



225 E. Robinson Street
Suite 505
Orlando, FL 32801

June 29, 2016

Ms. Lynn Stevens, Deputy Director
City of Daytona Beach
Utilities Engineering Division
125 Basin Street, Ste. 100
Daytona Beach, FL 32114

RE: Bennett Swamp Aquifer Recharge Project
Work Authorization Agreement No. 9
Continuing Services Contract No. 6235-CH

Dear Ms. Stevens:

Please find attached CH2M HILL Engineers, Inc.'s ("CH2M" or "the Consultant") proposal for Work Authorization No. 9, Bennett Swamp Aquifer Recharge Project. This work will be performed in conformance with CH2M's Continuing Services Contract No. 6235-CH. This proposal includes our Scope of Services and Fee Schedule as outlined below.

Scope of Services: CH2M will provide professional engineering services to assist the City of Daytona Beach in the design, permitting, during bidding and construction, and monitoring of the Bennett Swamp Aquifer Recharge Project. Specifically, these services include:

- Phase I—Preparation of a Feasibility Report
- Phase II—Permitting
- Phase III—Design and Construction Documents
- Phase IV—Assistance During Bidding and Construction
- Phase V—Baseline and Operational Monitoring of the Hydrologic and Nutrient Budgets

Project Schedule: The services will commence immediately following the City's issuance of the purchase order and will continue until the project is complete. From the notice to proceed, CH2M will complete the project within 450 calendar days.

Compensation: The compensation for this assignment, as detailed above, will be a not to exceed limit of \$561,017.62. Labor and reimbursable expenses will be billed in accordance with the approved rates specified in Exhibit B of the Continuing Services Contract.

Phase I—Feasibility Report	\$80,043.62
Phase II—Permitting	\$63,130.28
Phase III—Design and Construction Documents	\$191,094.58
Phase IV—Assistance During Bidding and Construction	\$58,132.48
Phase V—Baseline and Operational Monitoring of the Hydrologic and Nutrient Budgets	\$89,817.56

Geotechnical Subconsultant Services	\$8,705.80
Surveying Subconsultant Services	\$39,964.20
Expenses	\$30,129.10

TOTAL FEE NOT TO EXCEED \$561,017.62

The following attachments are incorporated into this Proposal:

- Attachment "A" Scope of Services
- Attachment "A.1" Geotechnical Subconsultant Scope of Services and Fee Proposal
- Attachment "A.2" Surveying Subconsultant Scope of Services and Fee Proposal
- Attachment "B" Project Schedule
- Attachment "C" (5 pages) Compensation Schedule (breakdown of the man hours and expenses by the 5 phases noted above)

This Proposal is valid for 60 days from the date shown in the header. If this Proposal is acceptable to you, please issue a Purchase Order to CH2M HILL Engineers, Inc. under Continuing Services Contract No. 6235-CH, Work Authorization No. 9.

Should you have any questions and/or comments regarding this Proposal, please do not hesitate to contact Timothy Walsh (407-650-2182).

Respectfully,

CH2M HILL Engineers, Inc.



Nancy Belding
Regional Contracts Manager

Enclosure

cc: Timothy B. Walsh, P.E./CH2M

Attachment A
TMDL Reduction to Halifax River/Aquifer Recharge
Design/Permitting/Assistance During Construction/Monitoring

Scope of Services

I. Introduction

The CONSULTANT shall provide Professional Stormwater and Environmental Engineering Services to design, permit, provide assistance during bidding and construction, and provide monitoring of the proposed aquifer recharge and wetland hydroperiod restoration of the Bennett Swamp by means of dispersing treated wastewater at a rate of 4 to 11.6 million gallons per day (MGD). This project will also provide environmental benefits to the Halifax River by reducing the nutrient loading by between 36,000 to 72,000 lbs of Nitrogen per year and as such reduce the Total Maximum Daily Load (TMDL). The project will be designed and permitted through FAC 62-611. The CONSULTANT shall provide these services in phases:

- Phase I—Feasibility Report
- Phase II—Permitting
- Phase III—Design and Construction Documents
- Phase IV—Assistance during Bidding and Construction
- Phase V—Baseline and Operational Monitoring of the Hydrologic and Nutrient Budgets

Some of these phases will run concurrent. Detailed descriptions of the scopes of work for the various phases are described below:

II. Phase I—Feasibility Report

The CONSULTANT shall prepare a Feasibility Report. The purpose of the Feasibility Report is to provide the CITY with sufficient information to decide on whether or not to move forward with the next phase. The Feasibility Report will determine the:

- A. Quantity of flow that will be applied
- B. Route and Type of dispersal pipe/system
- C. Permitting requirements
- D. Engineer's Opinion of Probable Construction Costs
- E. Integrated Monitoring Plan

II.A. Quantity of Flow

The CONSULTANT shall evaluate and make a recommendation of the quantity of flow based upon:

- Site visits by engineers and environmental scientists
- Existing conditions and available reports and calculations (i.e. Indian Lake MFL groundwater models and Tomoka River TMDL)
- Consultations with appropriate staff at the permitting agencies
- Water balance type hydrologic calculations
- Review of quantity of flow by senior ecologists, hydrogeologists, civil engineers and agricultural engineers

II.B. Route and Type of Dispersal Pipe/System

The intent of the project is to disperse the flow across the Bennett Swamp in order to maximize the recharge amount. The CONSULTANT shall develop alternative concepts and meet with various agencies to determine a cost effective and permittable alternative.

II.C. Permitting Requirements

The CONSULTANT shall coordinate with various affected agencies to explain the project and establish permitting requirements. Depending upon the permitting agency schedules, the CONSULTANT will attempt to meet at agency offices and/or on site. However, the inability of the permitting agencies to schedule their staff to meet either at their office and/or on site shall not be a basis for delay for the Feasibility Report. Agencies to be contacted will include:

- Florida Division of Forestry (DOF)—Land Managers
- St. Johns River Water Management District (SJRWMD)—Land Managers/Consumptive Use Permit/Indian Lake MFL/Environmental Resource Permit/Submerged Land Lease
- Florida Department of Environmental Protection (FDEP)—FAC 62-611 Wetlands Application/WWTP NPDES Permits/Halifax River and Tomoka River TMDL studies
- US Army Corps of Engineers (ACOE)—Federal Dredge & Fill Permit
- Florida Department of Transportation (FDOT)—International Speedway Blvd (ISB) Outfall of Bennett Swamp
- Volusia County—Pipe Crossing of LPGA Boulevard—if required

These meetings/correspondence and coordination activities will be documented in the Feasibility Report.

II.D. Engineer's Opinion of Probable Construction Cost

The CONSULTANT shall prepare an Engineer's Opinion of Probable Construction Cost for the valving/pumping requirements at the WWTP plant, the single day flow holding pond (if required), the force main to Bennett Swamp and Dispersal Pipe/System. The CONSULTANT shall develop these opinions of cost based upon:

- Similar projects and components designed by the CONSULTANT
- Available construction cost data
- Input from local contractors

II.E. Integrated Monitoring Plan

The CONSULTANT shall prepare an integrated monitoring plan that will satisfy the monitoring requirements of

- Existing SJRWMD CUP requirements
- FDEP 62-611 requirements
- FDEP grant performance requirements

- SJRWMD grant performance requirements
- Optimization of flow requirements to maximize recharge but not adversely affect the Tomoka River TMDL

Initial specific levels of analysis, details of data to be provided and format of reporting documents will be coordinated with affected agencies.

III. Phase II—Permitting

The CONSULTANT and the CITY anticipate that multiple permits and/or regulatory approvals will be required for this project. Both parties also understand that the successful completion of this permitting process is a critical path to the construction and the funding of the project. These permits and/or approvals are through different regulatory agencies and each will have different submittal content (application forms, reports, plans, sketches and legal descriptions, etc.) and require review through different processes. This application content and review process will be identified in the Feasibility Report (Section II.C.)

The CONSULTANT shall prepare the various submittal packages at the earliest time that the information for the various applications becomes available. Application packages will be prepared and provided for the CITY to review and submit. The CONSULTANT shall assist the CITY with the submittal and processing. This assistance may include:

- Pre-Application meetings to explain the project, explain the importance of the permitting process to the schedule and the state funding
- Electronic filing of the application (if appropriate)
- A followup meeting shortly after the submittal to review the content and provide any additional technical information that may be required
- Additional meetings, correspondence and contacts to eliminate and/or reduce any Requests for Additional Information (RAIs)
- Responding to RAIs in a timely manner, including any followup meetings, correspondence and contacts

The CONSULTANT shall keep the CITY up to date with the status of each permit and/or approval process.

IV. Phase III Design and Construction Documents

The CONSULTANT shall prepare design and construction documents suitable for bidding by the CITY. It is agreed by both parties that a single construction project will be prepared. The CONSULTANT shall coordinate with designated CITY staff for the design, materials of construction, and content of the construction plans and specifications with respect to the structure of bidding pay items and the operation and maintenance of the system. In addition to the standard construction drawings (i.e. Key Sheet, Drainage Maps, General Notes, Standard Details, etc.) the components of these bidding and construction documents shall include:

- A. One Day Holding Pond
- B. Pumping/Valving System
- C. Force Main to Bennett Swamp
- D. Dispersal System

- E. Technical Specifications
- F. Bidding Forms
- G. Engineer's Opinion of Probable Construction Cost

IV.A. One Day Holding Pond

If required by the permitting agencies, the CONSULTANT shall prepare construction plan documents for a One Day Holding Pond. It is anticipated that the details of this component will include a grading plan and design details including piping to the pond as well as return details. The location of the pond will be coordinated with designated CITY staff.

IV.B. Pumping/Valving System

The CONSULTANT shall prepare construction drawings for the pumping/valving system from the WWTP to the entrance road. These plans will be coordinated with CITY staff to determine acceptable routes and piping systems. Included in these designs will be flow monitoring devices, pressure modulating devices and shall consider potential future expansion of the WWTP facilities. Existing WTP plans, provided by the CITY as well as supplemental surveys will be utilized to layout the route and type of facilities. This component of the plans will be from the point of connection to the entrance road of the plant.

IV.C. Force Main to Bennett Swamp

The CONSULTANT shall design a pressurized force main from the WWTP plant to the Bennett Swamp. This design shall include designs to accommodate the proposed Bennett Swamp Transmission Lines. The CONSULTANT shall include provisions and design details to directionally drill the pipe across LPGA. The construction plans for this component shall include Plan/Profiles, CITY details with appropriate modification of those details and additional details.

IV.D. Dispersal Pipe/System

The CONSULTANT shall design a system to disperse the flow across the wetland. The type of system and route will be determined during the Phase I—Feasibility Report phase. The construction plans for this component shall include Plan/Profiles and details.

V. Phase IV Assistance During Bidding and Construction

The CONSULTANT shall provide assistance during bidding and construction. These services shall include:

- Coordination with Purchasing for Plans and Specifications Updates
- Attend Pre-Bid Conference
- Address Bidding RFIs—Prepare Bid Addenda
- Attend Bid Opening
- Review Bids—Provide Award Recommendation
- Attend Pre-Construction Meeting
- Attend Weekly Site Meetings—Approximately 20 meetings
- Attend Monthly Progress Meetings
- Address Construction RFIs—Prepare Plan and Specification Clarification

- Provide Product and Shop Drawing Review
- Review Contractor's Draw Requests
- Provide Project Closeout

VI. Phase V Baseline and Operational Monitoring

The CONSULTANT shall develop an integrated monitoring and analysis program that satisfies the permitting and grant performance requirements. The analysis shall include data from the existing piezometers (groundwater level/stage) as required by the CUP permit. The CONSULTANT shall install additional monitoring instrumentation. The monitoring program will be developed to include an analysis of the water and mass balances into and out of the Bennett Swamp. The analysis shall include evaluations to maximize the amount of recharge to the aquifer but minimize nutrient export above that assumed in the Tomoka River TMDL. The CONSULTANT shall perform the Baseline (pre-permitting) monitoring program and the first 3 months for the Operational (post construction) monitoring plan.

Per Condition 19 of the City's existing Consumptive Use Permit #2-127-8834-7, the CITY operates 13 existing monitoring wells. The CONSULTANT shall install an additional 5 monitoring wells with stage measurements with data loggers. The instrumentation shall be compatible with the existing CITY equipment. The cost of the materials and instrumentation will be expensed by the CONSULTANT to the CITY as part of the NOT TO EXCEED amount. Following installation and a 2 month burn in period, the data collection of these additional 5 wells shall be performed by CITY staff as part of their existing CUP monitoring permit.

Per the Wetlands Application Rule (Ch. 62-611, FAC), Baseline and Operational monitoring are required that consists of surface water, sediment, and biota field measurements/data collection. The Baseline monitoring must be performed before reclaimed water is permitted to be applied to the wetland. The CONSULTANT shall perform this Baseline monitoring of the surface water, sediment, and biota field measurements/data collection.

The Baseline surface water quality monitoring must occur once at a minimum of three permanent stations, one in the immediate vicinity of discharge into the wetland, one at the point of discharge near the Thayer Canal weir and one at the outfall near International Speedway Boulevard (ISB). Parameters to be sampled for include:

- Temperature and Dissolved oxygen for a 48-hr dawn-dusk period with a maximum of four (4) hour interval at each station
- pH and conductivity one field reading per station
- CBOD5, TSS, TP, TKN, NH₃, NO₃+NO₂, SO₄, fecal coliform, and chlorophyll a, one grab sample per station

Stage shall be monitored continuously at the points of discharge from the wetland to comply with the Wetlands Application Rule. Each monitoring station will be equipped with a stilling well installed 4 to 6 feet deep to be able to measure water level above or below ground surface.

Sediment sampling must occur once at a minimum of three permanent stations, one in the immediate vicinity of discharge, and two at the points of discharge for sulfur only.

Biota monitoring must occur once at a minimum of three permanent stations, one in the immediate vicinity of discharge, one in the approximate geographical middle of the wetland (the Thayer Canal location), and one at the point of discharge (ISB) for the following:

- Woody vegetation
- Herbaceous vegetation – line intercept method
- Fish
- Treatment and Endangered Plant and Animal Species List

The CONSULTANT shall gather the data, analyze and process it and compile it into a report. Hydraulic evaluations to aid in system design and planning will be included. Evaluations shall include water balance analysis, hydroperiod determination, estimations of infiltration rate, and projected application rate achievable based on regulatory limitations. The CONSULTANT shall prepare the report on a quarterly basis.

After the application of reclaimed water is permitted, the system is constructed and reclaimed water begins to flow to the wetland, an operational monitoring program must be followed where surface water samples shall be taken quarterly, sediment shall be taken annually, and biota shall be taken quarterly at the same station locations as during the baseline monitoring. Stage monitoring at the wetland outlet shall be continuous from the baseline program. The CONSULTANT shall perform the first quarterly monitoring and prepare the first quarterly monitoring report. Performing additional quarterly monitoring and preparing reports will be considered as additional services.

VII. Subconsultant Services

The CONSULTANT shall obtain geotechnical and land surveying services to supplement existing data as may be required. The CONSULTANT shall seek to limit these services by utilizing existing available information, such as:

- Existing Volusia County Lidar data
- Existing CITY drawings/maps of the WWTP facilities
- Existing CITY plans/surveys/easements for the Bennett Swamp Transmission Lines

VII.A. Geotechnical Services

Universal Engineering Sciences shall provide geotechnical services. These services may include:

- Shallow hand auger borings along the Force Main to Bennett Swamp route to identify any coquina and/or rock formations
- Muck probes and mapping along the Dispersal Pipe/System route
- A contingency for supplemental geotechnical investigations for unforeseen conditions

A detailed scope of services and fee proposal is provided as Attachment A.1.

VII.B. Land Surveying Services

Sliger & Associates, Inc. shall provide land surveying services. These services may include:

- Topographic surveys for the One Day Holding Pond
- Supplemental surveys to existing CITY drawings of the WWTP for the Pumping/Valving System

- Supplemental surveys for the force main to Bennett Swamp. Note, it is assumed that the route of the force main will follow the existing dirt road along side of the Thayer Canal. However, this route may include traveling north along the existing dirt road through Tomoka Consolidated Land property
- Topographic surveys along the route of the Dispersal Pipe System
- Horizontal and Vertical Construction Control
- Sketches and Legal Descriptions as may be required for Submerged Land Easements across State of Florida lands and/or easements across Tomoka Consolidated Land property
- Wetland delineation mapping
- Surveys to tie in the horizontal and vertical location of additional piezometers and instrumentation as may be required by the Monitoring Plan
- A contingency for supplemental surveys for unforeseen conditions

A detailed scope of services and fee proposal is provided as Attachment A.2.

ATTACHMENT A.1 GEOTECHNICAL SERVICES



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:

- Atlanta
- Daytona Beach
- Fort Myers
- Fort Pierce
- Gainesville
- Jacksonville
- Kissimmee
- Leesburg
- Miami
- Ocala
- Orlando (Headquarters)
- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- Tampa
- West Palm Beach

June 16, 2016

Revised - June 24, 2016

Third Revision - June 27, 2016

CH2M Hill, Inc.
225 East Robinson Street, Suite 505
Orlando, Florida 32801
Attn: Timothy B. Walsh, P.E.

Reference: **PROPOSAL FOR GEOTECHNICAL ENGINEERING SERVICES**
TMDL Reduction to Halifax River / Aquifer Recharge Design/Permitting /
Assistance during Construction / Monitoring
Daytona Beach, Volusia County, Florida
UES Opportunity No. 0430.0616.00009
UES Proposal No. 2016D-352R-3

Dear Mr. Walsh:

Universal Engineering Sciences (UES) appreciates the opportunity to submit a proposal for geotechnical engineering services for the above referenced project in Daytona Beach, Florida.

PROJECT INFORMATION

After reviewing the proposed site plan provided by you and our correspondence, it is our understanding that the proposed construction consists of installing an 18-inch diameter pipeline from the City Waste Water Treatment Plant off LPGA Boulevard approximately 8,000 linear feet west and another 8,000 linear feet into the 1,500-acre wetland area.

SCOPE OF SERVICES

We propose that thirty-two (32) Standard Penetration Test (SPT) borings to a depth of 6 feet each below existing grade be performed within the first 8,000 linear feet and thirty-two (32) muck probes (Auger Borings to a depth of 6 feet each below existing grade) be performed within the wetland area, all borings will be performed at a frequency of one per every five hundred feet along the proposed pipeline route. It is our understanding that the borings frequency may increase upon request. The Auger Borings will be performed in accordance with ASTM D-1452 and the data obtained from our field and laboratory investigation will be evaluated to provide the following information and recommendations:

- General soil stratigraphy;
- Encountered groundwater level;
- Presence or lack of unsuitable soils;
- Presence of cemented shell (coquina) and muck delineation; and
- Additional geotechnical services as required.

AUTHORIZATION AND FEES

Barring any unforeseen circumstances, we would be able to begin field work within two to three weeks of authorization and a final report would be complete within three to four weeks of authorization.

We will perform the proposed work for a fee of \$8,705.80 (all rates are UES contracted rates with the City of Daytona Beach). To initiate our services, please sign and return one copy of the attached Proposal Acceptance/Work Authorization form.

We appreciate the opportunity to offer our services and look forward to working with you on this project. Please feel free to call us with any questions at your convenience at (386) 756-1105.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES



Nick Jewell
Project Manager



Brian Pohl, P.E.
Branch Manager

Attachments

NJ/BCP/cme



EXHIBIT I
Proposal for a Geotechnical Exploration
TMDL Reduction to Halifax River / Aquifer Recharge Design / Permitting /
Assistance during Construction / Monitoring
Daytona Beach, Volusia County, Florida
 UES Proposal No.:16D-352R-3
 UES Opportunity No.: 0430.0616.00009

TASK	QUANTITY	UNIT	UNIT COST	TOTAL COST
PROFESSIONAL SERVICES				
Senior Project Engineer	20	hrs	\$75.40	\$1,508.00
Soil Scientist	20	hrs	\$44.95	\$899.00
Clerical	4	hrs	\$34.80	\$139.20
CADD Technician	8	hrs	\$40.60	\$324.80
Principal Consultant	4	hrs	\$110.20	\$440.80
SUBTOTAL:				\$3,311.80
SUPPORT SERVICES				
Mobilization / Demobilization of ATV Rig	1	each	\$350.00	\$350.00
Standby Time (for circumstances beyond control of drilling crew)	2	hrs	\$80.00	\$160.00
SPT Borings (16 borings to 6 feet each)	192	feet	\$9.50	\$1,824.00
Muck Survey (2 man party)	36	hrs	\$80.00	\$2,880.00
Boring Layout/Utility Locates	4	hrs	\$45.00	\$180.00
SUBTOTAL:				\$5,394.00
GEOTECHNICAL TOTAL:				\$8,705.80

Note: all rates UES contracted rates with the City of Daytona Beach



ATTACHMENT A.2 SURVEYING SERVICES

SLIGER & ASSOCIATES
incorporated



June 28, 2016

Mr. Tim Walsh, P.E.
CH2M Hill, Inc.
225 E. Robinson Street, Suite 505
Orlando, Florida 32801

Delivered via email

Re: *Proposal of Surveying and Mapping Services # 16-130*
Bennett Swamp Aquifer Recharge Project, Daytona Beach, Florida

Dear Tim:

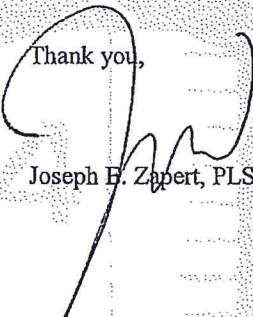
Sliger & Associates (S&A) is pleased to submit our proposal for Surveying and Mapping Services for the above referenced project.

SCOPE OF WORK

Prepare topographic surveys, control surveys, wetlands surveys and sketches and legal descriptions for easements.

Registered Surveyor/Project Manager	20 hours @ \$104.61	\$2,092.20
Survey Field Crew	232 hours @ \$123.18	\$28,577.76
CAD Tech	134 hours @ \$69.36	\$9,294.24
Total Fee:		\$39,964.20

Thank you,


Joseph E. Zappert, PLS, President

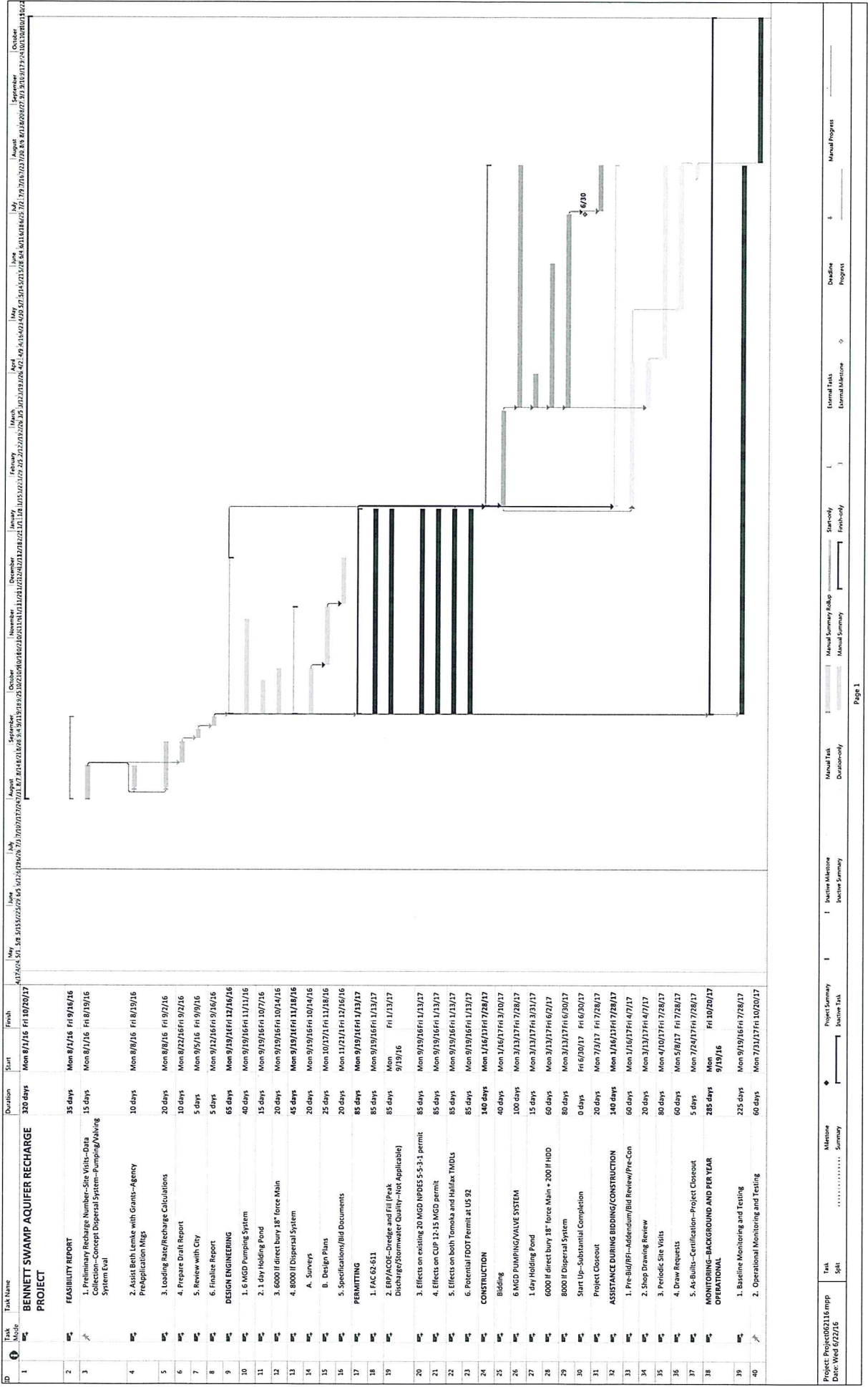
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Phone 386.761.5385

Free 877.775.4437

Fax 386.760.0619

ATTACHMENT B--DURATIONS SHOWN ARE WORK DAYS (320 WORK DAYS = 450 CALENDAR DAYS)





Item	Task Description	Project Manager		Sr. Technical Specialists		Sr. Civil Engineers		Civil Engineers		Engineering Interns		Environmental Scientists		Designers/Cad Technicians		Administrative Assistants		Total Cost	
		Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost	Rate	Cost		
	1. Wetland Application FAC 62-611 Permit--FDPP	16 \$	2,948.64	60 \$	11,924.40	80 \$	11,928.80					16 \$	57,217.92	40 \$	5,538.40	32 \$	1,690.08	244 \$	33,788.24
	2. Modification of WWTP NPDES Permit--acknowledgment that 20 MGD stress	4 \$	737.16			16 \$	2,905.76												
	3. EIP Permit--SIRWMD	12 \$	2,211.48			24 \$	3,458.64												
	4. ACOE Dredge&Fill Permit	8 \$	1,474.32																
	5. DOP/SIRWMD Coordination/Approval--Submerged Land Easement	16 \$	2,948.64			8 \$	1,152.88												
	6. FDOT Permit--Outfall at ISB	4 \$	737.16			8 \$	1,152.88												
	7. Volusia County ROW Permit--Crossing LPGA	16 \$	2,948.64																
	8. Tomoka Consolidated Land Coordination/Easement																		
	Subtotal	92 \$	16,954.68	60 \$	11,924.40	136 \$	19,896.96	40 \$	3,470.00	0	0	16	2217.92	76 \$	6,722.95	44 \$	2,241.36	464 \$	63,130.28

MILEAGE ESTIMATE

Trips--Roundtrips	#	Length	# x Length
Orlando to Daytona Beach	3	100	300
Orlando to Palatka	3	200	600
Tempat to Daytona Beach	2	180	360
Tempat to Palatka	2	300	600
Tempat to Maitland/Orlando	2	180	360
Gainesville to Palatka	2	90	180
Gainesville to Daytona Beach	2	200	400
Total			3000

REIMBURSIBLES

PRINTING/REPRODUCTION	Unit	Quantity	Unit Price
8.5 x 11 B/W	EA	5000	\$ 0.07
8.5 x 11 Color	EA	500	\$ 0.20
11x17 B/W	EA	500	\$ 0.10
11 x 17 Color	EA	150	\$ 0.25
Binding	EA	25	\$ 4.00
Plotter bond	SF		\$ 0.50
Total Printing/Reproduction			\$ 537.50
MILEAGE	MI	3000	\$ 0.540
SHIPPING/POSTAGE			\$ 400.00
SUBTOTAL			\$ 2,557.50
Total Task			\$ 65,687.78



Item	Project Manager		Sr. Technical Specialists		Sr. Civil Engineers		Civil Engineers		Engineering Interns		Environmental Scientists		Designers/Cadd Technicians		Administrative Assistants		Total Cost	
	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours		
1. Common Sheets	241 \$	4,422.96															136 \$	16,260.80
2. Design of 1 Day Holding Pond	41 \$	737.16															91 \$	9,357.32
3. Design of 6 MGD Pumping/Valve System	41 \$	737.16															334 \$	40,482.06
4. Design of 6 MGD Pipe-6500 Td direct bury to follow Bennett Swamp Transmission Lines from Plant to Station 160+00	241 \$	4,422.96															404 \$	39,888.36
5. Design of 6 MGD Dispersal System	241 \$	4,422.96															464 \$	51,822.76
6. Preparation of Specifications (use City Specs)	241 \$	4,422.96															358 \$	20,840.32
7. Preparation of Bidding Documents	81 \$	1,474.32															403 \$	4,998.32
8. Preparation of Engineer's Opinion of Probable Construction Cost	161 \$	2,948.64															64 \$	8,234.64
																	0 \$	0
																	0 \$	0
																	0 \$	0
																	0 \$	0
Subtotal	128.00 \$	23,589.12	104.00 \$	20,658.96	406.00 \$	58,508.66	32.00 \$	2,776.00	344.00 \$	216,192.16	0.00 \$	0.00	648.00 \$	57,322.08	40.00 \$	2,037.60	1,702.00 \$	191,094.58

MILEAGE ESTIMATE	#	Length	# x Length
Trips--Roundtrips	6	100	600
Orlando to Daytona Beach	0	200	0
Orlando to Palatka	0	280	0
Tampa to Daytona Beach	0	300	0
Tampa to Palatka	180	90	180
Gainesville to Palatka	2	200	400
Gainesville to Daytona Beach			
Total			1000

REIMBURSEMENTS	Unit	Quantity	Unit Price	Total
PRINTING/REPRODUCTION				
8.5 x 11 B/W	EA	500	\$ 0.07	\$ 35.00
8.5 x 11 Color	EA	5000	\$ 0.10	\$ 500.00
11 x 17 Color	EA	400	\$ 4.00	\$ 1,600.00
Binding	EA	1	\$ 5.00	\$ 5.00
Plotter Bond	SF	1000	\$ 0.50	\$ 500.00
Total Printing/Reproduction				\$ 2,640.00
MILEAGE	MI	1000	\$ 0.540	\$ 540.00
SHIPPING/POSTAGE				\$ 200.00
SUBTOTAL				\$ 1,275.00
Total Task				\$ 192,369.58

Continuing Professional Services for Stormwater and Environmental Engineering
 Contract No. 6235-CH WA99
 Bennett Swamp Aquifer Recharge Project-Phase IV-Assistance During
 Bidding and Construction
 CH2M Project No. 678859

Attachment C Sheet 4 of 5

FEE SUMMARY

Prepared by: Timothy B. Walsh, P.E.
 6/21/2017



Item	Task Description	Project Manager		Sr. Technical Specialists		Sr. Civil Engineers		Civil Engineers		Engineering Interns		Environmental Scientists		Designers/Cadd Technicians		Administrative Assistants		Total Cost	
		Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours		
1.	Coordination with Purchasing/Plans-Specs Updates	41 \$	737.16																
2.	Attend Pre-bid Conference	41 \$	737.16																
3.	Address RFIs--Prepare Bid Addenda	81 \$	1,474.32																
4.	Attend Bid Opening	41 \$	737.16																
5.	Review Bids--Provide Award Recommendation	41 \$	737.16																
6.	Attend Pre-Construction Meeting	41 \$	737.16																
7.	Weekly Site Visit Meetings	801 \$	14,743.20																
8.	Address RFIs--Plan Revisions	81 \$	1,474.32																
9.	Shop Drawing Review	81 \$	1,474.32																
10.	Review Draw Requests	141 \$	2,580.06																
11.	Project Closeout	241 \$	4,422.96																
	Subtotal	1621 \$	29,854.98	0 \$	-	138 \$	19,987.18	16 \$	1,388.00	0 \$	-	0 \$	0 \$	40 \$	3,538.40	68 \$	3,463.92	424 \$	59,132.48

MILEAGE ESTIMATE			
Trips--Roundtrips	#	Length	# x Length
Orlando to Daytona Beach	29	100	2900
Orlando to Palatka	4	200	800
Tampa to Daytona Beach	0	280	0
Tampa to Palatka	0	300	0
Tampa to Maitland/Orlando	1	180	180
Gainesville to Palatka	0	90	0
Gainesville to Daytona Beach	4	200	800
Total			5000

REIMBURSIBLES			
PRINTING/REPRODUCTION	Unit	Quantity	Unit Price
8.5 x 11 B/W	EA	500	\$ 0.07
8.5 x 11 Color	EA	500	\$ 0.20
11x17 B/W	EA	500	\$ 0.10
11 x 17 Color	EA	8	\$ 0.25
Binding	EA	8	\$ 4.00
Pletter Bond	SF		\$ 0.50
Total Printing/Reproduction			\$ 117.00
MILEAGE	MI	5000	\$ 0.540
SHIPPING/POSTAGE			\$ 300.00
SUBTOTAL			\$ 3,117.00
Total Task			\$ 61,249.48

Attachment C Sheet 5 of 5
 FEE SUMMARY

Continuing Professional Services for Stormwater and Environmental Engineering
 Contract No. 6335-CM WAP9
 Resource Surveys and/or Bridge Project—Phase VI—Baseline and Operational Monitoring of the Hydrologic and Nutrient Budgets
 ORD-2011-011 (Rev. 07/2011)

Prepared by: Timothy B. Walsh, P.E.
 6/21/2017

Item	Task Description	Sr. Technical Specialist		Sr. Civil Engineer		Civil Engineer		Environmental Scientist		Field Technicians		Administrative Assistant		Total Hours	Total Cost		
		Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate				
1	Inclusion of Additional Instrumentation	16	\$ 2,948.64	5	5	8	\$ 694.00	8	\$1,208.96	64	\$ 5,661.44	5	5	94	\$ 10,413.04		
2	Baseline Water Quality, Sediment and Bacteria Testing and Monitoring—1 Sampling Period	4	\$ 737.16	5	5	8	\$ 694.00	8	\$1,208.96	64	\$ 5,661.44	5	5	82	\$ 9,604.84		
3	Baseline Mass Balance Monitoring Analysis and Report—Baseline Quarterly—3 Quarters	60	\$ 11,097.60	24	\$ 4,769.76	60	\$ 5,305.00	60	\$ 8,646.00	60	\$ 5,305.00	72	\$ 6,378.24	276	\$ 31,246.44		
4	Operational Water Quality, Sediment and Bacteria Testing and Monitoring—1 Sampling Period	8	\$ 1,474.32	8	\$ 1,389.92	8	\$ 1,389.92	8	\$ 1,389.92	8	\$ 1,389.92	8	\$ 1,389.92	8	\$ 1,389.92		
5	Operational Water Quality, Sediment and Bacteria Testing and Monitoring—1 Sampling Period	24	\$ 4,422.24	8	\$ 1,389.92	24	\$ 3,327.36	24	\$ 3,327.36	24	\$ 3,327.36	24	\$ 3,327.36	24	\$ 3,327.36		
6	Hydrologic, Flow and Nutrient Mass Balance Monitoring Analysis and Report—Operational Quarterly—1 Quarter	8	\$ 1,474.32	2	\$ 371.48	2	\$ 371.48	2	\$ 371.48	2	\$ 371.48	2	\$ 371.48	2	\$ 371.48		
7	Summary Report—Annual	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Subtotal		124	\$ 22,851.96	42	\$ 8,347.02	116	\$ 16,716.76	112	\$ 8,716.00	0	0	144	\$ 12,612.28	72	\$ 8,347.02	722	\$ 89,817.56

Item	Task Description	Quantity	Unit	Rate	Total Cost
REPAIRS/REPRODUCTION					
1	8.5 x 11 B/W	1000	EA	\$ 0.07	\$ 70.00
2	8.5 x 11 Color	500	EA	\$ 0.20	\$ 100.00
3	11x17 B/W	3000	EA	\$ 0.10	\$ 300.00
4	11x17 Color	3000	EA	\$ 0.25	\$ 750.00
5	Binding	16	EA	\$ 4.00	\$ 64.00
6	Scatter Board	500	SF	\$ 0.50	\$ 250.00
7	Printer/Printing/Reproduction	7300	MH	\$ 0.540	\$ 3,942.00
8	SHIPMENT/POSTAGE				\$ 300.00
REPAIRS/REPRODUCTION					
9	Stilling Wells—Material/Equipment	5	ea	\$ 1,000	\$ 5,000.00
10	Groundwater Stage w/Records	5	ea	\$ 1,000	\$ 5,000.00
11	Logging & Mails	16	per night	\$ 156.00	\$ 2,496.00
12	Laboratory Testing	6	per site per sample	\$ 655.00	\$ 3,930.00
	Subtotal				\$ 11,719.56

Item	Task Description	Quantity	Unit	Rate	Total Cost
1	Stilling Wells	5	ea	\$ 741.00	\$ 3,705.00
2	Business Steel Tubing—7/8"	8	\$ 93.00	\$ 744.00	
3	Wire Screens	1	\$ 100.00	\$ 100.00	
4	1/2" x 1/2" x 1/2" PVC	1	\$ 75.00	\$ 75.00	
5	miscellaneous—nuts/bolts/washers/caps	1	\$ 85.00	\$ 85.00	
Total					\$ 1,004.00 use \$1,000

Item	Task Description	Quantity	Unit	Rate	Total Cost
STILLING WELLS AND GROUNDWATER LEVEL MONITORING ESTIMATES					
1	Model	1	\$ 595.00	\$ 595.00	
2	Onset HOBO 13 h Titanium	1	\$ 1,606.00	\$ 1,606.00	
3	Geokon-4500AL w/wireless data logger	1	\$ 1,080.00	\$ 1,080.00	
4	Sohini-3001 data logger w/bluetooth	1	\$ 1,093.87	\$ 1,093.87	
Average					\$ 1,093.87 use \$1,000

Item	Task Description	Quantity	Unit	Rate	Total Cost
LOGGING AND MAIL ESTIMATE—FEDERAL ALLOWABLE PER DIEM RATES					
1	LOGGING RATE: \$97.00	16	MEALS: \$59		\$ 1,552.00
<i>www.federalregister.gov/pdf/2016/11/m16-244/da/daytona-beach</i>					

Item	Task Description	Quantity	Unit	Rate	Total Cost
WATER QUALITY LABORATORY TESTING ESTIMATE—PER SAMPLE PER LOCATION PER EVENT					
1	Multi-meter Rental	5/8yr	\$250	\$1,250.00	
2	CEQDS	5/sample	\$35	\$175.00	
3	TSS	5/sample	\$30	\$150.00	
4	TP	5/sample	\$25	\$125.00	
5	TKN	5/sample	\$30	\$150.00	
6	NH3	5/sample	\$30	\$150.00	
7	NO2-NO3	5/sample	\$20	\$100.00	
8	SOC	5/sample	\$45	\$225.00	
9	Chlorine	5/sample	\$45	\$225.00	
10	Sulfur (sediment)	5/sample	\$45	\$225.00	
Total					\$650.00