JonesEdmunds

Jones Edmunds & Associates, Inc.

SUPPLEMENTAL WORK ORDER
for the CITY OF CLEARWATER

Date:	**October 29, 2018**
Consultant Project Number:	**03720-048-01**
City Project Number:	**14-0036-UT**
City Plan Set Number:	_____

1. PROJECT TITLE:

Northeast Water Reclamation Facility (WRF) Blend Tank Improvements

2. SCOPE OF SERVICES:

Jones Edmunds & Associates, Inc. is pleased to provide the City of Clearwater with this supplemental work order to provide additional design services related to the Northeast Water Reclamation Facility (WRF) Blend Tank Improvements project.

In 2015, the City contracted Jones Edmunds to design upgrades to minimize shock loading to the primary anaerobic digester at the City's Northeast Water Reclamation Facility (WRF). The work included upgrading the truck off-loading pump station, refurbishing the two 40-foot-diameter Sludge Storage and Blending Tanks, modifying the suction piping and valves for the Sludge Storage and Blend Tanks, installing new Sludge Transfer Pumps, installing new Dewatering Feed Pumps, and upgrading electrical, instrumentation, and controls for the above-mentioned unit treatment processes. The project upgrades were identified to improve reliability and operability, reduce maintenance, and allow flexibility to pump to the sludge storage tanks or directly to the anaerobic digester.

This scope of services incorporates recent additions to the Northeast Blend Tank project that will further contribute to the flexibility and operability of the unit processes, meet the City's newly adopted electrical and labeling standards, and provide redundancy for the system components thus increasing the operator's safety and control of the systems.

FINAL DESIGN PHASE (PLANS AND SPECIFICATIONS)

Task 3.4 – Addition of Grinder Systems – Upon review of the 60% drawings, City staff informed Jones Edmunds to include grinder systems on the pipes feeding the north and south blend tanks

and blended sludge feed to the digester to prevent from pipe clogging and maintain a uniform consistency within the blended sludge. The items associated with this task include:

A. Design two grinder systems on the pipes feeding and exiting the north and south blend tanks and include a grinder specification and modify drawings to include bypass piping for the systems.
B. Design a concrete slab for each grinder system and bypass piping station.
C. Design associated electrical and I&C modifications for the grinder systems and update the project documents.

Task 3.5 – Tank Covers and Odor Control Piping Revisions – The existing NE Blend Tanks contain domed covers and piping which is used to capture odors from the tanks and convey it to the odor control system. In 2015, the odor control system was no longer in service and JE was instructed by the City to exclude piping connections to the new tank covers from the design since the odor control system was no longer in use. The City staff has more recently informed Jones Edmunds that the odor control system will be repaired and placed back into service. This task includes work to design new odor control vents and connections to the new tank covers which had been excluded in the original scope of work. The items to be completed under this task include:

A. Revise drawings to reconnect odor control intake connections and provide piping modifications to move air from under the sludge blending tank covers and convey it to the existing odor control system.
B. Include OHSA tie-off points for harnesses on the tank covers.

Task 3.6 – Yard Piping Modifications – At the 60% design submittal, the City requested Jones Edmunds incorporate bypass piping and valves for all flow meters on the project. The items to be completed under this task include:

A. Incorporate bypass piping and valves for all magnetic flow meters (Total of 2) to allow for maintenance and/or replacement of the meters.

Task 3.7 – Dewatering Modifications – The original scope of work included replacing the dewatering feed pumps and integrating them into the existing control system. The City has requested modifications to the controls to provide flexibility and redundancy in operating the dewatering system (belt filter presses and centrifuge systems). The items to be completed under this task include:

A. Revise piping at the dewatering feed pump station to allow for each pump to feed the centrifuge or the belt filter presses as noted in 60% City drawing comments and incorporate a flange to connect a temporary feed to mobile dewatering equipment.
B. Modify controls of the existing centrifuge and belt filter presses to account for pumping configuration modifications and update the project documents.

C. Evaluate the design of the installation of lifting eyes or a crane and lift for removal of dewatering feed pumps to a rear access location.

3. PROJECT GOALS:

Upgrade/refurbish the Northeast WRF Sludge Storage and Blending Tanks to allow biosolids to be temporarily stored and pumped to the anaerobic digester over a 24-hour period to reduce shock-loadings to the anaerobic digester; reduce foaming; and facilitate flexibility in biosolids handling, processing, and disposal. Convey digested biosolids from the anaerobic digester to the other Sludge Storage and Blending Tank (not used for primary and secondary sludge storage) or directly to dewatering. Replace the existing suction header piping, valves, and dewatering feed pumps and provide additional suction header piping and new sludge transfer pumps.

4. BUDGET:

See attachment B. This price includes all labor and expenses anticipated to be incurred by Jones Edmunds & Associates, Inc. for the completion of these tasks in accordance with Professional Services Method "A" – Cost Times Multiplier Basis **for a fee not to exceed Thirty-Two Thousand Five Hundred Dollars ($32,500)**.

Permit applications fees are not expected to be incurred for this work and thus not included.

5. SCHEDULE:

The project is estimated to be completed over a mutually agreed upon schedule following a Notice to Proceed from City.

6. STAFF ASSIGNMENT:

The firm's staff assignments to this project include:

Tom Friedrich, PE, BCEE	Project Manager / Client Services Manager
Erin Hunt, PE	Infrastructure Managing Director
Lisa Rhea, PE	Senior QA/QC / Senior Project Engineer
Mike Clark, PE	Senior Electrical Engineer – QA/QC
David Yonge, PhD, PE	Task Manager / Project Engineer
Sean Menard, EI	Engineer Intern
Gregg Fruecht	Construction Administrator
Pete Hoenshelt, PE	Electrical / I&C
John Sobczak, PE	Structural

The City's staff assignments to this project include:

Duy Nguyen	Project Manager
Jeremy J. Brown, PE	Utilities Engineering Manager
Jason Jennings	Public Utilities Manager

Mike Flanigan	Public Utilities Liaison
Randy Barnoski	NE WRF Chief Operator
Richard G. Gardner, PE	Public Utilities Assistant Director

7. CORRESPONDENCE/REPORTING PROCEDURES:

ENGINEER's project correspondence shall be directed to Tom Friedrich, with copy to David Yonge and Lisa Rhea.

All City project correspondence shall be directed to the Project Manager, with copies to the Utilities Engineering Manager and Public Utilities Assistant Director.

ENGINEER shall provide a minimum of forty-eight (48) hours' notice prior to conducting fieldwork/site visits. ENGINEER shall provide a minimum of seven (7) days notification for site visits requiring the assistance of City Operations and Maintenance personnel.

ENGINEER acknowledges that all City directives shall be provided by the City Project Manager.

In addition to the original copies delivered as stated in the scope of work, all project deliverables will be submitted in electronic format on CD or other City approved device prior to approval of final invoice.

8. INVOICING/FUNDING PROCEDURES:

For work performed, invoices shall be submitted monthly to the:

City of Clearwater, Engineering Department
Attention: Veronica Josef, Senior Staff Assistant
PO Box 4748
Clearwater, Florida 33758-4748.

Contingency services will be billed as incurred only after written authorization provided by the City to proceed with those services.

City Invoicing Code: _3217321-561300-96215_.

9. INVOICING PROCEEDURES

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

A. Project Number, Purchase Order Number and Contract Amount.
B. The time period (begin and end date) covered by the invoice.
C. A short narrative summary of activities completed in the time period
D. Contract billing method – Lump Sum or Cost Times Multiplier
E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
F. If Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts

will be required for any single item with a cost of $50 or greater or cumulative monthly expenses greater than $100).

G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. SPECIAL CONSIDERATIONS:

The consultant named above is required to comply with Section 119.0701, Florida Statutes (2013) where applicable.

PREPARED BY:

_____
Stanley F. Ferreira, Jr., PE
President / Chief Executive Officer
Jones Edmunds & Associates, Inc.

_____
Date

APPROVED BY:

_____
D. Scott Rice, PE
City Engineer
City of Clearwater

_____
Date

CITY OF CLEARWATER
ENGINEERING DEPARTMENT

WORK ORDER INITIATION FORM
CITY DELIVERABLES

1. FORMAT

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. DELIVERABLES

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20’ unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address Tom.Mahony@myClearwater.com.

All electronic files must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

Northeast Water Reclamation Facility (WRF) Blend Tank Improvements – Design and Bidding Phase Services
Jones Edmunds & Associates, Inc.
City ID 14-0036-UT

WORK ORDER INITIATION FORM
PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
3.0	**Supplemental Services**			
3.4	Addition of Grinder Systems	$3,300	$5,300	**$8,600**
3.5	Tank Cover Odor Control Piping Revisions	$0	$2,000	**$2,000**
3.6	Yard Piping Modifications	$0	$5,600	**$5,600**
3.7	Dewatering Feed Pump Modifications	$11,600	$4,700	**$16,300**
Supplemental Services Total				**$32,500**