accordance with ASTM D-1586 specifications to a depth of 50 feet in the area of the referenced seawall. In order to facilitate the performance of the test borings, our crew will need to core the asphalt/ concrete. Upon completion, any holes will be re-patched. If a more permanent patch is desired, a licensed concrete/ asphalt contractor should be retained.

At the completion of the on-site work, the soil samples will be returned to our laboratory. We will provide an engineering report including a description of our findings and soil parameters for seawall design by others. In order to provide information concerning the engineering properties of the soils encountered, it is anticipated that tests may be performed to determine natural water content, organic content, and sieve analysis on representative soil samples collected from the site. The engineering report will include graphic logs of the test borings and a test boring location plan. We assume the site is accessible to truck mounted drilling equipment and that underground utilities will be cleared by others prior to our performing the on-site work.

FEE SCHEDULE

The above-indicated scope of work will be performed for an estimated cost of \$5,950.00 based on the following rates and quantities:

Tech. site visit, boring layout, utility clearance	Lump Sum	\$500.00
Mobilization of equipment/crew, incl. per diem	1 @ \$1,500.00	\$1,500.00
SPT borings	Lump Sum	\$1,350.00 (min)
Casing	Lump Sum	\$500.00
Coring and patching	Lump Sum	\$500.00
Soil classification/ laboratory analysis	Lump Sum	\$250.00
Senior Engineer	Lump Sum	\$1,000.00
Senior Project Manager	Lump Sum	\$250.00
Clerical/Admin. for report preparation	Lump Sum	\$100.00

*If loose or deleterious soil is encountered it may be necessary to extend the soil boring(s).

Additional requested and authorized services beyond those described above will be provided at customary unit rates with expenses at cost +20%.

Construction Materials Testing (as may be required):

Pile monitoring - \$65.00/hour
Proctors - \$125.00/test
Density tests - \$25.00/test (5 min/trip)
Concrete cylinders - \$85.00/set
Trip charge - \$50.00/ea. (if required)
Bearing capacity completion letter - \$125.00
Clerical/ Admin. - \$50.00/hour
Principal Engineer - \$125.00/hour

We currently anticipate starting this work within approximately four business days of receiving written authorization to proceed and a **deposit of \$2,975.00**. The on-site work should take approximately two business days to complete. The geotechnical report should be available within approximately 12 - 15 business days after the on-site work is completed.

NE has been offering geotechnical engineering, environmental sciences, materials testing, and structural inspection services for over 50 years in South Florida and the Treasure Coast during which time we have worked on many similar projects. Our commitment to practical, cost effective solutions supported by responsive client services distinguishes our firm and enables us to solve your most demanding technical challenges. Another value added component NE brings to your project is our staff of experienced professionals including geotechnical engineers, environmental specialists, field personnel who are certified and have been trained to provide a wide range of consulting services, and our dedicated administrative staff.

NE's laboratory is checked annually by the Construction Materials Engineering Council (CMEC) and is certified to perform geotechnical engineering and materials testing services for the Florida Department of Transportation (FDOT).



Our sister company, Nutting Environmental of Florida, Inc. (NEF), can assist in your environmental needs. For thirty years, NEF has performed a wide variety of environmental consulting services throughout Florida including Phase I and II environmental site assessments, storage tank removal and tank closure assessments, contamination assessments, design and implementation of remedial action plans (RAP), groundwater monitoring for solid waste and Hazmat permit requirements, assistance with dewatering permitting and much more. NEF can be reached 561-732-7200.

Thank you for providing us the opportunity to present this proposal/agreement. We look forward to working with you on this and future projects.

Respectfully submitted,
NUTTING ENGINEERS OF FLORIDA, INC.

Scott Ersland
Division Manager

James J. Flaig, P.E.
Principal/Chief Engineer

Reports and invoices will be addressed to the client as listed below unless other instructions are provided in writing with this executed proposal. The undersigned, as an authorized representative of the entity listed below, approves this proposal and agrees to be bound by the terms and conditions contained in this proposal. Deposit amounts are collected at time of written authorization to proceed. If you are a first time client, we request that the balance due for these services be paid at the time of report completion. Once your account is established, our terms are net 30 days. Any invoices over 30 days will be assessed a 1 1/2 percent service charge per month until paid in full.

PLEASE ENTER INFORMATION LEGIBLY BELOW SO IT CAN BE UTILIZED FOR PROJECT SET-UP:

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

COMPANY NAME: _____

ADDRESS: _____

PHONE: _____ FAX: _____

EMAIL: _____

Tetra Tech Key West Aquarium 1 Whiteside St Key West geo 1-15-18
General Terms and Conditions

For the purpose of this project, the addressee of this proposal will be known as the Client. The client is expected to furnish NUTTING ENGINEERS OF FLORIDA, INC. ("NE"), with accurate information including sketch of survey and/or site plan, construction drawings/specifications as appropriate, details of proposed construction including the proposed structural system and loads or existing construction problem information and site accessibility information as appropriate. Other information requirements may be detailed in the enclosed proposal. IF ANY CONDITIONS CHANGE such as building layout, loading, project specifications/design, or unusual site conditions are observed, NE should be notified immediately in writing about the changed condition for possible review and comment. Should the Client wish to impose other conditions and requirements beyond those contained in this proposal such as in a separate contract, we reserve the option to modify contract language, fee amounts, to remove our proposal from consideration or other measures as may be indicated.

Delivery – Scheduled upon receipt of written authorization to proceed and deposit unless other arrangements are agreed to in writing. Additional report copies can be provided for a nominal fee to the Client. NE will exercise appropriate measures to ensure project completion within a reasonable time frame subject to existing workloads. However, NE will not be held responsible



for unavailability of necessary project data and site access within the time frame agreed upon for the investigation. Project delivery may be delayed if the ENTIRE signed proposal and deposit are not received in a timely manner. The ENTIRE signed quotation should be returned along with the requested project information. This unsigned proposal is valid for 60 days.

Payment - \$2,975.00 deposit required with signed agreement. Directing NE to proceed with the work shall constitute acceptance of the terms of NE's proposal and these General Terms and Conditions. Balance due upon delivery of report. Interest at the rate of 18% per annum or the highest rate allowable by law whichever is less, will be added to all amounts not paid within 30 days after date of invoice. All attorney fees and expenses associated with collection of past due invoices will be paid by Client.

Insurance – NE maintains Workers' Compensation and Employer's Liability Insurance in conformance with state law. In addition, we maintain Comprehensive General Liability Insurance and Automobile Liability Insurance with bodily injury limits of \$1,000,000.00 and property damage limits of \$1,000,000.00. A certificate of insurance can be supplied evidencing such coverage which contains a clause providing that fifteen days written notice be given prior to cancellation.

Right-of-Entry - Unless otherwise agreed, Client will furnish right-of-entry on the property for NE to make the planned borings, surveys, and/or explorations. NE will not be responsible for removing fences, earth berms, vegetation or other obstructions for purposes of our investigation. NE will take reasonable precautions to minimize damage to the property caused by its equipment and sampling procedures, but the cost of restoration or damage which may result from the planned operations is not included in the contracted amount. If Client desires to restore the property to its former condition, NE will accomplish this and add the cost to its fee. Client agrees to waive all claims arising from or related to the failure to provide NE with proper access to conduct its work.

Damage to Existing Man-made Objects - It shall be the responsibility of the Owner or his duly authorized representative to disclose the presence and accurate location of all hidden or obscure man-made objects relative to routes of access, field tests, sampling, or boring locations. When cautioned, advised or given data in writing that reveal the presence or potential presence of underground or over-ground obstructions, such as utilities, septic tanks, etc., NE will give special instructions to its field personnel. In addition, Client waives any claim against NE arising from damage to existing man-made objects.

Warranty and Limitation of Liability - NE shall perform services for Client in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the project. In the event any portion of the services fails to comply with this warranty obligation and NE is promptly notified in writing prior to one year after completion of such portion of the services, NE will re-perform such portion of the services, or if re-performance is impracticable, NE will refund the amount of compensation paid to NE for such portion of the services. This warranty is in lieu of all other warranties. No other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose is made or intended by the proposal for consulting services, by furnishing an oral response of the findings made or by any representations made regarding the services included in this agreement. In no event shall NE or any of its professional employees be liable for any special, indirect, incidental or consequential loss or damages, including but not limited to impact and delay claims. The remedies set forth herein are exclusive and the total liability of consultant whether in contract, tort (including negligence whether sole or concurrent), or otherwise arising out of, connected with or resulting from the services provided pursuant to this Agreement shall not exceed the total fees paid by Client or \$50,000.00, whichever is greater. At additional cost, Client may obtain a higher limit prior to commencement of services.

PURSUANT TO §558.0035, FLORIDA STATUTES, NE'S INDIVIDUAL EMPLOYEES AND/OR AGENTS MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THEIR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT.

Indemnification – Client agrees to defend, indemnify and save harmless NE from all claims, including negligence claims, suits, losses, personal injuries, death and property liability resulting from NE's performance of the proposed work, whether such claims or damages are caused in part by NE, and agrees to reimburse NE for expenses in connection with any such claims or suits, including reasonable attorney's fees. Client's obligation to indemnify is limited to \$2 million per occurrence, which Client agrees bears a reasonable commercial relationship to the Work undertaken by NE. Client further agrees that these general conditions are a part of the Work's specifications or bid documents, if any.

Sampling or Testing Location - Unless specifically stated to the contrary, the unit fees included in this proposal do not include costs associated with professional land surveying of the site or the accurate horizontal and vertical locations of tests. Field tests or boring locations described in our report or shown on our sketches are based on specific information furnished to us by others and/or estimates made in the field by our technicians. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in the report. It is understood that all drilling locations are accessible to conventional truck mounted drilling equipment unless otherwise specified by the client. If unscheduled remobilizations or use of portable or all terrain equipment is required additional charges will apply. NE will attempt to clear utilities at our excavation/test locations by manual drilling to 3' below land surface (BLS). Any utilities/obstructions present at client specified test locations or below 3' BLS will be the responsibility of the client.

Sample Handling and Retention – Generally soil test samples are retained for approximately three months after which time they will be discarded unless written instructions to the contrary are received from the client.

Legal Jurisdiction - The parties agree that any actions brought to enforce any provision of this Agreement shall only be brought in a court of competent jurisdiction located in Palm Beach County, Florida. Any and all causes of action arising out of NE's performance of the Work, including but not limited to claims for indemnity, contribution and equitable subrogation, shall be deemed to have accrued and the applicable statutes of limitations shall commence to run not later than the date of NE's last invoice for the Work performed hereunder.

Force Majeure - NE shall not be held responsible for any delay or failure in performance of any part of this Agreement to the extent such delay or failure is caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, acts of God, act or omission of subcontractors, carriers, client or other similar causes beyond its control.

Documents - NE shall be entitled to rely upon the accuracy and completeness of all surveys, reports and information furnished by the client. If conditions different from those described in our report are found at the site, NE should be notified in writing immediately upon discovery. NE reserves the right to revise conclusions and recommendations presented in the final report should additional information regarding the project become available. All permits will be obtained by others unless otherwise specified in this proposal or in writing to NE. NE has no liability for consequences of information not provided or unavailable or otherwise not reviewed or known from the normal sources customarily examined by NE in such investigations within the time frame allowed for this investigation under this agreement. The client, entities identified in writing on the address portion of our report, design team professionals engaged by our client and building official staff are entitled to use and rely upon NE'S reports for purposes of the current project. Other parties are not authorized to use or rely upon NE'S reports unless NE so states in writing.

NE - General Contract Terms and Conditions May 2017

cc: Richard Wohlfarth, P.E. – Principal/ Director of Engineering
Kristina Berryman – Business Development Manager
Pavel Cruz – CMT Division Manager

Tetra Tech Key West Aquarium 1 Whiteside St Key West geo 1-15-18



Introducing Nutting Environmental of Florida, Inc.

Nutting Environmental of Florida, Inc. (NEF) has performed a wide variety of environmental consulting services throughout Florida for thousands of clients in both private and public sectors for 30 years. NEF was formed in 1987 as a sister company to Nutting Engineers of Florida, Inc. which has successfully provided expert geotechnical, construction materials testing and structural inspection services to many of the same clients throughout Florida since 1967.



Our goal is to provide exceptional service responding to client needs through the rapid, expert and cost effective performance of projects. We are well experienced through decades of diverse and at times challenging service in environmental due diligence evaluations (ASTM Phase I and Phase II Environmental Site Assessments), contamination assessments (Site Assessment Reports (SAR) in accordance with Chapter 62-780 FAC) and the preparation and implementation of Remedial Action Plans (RAP) as well as many other contamination assessment related activities (e.g. groundwater monitoring, storage tank removal, dewatering support, etc.).

We bring integrity, creativity and flexibility in seeking both innovative and effective solutions for our clients. We are well known in Florida and beyond; our client base consists of a wide variety of private-sector and public agency clients and including local and national lenders, local businesses, national retail chains, multinational corporations, developers, contractors, local, county, state and federal agencies, real estate investors and insurance companies.

Some of the services we perform include:

- **Phase I and Phase II Environmental Site Assessments**
- **Peer Review of ESA Reports for Financial Institutions and Other Clients**
- **Transaction Screening Process**
- **Storage Tank Removal and Tank Closure Assessments**
- **Design & Implementation of Remedial Action Plans (RAP)**
- **Contamination Assessment Activities**
- **Interim Source Removal Activities (ISR)**
- **Assistance with Dewatering Permitting**
- **Vapor Intrusion Studies**
- **Hydrogeologic Evaluations**
- **Groundwater Monitoring for Solid Waste and HazMat Permit Requirements**



We are very interested in expanding our working relationship with you. If you have any questions, or would like additional information, please contact Lisa Romano, Project Coordinator, at our Boynton Beach office at (561) 732-7200 or via email at LisaR@nutting.biz.

1310 Neptune Drive • Boynton Beach, Florida 33426 • 561-732-7200

Broward 954-782-7200 • St. Lucie 772-408-1050 • Miami-Dade 305-557-3083 • Fax 561-737-9975

Toll free: 1-877-NUTTING (688-8464) • www.nef.cc • info@nef.cc



NUTTING ENVIRONMENTAL
OF FLORIDA, INC.
Your Project Is Our Commitment.