

**F. Consent Agenda - Natural Resources Management
ITEM 2.**



**AGENDA REPORT
July 9, 2019**

**Task Order Agreement to Furnish Professional Engineering Services for
Mud Lake Phase 1 Drainage Improvements**

SUBJECT:

Approval Re: Task Order Agreement to Furnish Professional Engineering Services for Mud Lake Phase 1 Drainage Improvements - District 2. (Fiscal Impact: \$137,703)

FISCAL IMPACT:

FY 2019-2020 \$137,703 (D2) 1112/260030 Stormwater Utility Funds

DEPT/OFFICE:

Natural Resources Management

REQUESTED ACTION:

It is requested that the Board of County Commissioners: 1) approve and authorize the Chair to execute the Task Order Agreement between Brevard County and Tetra Tech, Inc. to Furnish Professional Engineering Services for Mud Lake Phase 1 Drainage Improvements; and 2) Authorize the County Manager, or designee, to execute future change orders and Project associated agreements subject to the approval of the County Attorney's Office and Risk Management.

SUMMARY EXPLANATION and BACKGROUND:

The County is undertaking an effort to provide drainage improvements to the unincorporated area south of Mud Lake, in Cocoa. The next step is to begin design of the Mud Lake Drainage Improvements Project; a portion of the larger West Cocoa drainage improvements.

Mud Lake is located east of I-95 between SR 524 & SR 520 and receives runoff from the surrounding areas of unincorporated Brevard County and the City of Cocoa. The lake discharges past hundreds of low elevation homes; through a series of culverts and canals leading to the St. Johns River. This project would provide additional flood relief for those low-lying properties. The County is also seeking to expand the flood storage capacity of the planned improvements around Mud Lake to increase the benefits of the project.

Previously, Pegasus Engineering tested multiple flood relief options and recommended 17 drainage improvements. Many of these focused on conveyance upgrades, such as enlarging drainage ditches and replacing pipes with larger box culverts. Pegasus also recommended increasing the storage in Mud Lake and adding control structures to

regulate the outflow to reduce flooding in the downstream areas.

The County has requested that Tetra Tech, Inc. update the drainage model; optimize and provide an update of the Mud Lake Project to meet the requirements of the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) for engineered drainage improvement projects including pre-project and post-project flood elevation updates, prepare the construction plan sets, and complete all required permitting, as well as provide bid support and construction phase support.

CLERK TO THE BOARD INSTRUCTIONS:

A total of three (3) signed original Task Order agreements are needed – one (1) for the Clerk to the Board, one (1) for NRM, and one (1) for Tetra Tech, Inc.

ATTACHMENTS:

Description

- **AO-29**
- **Task Order**

**BREVARD COUNTY
BOARD OF COUNTY COMMISSIONERS**

INITIAL CONTRACT REVIEW AND APPROVAL FORM

SECTION I - GENERAL INFORMATION

1. Contractor: Tetra Tech, Inc.	
2. Fund/Account #: 1112 / 260050 Stormwater	3. Department Name: Natural Resources
4. Contract Description: Mud Lake Task Order FEMA grant	
5. Contract Monitor: Jeff Rapolti (Interim) x 56120	7. Contract Type: CONSULTANT
6. Dept/Office Director: Virginia Barker	

SECTION II - REVIEW AND APPROVAL TO ADVERTISE

<u>COUNTY OFFICE</u>	<u>APPROVAL</u>		<u>SIGNATURE</u>	<u>DATE</u>
	<u>YES</u>	<u>NO</u>		
User Agency	<input checked="" type="checkbox"/>	<input type="checkbox"/>		05/15/2019
Risk Management	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
County Attorney	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

SECTION III - REVIEW AND APPROVAL TO EXECUTE

<u>COUNTY OFFICE</u>	<u>APPROVAL</u>		<u>SIGNATURE</u>	<u>DATE</u>
	<u>YES</u>	<u>NO</u>		
User Agency	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
Risk Management	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
County Attorney	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Valliere, Christine <small>Digital Signature (www.Christine.com) Date: 2019.05.21 09:27:40 AM</small>	05/21/2019

SECTION IV - CONTRACTS MANAGEMENT DATABASE CHECKLIST

<u>CM DATABASE REQUIRED FIELDS</u>	<u>Complete</u> ✓
Department Information	<input type="checkbox"/>
Department	<input type="checkbox"/>
Program	<input type="checkbox"/>
Contact Name	<input type="checkbox"/>
Cost Center, Fund, and G/L Account	<input type="checkbox"/>
Vendor Information (SAP Vendor #)	<input type="checkbox"/>
Contract Status	<input type="checkbox"/>
Contract Title	<input type="checkbox"/>
Contract Type	<input type="checkbox"/>
Contract Amount	<input type="checkbox"/>
Storage Location (SAP)	<input type="checkbox"/>
Contract Approval Date	<input type="checkbox"/>
Contract Effective Date	<input type="checkbox"/>
Contract Expiration Date	<input type="checkbox"/>
Contract Absolute End Date (No Additional Renewals/Extensions)	<input type="checkbox"/>
Material Group	<input type="checkbox"/>
Contract Documents Uploaded in CM database (Initial Contract Form with County Attorney/ Risk Management Approval; Signed/Executed Contract)	<input type="checkbox"/>
"Right To Audit" Clause Included in Contract	<input type="checkbox"/>
Monitored items: Uploaded to database (Insurance, Bonds, etc.)	<input type="checkbox"/>

**BREVARD COUNTY
BOARD OF COUNTY COMMISSIONERS**

INITIAL CONTRACT REVIEW AND APPROVAL FORM

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SECTION II - REVIEW AND APPROVAL TO ADVERTISE

COUNTY OFFICE	APPROVAL		SIGNATURE	DATE
	YES	NO		
User Agency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	_____
Risk Management	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
County Attorney	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

SECTION III - REVIEW AND APPROVAL TO EXECUTE

COUNTY OFFICE	APPROVAL		SIGNATURE	DATE
	YES	NO		
User Agency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	 _____	05/24/2019
Risk Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Matt Lairsey _____	05/24/2019
County Attorney	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

SECTION IV - CONTRACTS MANAGEMENT DATABASE CHECKLIST

CM DATABASE REQUIRED FIELDS	Complete ✓
Department Information	<input type="checkbox"/>
Department	<input type="checkbox"/>
Program	<input type="checkbox"/>
Contact Name	<input type="checkbox"/>
Cost Center, Fund, and G/L Account	<input type="checkbox"/>
Vendor Information (SAP Vendor #)	<input type="checkbox"/>
Contract Status	<input type="checkbox"/>
Contract Title	<input type="checkbox"/>
Contract Type	<input type="checkbox"/>
Contract Amount	<input type="checkbox"/>
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Contract Effective Date	<input type="checkbox"/>
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Material Group	<input type="checkbox"/>
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"Right To Audit" Clause Included in Contract	<input type="checkbox"/>
Monitored items: Uploaded to database (Insurance, Bonds, etc.)	<input type="checkbox"/>



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972
Tammy.Rowe@brevardclerk.us

July 10, 2019

MEMORANDUM

TO: Virginia Barker, Natural Resources Management Director

RE: Item F.2., Task Order Agreement to Furnish Professional Engineering Services for Mud Lake Phase 1 Drainage Improvements

The Board of County Commissioners, in regular session on July 9, 2019, approved and authorized the Chair to execute the Task Order Agreement between Brevard County and Tetra Tech, Inc. to furnish professional engineering services for Mud Lake Phase 1 drainage improvements; and authorized the County Manager, or his designee, to execute future change orders and project associated agreements subject to County Attorney and Risk Management approval. Enclosed are two executed Task Order Agreements.

Upon execution by Tetra Tech, Inc., please return a fully-executed Task Order Agreement to this office for inclusion in the official minutes.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe, Deputy Clerk

/kp

Encls. (2)

cc: Finance
Budget

**AGREEMENT TO FURNISH PROFESSIONAL
ENGINEERING SERVICES FOR:
MUD LAKE PHASE I DRAINAGE IMPROVEMENTS**

TASK ORDER NO. 14-015-06

This Agreement is made this 9 day of July, 2019, by Tetra Tech, Inc., hereinafter referred as the ENGINEER, and the COUNTY OF BREVARD, FLORIDA, hereinafter referred to as the COUNTY, and

WHEREAS, on July 23, 2014, the ENGINEER and the BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY entered into an AGREEMENT, wherein the ENGINEER agreed to furnish engineering services to the COUNTY as referred to in the AGREEMENT, and

WHEREAS, under SECTION II of the PROFESSIONAL SERVICES CONTRACT, the ENGINEER agrees to provide certain professional engineering services which shall be implemented by TASK ORDERS;

NOW, THEREFORE, the parties do mutually agree as follows:

Summary

The COUNTY is undertaking an effort to provide drainage improvements to the area south of Mud Lake, in Cocoa, Brevard County, Florida. Pegasus Engineering has conducted multiple iterations of proposed designs, the COUNTY is seeking to aggregate additional properties to increase the benefits of the project. Previously recommended drainage improvements focused on conveyance upgrades, such as enlarging drainage ditches and replacing pipes with box culverts. These improvements have reduced the number of surveyed homes in the flood zone from 205 to 103. Pegasus has recommended increasing the storage in Mud Lake and adding control structures to regulate the outflow to reduce flooding in the downstream areas.

The COUNTY has requested that ENGINEER provide an update of the current model from a user defined spatial reference ICPR3 model to a georeferenced ICPR4 model with Light Detection and Ranging (LiDAR); include an update to the previously conceptualized Mud Lake Project that meets the requirements of the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) for engineered drainage improvement projects (pre-project model run flood elevation, post-project model run flood elevation update, construction plan set preparation, all required permitting, etc.), bid support; and construction phase support.

Section I, Scope of Work

See Exhibit A

Section II, Schedule

See Exhibit A

Section III, Deliverables

See Exhibit A

Section IV. Compensation

For the scope of work described in Section I of this agreement, compensation from the COUNTY to the ENGINEER shall be on an hourly basis as indicated in the attached Exhibit B (actual expenses by category and tasks may vary from those indicated during the course of work), not to exceed \$137,703 unless authorized by a written Change Order executed by the COUNTY. Upon submittal of deliverables as described in Section III of this agreement, the COUNTY will be invoiced only for actual work performed. The County shall pay such invoices in accordance with Florida's Prompt Payment Act. The County reserves the right to refuse payment for or deduct from any invoice, fees for incomplete or defective work. The following is a summary of the fee breakdown:

A. Mud Lake Phase I Drainage Improvements (\$137,703)

- 1. Update previously designed project model from ICPR3 to ICPR4 - \$16,653
- 2. Update design of previously conceptualized Mud Lake Project - \$105,930
- 3. Construction Phase Support - \$13,499

Section V. Other Terms and Conditions

All of the terms and conditions of the Agreement shall apply to this Task Order as fully set out herein unless such terms and conditions are specifically superseded by the Terms and Conditions of this Task Order. It is hereby acknowledged that this Task Order is prepared based upon the master contract approved by the COUNTY on July 23, 2014 for engineering services, and such, this Task Order is subject to all conditions and stipulations contained in said contract, as amended.

PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF TETRA TECH, INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

Section VI. Effective Date and Authorized to Proceed

This Task Order shall be effective on the date specified in the Notice to Proceed from the COUNTY'S designated representative. This task order will expire one (1) year from the date of issuance of the Notice to Proceed unless otherwise extended through a subsequent change order.

IN WITNESS WHEREOF, the parties hereto set their hands and seals the date and year above written.

BREVARD COUNTY BOARD OF
COUNTY COMMISSIONERS

By: 
Kristine Isnardi, Chair
As approved by the Board on 07/09/19

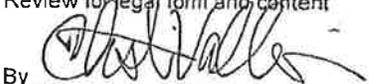
Date: July 9, 2019

TETRA TECH, INC.

By: _____
Brian Watson, PE, PH, D.WRE
Vice President, Southeast Regional Manager

Date: 5/24/2019

Review for legal form and content

By: 
Christine Valliere, Assistant County Attorney

ATTEST:


Scott Ellis, Clerk

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BREVARD COUNTY BOARD OF
COUNTY COMMISSIONERS

TETRA TECH, INC.

By: _____
Kristine Isnardi, Chair
As approved by the Board on _____

Brian J. Watson
By: _____
Brian Watson, PE, PH, D.WRE
Vice President, Southeast Regional Manager

Date: _____

Date: 5/24/2019

Review for legal form and content

By: *Christine Valliere*
Christine Valliere, Assistant County Attorney

EXHIBIT A
SCOPE OF WORK

MUD LAKE PHASE I DRAINAGE IMPROVEMENTS

EXHIBIT A

STATEMENT OF WORK

1 BACKGROUND

The proposed project is designed to provide drainage improvements to the area south of Mud Lake, in Cocoa, Brevard County, Florida. Pegasus Engineering has conducted multiple iterations of proposed designs, and Brevard County (County) is seeking to aggregate additional properties to increase the benefits of the project.

Previously recommended drainage improvements focused on conveyance upgrades, such as enlarging drainage ditches and replacing pipes with box culverts. These improvements have reduced the number of surveyed homes in the flood zone from 205 to 103. Pegasus has recommended increasing the storage in Mud Lake and adding control structures to regulate the outflow to reduce flooding in the downstream areas.

2 SCOPE OF WORK

The previously designed project has been modeled in Interconnected Channel and Pond Routing (ICPR) 3, and County would like to update and convert the model to ICPR4. The County has requested that Tetra Tech (ENGINEER) provide the following stormwater engineering services: Task 1 will need to include an update of the current model from a user defined spatial reference ICPR3 model to a georeferenced ICPR4 model with Light Detection and Ranging (LiDAR); Task 2 will need to include an update to the previously conceptualized Mud Lake Project that meets the requirements of the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) for engineered drainage improvement projects (pre-project model run flood elevation, post-project model run flood elevation update, construction plan set preparation, all required permitting, etc.) and bid support; and Task 3 will need to include construction phase support.

TASK 1.0: UPDATE PREVIOUSLY DESIGNED PROJECT MODEL FROM ICPR3 TO ICPR4

Consultant will update model from ICPR3 to ICPR4. This will include:

- A. Quality Assurance and Quality Control (QA/QC) of all inputs to the ICPR3 Model.
- B. Model update into ICPR4, based on the data provided in the Pegasus ICPR3.
- C. Hydrologic and hydraulic modeling – ENGINEER will compare the pre-project model flood elevations with the previously accepted ICPR3 results as a means of QAQC.

Deliverable: Draft and final ICPR4 Model and Model Conversion Technical Report.

TASK 2.0: UPDATE DESIGN OF PREVIOUSLY CONCEPTUALIZED MUD LAKE PROJECT

- A. Data Gathering - ENGINEER will gather various files consisting of, but not limited to, ownership and easements; inventory data of stormwater infrastructure; any as-built drawings of stormwater infrastructure; existing reports; permits; soils reports within the general area; water quality data; and any GIS LiDAR topographic data that may be available.

- B. Field Reconnaissance – ENGINEER will perform field reconnaissance within the proposed project boundaries. Using the LiDAR data, ENGINEER will evaluate the watershed boundaries for any adjustments that may be necessary with current field conditions.
- C. Survey – ENGINEER will provide survey services on an as needed basis based on the review of the existing model. It is assumed that no more than one day of survey work will be required. Additional survey will be completed for the wetland delineation in subtask F, below.
- D. Hydrologic and hydraulic modeling – ENGINEER will update the model using data gathered during the field reconnaissance and survey and then prepare a post-project model run for flood elevations using ICPR4.
- E. Geotechnical Evaluation – Existing geotechnical data will be used for the design; however, additional geotechnical borings may be required along the approximately 1,000 feet of previously proposed elevated road, 2 borings as needed to a depth sufficient to locate the ground water table along the proposed berm, and up to 5 additional borings in other areas may be necessary to capture any gaps in the previous design data. The geotechnical evaluation will include the collection of 5 3-inch Shelby tubes for laboratory constant head permeability testing, and sample collection for sieve/gradation, Atterberg, and soil strength. Data obtained from the laboratory testing will be used to prepare a preliminary determination of soil bearing capacity for settlement, identify seasonal high saturation levels, and provide infiltration calculations.
- F. Biological – ENGINEER will conduct a biological evaluation which will include a cursory review of the previously investigated area to confirm the previous findings and evaluate for any changed conditions. This work will initiate with a desktop investigation including National Wetlands Inventory (NWI) wetlands, U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) soils, Florida Land Use, Cover, and Forms Classification System (FLUCFCS) mapping of on-site land uses, Florida Fish & Wildlife Conservation Commission (FFWCC) listed species habitats and associated data, U.S. Fish & Wildlife Service (USFWS) Consultation Areas, and any other applicable publicly available resources with potential to effect.

Field reconnaissance will consist of up to eight days for wetlands delineation and one additional day for an ecological evaluation. ENGINEER's Senior Ecologist will perform field reconnaissance and conduct a review of wetlands for quality and preliminary Uniform Mitigation Assessment Method (UMAM) scoring. A wetland delineation will be completed for the project area within the 20.7 feet NAVD elevation and upgradient of the proposed berm. A site meeting with Florida Department of Environmental Protection (FDEP) and United States Army Corps of Engineers (USACE) (as necessary) will be completed to obtain concurrence on the delineated wetland limits. Based on conversations with Brevard County, it is assumed that mitigation will not be required for this project so long as the design will satisfy the requirements of the necessary permitting agencies.

During the field reconnaissance, ENGINEER will perform a visual inspection of the site for presence/probable absence and suitability of habitat for rare, threatened, and endangered (RTE) species to inhabit the site.

- G. Engineering Design - ENGINEER will prepare site plans and details showing the proposed installation of the structural BMP, associated filling activities, control structures, erosion and sedimentation control measures and stabilization requirements.

- H. Permitting - ENGINEER will arrange for a preapplication meeting with the FDEP, Saint John's River Water Management District (SJRWMD), and USACE, and all utilities with easements in the project area as applicable. Engineer will prepare and submit a Standard General Environmental Resource Permit (ERP) application to FDEP and SJRWMD, and complete a USACE Section 404 permit, as well as any other agency approvals and/or permitting as necessary.

The permitting subtask includes a pre-application meeting, minor assistance with approval from utilities, and up to two requests for information from the regulatory agencies.

I. Bid Support

- a. ENGINEER will work with County staff to provide a master copy of the Bid Set construction drawings and technical specifications. County will be responsible for distribution of bid packages to potential bidders.
- b. Support with addenda - ENGINEER will respond to technical questions issued for this project during the bidding process. ENGINEER will respond to questions via email for expedited response time and will generate necessary supporting documents.
- c. ENGINEER will attend the pre-bid meeting at the County.

Deliverables:

Field Reconnaissance Memo

Draft and final ICPR4 Model and Model Scenario Technical Report.

Site Plans: 60% for County Review, 90% for ERP Submittal, and 100% for County bid packages. Each Site Plan will include:

- Cover Sheet
- Index of Drawings
- Existing Site Conditions and Erosion Control Plan
- Site Geometry Plan
- Grading and Drainage Plan
- Details

ERP and USACE Section 404 Permitting Documents.

Additional agency permitting documents as necessary.

Two responses to agency requests for information (as necessary) and two minor modifications to design plans (as necessary).

TASK 3.0: CONSTRUCTION PHASE SUPPORT

- A. ENGINEER will attend preconstruction conference at the County.
- B. ENGINEER will evaluate Change Order requests and advise the County accordingly.
- C. ENGINEER will review constructed quantities and review pay requests and sign them prior to issuance to the County for final approval.

- D. County staff will conduct daily inspections of the proposed construction. ENGINEER will conduct weekly site visits during construction, including following placement of the erosion and sedimentation measures, and the final visit will take place at the completion of construction. ENGINEER will prepare a punch list of incomplete or unacceptable items which will be observed by County staff for verification of completion.
- E. Tetra Tech will review the as-built survey drawings provided by the contractor and submit the completion of construction certification documentation to the SJRWMD.

Deliverables:

Draft and final meeting minutes

Weekly (assuming 8 weeks of construction) and final punch-list items

Construction Certification to SJRWMD

3 SCHEDULE

TASK 1:

Complete Task 1A in 3 to 4 weeks from notice to proceed.

Complete Task 1B in 6 to 8 weeks from notice to proceed, assuming nodes do not require extensive updates.

Deliverable: Draft ICPR4 model and model report will be due 8 weeks from notice to proceed. Assuming a 1-week review period by the County, the Final ICPR4 model and model report will be due 12 weeks from notice to proceed.

TASK 2:

Deliverables:

Field Reconnaissance Memo due 14 weeks from notice to proceed.

Delivery of ICPR4 Model and Model Scenario Technical Report due 22 to 24 weeks following notice to proceed along with 90% Site Plan submittal.

Site Plans:

60% for County Review – Due 16 to 18 weeks from notice to proceed.

90% for ERP Submittal – Assuming 1 week for County Review of 60% Site Plan, Due 22 to 24 weeks from notice to proceed.

100% for County bid packages – Due within 3 weeks of Permit Approval.

ERP and USACE Section 404 Permitting Documents – Due 22 to 24 weeks from notice to proceed.

Two responses to agency requests for information (as necessary) and two modifications to design plans (as necessary).

TASK 3:

Schedule will be dependent upon permitting, County construction bidding, and award process.

4 COMPENSATION

Total compensation for this project will be on a time and material basis not to exceed \$137,703.

5 EXCLUSIONS AND ASSUMPTIONS

- Schedule assumes County response time for requests and reviews will be within one week.
- Permitting and public notice advertising fees are not included.
- Cultural resource field surveys are not included.
- No dredging of federal project channels will be involved with this permitting.
- All survey data will be provided in correct datum. Conversions in datum from existing ICPR3 model is not included.
- Project assumes no wetlands restoration or mitigation will be required.
- Construction budget assumes 8 weeks of construction.

EXHIBIT B
FEE ESTIMATE

EXHIBIT B

FEE BREAKDOWN – HOUR ESTIMATE STANDARD HOURLY RATES (PER APPROVED CONTRACT)

Task 1.0 Update ICPR 3 to ICPR4

Senior Project Manager 10 hours @ \$180.62/hour = \$1,806
 Senior Professional Scientist 4 hours @ \$165.14/hour = \$661
 Professional Engineer 10 hours @ \$129.01/hour = \$1,290
 Professional Scientist 20 hours @ \$129.01/hour = \$2,580
 Staff Engineer 104 hours @ \$98.01/hour = \$10,193
 Administrative Support 2 hours @ \$61.93/hour = \$124
Subtotal Item = \$16,653

Task 2.0 Update Design of Previously Conceptualized Mud Lake Project

The table below shows the Personnel and hours required for the following subtasks:

- A. Data Gathering
- B. Field Reconnaissance
- C. Survey
- D. Hydrologic and hydraulic modeling
- E. Geotechnical Evaluation
- F. Biological
- G. Engineering Design
- H. Permitting
- I. Bid Support

Personnel	Rate	SUB TASKS HOURS									Total Hours	TOTAL
		A	B	C	D	E	F	G	H	I		
Principal/SR Project Manager	\$180.62							24			24	\$4,334.88
SR Professional Engineer/Scientist	\$165.14	4	6			4	4	2	12	2	34	\$5,614.76
Professional Engineer	\$129.01	20	8			4	2	160	40	40	274	\$35,348.74
Professional Scientist	\$129.01						114		22		136	\$17,545.36
Professional Scientist	\$129.01				15						15	\$1,935.15
Staff Engineer/Scientist	\$ 98.01				68						68	\$6,664.34
Sr CADD/GIS	\$ 92.89						5	80		10	95	\$8,824.55
CADD/GIS Tech	\$ 85.00						5	80		10	95	\$8,075.00
Surveyor (P.L.S.)	\$ 98.05			10			30				40	\$3,922.00
2 Person Survey Crew	\$134.17			10			30				40	\$5,366.80
Administrative Support	\$ 61.93	0	0	1	1	1	2	2	2	2	11	\$681.23
TOTAL		24	14	21	84	9	192	348	76	64	832	\$98,312.81

Subtotal Item = \$98,313

Task 3.0 Construction Phase Support

Senior Project Manager 8 hours @ \$180.62/hour = \$1,445
 Senior Professional Scientist 4 hours @ \$165.14/hour = \$661
 Professional Engineer 46 hours @ \$129.01/hour = \$5,934
 Construction Inspector 60 hours @ \$72.25/hour = \$4,335
 Administrative Support 2 hours @ \$61.93/hour = \$124
Subtotal Item = \$13,499

**Exhibit B – Fee Proposal Brevard CIP 2017 Rates Template
Mud Lake Phase I 2019**

Brevard County Mud Lake ICPR4 Model and Design Update				Task 1.0: Update ICPR3 Model to ICPR4		TASK 2.0: UPDATE PREVIOUS CONCEPT		TASK 3.0: CONSTRUCTION PHASE SUPPORT		SUMMARY - All Tasks	
				Hours/ Units	Billed Cost	Hours/ Units	Billed Cost	Hours/ Units	Billed Cost	Hours/ Units	Billed Cost
<u>LABOR</u>	<u>CLASSIFICATION</u>	<u>EMPLOYEES</u>	<u>RATE</u>	Hours		Hours		Hours		Hours	
Principal/SR Project Manager		Wilson/Shmurak	\$ 180.62	10	\$ 1,806	24	\$ 4,335	8	\$ 1,445	42.0	\$ 7,586
SR Professional Engineer/Scientist		Stellon	\$ 165.14	4	\$ 661	34	\$ 5,615	4	\$ 661	42.0	\$ 6,936
Professional Engineer		Berg	\$ 129.01	10	\$ 1,290	274	\$ 35,349	46	\$ 5,934	330.0	\$ 42,573
Professional Scientist		Holly	\$ 129.01		\$ -	138	\$ 17,545		\$ -	136.0	\$ 17,545
Professional Scientist		Wyss	\$ 129.01	.20	\$ 2,580	16	\$ 1,935		\$ -	35.0	\$ 4,515
Staff Engineer/Scientist		Lincoln/Akasapu-smith	\$ 98.01	104	\$ 10,193	68	\$ 6,664		\$ -	172.0	\$ 16,857
Sr CADD/GIS		Pfls/Gwinn	\$ 82.80		\$ -	95	\$ 8,825		\$ -	95.0	\$ 8,825
CADD/GIS Tech		Curry	\$ 85.00		\$ -	95	\$ 8,075		\$ -	95.0	\$ 8,075
Surveyor (P.L.S.)		Niarhos	\$ 98.05		\$ -	40	\$ 3,822		\$ -	40.0	\$ 3,922
2 Person Survey Crew		varies	\$ 134.17		\$ -	40	\$ 5,367		\$ -	40.0	\$ 5,367
Construction Inspector		Thomas Foster	\$ 72.26		\$ -		\$ -	60	\$ 4,335	60.0	\$ 4,335
Administrative Support		Keller	\$ 61.83	2	\$ 124	11	\$ 681	2	\$ 124	15.0	\$ 929
Subtotal Labor				150	\$ 16,653	532	\$ 98,313	120	\$ 12,499	1,102	\$ 127,465
<u>SUBCONTRACTOR</u>				Units		Units		Units		Units	
Geotech Services		Ardaman	\$ 6,980		\$ -	1	\$ 6,980		\$ -	1.0	\$ 6,980
Subtotal Subcontractor					\$ -		\$ 6,980		\$ -	1.0	\$ 6,980
Fee			10%		\$ -		\$ 698		\$ -		\$ 698
Subtotal Subcontractor and Fee					\$ -		\$ 7,678		\$ -		\$ 7,678
<u>MATERIALS AND EQUIPMENT</u>											
Subtotal Materials and Equipment					\$ -		\$ -		\$ -		\$ -
Fee			10%		\$ -		\$ -		\$ -		\$ -
Subtotal Materials, Equipment, and Fee					\$ -		\$ -		\$ -		\$ -
<u>OTHER DIRECT COSTS (ODCs)</u>											
1st Truck Day (for wetlands delineation and construction)			\$100.00		\$ -	10	\$ 1,000	10	\$ 1,000	20.0	\$ 2,000
Trimble GeoXT DGPS			\$50.00		\$ -	10	\$ 500		\$ -	10.0	\$ 500
Shipping/Postage/Binding			\$30.00		\$ -	2	\$ 60		\$ -	2.0	\$ 60
Subtotal ODCs (no fee)					\$ -		\$ 1,560		\$ 1,000		\$ 2,560
TOTAL COST					\$ 16,653		\$ 107,661		\$ 13,499		\$ 137,703