SERVICES AUTHORIZATION #II
ENGINEERING SERVICES AGREEMENT

THIS SERVICES AUTHORIZATION is made and entered into this _____ day of _____, 20___, by and between the **City of Orlando, Florida**, a municipal corporation existing under the laws of the State of Florida (CITY), and **Carollo Engineers, Inc.,** doing business locally at 1089 W. Morse Boulevard, Suite A, Orlando, Florida 32789 (ENGINEER).

WHEREAS, the CITY and the ENGINEER have previously entered into an agreement for the ENGINEER's professional services (Agreement) on November 17, 2013, concerning the Conserv II Biosolids Dewatering System Improvements Project (Project); and

WHEREAS, the CITY and the ENGINEER wish to amend the Agreement as set forth herein; and

WHEREAS, the CITY and the ENGINEER now wish to memorialize their understanding for the ENGINEER's additional professional services for the Project.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and given one to the other, the sufficiency of which is hereby acknowledged, the parties agree as follows:

I. SCOPE OF SERVICES

The scope of services has been agreed to by the parties, and is attached hereto and incorporated herein, by reference, as EXHIBIT I.

II. FEE

The not-to-exceed fee of $130,001 has been agreed to by the parties as set forth on EXHIBIT I.

III. TERM

ENGINEER shall complete all work in accordance with the timeframes set forth in the scope of work, if any, provided, however, that all work and the term of the Services Authorization shall be completed by the end of business (5:00 p.m.) on December 31, 2016. It is also agreed that the CITY shall have an option for extension of this Services Authorization as necessary to complete the present scope of services (Exhibit I) or to provide additional services.

IV. ENTIRE AGREEMENT

This Services Authorization supersedes all previous services authorizations, amendments, agreements, or representations, either verbal or written, heretofore in effect between the CITY and the ENGINEER that may have concerned the matters covered herein, except that this Services Authorization shall in no way supersede or amend the Agreement or other services authorizations or amendments except as specifically provided herein. No additions, alterations, or variations to the terms of this Services Authorization shall be valid, nor can the provisions of this Services Authorization be waived by either party, unless such additions, alterations, or waivers are expressly set forth in writing in a document duly executed by both parties. ENGINEER acknowledges and agrees that any proposals or proposed agreements from subconsultants attached to this SERVICES AUTHORIZATION are attached solely to reflect the scopes of work to be performed and the fees to be charged by such subconsultants. By executing this SERVICES AUTHORIZATION, the CITY does not become a party thereto or bound by the terms thereof.

IN WITNESS WHEREOF, the parties hereto have executed this Services Authorization on the day and year first written above.

City of Orlando, Florida

By:_____
David Billingsley, CPSM, C.P.M.
Chief Procurement Officer

APPROVE AS TO FORM AND LEGALITY
for the use and reliance of the
City of Orlando, Florida, only.
_____, 20____.

_____
Assistant City Attorney
Orlando, Florida

Carollo Engineers, Inc.

By:_____

_____
(Print Name)

Title:_____

STATE OF FLORIDA }

COUNTY OF _____}

PERSONALLY APPEARED before me, the undersigned authority,_____, [ ] well known to me or [ ] who has produced _____ as identification, and known by me to be the _____of the corporation named above, and acknowledged before me that he/she executed the foregoing instrument on behalf of said corporation as its true act and deed, and that he/she was duly authorized to do so.

WITNESS my hand and official seal this ____ day of _____, 20____.

_____
NOTARY PUBLIC
Print Name:_____
My Commission Expires:

Scope of Services

City of Orlando Biosolids Dewatering Project
Project RQS13-0458
Service Authorization PO-0000003212

Amendment No. 1 – RAS/WAS Pumping Modifications
Design and Construction Phase Services

February 25, 2015

EXHIBIT 1 – SCOPE OF SERVICES

A. Project Understanding

The Biosolids Dewatering Project for the City of Orlando's Conserv II Water Reclamation Facility (WRF) addresses new dewatering facilities and associated components, including a new waste sludge holding tank. During the initial stage of the design, improvements to the existing return activate sludge (RAS) and waste activated sludge (WAS) pumping systems were identified that are necessary for the overall system operation. The improvements will also significantly improve control of the biological treatment process.

Under the current operation, activated sludge flows by gravity from the secondary clarifiers to the RAS/WAS wetwell though common piping. The RAS pumps withdraw sludge from the wetwell and discharge into the aeration basins. The WAS pumps also withdraw sludge from the wetwell and discharge to the existing thickening system.

With the new dewatering system, the RAS and WAS pumps must be replaced to meet new hydraulic conditions and to improve operation and process control. The City would like the RAS pump configuration to be modified to directly withdraw and meter sludge from each clarifier.

Portions of the RAS piping between the clarifier and the RAS wetwell are over 40 years old and one section is routed below the Operations Building. In addition, it is anticipated that the piping is not restrained. As a result, it is necessary to replace or rehabilitate the piping so that it meets the intended service conditions and is renewed to provide reliable long term performance. The piping corridors have a significant amount of existing below grade piping, as well as electrical and communication duct backs; consequently, slip lining and/or above grade routing options will be considered.

With these goals providing a framework for the improvements, conceptual alternatives were discussed with the City (including a review of a 60% level of completion design prepared by others). Based on these discussions/workshop, the features and extent of the improvements were developed such that a preliminary design technical memorandum was eliminated from the scope of services.

As part of this amendment no. 1 to the Service Authorization PO-0000003212, the design of the RAS/WAS pumping improvements will including the following:

The scope of work is based on designing the following improvements:

- RAS pumping system design will be based on an ADF capacity of 25 mgd and providing a total RAS flow of 1 times ADF. RAS pump for each clarifier will provide a fourth of this total flow (4,350 gpm). The RAS pump will be sized to deliver a minimum of 2,600 gpm (60% of the ADF) at current low flows of 12 mgd with two clarifiers in service.

- The existing return activated sludge (RAS) pumps will be replaced to provide one pump per clarifier and one uninstalled spare. Pump speed will be controlled with variable frequency drives (VFDs).
    - RAS pumps for Secondary Clarifiers 1 and 2 will be located on the north side of the access road and piping routed accordingly.
    - RAS pumps for Secondary Clarifiers 3 and 4 will be oriented as shown on the 60% plans (prepared by others).
    - A tap for a TSS probe will be provided on each pump discharge and if an acceptable probe is identified (based on testing by the City), a TSS probe/station will be installed at each RAS pump.
    - A manual sample tap (hand valve) will be provided on the discharge of each RAS pump to allow separate RAS samples to be obtained if comparison testing is necessary.
- New flow metering assemblies will be provided for each RAS pump discharge.
- RAS yard piping improvements will be based on the following:
    - Slip lining the section between Secondary Clarifiers 3 and 1.
    - Route a new RAS pipeline from Secondary Clarifier 1 and 3 to the existing RAS wet-well connection point. The new pipe may be in the same location as the existing pipe.
    - Route a new RAS pipeline from Clarifiers 2 and 4 to the existing RAS wet-well connection point. This route will be south of the existing Operations Building in the general vicinity of the existing Construction Trailer. This Construction Trailer can be removed as necessary to accommodate the RAS piping. ENGINEER will hire the services of Southeastern Surveying to assist in performing soft digs to identify all existing utilities along this route from the east of the Construction Trailer to near the existing RAS wet-well.
- Three (3) waste activated sludge (WAS) pumps (two operating and one spare) will be installed at the new sludge holding tank and controlled with variable frequency drives (VFDs). The WAS system piping/valves will allow the installed spare pump to receive WAS flow from either the North or South clarifiers.
- Two (2) new metering assemblies will be provided at the WAS system. Sampling stations will be provided on the WAS pump discharge lines (near the meters).
- The VFDs for the new RAS and WAS pumps will be housed in a new common prefabricated electrical building (located between Clarifiers 3 and 4).
- Ancillary/support facilities for the RAS and WAS pumps, such as lighting, seal water and drains.
- Demolition of the existing RAS meters, meter vaults, RAS and WAS pumps and associated piping and appurtenances as necessary for the project.

As part of the work under this Project, ENGINEER shall coordinate with other engineering consultants working at the plant and for the CITY.

B. Scope of Work

The scope of services to be provided as part of this amendment is summarized by the following tasks:

Task 1 – Project Management and Quality Assurance/Control
Task 2 – Final Design Phase Services
Task 3 – Bidding Phase Services
Task 4 – Construction Phase Services
Task 5 – Assist with Start-up, Testing and Training and amendment of the Existing Plant O&M Manual

Task 1 – Project Management and Quality Assurance/Control

Task 1.1 – Prepare Project Work Plan

ENGINEER will update the project work plan and distribute to project personnel for the scope of work defined under this amendment no. 1.

Task 1.1 Deliverable: Conserv II WRF Dewatering System Improvements – Updated Project Work Plan

Task 1.2 - Progress Reports during Design Phase

No additional scope under this task. Work under this task has been defined in the Service Authorization PO-0000003212.

Task 1.2 Deliverables: Monthly Progress Reports

Task 1.3 - Maintain Schedule, Action Item Logs, and Decision Logs

No additional scope under this task. Work under this task has been defined in the Service Authorization PO-0000003212.

Task 1.4 – Subconsultant Work Coordination

ENGINEER will coordinate with the subconsultants as necessary, to manage and implement this additional scope of work. This subtask includes up to two (2) additional internal project collaboration meetings between ENGINEER and its subconsultants to coordinate and implement work efforts.

Task 2 – Final Design Phase Services

Task 2.1 – 60% Design Documents

The ENGINEER will prepare 60-percent design submittals (drawings and specifications) and coincide with the 60% submittal as defined in the Service Authorization PO-0000003212. The project will use CITY's front-end documents (Division 0). The 60-percent design documents will consist of detailed drawings and specifications for the recommended improvements to the dewatering system. Documents to be submitted with the 60-percent design include:

1. Preliminary site layout and yard piping plans for the new RAS/WAS pumps and associated piping
2. Demolition plans.
3. Mechanical drawings showing the layout and details of all major process/mechanical equipment.
4. Electrical drawings showing the design for site power distribution, panel design, building power distribution, logic and control wiring, lighting and other details of electrical power supply and control. Power plans, one-line diagrams, schematics, as required, power and lighting plans and details of electrical installation etc.
5. Listing of major equipment proposed and equipment data sheets.
6. Instrumentation and Controls - Preliminary system block diagram
7. Instrumentation and Control Systems - Operating philosophies, system architecture and implementation plan.
8. Process Mechanical - Process narratives and flow diagrams
9. HVAC and Plumbing drawings showing the new electrical building air handling systems.
10. Technical Specifications (Division 0 through 16)

A design review workshop will be conducted with the CITY to review the 60-percent submittals as defined in the Service Authorization PO-0000003212.

Task 2.1 Deliverables: 60% Design Documents –

1. As defined in the Service Authorization PO-0000003212
2. Updated Estimate of Probable Construction Costs (PDF Format)

Task 2.2 – 90% Design Documents

Based on the review comments received from the CITY, the ENGINEER will prepare 90-percent level plans, specifications (Divisions 0 through 16).

A design review workshop will be conducted with the CITY to review the 90-percent submittals as defined in the Service Authorization PO-0000003212.

Task 2.2 Deliverables: 90% Design Documents –

1. As defined in the Service Authorization PO-0000003212

2. Updated Estimate of Probable Construction Costs (PDF Format)

Task 2.3 – 100% Design Documents (Issued for Bid Set)

Based on the review comments received from the CITY for the 90-percent design submittals, the ENGINEER will prepare 100-percent level plans, specifications (Divisions 0 through 17).

Task 2.3 Deliverables: 100% Design Documents –

1. As defined in the Service Authorization PO-0000003212.
2. 100% Estimate of Probable Construction Costs (PDF Format)

Task 2.4 – Preparation of Project Permits

The ENGINEER shall prepare and submit necessary FDEP and City permit applications as necessary for the project as defined in the Service Authorization PO-0000003212.

Task 2.4 Deliverables –

As defined in the Service Authorization PO-0000003212

Task 3 – Bid Phase Services

It is assumed that the CITY will construct these improvements by procuring the services of a CONTRACTOR by bidding the design documents. It is also assumed that the City will prepare the bid documents and advertise for bids. Work under this task is as defined in the Service Authorization PO-0000003212.

Bidding phase services will include the following:
1. Attend a pre-bid meeting,
2. Answer bidder questions and prepare addendums,
3. Prepare bid tabulations and recommendation letter for award of contract.

Task 4 – Construction Phase Services

The Construction of the proposed improvements is anticipated to be completed within an 18-month construction schedule. ENGINEER will provide following services during the construction phase and as defined in the Service Authorization PO-0000003212:

Task 4.1 – Prepare Conformed Documents

The ENGINEER will prepare conformed documents "Issued for Construction" by compiling bidder questions and addendums.

Task 4.1 Deliverables: Prepare Conformed Documents –

As defined in the Service Authorization PO-0000003212

Task 4.2 –Review Shop drawings.

The ENGINEER will receive, review, evaluate, and distribute shop drawings as submitted by the CONTRACTOR for this additional scope of work. A maximum of 15 shop-drawing submittals are anticipated at this time. This includes about 5 shop-drawing submittals as identified in the electrical scope of work, and 10 additional shop-drawings including submittals for the mechanical equipment such as RAS/WAS pumps, valves, piping, HVAC and ductwork, flowmeters, and structural items such as concrete, rebar, supports, miscellaneous metals, etc.
The ENGINEER's review shall be for conformance with the design documents and compliance with the contract documents. Such review or other action shall not extend to means, methods, sequences, techniques, or procedures of construction selected by the CONTRACTOR, or to safety precautions and programs. ENGINEER shall receive and review (for general contents as required by the contract documents) operation and maintenance manuals, guarantees, and certificates of inspection which are to be assembled by the CONTRACTOR.

Task 4.3 - Request for Information and Field Change Directives.

The ENGINEER will receive, review, evaluate, and distribute Requests for Information (RFIs) from the CONTRACTOR as defined in the service authorization PO-3212. The ENGINEER shall also issue Field change directive (FCD) for those changes that are identified as conflicts in the field by the contractor. The ENGINEER shall respond to the CONTRACTOR to clarify or interpret technical or design related questions. The ENGINEER shall issue necessary interpretations and clarifications of the design documents. Responses to a total of 10 additional RFIs are budgeted as part of this task.

Task 4.4 – Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion and Preparation of Record Drawings.

The ENGINEER will attend monthly construction progress meetings, perform periodic site inspections (assuming one per month), and also participate in substantial and final completion walk-through and related activities as defined in the service authorization PO-3212. No additional monthly progress meetings are budgeted under this task. However, 2 additional meetings are budgeted for this task for the substantial and final completion walk-through.

The ENGINEER will review CONTRACTOR's as-built drawings for conformance with section 01050 of the contract documents.

Task 5 – Assist with Start-up, Testing and Training and Amending Existing Plant O&M Manuals

The ENGINEER will assist in the start-up, testing, and training services. Additionally, ENGINEER will provide standard operating procedures (SOPs) for the RAS/WAS pumping system and update the O&M manual for the facility. The CITY will provide the ENGINEER a copy of the existing SOP for the existing RAS/WAS pumping system to update and develop further as necessary. Training will consist of a one 8-hour classroom training session conducted by the ENGINEER. The training will cover the major elements of the SOP and maintenance requirements for major equipment.

PRELIMINARY LIST OF ADDITIONAL DRAWINGS FOR AMENDMENT NO. 1 (HIGHLIGHTED IN YELLOW)

- Drawing G – 1 Cover sheet
- Drawing G – 2 Sheet Index
- Drawing G – 3 Abbreviations & symbols
- Drawing G – 4 Updated Process Flow Diagram
- Drawing G – 5 General Notes
- Drawing D – 1 Dewatering Building – Demolition Partial Plan 1 (Sludge Feed Pumps)
- Drawing D – 2 Dewatering Building – Demolition Partial Plan 2 (BFPs and Conveyors)
- Drawing D – 3 Dewatering Building – Demolition Partial Plan 3 (BFPs and Conveyors)
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- Drawing D – 4 Dewatering Building – Demolition Partial Plan 4 (BFPs and Conveyors)
- Drawing D – 5 Dewatering Building – Demolition Partial Plan 5 (Odor Control System)
- Drawing D – 6 Dewatering Building – Demolition Partial Plan 6 (Polymer System and Washwater system)
- Drawing D – 7 Digested Sludge Holding Tank – Demolition
- Drawing D – 8 RAS/WAS Pumping System Demolition Plan
- Drawing D – 9 RAS/WAS Pump Station Demolition Plan
- Drawing C – 1 General Civil Notes, Symbols and Abbreviations
- Drawing C – 2 Overall Site plan
- Drawing C – 3 Partial Site Plan – 1 (WAS Piping – From RAS/WAS PS to New Sludge Holding Tank)
- Drawing C - 4 Partial Site Plan – 2 (WAS Piping – From Digested Sludge Holding Tank to New Sludge Holding Tank)
- Drawing C - 5 Partial Site Plan – 3 (WAS Piping – New Sludge Holding Tank to Dewatering Building)
- Drawing C – 6 Partial Site Plan – 4 (Washwater Piping)
- Drawing C – 7 Yard Piping – RAS Piping (Clarifiers to Aeration Tanks)

- Drawing C – 8 Yard Piping – WAS Piping (Clarifies to Sludge Holding Tank
- Drawing C – 9 Updated Yard piping Details
- Drawing C - 10 Paving and Grading Details
- Typical C – 11 through C – 12 Typical Civil Details
- Drawing S – 1 Structural Notes and design criteria
- Drawing S – 2 Dewatering Building Modifications – Partial Plan 1
- Drawing S – 3 Dewatering Building Modifications – Partial Plan 2
- Drawing S – 4 Dewatering Building Modifications – Section and Details
- Drawing S – 5 New Sludge Holding Tank – Foundation Plan
- Drawing S – 6 New Sludge Holding Tank – Plan, Section and Details
- Drawing S – 7 New Prefab Electrical Building for RAS/WAS Improvements
- Drawing S – 7 through S – 8 Typical Structural Details
- Drawing M – 1 Mechanical Notes and Symbols
- Drawing M – 2 Dewatering Building – Partial Plan and details 1 (Sludge Feed Pumps)
- Drawing M – 3 Dewatering Building – Partial Plan and details 2 (BFPs and Cake Conveyors)
- Drawing M – 4 Dewatering Building – Partial Plan and details 3 (BFPs and Cake Conveyors)
- Drawing M – 5 Dewatering Building – Partial Plan and details 4 (Polymer System and Wash water system)
- Drawing M – 6 Dewatering Building – Section and details 1
- Drawing M – 7 Dewatering Building – Section and details 2
- Drawing M – 8 Dewatering Building – Section and details 3
- Drawing M – 9 Dewatering Building – Section and details 4
- Drawing M – 10 New Sludge Holding Tank – Partial Plan and Details
- Drawing M – 11 New Sludge Holding Tank – Section and Details

- Drawing M – 12 Odor Control System – Plan and Section
- Drawing M – 13 Odor Control Chemical Storage Room – Plan and Section
- Drawing M – 14 Odor Control System – Details
- Drawing M – 15 Clarifier 1 RAS Pump Station
- Drawing M – 16 Clarifier 2 RAS Pump Station
- Drawing M – 17 Clarifier 3 RAS Pump Station
- Drawing M – 18 Clarifier 4 RAS Pump Station
- Drawing M – 19 WAS Pump Station Plan and Sections
- Drawing M – 20 RAS and WAS Pump Station Details
- Drawing M – 21 through M – 22 Typical Mechanical Details
- Drawing V – 1 Symbols
- Drawing V – 2 Schedules
- Drawing V – 3 Ventilation System Modifications – Upper Floor
- Drawing V – 4 Ventilation System Modifications – Lower Floor
- Drawing V – 5 RAS/WAS Electrical Building HVAC System
- Drawing V – 6 through V – 7 HVAC Typical Details
- Drawing E – 1 Electrical Legend and Symbols
- Drawing E – 2 Electrical General Notes
- Drawing E – 3 Electrical Site Plan – Keyed Map
- Drawing E – 4 Enlarged Electrical Site Plan – Sheet 1
- Drawing E – 5 Enlarged Electrical Site Plan – Sheet 2
- Drawing E – 6 Existing Overall One Line Diagram
- Drawing E – 7 Existing Dewatering MCC – One Line Diagram – Sheet 1 Demolition
- Drawing E – 8 Existing Dewatering MCC – One Line Diagram – Sheet 2 Demolition
- Drawing E – 9 Existing Dewatering MCC Elevation Diagrams
- Drawing E – 10 Existing Dewatering MCC – One Line Diagram – Sheet 1 Modification

- Drawing E – 11 Existing Dewatering MCC – One Line Diagram – Sheet 2 Modification
- Drawing E – 12 Modified Press Building – One Line Diagram
- Drawing E – 13 Existing Panel Riser Diagrams – Demolition
- Drawing E – 14 Schematic Diagrams – Sheet 1 (Feed Pumps and Washwater Pumps)
- Drawing E – 15 Schematic Diagrams – Sheet 2 (Aeration Blowers and Odor Control Blowers)
- Drawing E – 16 Instrumentation Riser Diagrams
- Drawing E – 17 Power and Control Riser Diagrams – Sheet 1
- Drawing E – 18 Power and Control Riser Diagrams – Sheet 2
- Drawing E – 19 Panel Schedules – Sheet 1
- Drawing E – 20 Panel Schedules – Sheet 2
- Drawing E – 21 Panel Schedules – Sheet 3
- Drawing E – 22 Miscellaneous Schedules
- Drawing E – 23 Dewatering Building – Dewatering Room Demolition Plan
- Drawing E – 24 Dewatering Building – Polymer and Washwater Room Demolition Plan
- Drawing E – 25 Dewatering Building – Electrical Room – Electrical Plan
- Drawing E – 26 Dewatering Building – Dewatering Room Lighting Plan
- Drawing E – 27 Dewatering Building – Dewatering Room Power/Control Plan
- Drawing E – 28 Dewatering Building – Dewatering Room Electrical Plan
- Drawing E – 29 Press Building and Sludge Holding Tank – Electrical Plan
- Drawing E – 30 Existing RAS/WAS Pump Station Single Line Diagram – Demolition
- Drawing E – 31 Existing Operations Building Single Line Diagram – Modifications
- Drawing E – 32 Proposed RAS/WAS Pump Station Single Line Diagram
- Drawing E – 33 RAS and WAS Pump VFD Schematic Diagram
- Drawing E – 34 Existing RAS/WAS Pump station – Demo Plan
- Drawing E – 35 New RAS/WAS Electrical Building – Electrical Plan
- Drawing E – 36 New RAS/WAS Electrical Building – Grounding Plan

- Drawing E – 37 RAS/WAS Pump Station – Electrical Plan
- Drawing E – 38 RAS/WAS Pump Station – Grounding Plan
- Drawing E – 39 RAS/WAS Riser Diagrams
- Drawing E – 40 Photos – Sheet 1
- Drawing E – 41 Photos – Sheet 2
- Drawing E – 42 Photos – Sheet 3
- Drawing E – 43 Photos – Sheet 4
- Drawing E – 44 through E – 48 Electrical Details
- Drawing I – 1 Instrumentation Symbols and Abbreviations
- Drawing I – 2 PLC System Communication Block Diagram
- Drawing I – 3 Updated Process and Instrumentation Diagram (RAS/WAS Pumping System)
- Drawing I – 4 Process and Instrumentation Diagram (Sludge Holding Tank and Aeration Blowers)
- Drawing I – 5 Process and Instrumentation Diagram (Press Feed Pumps)
- Drawing I – 6 Process and Instrumentation Diagram (Belt Filter Presses)
- Drawing I – 7 Process and Instrumentation Diagram (Screw Conveyors)
- Drawing I – 8 Process and Instrumentation Diagram (Washwater Pumps and Odor Blowers)
- Drawing I – 9 Process and Instrumentation Diagram (Polymer System and Misc.)
- Drawing I – 10 PLC Panel Details
- Drawing I – 11 Existing RIO Panel Modifications
- Drawing I – 12 New RAS/WAS Pump Station – RIO Panel
- Drawing I – 13 through N - 14 Typical I&C Details

CAROLLO ENGINEERS INC. - Engineering Services Fee (Amendment No. 1)

RAS/WAS Pumping Improvements Design and Construction Phase Services

Conserv II Biosolids Dewatering System Improvements

TASK	TASK DESCRIPTION	Proferssional	Project Professional	Lead Project Professional	Senior Project Professional	CAD Technlnician	Senior CAD Technician	Document Processing/Graphics	Total Hours	Total Labor Cost (Not-to-Exceed)	Reimbursibles (Printing)
	Raw Rate	$ 52.25	$ 59.00	$ 68.25	$ 74.50	$ 37.25	$ 53.75	$ 27.25			
	Multiplier	3.00	3.00	3.00	3.00	3.00	3.00	3.00			
	Loaded Rate	$ 156.75	$ 177.00	$ 204.75	$ 223.50	$ 111.75	$ 161.25	$ 81.75			
1	PROJECT MANAGEMENT AND QUALITY ASSURANCE/CONTROL										
1.1	Prepare Project Work Plan	0	0	4	0	0	0	0	4	$819	
1.2	Progress Reports	0	0	0	0	0	0	0	0	$0	
1.3	Maintain Schedule, Action Item Logs, and Decision Logs	0	0	0	0	0	0	0	0	$0	
1.4	Subconsultant Work Coordination	0	0	8	0	0	0	0	8	$1,638	
	Subtotal Task 1	0	0	12	0	0	0	0	12	$2,457	$0
2	FINAL DESIGN PHASE SERVICES										
2.1	60% Design Documents	0	0	6	16	16	0	8	46	$7,247	$329
2.2	90% Design Documents	0	0	2	0	8	0	2	12	$1,467	$329
2.3	100% Design Documents	0	0	2	4	8	0	2	16	$2,361	$72
2.4	Preparation of Project Permits	0	0	8	0	0	0	0	8	$1,638	
	Subtotal Task 2	0	0	18	20	32	0	12	82	$12,713	$730
3	BID PHASE SERVICES										
	Subtotal Task 3	0	0	4	0	0	0	0	4	$819	$0
4	CONSTRUCTION PHASE SERVICES										
4.1	Prepare Conformed Documents	0	0	2	0	8	0	0	10	$1,304	$44
4.2	Review Shop Drawing Submittals	0	0	2	0	0	0	0	2	$410	
4.3	Request for Information and Field Change Directives	0	0	2	0	0	0	0	2	$410	
4.4	Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion and Preparation of Record Drawings	0	0	0	0	0	0	0	0	$0	
	Subtotal Task 4	0	0	6	0	8	0	0	14	$2,123	$44
5	ASSIST WITH STARTUP, TESTING AND TRAINING AND AMEND PLANT O&M MANUALS										
	Subtotal Task 5	0	0	0	0	0	0	0	0	$0	$0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EXHIBIT NO. II

CAROLLO ENGINEERS INC. - Overall Engineering Services Fee (Amendment No. 1)

RAS/WAS Pumping Improvements Design and Construction Phase Services

Conserv II Biosolids Dewatering System Improvements

TASK	TASK DESCRIPTION	Carollo Engineers Inc.	EPIC	Engineering Technologies Inc.	Hillers Electrical Engineering Inc.	Southeastern Surveying	CPW Construction Inc. (See Note 1)	Total Project Not-to-Exceed Costs
1	PROJECT MANAGEMENT AND QUALITY ASSURANCE/CONTROL							
1.1	Prepare Project Work Plan	$819						$819
1.2	Progress Reports	$0						$0
1.3	Maintain Schedule, Action Item Logs, and Decision Logs	$0						$0
1.4	Subconsultant Work Coordination	$1,638						$1,638
	Subtotal Task 1	$2,457	$854	$0	$0	$0	$0	$3,311
2	FINAL DESIGN PHASE SERVICES							
2.1	60% Design Documents	$7,247			$11,542			$18,789
2.2	90% Design Documents	$1,467			$11,542		$0	$13,009
2.3	100% Design Documents	$2,361			$8,434			$10,795
2.4	Preparation of Project Permits	$1,638			$635			$2,273
	Subtotal Task 2	$12,713	[illegible]	[illegible]	$32,153	[illegible]	$0	[illegible]
3	BID PHASE SERVICES							
	Subtotal Task 3	[illegible]	[illegible]	$205	$796	$0	$0	$3,551
4	CONSTRUCTION PHASE SERVICES							
4.1	Prepare Conformed Documents	$1,304						$1,304
4.2	Review Shop Drawing Submittals	$410						$410
4.3	Request for Information and Field Change Directives	$410					$0	$410
4.4	Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion and Preparation of Record Drawings	$0					$0	$0
	Subtotal Task 4	[illegible]	[illegible]	$526	[illegible]	$0	$0	[illegible]
5	ASSIST WITH STARTUP, TESTING AND TRAINING AND AMEND PLANT O&M MANUALS							
	Subtotal Task 5	$0	$2,888	$0	$0	$0	$0	$2,888
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Note 1: CPW Construction's scope in the amount of $31,279.60 for Orlando Conserv II WRF Dewatering Improvements project (Service Authorization PO-0000003212) will include added services for the RAS/WAS pumping system and remain unchanged. The initial proposal contained 18 month duration for construction and hours allocated for 90% plan review and remain unchanged.

CAROLLO ENGINEERS INC. - Engineering Services Schedule (Amendment No.1)
RAS/WAS Pumping Improvements Design and Construction Phase Services
Conserv II Biosolids Dewatering System Improvements

DESIGN SERVICES

Weeks from NTP For the Service Authorization PO-3212

TASK	TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
1	PROJECT MANAGEMENT AND QUALITY ASSURANCE/CONTROL																																						
1.1	Prepare Project Work Plan																																						
1.2	Progress Reports																																						
1.3	Maintain Schedule, Action Item Logs, and Decision Logs																																						
1.4	Subconsultant Work Coordination																																						
2	FINAL DESIGN PHASE SERVICES																																						
2.1	Preliminary Design Technical Memorandum																																						
2.2	60% Design Documents																																						
2.3	90% Design Documents																																						
2.4	100% Design Documents																																						
2.5	Preparation of Project Permits																																						

Your Work, Simplified.

February 16, 2015

Larry E. Elliott, P.E.
Senior Vice President
Carollo Engineers, Inc.
1089 West Morse Blvd, Suite A
Winter Park, Florida 32789

Subject: **Professional Engineering Services Amendment 1**
City of Orlando Biosolids Dewatering Project (Project RQS13-0458)
RAS/WAS System Improvements
Design and Construction Phase Services

Dear Mr. Elliott:

In accordance with your request, EPIC Engineering & Consulting Group, LLC (EPIC) has prepared a proposal to assist Carollo Engineers, Inc. (Carollo) on the referenced project.

The Biosolids Dewatering Project for the City of Orlando's Conserv II Water Reclamation Facility (WRF) addresses new dewatering facilities and associated components, including a new waste sludge holding tank. During the initial stage of the design, improvements to the existing return activate sludge (RAS) and waste activated sludge (WAS) pumping systems were identified that are necessary for overall system operation. The improvements will also significantly improve control of the biological treatment process.

Under the current operation, activated sludge flows by gravity from the secondary clarifiers to the RAS/WAS wetwell though common piping. The RAS pumps withdraw sludge from the wetwell and discharge into the aeration basins. The WAS pumps also withdraw sludge from the wetwell and discharge to the existing thickening system.

With the new dewatering system, the WAS pumps must be replaced to meet new hydraulic conditions. In addition, to improving operation and process control, the City would like the RAS pump configuration modified to directly withdraw and meter sludge from each clarifier.

Portions of the RAS piping between the clarifier and the RAS wetwell are over 40 years old and one section is routed below the Operations Building. In addition, it is anticipated that the piping is unrestrained. As a result, it is necessary to replace or rehabilitate the piping so that it meets the intended service conditions and is renewed to provide reliable long term performance. The piping corridors have a significant amount of existing below grade piping, as well as electrical and communication duct backs; consequently, slip lining and/or above grade routing options will be considered.

With these goals providing a framework for the improvements, conceptual alternatives were discussed with the City (including a review of a 60% level of completion design prepared by others). Based on these discussions/workshop, the features and extend of the improvements

were developed to the extent that a preliminary design technical memoriam was eliminated from the scope. As a result, the design will be include the following improvements:

1. RAS system design will be based on an ADF capacity of 25 mgd and providing a RAS flow of 1xADF.
2. The existing return activated sludge (RAS) pumps will be replaced to provide one pump per clarifier and one uninstalled spare. Pump speed will be controlled with variable frequency drives (VFDs).
   a. RAS pumps for Clarifiers 1 and 2 will be located on the other side of the road from the clarifiers and the piping routed accordingly.
   b. RAS pumps for Clarifiers 3 and 4 will be oriented as shown in the 60% plans (prepared by others).
   c. A tap for a TSS probe will be provide on each pump discharge and if an acceptable probe is identified (based on testing by the City), a TSS probe/station will be installed at each RAS pump.
   d. A manual sample tap (hand valve) will be provided on the discharge of each RAS pump to allow separate RAS samples to be obtained if comparison testing is necessary.
   e. City has requested that we confirm the turndown capability of each RAS Pump VFD. During low flow (approximate ADF of 12 mgd), and with two clarifiers in service, each RAS pump will need to deliver 2,500 gpm (approximately 60% of ADF).
3. New flow metering assemblies will be provided for each RAS pump discharge.
4. RAS yard piping improvements will be based on the following
   a. Slip lining the section between Clarifiers 3 and 1.
   b. Routing a new RAS pipeline from Clarifier 1 to the existing RAS wetwell connection point. The new pipe may be in the same location as the existing pipe.
   c. Routing a new RAS pipeline from Clarifiers 2 and 4 to the existing RAS wetwell connection point. This route will be south of the Operations Building in the general vicinity of the construction trailer. The construction trail can be removed as necessary to accommodate the RAS piping.
5. Three (3) new waste activated sludge (WAS) pumps (two operating and one common "swing" pump) will be installed at the new sludge holding tank and controlled with variable frequency drives (VFDs). The WAS system piping/valves will allow the swing pump to receive WAS from the either the north or south lines.
6. Two (2) new flow metering assemblies will be provided at the WAS system. Sampling stations will be provided on the WAS pump discharges lines (near the meters).
7. The VFDs for the new RAS and WAS pumps will be housed in a new common prefabricated electrical building (located between Clarifier 3 and 4).
8. Ancillary/support facilities for the RAS and WAS pumps, such as lighting, seal water and drains.
9. Demolition of the existing RAS meters, meter vaults, RAS and WAS pumps and associated piping/appurtenances as necessary for the project.

EPIC will assist Carollo by providing mechanical and civil design of the improvements. The scope of services is based on a 9 month design period and an 18-month construction period.

SCOPE OF SERVICES

The scope of services proposed for this project includes the following major tasks:

Task 1 – Project Management and Quality Assurance/Control
Task 2 – Final Design Phase Services
Task 3 – Bidding Phase Services
Task 4 – Construction Phase Services
Task 5 – Assist with Start-up, Testing and Training and Amendment of the Existing Plant O&M Manual

Our scope of services is based on the overall scope developed by Carollo; consequently, the tasks of the overall scope are listed below and EPIC's proposed services are identified for each task. Electrical, instrumentation, structural and geotechnical (soft digs) engineering services will be provided by others.

Task 1 – Project Management and Quality Assurance/Control

EPIC Services

Additional QA/QC activities associated with the Amendment.

Task 2 – Final Design Phase Services

EPIC Services

Detailed drawings and specifications for the construction work will be prepared based on the following:

- Drawings will be prepared in 22x34 sheet format using AutoCAD software.
- Specifications will be prepared utilizing Microsoft Word software.
- Drawings and specifications will be submitted in electronic format to Carollo at the 60%, 90% and 100% levels of completion.
- Two (2) design review meetings with the City and two (2) project coordination meetings are included in the design phase budget.
- The scope and budget are based on a single construction contract.
- Submittals will be transmitted in electronic format (PDF, AutoCAD or Word) to Carollo for incorporation into the submittal to the City.
- Yard piping in AutoCAD format will be provided by the City.
- Soft dig data will be provided for the utilities along the pipeline route, including the southeast corner of the Operations Building (area of utility congestion).

It is estimated that approximately twelve (12) additional mechanical and civil drawings will be required to show the work. The breakdown list of the drawings is presented in the Table 1 below.

Table 1 List of Drawings (To Be Prepared By EPIC)

Drawing	Title
Demo	RAS/WAS System Demolition Plan
Demo	RAS/WAS Pump Station - Demolition Plan
Demo	Demolition Details
Civil	Yard Piping -RAS & WAS Piping
Civil	Yard Piping Details
Mechanical	Clarifier RAS Pumping Stations – Overall Plan
Mechanical	Clarifier 1 RAS Pumping Station
Mechanical	Clarifier 2 RAS Pumping Station
Mechanical	Clarifier 3 RAS Pumping Station
Mechanical	Clarifier 4 RAS Pumping Station
Mechanical	WAS Pump Station – Plan and Section
Mechanical	RAS and WAS Pump Station Details

Task 2.1 – 60% Design Documents

EPIC Services

Prepare 60-percent level plans and provide input regarding a list of specifications and an estimate of probable costs.

EPIC will also prepare for and attend a design review workshop with the CITY and provide input (to Carollo) regarding written responses to review comments.

Task 2.2 – 90% Design Documents

EPIC Services

Based on the review comments received from the CITY, EPIC will prepare 90-percent level plans and specifications and \ input into the estimate of probable costs.

EPIC will also prepare for and attend a design review workshop with the CITY and provide input (to Carollo) regarding written responses to review comments.

Task 2.3 – 100% Design Documents

EPIC Services

Based on the review comments received from the CITY, EPIC will prepare 100-percent level plans and specifications and \input into the estimate of probable costs.

Task 2.4 – Coordination Meetings with Other Engineers/Consultants

EPIC Services

No EPIC services are proposed under this Task.

Task 2.5 – Preparation of Project Permits

EPIC Services

No EPIC services are proposed for this Amendment.

Task 3 – Bid Phase Services

It is assumed that the CITY will construct these improvements by procuring the services of a CONTRACTOR by bidding the design documents. It is also assumed that the City will prepare the bid documents and advertise for bids.

EPIC Services
Under this task, the following additional services are proposed for this Amendment.

- Responding to bidder's questions and supplying written responses to four (4) addenda related to the work under this Amendment.

Task 4 – Construction Phase Services

EPIC Services
EPIC support during the construction phase is limited to the scope of improvements associated with the Table 1 List of Drawings (To Be Prepared by EPIC). Services shall include review of Requests for Information and Change Orders, site inspections, interpretation/clarification of contract documents, attendance of selected meetings, and Final Inspection. Please note that EPIC services are not proposed for Preconstruction Conference, FDEP Clearance Requests or for Contractor's Schedule or Pay Request activities.

The fee estimate is based on a maximum construction period of 18-months and in some cases a maximum number of meetings or "reviews". Should additional construction time be required or additional meetings or reviews be required, in excess of the quantities stated herein, EPIC may be entitled to additional compensation, upon approval of Carollo and the CITY.

Task 4.1 – Prepare Conformed Documents

EPIC Services
No EPIC services are anticipated for this Task.

Task 4.2 –Review Shop drawings

EPIC Services
Review drawings and other data submitted by the Contractor for general conformity to the construction contract documents. No more than two reviews are anticipated for each submittal item or piece of equipment. The budget is based on review of an additional 5 submittals and re-submittals (approximately 3-hour each).

Task 4.3 - Request for Information and Field Change Directives

EPIC Services
When requested, EPIC will review, evaluate and respond to RFI's. The budget is based on review of 3 additional RFI's (approximately 2-hour each).

When requested, EPIC will review Change Orders (COs) generated by either the Contractor or the CITY. The budget is based on a one (1) additional COs (approximately 5-hours each, including meetings to discuss the proposed COs).

Task 4.4 – Attend Construction Progress Meetings, Periodic Site Inspections, Inspections during Substantial and Final Completion and Preparation of Record Drawings

EPIC Services
No additional site visits are proposed under this Amendment.

Two (2) additional partial substantial completion inspections are included (one for the completion of construction for each Clarifier pair). Inspection shall include a review inspection, preparation a punch list of corrective work items that were observed during site visits.

EPIC will review CONTRACTOR's as-built drawings for conformance with section 01050 of the contract documents.

Task 5 – Assist with Start-up, Testing and Training and Amending Existing Plant O&M Manuals

EPIC Services
EPIC will visit the site during start-up and functional testing of the installed equipment to assist the Contractor in start-up and troubleshooting. The budget is based eight (8) hours of engineering time.

Additionally, EPIC will provide standard operating procedures (SOPs) for the RAS/WAS systems, as well as an update to the O&M manual related to these systems.

PROJECT SCHEDULE

EPIC will provide the above-listed services over the duration of the project to meet the schedule established by City of Orlando and Carollo.

COMPENSATION

EPIC will be compensated for the services described herein on an hourly, not to exceed basis in the amount of **$51,869.86**. The fee estimate for the scope of services is provided as Attachment A.

We sincerely appreciate the opportunity to assist Carollo Engineers, Inc. in providing professional engineering services to the City of Orlando. If you have any questions or require additional information, please call me at 407-721-6954.

Sincerely,

Richard Wilson, P.E.
Project Manager
EPIC Engineering & Consulting Group, LLC

cc: Prasad Chittaluru, Ph.D., P.E., EPIC

ATTACHMENT A

City of Orlando Biosolids Dewatering Project - Project RQS13-0458
Not-to-Exceed Fee Estimate
Final Design and Construction Phase Services - Amendment 1 RAS and WAS Pumping Improvements

EPIC NOT-TO-EXCEED LABOR BUDGET

Task	Task Name	Senior Project Manager P8	Sr. Professional I P3	Tech III T3	Admin II A2	Total Hours	Total Raw Labor Cost ($)	Total Billing Labor Cost
	Hourly Rate	$61.20	$43.40	$25.00	$22.30	---	---	---
1	Project Management and Quality Assurance/Control	4	0	0	2	6	$289.40	$853.73
2	Final Design Phase Services	79	34	260	6	379	$12,944.20	$38,185.39
3	Bidding Phase Services	6	0	7	2	15	$586.80	$1,731.06
4	Construction Phase Services	35	6	9	7	57	$2,783.50	$8,211.33
5	Assist with Start-up, Testing and Training and O&M Manual	14	0	4	1	19	$979.10	$2,888.35
	Total, Not-To-Exceed	138	40	280	18	476	$17,583.00	$51,869.86
	Labor Multiplier	2.95						

ENGINEERING TECHNOLOGIES
Consulting Engineers

3551 W. Lake Mary Blvd., Suite 210
Lake Mary, FL 32746
Phone: (407) 322-0500

e/T Project Number: 14-174

January 19, 2015

Sudhan Paranjape, P.E.
Senior Project Manager
Carollo Engineers, P.C.
1089 W. Morse Blvd., Suite A
Winter Park, FL. 32789

Re: Proposal for Structural Engineering
Conserv II Biosolids Dewatering Project RAS/WAS Improvements
City of Orlando, Florida

Dear Mr. Paranjape:

Engineering Technologies, Inc. (e/T) is pleased to submit this proposal to provide structural engineering services to Carollo Engineers for the above referenced project.

SCOPE OF SERVICES

It is our understanding that several changes are to be made to the RAS/WAS system. These changes include new pumps and associated electrical equipment.

Task 1: Final Design Phase Services: e/T staff will prepare drawings and specifications for the construction of a new slab-on-grade foundation for a new prefabricated building to house equipment. In addition, e/T staff will prepare details for additional concrete pads for various equipment. These drawings will be combined with those outlined in a previous proposal for the dewatering project.

Task 2: Bid Phase Services: e/T staff will assist Carollo staff in responding to Contractor's questions during bidding and issue addenda as needed.

Task 3: Construction Phase Services: e/T staff will prepare conformed drawings, review shop drawings and respond to any RFI's.

COST AND SCHEDULE

e/T proposes to undertake the work described above on a time and expense basis at a not-to-exceed price of **$2,206.00**. See the attached Table for a breakdown e/T's hours.

TERMS AND CONDITIONS

e/T will begin work immediately upon receipt of your notice to proceed. We will issue invoices on a monthly basis. e/T appreciates the opportunity to submit this proposal to Carollo and we look forward to a successful collaboration on this project.

Sincerely,
E/T ENGINEERING TECHNOLOGIES, INC.

Bilgin Erel, P.E.
President

Table 1 - Engineering Services Fee Estimate

Cost Estimate: Structural Engineering Services
City of Orlando Conserv II Biosolids Dewatering Project - RAS/WAS Improvements
Date: January 2015

Task No	Task Description	Est.No Dwgs	Man-hours By Category					Totals	
			Principal $150.00	Associate $115.00	Engineer $90.00	Drafting $62.00	Clerical $45.00	Hrs	Cost
1	**Final Design Phase Services**								
		1	1	3	4	10	0	19	$1,475.00
2	**Bid Phase Services**								
			0	1	1	0	0	2	$205.00
3	**Construction Phase Services**								
			0	1	2	3	1	7	$526.00
	Total Cost								**$2,206.00**

HILLERS ELECTRICAL ENGINEERING, INC.

January 23, 2015

Sudhan Paranjape, P.E.
Carollo Engineers, Inc.
1089 W. Morse Blvd., Suite A
Winter Park, FL 32789

Subject: Conserv II Biosolids Dewatering Amendment RAS/WAS Modification Proposal

Dear Sudhan;

Hillers Electrical Engineering, Inc. (HEE) is pleased to provide Carollo Engineers, Inc. a proposal for the electrical and instrumentation services associated with the above referenced project. The amendment of RAS/WAS modification will be an add-on to the Conserv II Biosolids Dewatering project. Our scope will follow Carollo's latest Scope of Work associated with the design, bidding and construction services.
Our proposed electrical and instrumentation services not-to-exceed fee for the above amendment is $ 42,385.00 as shown in the attached spreadsheet.

HEE wishes to thank Carollo Engineers, Inc. for the opportunity to provide this proposal. Please do not hesitate to call me if you have any questions regarding this proposal or any other matter.

Sincerely,

Thein Win, P.E., LEED AP
CE16ConservIIBiosolidsDewatering-amendment RAS-WAS

23257 State Road 7, Suite 100, Boca Raton, Florida 33428 561-451-9165 Fax: 561-451-4886

Conserv II Biosolids Dewatering - Design and Construction Fees										
HILLERS ELECTRICAL ENGINEERING, INC.										
Design Fee Breakdown - RAS/WAS Amendment										
1/21/2015										
Rate	$161.00	$132.00	$112.00	$105.00	$85.00	$55.00				
	Proj. Mgr.	Proj. Eng.	Const. Obsv	Cadd	Drafting	Secretarial	Total		TOTAL	
PHASE OF WORK	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Expenses	TASK COST	
										Final Design Fee:
Final Design Phase										**$32,153.00**
60% Design										$11,542.00
60% Electrical Design	1	24		24			49		$5,849.00	
60% I&C Design	1	20		20			41		$4,901.00	
60% Specification		4					4		$528.00	
60% Cost Opinion		2					2		$264.00	
90% Design										$11,542.00
90% Electrical Design	1	24		24			49		$5,849.00	
90% I&C Design	1	20		20			41		$4,901.00	
90% Specification		4					4		$528.00	
90% Cost Opinion		2					2		$264.00	
100% Design										$8,434.00
100% Electrical Design	1	16		16			33		$3,953.00	
100% I&C Design	1	16		16			33		$3,953.00	
100% Specification		2					2		$264.00	
100% Cost Opinion		2					2		$264.00	
Permitting Serv-Building Department	1	2		2			5		$635.00	$635.00
										Construction Fee:
Construction Fee Breakdown										**$10,232.00**
Bidding Services										$796.00
Pre-bid meeting										
bidding assistance/RFI/Addendums	2	2		2			6		$796.00	
Construction Services										$9,436.00
Conformed drawings		2		2			4		$474.00	
shop drawing review	2	24					26		$3,490.00	
RFI and Field Change Directives	1	4		4			9		$1,109.00	
Periodic site visits (Add. 2)		4	4				8	$400.00	$1,376.00	
Substaintial and Final Inspections		4	4				8		$976.00	
Assist with start-up, testing		4	4				8	$400.00	$1,376.00	
record drawings	1	2		2			5		$635.00	
										Total:
Total Hours	13	184	12	132			341			**$42,385.00**
Total Labor Cost	$2,093.00	$24,288.00	$1,344.00	$13,860.00			$41,585.00	$800.00	$42,385.00	
CE16 - amendment RAS/WAS										
Note: The above fee is only for RAS/WAS project being add-on to the Biosolid Project.										

Scope Fee Summary

February 20, 2015

Via Email: sparanjape@carollo.com

Mr. Sudhan Paranjape, PE
Carollo Engineers, Inc.
1089 W. Morse Boulevard, Suite A
Winter Park, FL 32789

RE: CONSERV II WRF – Test Holes
Section 07, Township 23 South, Range 29 East, Orange County, City of Orlando, Florida

Dear Mr. Paranjape,

We are pleased to submit our ***REVISED*** proposal for Subsurface Utility Verification (Penetrating) on the above referenced project.

SCOPE OF WORK:

1. Coordinate Sunshine 811 and utility locates to include supplemental calls to each locator to expedite the field marking of each subsurface utility as required by law.

2. Expose the subject utilities by using non-destructive vacuum excavation methods at ten (10) specific locations as indicated on plan sheet(s) provided or marked by client in the field.

3. Confirm/determine the vertical and horizontal position of the subject utilities and record the information, using the locate marks provided by the utility owners and/or their representatives unless otherwise specifically requested by client.

4. Any asphalt/concrete removed will be repaired using like materials.

5. Tie each test hole location to a minimum of three visible physical features to enable this data to be added to your base map and also enable future recovery.

6. For an additional fee, an option that is available is the location of each Test Hole using GPS or conventional surveying equipment, with control furnished by the client.

The final product will be test hole reports/sketches of the project area reflecting all pertinent data for your use.

Terms and Conditions

It is understood that the construction contractor is responsible to abide by Sunshine 811, Florida State Statutes Chapter 556.106 and all applicable laws, and regulations that pertain to the services provided.

Carollo Engineers, Inc. will make available all plans and utility records that have been obtained for this site. However, the information provided by Carollo Engineers, Inc. is also dependent upon a Sunshine 811 request for utility owners and/or their representatives to mark their buried underground plant at the project site as required by law. Southeastern Surveying and Mapping Corporation (SSMC) has a right to rely on the accuracy of such plans and utility records and will notify Carollo Engineers, Inc. if there are any patently or reasonably identifiable defects in the documents.

Carollo Engineers, Inc. is aware that due to the inherent uncertain nature of subsurface utilities, including but not limited to deficient or misrepresentation of prints, SSMC cannot guarantee that all subsurface utility lines will be accounted for. SSMC will ensure that all reasonable efforts are made to identify the location of said underground utilities and provide the best available information within the project area with the use of Ground Penetrating Radar, Electronic Line Locating Equipment and Vacuum Excavation methods, as needed. Additional research will only be conducted by SSMC if requested in writing by Carollo Engineers, Inc.

In accordance with the Underground Facility Damage Prevention and Safety Act, the Design Engineer shall perform sufficient Utility Coordination with the Utility providers in this location to affirm the information from SSMC's efforts and confirm that no other subsurface utility is possibly undetected by these efforts.

SSMC shall not be held liable for any latent or unreasonably discoverable utilities in the project area. Furthermore in the event of a claim regarding the services provided in the proposal, SSMC shall have liability for reasonable and necessary defense costs to the extent caused by SSMC's negligence.

M.O.T. will be used only if absolutely necessary and these invoice charges will be an addition to the total per day rate and reflected on our invoice to you.

Note: If permitting is required for said work, these charges will also be additional and reflected on our invoice to you.

Note: Test Holes that require a depth of greater than ten (10) feet, or require a substantial amount of increased effort (sleeving, shoring, de-watering, etc.), then said Test Holes may need to be negotiated separately on a case by case basis if normal vacuum excavation practices do not allow said utilities to be exposed.

Note: All utility sizes given are outside diameter unless otherwise specified and are approximate only due to uncontrollable field conditions that may be encountered during excavation.

Note: Any additional overlaying or restoration of pavement, other than the replacement of materials removed and cold patched, will be the responsibility of Carollo Engineers, Inc.

The final product will be test hole reports/sketches of the project area reflecting all pertinent data for your use. Our fee for this project will be as follows:

Test Holes/Day Rate:

$361.00 Dirt/Each (anticipate 10)	**$3,610.00**
$412.00 Asphalt/Concrete/Each	
Survey Services	**$944.00**
NOT TO EXCEED	**$4,554.00**

We anticipate completion of the above described work within four (4) weeks after receipt of approved permit and written notice to proceed. Payment is expected within thirty (30) days from date of invoice.

We look forward to the opportunity to work with you on this project.

Sincerely,

M. Scott Sowards
Utility Division Project Manager

MSS:gac

If the above scope, period of service and method of compensation meets with your approval, please execute below and fax to SSMC as notice to proceed along with the notice of commencement.

If your firm prefers using your own standard PROFESSIONAL SERVICES AGREEMENT in lieu of this proposal letter, this document MUST BE furnished to SSMC, negotiated, and executed prior to the commencement of any service.

Send all Agreements to:

Orlando Corporate Office
6500 All American Boulevard
Orlando, FL 32810.
Fax: 407-292-0141
Email: info@southeasternsurveying.com

Your firm agrees that by (1) signing and returning this Proposal, or (2) partial or complete performance under this Proposal and SSMC has not received, negotiated and/or executed a PROFESSIONAL SERVICES AGREEMENT, then it is agreed that THE TERMS AND CONDITIONS IN THIS PROPOSAL SHALL GOVERN THE SERVICES RENDERED.

Furthermore, if requested, your firm acknowledges that by accepting this Proposal, SSMC will provide your firm with an insurance certificate that (1) contains the project name and (2) lists your firm as the certificate holder.

The person executing this document must indicate that he/she is a Principal and/or Corporate Officer.

If the signatory is not a Principal and/or Corporate Officer, a Letter of Authorization on company letterhead signed by a Principal and/or Corporate Officer, MUST be provided that specifically states that signatory has the authority to bind the parties by entering into this agreement.

ACCEPTED BY:

Principal / or Corporate Officer	/ Title	Printed Name	Date