



Brown and Caldwell

WORK ORDER INITIATION FORM for the CITY OF CLEARWATER

Date: 1-17-19

Consultant Project Number:

City Project Number: 18-0047-UT

Plan Set Number:

1. PROJECT TITLE:

MS WRF Process Control Gates Repairs (FDEP)

2. SCOPE OF SERVICES:

Brown and Caldwell (Consultant) will provide the following services to the City of Clearwater (the City):

The Consultant has been requested to design improvements to address deficiencies identified by FDEP in an August 7, 2018 letter for the MSWRF. The improvements within the letter identify gate actuator repairs/replacement within the secondary settlement tanks. The City desires the Consultant to assist in the preparation of bid documents for the gate repairs/replacement associated with the aeration channels within the secondary settlement basin. In addition, the associated bid documents will require the aeration tanks to be isolated and have grit removed, diffused air system (inclusive of only the diffusers and connecting piping) to be evaluated and repaired, the tank drains repaired (assuming this can be accomplished by gravity flow), and the basins effluent weirs repaired to working order during the gate replacement effort.

100 PRE-DESIGN PHASE

Task 101 Project Management Plan and Field Work Safety Plan. The Field Work Safety Plan will be submitted to the City prior to field activities.

Task 102 Progress Reports and Invoices

Task 103 Project Coordination

- a. City coordination for schedules, field visits, miscellaneous communication and project updates.
- b. Consultant coordination regarding project deliverables, City schedules and miscellaneous project updates based on received direction from the City.

Task 104 Meetings

The Consultant will prepare an agenda, sign-in sheet and a meeting summary for each meeting listed below:

- a. Project Kickoff and Site Visit. Consultant shall prepare for and lead a project kick-off meeting with City staff to review the goals and objectives of the project, to establish lines of communication between City staff and the Consultant's project team, and to identify the operating data and other information needed by Consultant to begin work on the project. A site visit to the MSWRF will be conducted.
- b. 30% Review Meeting following submittal of 30% design documents.
- c. 60% Review Meeting following submittal of 60% design documents.
- d. 90% Review Meeting following submittal of 90% design documents.

The Consultant will provide the appropriate design phase submittal at least two weeks (10 business days) prior to the review meeting to allow for City review of the submittal prior to the meeting. The review meeting will occur approximate one week following the receipt of the City's comments. Following the meeting, the City will have an additional week (5 days) to provide additional written comments to Consultant.

200 FINAL DESIGN PHASE

Consultant will perform the services as described below.

Task 201 30% Design

The Consultant will conduct up to 3 field visits to observe and assess the existing structural and mechanical components of the gates, and weirs as are visible without entering the tanks or confined spaces. The City will take down one settlement tank basin for visual inspection by the Consultant to see if there are any visual signs of structural deficiency and to estimate the volume of grit on the floor bottom for estimating grit removal quantities for removal by a contractor. The Consultant will deliver a Draft 30% document for review and comment by the City. After receiving written comments from the City, the Consultant will incorporate the City comments into a Final 30% document.

- A. Consultant will review existing record drawings, shop drawings, and Standard Operating Protocol (SOP) documents, as provided by the CITY, and evaluate the following:
 - i. The existing gate configuration for the secondary settlement process is such that each of the four channels have 3 gates (12 gates in total). The Engineer will evaluate the hydraulics of the existing gate configuration to determine if modifications can be made to eliminate any of the gates.
 - ii. The basins effluent weirs will be evaluated for proper operation by the City. The Consultant will specify equivalent weir replacement as deemed necessary by the City.
 - iii. The basin floor drains will be evaluated based on available record drawings and the City's understanding of their ability to operate the drains. The Consultant will determine if any changes can be made to reestablish draining the basins by gravity flow.
- B. Coordination with Gate manufacturers to discuss repair and/or replacement options.
- C. Coordination with City operations staff.
- D. Consultant will provide 30% design documents, which will include the following:
 - i. Technical Memorandum documenting the following:
 - 1) Existing process operations and equipment;
 - 2) Observed conditions based on field observations and recommend repair options;
 - 3) Hydraulic evaluation for reducing the number of gates required (currently 3 per basin);
 - 4) Proposed repair and/or replacement options for gates and weirs;
 - 5) Basin drain repair options;
 - 6) Develop preliminary bypass and maintenance of plant operations plan for maintaining the basin process water flows during construction of the gate repair/replacement. A detailed written plan will be included within the technical specification as part of 90% Design and Final Design submittals.
 - 7) Table of Contents for the Technical specifications, to be included as Section IVA, supplementing the Consultants Division 1 through 17 as necessary.
 - 8) Drawing list for detailed design.
 - 9) Engineers Opinion of Probable Construction Cost (EOPCC)
 - ii. Typical details for gate repair/replacement

Task 202 60% Design

Consultant will provide 60% design documents, which will include technical specifications, plan sheets, details following the recommendation of Task 201. 60% design documents generally include the following:

- 1) Cover sheet with sheet list, symbols and abbreviations, general notes
- 2) Structural plans and sections
- 3) Process/mechanical plans and sections
- 4) Draft Technical Specifications not including Division 1
- 5) Updated EOPCC

Task 203 90% Design

Consultant will provide 90% design documents, which include updated design documents included in the 60% design. 90% documents generally include the following:

- 1) Updated 60% sheets
- 2) Structural details
- 3) Process/mechanical details
- 4) Division 1 documents and updated Technical specifications, including bid forms
- 5) Updated EOPCC

Task 204 Final Design

Consultant will incorporate City's comments on Consultant's 90% deliverables and provide the final plan sheets and specifications along with a final EOPCC.

Task 205 FDEP Response Letter

Consultant will assist in drafting three update letters regarding the gate repair activities to notify FDEP of the City's progress associate with the tank repairs:

1. Design Activities
2. Construction Activities
3. Completed Activities

Task 206 Contingency

Consultant shall provide additional services as mutually agreed upon. An example; it is assumed that there are no major structural deficiencies, however should additional investigation or design be required to address observed conditions, additional fee may be required to cover additional design effort.

300 BIDDING PHASE

Task 301 Pre-bid Meeting

Consultant's project engineer shall attend the pre-bid meeting and provide a project description to those in attendance. Consultant shall assist in preparing a meeting summary,

and a formal response to questions asked during the meeting. The City will provide an agenda and sign-in sheet and will be responsible for issuing any formal response from the meeting. The Consultant shall prepare technical responses for the City to include in their formal response.

Task 302 Addenda

Consultant will provide written responses to technical questions for up to one (1) addenda as requested by the City. The City will be responsible for issuing addenda.

Task 303 Conformed Documents

Consultant will provide conformed documents, if needed.

Task 304 Recommendation

Consultant will review bid tabulations, verify apparent low bidder responsiveness, and recommend award. Consultant will prepare a recommendation letter to the City.

Deliverables:

- 30% Draft – Three (3) printed copies and a PDF file format of the deliverable
- 30% Final – Three (3) printed signed and sealed copies and a PDF file format of the deliverable
- 60% and 90% – Drawings will be based on full size, 24"x36" paper and half size drawings shall be standard tabloid size 11"x17" paper. Three (3) printed copies of plans in 11 x 17 and specifications 3 ring bound, PDF file format of plans and specifications; specifications in Microsoft (MS) Word file format
- Final Documents – Three (3) copies of full-size bid documents, signed and sealed by a Registered Florida Professional Engineer, and in PDF; specifications in MS Word file format
- Addenda, up to one (1) addenda, in MS Word file format
- Conformed Documents – Three (3) copies of conformed documents, signed and sealed by a Registered Florida Professional Engineer, and in PDF; specifications in MS Word file format
- Letter of Recommendation, MS Word file format
- FDEP Update Letters, MS Word file format, and in PDF file format

3. PROJECT GOALS:

- A. Prepare a Technical Memorandum, at the 30% design level, documenting the detailed design to be completed, including a preliminary bypass and maintenance of plant operations plan for maintaining the basin process water flows during construction.
- B. Prepare bid documents for the City to bid and award repairs to a contractor for the gate repairs/replacement associated with the aeration channels within the secondary settlement basin. In addition, the bid documents will require the aeration tanks to be isolated and have grit removed, diffused air system to be evaluated and repaired, the tank drains repaired, and the basins effluent weirs repaired to working order during the gate replacement effort.
- C. Assist with documentation of the City's progress of the Project to FDEP.

4. BUDGET:

See – Attachment "B"

This price includes all labor and expenses anticipated to be incurred by Consultant for the completion of these tasks in accordance with Professional Services Method "A" – Cost Times Multiplier Basis, for a fee not to exceed One hundred forty two thousand five hundred thirty five Dollars (**\$142,535**).

5. SCHEDULE:

The project design is to be completed six months from issuance of notice-to-proceed (NTP). The project deliverables are to be phased as shown below.

Milestones	Business Days from NTP
Kickoff Meeting	10
30% Design	50
60% Design	110
90 Design	160
Final Design	190
Bid Phase	TBD

6. STAFF ASSIGNMENT:

Brown and Caldwell:

Todd Bosso, PE – Managing Engineer, Project Manager

Phil Walker, PE – Project Engineer

Robert Hrabovsky, PE – Structural Engineer

Rhona Gonzalez – Project Analyst I
Carlota Centeio – Project Coordinator

City of Clearwater:

Jenelle Ostrowski, PE - Project Manager
Ryan Alexander – Public Utilities Site Representative (as appropriate)
Michael Flanigan – Public Utilities Liaison (as appropriate)
Michael Gilliam and Jason Jennings - Public Utilities Manager (as appropriate)
Jeremy J. Brown, PE - Utilities Engineering Manager
Richard G. Gardner, PE - Public Utilities Assistant Director

7. CORRESPONDENCE/REPORTING/COMMUNICATIONS PROCEDURES:

Consultant's project correspondence shall be directed to Consultant's Project Manager.

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

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

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

A health and safety plan must be submitted and approved by the Project Manager prior to conducting any fieldwork/site visits.

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
Attn. Veronica Josef, Senior Staff Assistant
PO Box 4748
Clearwater, Florida 33758-4748**

City Invoicing Code: 3217321-530100-96213

9. INVOICING PROCEDURES

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:

Consultant shall comply with Section 119.0701, Florida Statutes (2016) where applicable.

Consultant's scope of services, budget, and schedule assume the following:

- a. The scope of work and budget assumes that record drawings are accurate and field verification will not be provided as a part of this scope of work.
- b. The City will provide equipment and manpower necessary to assess the approximate grit depth with the secondary settlement tanks. The Consultant will witness and assist in the data collection.
- c. Bidding Services and solicitation of quotes to perform the scope of work will be performed by the City.
- d. No electrical or instrumentation and control disciplines are required for this project.
- e. No civil/stormwater improvements are required or included in this scope of work.
- f. No Building Department permitting services will be required.
- g. No structural evaluation of the existing tanks will be performed.
- h. No infrastructure assessment will be performed.
- i. Surveying, Subsurface Utility Engineering, and Geotechnical Services are not included.
- j. No Permit Application or related work is included.
- k. No confined space entry.
- l. The City will be prepare all contract documents and bid advertisements and provide City standard specifications for the Consultant to reference and amend (Section IVA) Division 1 through 17 as needed.
- m. No record drawings will be provided.

PREPARED BY:

**Todd Bosso, PE
Managing Engineer
Brown and Caldwell**

Date

APPROVED BY:

**D. Scott Rice, P.E.
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.

MS WRF PROCESS CONTROL GATES REPAIRS (FDEP)

Brown and Caldwell**WORK ORDER INITIATION FORM
PROJECT BUDGET**

Task	Description	Subconsultant Services	Labor	Total
100	Pre- Design			
101	Project Management		\$1,566	
102	Progress Report and Invoices		\$8,033	
103	Project Coordination		\$6,060	
104	Meetings		\$9,232	
				\$24,891
200	Final Design Phase			
201	30% Design		\$28,280	
202	60% Design		\$31,924	
203	90% Design		\$23,268	
204	Final Design		\$14,613	
205	FDEP Response Letter		\$2,096	
206	Contingency		10,000	
				\$110,181
300	Bidding Phase			
301	Pre-Bid Meeting		\$1,301	
302	Addenda		\$2,474	
303	Conformed Documents		\$2,248	
304	Recommendation		\$790	
				\$6,813
Subtotal, Labor and Subcontractors				\$141,885
Permit Review Fees				
Other Direct Costs (prints, photocopies, postage, etc.) (Not applicable to lump sum Work Orders)				\$650
Grand Total				\$142,535