Agenda Item: **3L-5**

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS

AGENDA ITEM SUMMARY

Meeting Date:	June 16, 2020	(X) Consent ( ) Workshop	( ) Regular ( ) Public Hearing
Department:	Environmental Resources Management		

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Task Order No. ERM20-02 to the Palm Beach County (PBC) Construction Materials Testing, Geotechnical Engineering and Inspection Services Annual Contract (R2017-1660) with Terracon Consultants, Inc. (Terracon), for an amount not to exceed $269,189.44 to provide professional engineering services for the Loxahatchee River Watershed Hydrological Refinements – Phase I (Project).

Summary: Task Order No. ERM20-02 provides for geotechnical engineering services for the design of three seepage barriers along Hungryland Slough Natural Area, Jupiter Farms, and Loxahatchee Slough Natural Area at a cost of $269,189.44. The Project is part of a watershed-based effort to protect and restore the Loxahatchee River and enhance natural areas within the Loxahatchee River Watershed. The Project will define the best method to maintain wet season water levels and quantify the increased water storage on Loxahatchee Slough and Hungryland Slough Natural Areas which are major contributors of freshwater to the Loxahatchee River. The project area is 17 linear miles and would benefit 13,400 acres. Terracon has agreed to 16% SBE participation. The SBE participation for this Task Order is 16.9%. The Loxahatchee River Preservation Initiative awarded the Project a $160,000 grant to provide partial funding. The grant was approved by the BCC on December 3, 2019. District 1 (YBH)

Background and Justification: The Board of County Commissioners (BCC) approved the Consultants' Competitive Negotiation Act (CCNA) Contract with Terracon, a PBC company, on November 7, 2017 (R2017-1660). Task Order No. ERM20-02 will authorize the design of three seepage barriers and will quantify the increased water storage the seepage barriers would provide on Loxahatchee Slough and Hungryland Slough Natural Areas. At the time the contract was solicited, the Small Business Enterprise (SBE) Ordinance (R2002-0064) was in effect.

Attachment:
1. Task Order No. ERM20-02

Recommended by: YBH/KF _____ 5-7-2020
Department Director **Date**

Approved by: _____ 5/19/20
Assistant County Administrator **Date**

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2020	2021	2022	2023	2024
Capital Expenditures	_____	_____	_____	_____	_____
Operating Costs	$269,190	_____	_____	_____	_____
External Revenues	_____	_____	_____	_____	_____
Program Income (County)	_____	_____	_____	_____	_____
In-Kind Match (County)	_____	_____	_____	_____	_____
NET FISCAL IMPACT	$269,190	_____	_____	_____	_____
# ADDITIONAL FTE POSITIONS (Cumulative)	_____	_____	_____	_____	_____

Is Item Included in Current Budget? Yes X No _____

Does this item include the use of federal funds? Yes _____ No X

Budget Account No.:

Fund 1226 Department 380 Unit E245 Object 3401 Program _____

B. Recommended Sources of Funds/Summary of Fiscal Impact:

C. Department Fiscal Review:

S. Mealy

III. REVIEW COMMENTS

A. OFMB Fiscal and /or Contract Dev. and Control Comments:

5/13/2020
OFMB 5/13 5/13

5/18/2020
5/18/2020
Contract Development & Control

B. Legal Sufficiency:

YBH Helene C. Hoyd for Yelitza Hearman 5-19-2020
Assistant County Attorney

C. Other Department Review:

_____
Department Director

ATTACHMENT 1

TASK ORDER

TASK ORDER: ERM20-02 CONSULTANT: Terracon Consultants, Inc. R2019-1121

ACCOUNT: 1226-380-E245-3401 X016-NL05.008 CONTRACT: R2017-1660, R2018-1325

[Fiscal approval of Budget Availability: S. Neary 5/5/2020]

PROJECT MANAGER: David Witmer PHONE: 561-233-2517

CONTRACT MANAGER: Juan Cueto PHONE: 561-681-3918

PROJECT NAME: Loxahatchee River Watershed Hydrological Refinements – Phase I

LOCATION/DISTRICT #: Jupiter / District 1

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall provide professional services for geotechnical engineering, as described in the attached proposal dated March 24, 2020.

DELIVERABLES: See attached proposal.

TASK ORDER TYPE: NOT-TO-EXCEED DUE DATE: 3/31/2021

TOTAL AMOUNT $269,189.44

(Check where appropriate)
for Contract and Subcontract Amounts:

	Black	Hispanic	Women	Asian-Pacific	White Male
M/WBE(State) ☐	$	$	$	$	
SBE-M/WBE* ☒	$	$	$	$45,749.64	
SBE ☐	$	$	$	$	$

*certified as both an SBE and a State M/WBE

TOTAL SBE-M/WBE PARTICIPATION: $45,749.64

CONSULTANT REP: _____ DATE: 4-29-2020
Michael J. Yost, Corporate Secretary

APPROVED AS TO TERMS AND CONDITIONS:

ERM DIRECTOR: Deborah Drum DATE: 5-7-2020
Deborah Drum

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY: _____ DATE: _____

BOARD OF COUNTY COMMISSIONERS: _____ DATE: _____
Dave Kerner, Mayor

OEBO SCHEDULE 1

LIST OF PROPOSED CONTRACTOR/CONSULTANT AND SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

SOLICITATION/PROJECT/BID NAME: Lox River Watershed Hydro Refinmts.
NAME OF PRIME RESPONDENT/BIDDER: Terracon Consultants, Inc.
CONTACT PERSON: Mike O'Connor
SOLICITATION OPENING/SUBMITTAL DATE: _____

SOLICITATION/PROJECT/BID No.: Task Order No. ERM20-02
ADDRESS: 1225 Omar Road, West Palm Beach
PHONE NO.: 561.689.4299 **E-MAIL:** Mike.OConnor@terracon.com
DEPARTMENT: Environmental Resources Management

PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED THE PRIME CONTRACTOR/CONSULTANT ON THIS PROJECT. PLEASE ALSO LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS /SUBCONSULTANTS ON THE PROJECT.

Name, Address and Phone Number	(Check all Applicable Categories) Non-SBE	M/WBE Minority/Women Business	SBE Small Business	DOLLAR AMOUNT OR PERCENTAGE OF WORK Black	Hispanic	Women	Caucasian	Other (Please Specify)
1. Terracon Consultants, Inc.	☑	☐	☐	____	____	____	223,439.80	
2. RADISE International , Inc.	☐	☑	☑	____	____	____	____	45,749.64 Asian
3.	☐	☐	☐	____	____	____	____	____
4.	☐	☐	☐	____	____	____	____	____
5.	☐	☐	☐	____	____	____	____	____
Total				____	____	____	____	____

(Please use additional sheets if necessary)

Total Bid Price $ 269,189.44

Total SBE - M/WBE Participation 45,749.64

Note:
1. **The amount listed on this form for a Subcontractor/subconsultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.**
2. **Firms may be certified by Palm Beach County as an SBE and/or and M/WBE. If firms are certified as both an SBE and/or M/WBE, please indicate the dollar amount under the appropriate category.**
3. **Modification of this form is not permitted and will be rejected upon submittal.**

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2 both parties recognize this Schedule as a binding document. **All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.**

SOLICITATION/PROJECT NUMBER: Task Order #ERM20-02

SOLICITATION/PROJECT NAME: Loxahatchee River Watershed Hydro. Refinemnt -Ph. I

Name of Prime: Terracon Consultants, Inc.

(Check box(s) that apply)

☐SBE ☐WBE ☐MBE ☐M/WBE ☑Non-S/M/WBE **Date of Palm Beach County Certification (if applicable):**_____.

The undersigned affirms they are the following (select one from each column):

Column 1

☑Male ☐Female

Column 2

☐African-American/Black ☐Asian American ☑Caucasian American ☐Hispanic American ☐Native American

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Geotechnical engineering services				$269,189.44

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: $223,439.80

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Radise International — **Price or Percentage:** $45,749.64

Name of 2nd/3rd tier Subcontractor/subconsultant

Terracon Consultants, Inc.

Print Name of Prime

By: [signature]

Authorized Signature

MICHAEL J. O'CONNOR

Print Name

PRINCIPAL

Title

Date: 4-27-2020

Print Name of Subcontractor/subconsultant

By: _____

Authorized Signature

Print Name

Title

Date:

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: Task Order #ERM20-02

SOLICITATION/PROJECT NAME: Loxahatchee River Watershed Hydro. Refinemnt -Ph. I

Prime Contractor: Terracon Consultants, Inc. Subcontractor: RADISE International, L.C.

(Check box(s) that apply)

☑SBE ☐WBE ☑MBE ☐M/WBE ☐Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 12/13/2017-12/13/2020

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2				Column 3
☑Male ☐Female	☐African-American/Black	☑Asian American	☐Caucasian American		☐Supplier
	☐Hispanic American	☐Native American			

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Geotechnical Engineering Services				$45,749.64

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: $45,749.64

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage:

Terracon Consultants, Inc.
Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Michael J. O'Connor
Print Name

Principal
Title

Date: 4-27-2020

RADISE International, L.C.
Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Kumar Allady, PE
Print Name

CEO
Title

Date: 04/24/2020

March 24, 2020

Terracon

Natural Resources Stewardship Division
Dept. of Environmental Resources Management
2300 North Jog Road, 4th Floor
West Palm Beach, FL 33411-2743

Attention: Mr. David Witmer
P: (561) 681-3918
E: DWitmer@pbcgov.org

Subject: ***Proposal, Geotechnical Engineering Services (Rev. 3)***
Loxahatchee River Watershed Hydrologic Refinement – Phase 1
Palm Beach County, Florida
Terracon Proposal No. PHD165110

Dear Mr. Witmer:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal for Geotechnical Engineering Services for the above-referenced project. This proposal follows information provided to us by the Palm Beach County Department of Environmental Resources Management and is based upon unit rates provided in our current continuing services contract with Palm Beach County.

1.0 INTRODUCTION

We understand that current plans are to design a seepage barrier for three areas as described below:

1. The south boundary of the Hungryland Slough Natural Area – approximately 3 miles long.
2. The four sides of a rectangular shaped area located to the south of Jupiter Farms – approximately 8 miles long.
3. The north and west sides of the Loxahatchee Slough Natural Area – approximately 6 miles long.

The existing perimeter berms are not to be modified with the exception of the work required to install the seepage barrier into them.

All of the boring and test well locations will be selected in areas that are accessible with our mud-bug or truck-mounted drilling rigs.

It should be noted that a seepage barrier does not stop seepage from leaving the natural area and its adjacent wetlands, but rather it slows its rate. The magnitude of reduction may or may not be significant depending upon subsurface geology and methods used for seepage barrier installation. If there is a low permeability layer that the seepage barrier can "tie into", the reduction in seepage may be significant. Otherwise, the magnitude of seepage reduction may be relatively low, or the cost to construct a more effective barrier may be very high.

2.0 SAFETY - IIF

Terracon has a commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free*® safety culture, we will prepare a "Pre-Task Plan" to identify the potential site safety and job hazards associated with the work proposed at this site. Prior to commencement and during the on-site activities, we will re-evaluate potential job hazards and appropriate safe working procedures. At this time, we anticipate that a United States Occupational Safety and Health Administration (**OSHA**) Level D work uniform consisting of hard hats, traffic vests, safety glasses, protective gloves, and steel-toed boots will be required by all personnel in the work area.

3.0 SCOPE OF WORK

3.1 Geotechnical Services

Our study will be focused upon the nature and sequence of the subsurface profile, the permeability of the underground conditions, and the seepage potential for various head conditions, seepage barrier types and depths. The work will culminate with a written geotechnical engineering report that provides the results of the study and includes recommendations for design and construction of the seepage barrier. An order of magnitude cost estimate for construction of 1) the soil-bentonite wall, and 2) the geo-synthetic liner will be provided. Specific tasks of these services are as follows:

1. Engineering site visit to observe, photograph and map site conditions of geotechnical significance.

2. Staking of boring locations and obtaining underground utility clearance per the Sunshine State One Call service.

3. Mobilization of a drilling rig, and drilling of Standard Penetration Test (SPT) borings along the seepage barrier alignments. Spacing between borings will be at a nominal distance of 500 feet. Depths of these borings are summarized as follows:

    - 5 borings to 100 feet deep

- 12 borings to 50 feet deep
- 163 borings to 20 feet deep

Samples will be obtained from the borings at frequent vertical intervals. Groundwater levels will be measured in the borings, and the boreholes will be sealed with neat cement grout.

Up to four undisturbed (i.e. Shelby Tube) samples will be obtained of the clayey sands within the subsurface profile for subsequent laboratory permeability testing.

4. Eight piezometer clusters will be installed, with each cluster consisting of three piezometers (groundwater level monitoring wells). Each piezometer will consist of a 2-inch diameter machine slotted Schedule 40 PVC well screen that is flush-joint coupled to a riser pipe of similar composition. The annular space between the borehole and the well-screen will be backfilled with silica sand, and the remainder of the annulus will be sealed with neat cement grout. For each cluster, one piezometer will be 40 feet deep, with a screened interval from 20 to 40 feet below land surface. Another piezometer will be 20 feet deep with the screen from 10 to 20 feet. The third piezometer per cluster will be 10 feet deep with its bottom half screened.

5. The piezometers will be pumped to develop the formational groundwater and to remove fines disturbed during the piezometer installation. Field permeability tests will be run in each of the piezometers using the Constant Head Test Method. Data from the field permeability testing will be utilized as input to subsequent seepage modeling.

6. Samples from the borings will be classified in accordance with the Unified Soil Classification System (ASTM D 2487) and appropriate geological nomenclature. Representative samples will be tested for index properties such as moisture content, organic content, grain size distribution and Atterberg Limits. We will use the laboratory data together with standard correlations in the geotechnical literature to predict the permeability of the subsurface components. Up to four laboratory permeability tests will be performed on undisturbed samples of clayey sand.

7. A geotechnical engineering evaluation of the proposed seepage barrier will be completed in light of the gathered subsurface exploration, field permeability testing and laboratory test data. The evaluation will include the following components:
   - Characterization of the shallow aquifer that underlies the project site.
   - Set up and running of seepage models for various head conditions and types and depths of seepage barriers. The seepage modeling will utilize the computer program SEEP/W, which is part of the GeoStudio two dimensional finite element software suite developed by GEO-SLOPE International Ltd. Seepage modeling will be completed for conditions with

and without seepage barriers for the range of anticipated head conditions, and for three depths of barriers in order to check the sensitivity of the seepage with respect to the depth of the barrier.

8. Preparation of a geotechnical engineering report that summarizes the field exploration, findings from the field and laboratory testing, and the results of the engineering evaluations. The report will also include recommendations for design and construction of the seepage barrier from the geotechnical engineering vantage point. Four hard copies of the report signed and sealed by a registered professional engineer will be provided.

9. A separate submittal will include an order of magnitude estimate of cost for the seepage barrier project.

3.2 Schedule

Your project will be delivered using our ***GeoReport®*** system. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan will be posted for review and verification
- Site Characterization – Findings of the site exploration
- Geotechnical Engineering – Recommendations and geotechnical engineering report

We can commence the field work for the project within approximately two weeks after receiving your written authorization to proceed and a signed task order. The field staking and drilling rig mobilization will follow within two weeks or so thereafter. We estimate that the field exploration program will require approximately twelve weeks, barring wet weather related delays, and that the laboratory testing will be completed over a four week period. The geotechnical engineering analysis and report preparation will require approximately three months, beginning at the conclusion of the field work. The overall project duration from notice to proceed to submittal of the engineering report is therefore estimated to be seven to nine months. We will provide bi-weekly updates, by phone conference and/or email, of progress and key findings.

4.0 COMPENSATION

We propose to do the work on a unit rate basis with a maximum limiting amount of **$269,189** as itemized on Attachment A. This amount will not be exceeded without due cause and your prior written authorization. The unit rates shown on the attachment are consistent with our current continuing services contract with Palm Beach County. Of note, we plan to utilize a mud-bug mounted drilling rig owing to its ability to access the site, particularly when the site is wet. Selection of the drilling rig will be made just prior to mobilization during a field meeting with ERM.

Our Small Business Enterprise (SBE) sub-consultant, Radise International (Radise) will assist the project in the following task:

- Drilling Ninety Standard Penetration Test (SPT) Borings to a depth of 20 feet

5.0 AUTHORIZATION

If this proposal meets with your approval, the work may be initiated by sending your request for Consultant Services Authorization. The fee is valid for 90 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give me a call.

Sincerely,

Terracon Consultants, Inc.

Jaime Velez, P.E.
Senior Geotechnical Engineer
4/29/20

Douglas S. Dunkelberger, P.E.
Principal Geotechnical Engineer

Attachment A – Itemized Fee Breakdown

ATTACHMENT A - FEE ESTIMATE
LOXAHATCHEE RIVER WATERSHED HYDROLOGICAL REFINEMENTS PHASE 1
TERRACON CONSULTANTS, INC.
GEOTECHNICAL ENGINEERING SERVICES

ITEM DESCRIPTION	UNITS	QUANT.	UNIT RATE	FEE
GEOTECHNICAL				
I. PROJECT START UP & MOBILIZATION				
A. Kickoff Meeting (Sen. Geotechnical Engineer)	hours	8	$ 141.95	$1,135.60
B. Stake Boring Locations & Utility Clearance (Terracon)	hours	40	$ 82.01	$3,280.40
C. Stake Boring Locations & Utility Clearance (Radise-SBE)	hours	24	$ 82.01	$1,968.24
D. Drilling Rig Mobilization (3 per site - Radise-SBE)	each	3	$ 350.00	$1,050.00
E. Drilling Rig Mobilization (3 per site - Terracon)	each	3	$ 350.00	$1,050.00
	SUBTOTAL - START UP & MOB			**$8,484.24**
II. FIELD EXPLORATION				
A. SPT Borings (spaced 1,000 feet on center)				
5 to 100 feet deep				
0 to 50 feet deep	feet	250	$ 13.00	$3,250.00
51 to 100 feet deep	feet	250	$ 15.00	$3,750.00
12 to 50 feet deep	feet	600	$ 13.00	$7,800.00
90 to 20 feet deep (Radise - SBE)	feet	1800	$ 13.00	$23,400.00
73 to 20 feet deep	feet	1460	$ 13.00	$18,980.00
B. Grout Seal Boreholes				
0 to 50 feet deep (Radise - SBE)	feet	1800	$ 4.00	$7,200.00
0 to 50 feet deep	feet	2310	$ 4.00	$9,240.00
51 to 100 feet deep	feet	250	$ 5.00	$1,250.00
C. Casing				
0 to 50 feet deep (Radise - SBE)	feet	1800	$ 6.00	$10,800.00
0 to 50 feet deep	feet	2310	$ 6.00	$13,860.00
51 to 100 feet deep		250	$ 8.00	$2,000.00
D. Shelby Tube Sampling	each	4	$ 300.00	$1,200.00
E. Well Installation (8 @ 40', 8 @ 20' & 8 @ 10')	feet	560	$ 30.00	$16,800.00
F. Field Permeability Testing	each	24	$ 300.00	$7,200.00
G. Field Engineering Inspector	hours	480	$ 82.01	$39,364.80
	SUBTOTAL - FIELD EXPLORATION			**$166,094.80**
III. LABORATORY TESTING				
A. Visual Engineering Classification	hours	64	$ 82.01	$5,248.64
B. Moisture Content Test	each	80	$ 15.00	$1,200.00
C. Organic Content Test	each	20	$ 50.00	$1,000.00
D. Full Grain Size Distribution	each	80	$ 75.00	$6,000.00
E. Atterberg Limits	each	4	$ 80.00	$320.00
F. Laboratory Permeability Testing	each	4	$ 500.00	$2,000.00
	SUBTOTAL - LABORATORY TESTING			**$15,768.64**
IV. ENGINEERING & REPORT PREPARATION				
A. Principal Engineer	hours	40	$ 192.73	$7,709.20
B. Senior Geotechnical Engineer	hours	120	$ 141.95	$17,034.00
C. Engineer, P.E.	hours	200	$ 110.95	$22,190.00
D. Staff Engineer	hours	100	$ 83.17	$8,317.00
E. Senior Engineering Technician	hours	32	$ 82.01	$2,624.32
F. Drafter/CADD	hours	24	$ 60.00	$1,440.00
G. Engineering Technician	hours	12	$ 56.04	$672.48
	SUBTOTAL - ENGINEERING			**$59,987.00**

V. PROJECT MANAGEMENT & MEETINGS				
A. Principal Engineer	hours	32	$ 192.73	$6,167.36
B. Senior Geotechnical Engineer	hours	80	$ 141.95	$11,356.00
C. Engineer, P.E. (Radise - SBE)	hours	12	$ 110.95	$1,331.40
D. Staff Engineer	hours	0	$ 83.17	$0.00
E. Senior Engineering Technician	hours	0	$ 82.01	$0.00
F. Drafter/CADD	hours	0	$ 60.00	$0.00
G. Engineering Technician	hours	0	$ 56.04	$0.00
SUBTOTAL - ENGINEERING				**$18,854.76**
TOTAL - GEOTECHNICAL				**$269,189.44**
Maximum Limiting Amount				**$269,189**

Radise - SBE: Indicates work to be performed by Small Business Enterprise Radise International, LC

RADISE
INTERNATIONAL

March 17, 2020

Terracon Consultants, Inc.
1225 Omar Rd
West Palm Beach, FL 33405

Attn.: Mr. Jaime Velez, P.E.
Email: jaime.velez@terracon.com

RE: Drilling Services Proposal
PBC Loxahatchee River Watershed Hydrologic Refinement
Palm Beach County, Florida

Dear Mr. Velez, P.E.,

RADISE International, L.C. (RADISE) is pleased to submit this proposal to provide drilling services for the above referenced project. This proposal presents our proposed scope of work, and establishes our schedule and fee for performing the work.

SCOPE OF SERVICES

The proposed scope of work for the project consists of the following:

1. Visit the site to field mark (paint and/or stake) the planned boring locations and observe existing site conditions.
2. Contact Sunshine 811 to request field location and clearance of underground utilities in the areas of the borings as per Florida Statutes.
3. Mobilize personnel, truck-mounted and track-mounted drilling equipment to the site.
4. Perform ninety (90) Standard Penetration Tests (SPT) borings to depths of 20 feet in accordance with ASTM D-1586. Samples will be collected continuously to a depth of 10 feet and in 5 feet intervals thereafter.
5. Following the completion of the drilling operations, the boreholes will be backfilled with bentonite and/or grout.
6. A representative from Terracon Consultants, Inc. will supervise the field explorations.

SCHEDULE

Mobilization for the drilling operations will occur within 4 weeks of notice to proceed. The specified field drilling work is expected to require 3 to 4 weeks to complete.

COMPENSATION & TERMS

Based upon our understanding of the project and interpretation of your requirements, we propose to perform the scope of work outlined previously for a not to exceed fee of **$45,749.64**, as detailed in the Fee Breakdown on Attachment A. We will bill on a unit rate basis for the actual work performed in the field. Our work will be performed in accordance with the General Terms and Conditions included as part of this proposal as Attachment B.

Soil samples obtained from the drilling operations will be collected by Terracon Consultants, Inc. field representative following the completion of the field work.

CLOSURE

We appreciate the opportunity to provide our services for this project, and trust that the scope of work and fee presented in this proposal are clear and understandable. Should the proposal contents require any clarification or amplification, please feel free to contact us.

Sincerely,
RADISE International, L.C.

Andrew Nixon, P.E.
Operations Manager

Attachments: A – Fee Estimate
B – Terms and Conditions

-oOo-

Agreed to this _____ day of _____, 2020

_____
Name

_____
Title

_____
Company

RADISE INTERNATIONAL

ATTACHMENT A - FEE ESTIMATE
GEOTECHNICAL ENGINEERING SERVICES
PBC Loxahatchee River Watershed Hydrologic Refinement
Palm Beach County, Florida

		Qty	Unit	Unit Price	Unit Contract ID	Total
1.0	**UTILITY COORDINATION**					
1.1	Stake Borings (Senior Engineering Technician)	24	Hour	$ 82.01	VIII.5	$ 1,968.24
1.2	Utility Coordination (Engineer, PE)	16	Hour	$ 110.95	VIII.3	$ 1,775.20
				TOTAL UTILITY COORIDATION		**$ 1,968.24**
2.0	**FIELD EXPLORATIONS (EST. 3-4 WEEKS)**					
2.1	Mobilization of Drilling Equipment to Project (50-Mile Travel)	3	Each	$ 350.00	VI.8.1	$ 1,050.00
2.2	SPT Borings (90 to 20')					
2.2.1	Standard Penetration Test - Truck Rig (0'-50')	1800	Foot	$ 13.00	VI.3	$ 23,400.00
2.2.2	Casing (0' to 50')	1800	Foot	$ 6.00	VI.5	$ 10,800.00
2.2.3	Grout Bore Holes (0' to 50')	1800	Foot	$ 4.00	VI.4	$ 7,200.00
				TOTAL FIELD WORK		**$ 42,450.00**
3.0	**FIELD COORDINATION & PROJECT MANAGEMENT**					
3.1	Engineer, PE	12	Hour	$ 110.95	VIII.3	$ 1,331.40
				TOTAL PROFESSIONAL SERVICES		**$ 1,331.40**
					TOTAL AMOUNT	**$ 45,749.64**

ERM CONTRACT HISTORY
Terracon Consultants, Inc.
Continuing Contract for Construction Materials Testing, Geotechnical Engineering & Inspection (Testing Lab) Annual Services

Contract R2017-1660 dated November 7, 2017 expiring on November 6, 2018.
Second Amendment (R2018-1325) dated September 18, 2018 extends the contract through November 6, 2019.
Third Amendment (R2019-1121) dated August 20, 2019 extends the contract through November 6, 2020.
SBE Goal: 16% (8% SBE-Woman; 8% SBE-Asian Pacific)
Task Order Summary:

TASK NUMBER	TOTAL/ SBE and/or MWBE AMOUNT	TASK DUE DATE	TASK DESCRIPTION	APPROVED BY/DATE
ERM19-05	10,021.67 0.00	12/31/2019	Loxahatchee Slough Natural Area Pile Installation Testing	ERM 5/7/2019
ERM20-02	269,189.44 45,749.64	3/31/2021	Loxahatchee River Watershed Hydrological Refinements - Phase I	BCC

Total: 279,211.11
SBE-MBE: 45,749.64
SBE-MBE Participation: 16.4%
Report Date & Filename: 04/14/20 T:\eer\engser\Consultants\Terracon Consultants 2017-2019\[history 1660.xls]Sheet1