

**WORK ASSIGNMENT NO. 5 PURSUANT TO
THE JULY 13, 2010 AGREEMENT BETWEEN THE
CITY OF VENICE, FLORIDA AND
McKIM & CREED, INC.**

WHEREAS, on July 13, 2010 the parties entered into an Agreement whereby the ENGINEER would perform professional services for the OWNER pursuant to an executed Work Assignment; and

WHEREAS, the OWNER wishes to authorize the ENGINEER to perform professional services concerning the Eastside WRF Reclaimed Water Filtration System Improvements as more particularly described in the Scope of Services contained herein; and

WHEREAS, the ENGINEER wishes to perform such professional services,

NOW THEREFORE, in consideration of the premises and mutual covenants contained in the July 13, 2010 Agreement and in this Work Assignment, the parties agree as follows:

1. General description of the project. This reclaimed water filtration improvements includes: removing the existing pressure filter system, installing a new gravity filtration system, installing new pump stations for the gravity effluent to the GST influent line and for the waste backwash water to the plant drain lift station, modifying yard piping as needed, upgrading the existing pond return pump station and providing chemical feed to the filtered water before the GST influent line.
2. Scope of services to be performed. ENGINEER shall perform the services described in the scope of services attached as Attachment "A".
3. Compensation to be paid. City shall pay the ENGINEER the sum of \$ 299,797.00 for performance of the professional services specified in this work assignment.
4. Time for completion. ENGINEER shall complete the professional services specified in tasks 1 through 3 of this work assignment within 32 weeks from the date of this work assignment and the remaining tasks in accordance with the City's schedule.

IN WITNESS WHEREOF, the parties have executed this work assignment on the ____ day of ____, 2013.

McKIM & CREED, INC.

CITY OF VENICE, FLORIDA

By: _____
Mayor

ATTEST:

City Clerk

ATTACHMENT "A"
Project: Eastside WRF Reclaimed Water Filtration System Improvements
Work Assignment No. 5
Utilities/MC-2013-5

PURPOSE

The City of Venice (City) has requested McKim & Creed, Inc. (Engineer) to provide Professional Engineering Services for design, permitting, bidding and limited construction services for the reclaimed water filtration system improvements recommended in the Final Lake Filtration System Alternatives Evaluation Report prepared for the City on March 2013 by the Engineer.

PROJECT DESCRIPTION

The City operates the Eastside Water Reclamation Facility (EWRF). The current permitted capacity of the EWRF is 6 million gallons per day (mgd). The EWRF treats wastewater from the City's service area and portions of Sarasota County's service area. The EWRF distributes the reclaimed water (RCW) to the City's reuse system, to the 35 million gallon (MG) RCW storage pond or to Sarasota County's reuse system. RCW stored in the ponds has already met effluent standards and is not required to be retreated prior to distribution or disposal. However, currently the water returned from the 35 MG storage pond is retreated in the biological process. Previous attempts to return water to the chlorine contact basin and bypass upstream processes has resulted in elevated nephelometric turbidity unit (NTU) levels. Given the inherent presence of nutrients in RCW, the open top nature of pond storage, and the abundance of sunlight in Florida, RCW storage ponds tend to contain abundant quantities of algae at certain times of the year. The reclaimed water filtration system will allow the return of stored RCW from the EWRF pond to meet customer demands. By filtering the RCW returned from the storage pond and discharging it into the RCW storage tank, the City can improve plant operations, avoid potential reject events and obviate the need to bring RCW back into the permit compliance zone of the EWRF.

SCOPE OF SERVICES

This scope has been developed to address the anticipated project requirements. Tasks not specifically identified in this scope of services are not included. The Engineer shall perform the following tasks under this work assignment:

TASK 1: PRELIMINARY ENGINEERING

A. Project Initiation & Administration

The Engineer will develop project documents and filing systems for the project that will include project set-up, project schedule, project management plan,

QA/QC plan, safety plan (for engineering services only), and hard and electronic file systems. Engineer will conduct an internal kick-off meeting with design team to discuss the project and assign responsibilities. Following the project setup, a project kick-off meeting and site visit will be held with the City to discuss the overall project approach, identify key team members, and establish procedures for communication and data collection. Engineer will prepare the meeting agenda and a detailed schedule for the kick-off meeting. Subsequently, meeting minutes will be prepared by the Engineer and distributed to the meeting attendees via e-mail. Additionally, the Engineer will provide monthly status reports of the progress of this scope of work to accompany monthly invoices and administer the project.

B. Data Collection and Review

Engineer will coordinate with the City to obtain additional information needed to proceed with the design. Additional data required from the City for the design of this project may include, but not be limited to, the following:

- Current and historical plant operating data;
- Additional existing or new EWRf record drawings, sketches, photos, reports, shop drawings, O&M manuals and any other information for the existing reclaimed water filtration system, including pump stations, storage ponds, piping, valves, flow meters, electrical and instrumentation system components not already in the Engineer's possession.
- Recent site survey data, in CADD or other electronic format.

It is anticipated that data collection will be an ongoing effort in conjunction with the design.

C. Topographical Survey

A topographical survey will be performed of the project area to be used during the design, permitting and construction phase of the project. The survey will be completed to minimum technical standards adopted by the State of Florida Department of Business and Professional Regulation, Board of Professional Surveyors and Mappers. A boundary survey is not anticipated for this project and is not included in this scope of work.

D. Subsurface Utility Exploration

Engineer will perform subsurface utility exploration (SUE) to determine piping conflicts in the vicinity of the reclaimed water filtration system and yard piping improvements. The work will be performed by a three man field crew over two

days (maximum 20 locates). Locates will be at a depth no greater than 10 feet at locations designated by the Engineer. A spreadsheet of the SUE locates will be developed and included in the design documents indicating the utility service, northing and easting location (+/- .05 ft), depth to grade, pipe size, pipe material and pipe orientation.

E. Geotechnical Investigation

Soils testing will be performed by a Florida licensed Professional Geotechnical engineer in the vicinity of the reclaimed water filtration system improvements to determine the suitability of in situ soils for the proposed improvements and general subsurface soil conditions. The field testing will include a single 40-foot standard penetration tests (SPT) and double ring infiltration test (DRIT). Following laboratory analyses, a report will be prepared containing the results of the field testing and laboratory analyses with recommendations for specifying construction parameters that will assist in design of the proposed improvements. Two (2) signed and sealed copies of the report will be provided to the City.

F. Progress Meeting

Engineer will meet with City during the preliminary engineering stage to discuss the progress of the project, review recent findings, and to go over the status of information needs. Progress drawings will be available for discussion purposes. Meeting minutes will be prepared by the Engineer and distributed to meeting attendees.

TASK 2: FINAL DESIGN

The design will consist of modifications to the existing lift station at the storage pond, installation of a single gravity disc filter, backwash pump station, filter effluent pump station, chemical feed system, storm water improvements for the added impervious area and yard piping improvements.

A. 60% Design Phase

1. Prepare 60% Drawings:

Engineer will prepare 60% design drawings for the City's review and comment. The Drawings will generally consist of the following:

- Cover, General Notes, Index, Symbols and Legend Sheets
- Civil/Site Plans showing locations of existing and proposed facilities, existing topography and drainage plans.

- Demolition plans for the removal/abandonment of existing facilities.
 - Yard Piping Plans for the proposed yard piping improvements.
 - Mechanical/Process Plans for the proposed facilities. The mechanical plans will include notes, plans, sections, details and schematics for the reclaimed water filtration system improvements.
 - Electrical Plans for the proposed facilities including single line diagrams, electrical site plans, motor control center modifications, schedules and details.
 - Instrumentation Plans for the proposed facilities including Process & Instrumentation diagrams and details for integration of the new equipment into the existing facility.
 - Structural Plans for the proposed facilities including foundation plans, elevated walkway plans notes and details.
2. **Prepare 60% Technical Specifications:** Engineer will prepare 60% technical specifications for the construction of the new components and facilities.
 3. **Prepare Engineer's 60% Opinion of Probable Construction Cost:** Engineer will prepare 60% opinion of probable construction cost for the reclaimed water filter system improvements.
 4. **60% QA/QC Review:** Quality control and quality assurance of the 60% Submittal will be conducted by a technical specialist not directly involved with the project in accordance with Consultant's QA/QC Procedures.
 5. **60% Submittal:** The 60% Submittal will be prepared and submitted to the City for review and comment. The submittal will include Drawings, Technical Specifications, and the Engineer's Opinion of Probable Construction Cost. Three (3) hard copies of the submittal package will be provided to the City. One (1) CD with the 60% Submittal documents in PDF format will also be provided.
 6. **60% Design Review:** Engineer will prepare agenda and meet with City staff to review their comments on the 60% Submittal. Engineer will incorporate agreed changes into the 90% Submittal. A comment/response letter addressing the City's comments will be submitted to ensure that all of the City's comments from the 60% review meeting are addressed.

B. 90% Design Phase

1. **Prepare 90% Drawings:** Based on the City's 60% review comments and discussions during the 60% Design Review Meeting, Engineer will advance the 60% design drawings to 90% complete.
2. **Prepare 90% Technical Specifications:** Engineer will advance the 60% technical specifications to the 90% percent level for the construction of the new components and facilities.
3. **Prepare Engineer's 90% Opinion of Probable Construction Cost:** The Engineer's 60% percent Opinion of Probable Construction Cost will be updated for the 90% Submittal.
4. **90% QA/QC Review:** Quality control and quality assurance of the 90% Submittal will be conducted by a technical specialist not directly involved with the project in accordance with Consultant's QA/QC Procedures.
5. **90% Submittal Package:** The 90% Submittal will be prepared and submitted to the City and permitting agencies for review and comment. The submittal will include Drawings, Technical Specifications, and the Engineer's Opinion of Probable Construction Cost. Three (3) hard copies of the submittal package will be provided to the City. One (1) CD with the 90% Submittal documents in PDF format will also be provided.
6. **90% Design Review Meeting:** Prepare agenda and meet with City staff to review comments on the 90% Submittal. Obtain City comments for incorporation into the 100% Submittal. A comment/response letter addressing the City's comments will be submitted to ensure that all of the City's comments from the 90% review meeting are addressed.

C. 100% Design Phase

1. **Prepare 100% Drawings:** Based on the City's 90% review comments and discussions at the 90% Design Review Meeting, Engineer will advance the 90% design drawings to 100% complete.
2. **Prepare 100% Technical Specifications:** Engineer will advance the 90% technical specifications to 100% for the construction of the new components and facilities.

3. **Prepare Engineer's 100% Opinion of Probable Construction Cost:** The Engineer's 90% Opinion of Probable Construction Cost will be updated for the 100% Submittal.
4. **100% QA/QC Review:** Quality control and quality assurance of the 100% Submittal documents will be conducted by a technical specialist not directly involved with the project in accordance with Consultant's QA/QC Procedures.
5. **100% Submittal:** The 100% Submittal will be prepared and submitted to the City as the Issue for Bid Submittal. The submittal will include one (1) set of full sized plans (bound, signed and sealed), one (1) set of Technical Specifications (bound, signed & sealed), one (1) set of full sized plans (unbound for reproduction), one (1) set of Technical Specifications (unbound for reproduction) and one (1) copy of Engineer's Opinion of Probable Construction Cost. One (1) CD with the 100% Submittal documents in PDF format will also be provided.

TASK 3: PERMITTING

A. Environmental Resource Permit

Engineer will obtain an Environmental Resource "Stormwater" Permit (ERP) for the project. Permitting services will include:

- Pre-application meeting with the City and FDEP
- Preparation and submittal of Environmental Resource Permit application package (Parts A, C and E with supporting documentation).
- Address RAIs from the FDEP
- FDEP application review fee to be paid for by the Engineer (limited to \$500)

B. Building Department Permit

Engineer will assist with obtaining the Building Permit for the project with the City of Venice Building Department. Permitting services will include:

- Pre-application meeting with City Building Department
- Provide to the Contractor three (3) signed and sealed plans to be submitted as part of the City Building Department package
- Contractor will be responsible for submitting and obtaining the permit which includes payment of all fees required to obtain the building permit

TASK 4: BID DOCUMENTS AND BIDDING ASSISTANCE**A. Attend Information Conference**

Engineer will attend an information conference conducted by the City to provide an overview of the project and to respond to Contractors' technical questions.

B. Addenda Preparation

Engineer will review contractors' questions and provide clarifications to the contract specifications and drawings. If necessary, specifications and drawings will be revised and provided with the written response. This information will be provided to the City's project manager to assist with issuing the addenda. The City will be responsible for the distribution of the addenda.

C. Bid Evaluation

Engineer will prepare the certified bid tabulation and review the lowest bids for completeness; including performance and payment bond, and compliance with bid requirements. The references of the apparent responsive low bidder will be verified. Engineer will prepare a letter of recommendation for the City's use in awarding the contract.

TASK 5: CONSTRUCTION SERVICES

The Construction Services scope of work to be provided by Engineer is based on the assumption that City of Venice will provide a qualified Full-Time Resident Inspector, who is experienced with wastewater treatment plant construction, during the entire course of construction activities at the site. It is also assumed that the City will provide a Project Manager to provide all construction administration and management, as well as, all coordination with the City's Full-Time Resident Inspector and the Contractor on a daily basis. It is the intent of the services outlined below to provide sufficient engineering oversight for Engineer to be able to certify that the work was constructed in substantial compliance with the contract drawings and design intent. Engineer will rely on the City's daily inspection reports, photography, observations, monitoring and recording of installed quantities of work, and reports of workmanship to complete its services described below and to certify the project. The construction contract for this project is estimated to be 270 calendar days to final completion.

A. Pre-Construction Conference

Engineer will conduct the pre-construction conference. Construction procedures and lines of communication will be established. Engineer will prepare the minutes of the meeting and distribute to the attendees.

B. Monthly Progress Meetings

Engineer's Senior Project Representative will conduct the monthly progress meetings at the project site to include City staff and the Contractor's representative. These meetings will be held once per month during the 9-month construction phase. Engineer will coordinate his site visits with the monthly progress meeting. Engineer's Senior Project Representative will prepare the minutes of the meeting and distribute to the attendees.

C. Shop Drawing and Other Submittal Reviews

Engineer will establish and administer a procedure for receiving and tracking submittals. Services will be provided for technical review of shop drawings, detailed construction drawings, erection drawings, operation and maintenance manuals and other submittals required by the Contract Documents. Copies of submittal reviews will be provided to the City and the Contractor.

D. Materials, Inspecting, Testing and Approval

A materials testing firm shall be employed and coordinated by the Contractor. Materials testing shall include testing of concrete, soil compaction, and other materials as may be required during construction. Reports generated by the materials testing firm will be reviewed by the Engineer for compliance with specified criteria. The Contractor and testing agency will be responsible for distribution of the testing results.

E. Clarifications and RAI Responses

Engineer will respond to requests for information and/or clarification by the Contractor or the City, coordinate the resolution of issues during construction, assist the City in corresponding with the Contractor and/or Regulatory personnel, assist the City in preparing field directives, and assist the City in preparing Change Orders, if necessary.

F. Periodic Site Visits

Engineer's Senior Project Representative will conduct periodic site visits to assess the overall construction progress and to observe major construction events. These visits will be conducted on an average of 8 hours per week during the 7-month active construction period for a total of 240 hours. These services will be adjusted as necessary to allow for more presence during key construction activities; less presence will be provided during mobilization, demobilization and other routine construction activities.

G. Project Start-Up

Engineer will assist in the start-up, testing and coordination of mechanical systems, instrumentation, electrical, controls and communication of the reclaimed water filtration system. For the purpose of this proposal, it is anticipated that two discipline specific engineers will be present during startup of the reclaimed water filters and the RCW return pump station for 2 full days for a total of 32 hours.

H. Substantial Completion Walkthrough

Upon notification of substantial completion from the Contractor and confirmation from the City, the Consultant's Lead Discipline Project Engineers and Senior Project Representative will conduct a walkthrough of the completed work to identify deficiencies. Once the walk through is complete, Engineer will prepare a punch list of items to be addressed/completed by the Contractor. Once the Contractor has completed the punch list items with concurrence from the City, the Engineer's Project Representative will conduct a final walk through to verify the work. If additional items are identified, the Engineer will prepare a final punch list to be completed by the Contractor and approved by the City.

I. Record Drawings

Engineer shall prepare Record Drawings based on "as built" information supplied by the Contractor and observation reports of construction and annotated photo album supplied by the City's Resident Inspector which accurately identify all field changes, material substitutions, and any other modifications made during the construction process. Engineer will provide the City with a single layer, AutoCAD drawing overlay file (additions and cross outs only) in electronic format, PDF copy and two (2) signed and sealed hard copies of the composite drawing to be used as the official Record Drawings for the project. Electronic formats will be provided on CD.

STAFFING ASSIGNMENT

City of Venice: Len Bramble – Utilities Director
Tim Hochuli – Assistant Utilities Director
Jim Petrosky – Operations Supervisor (Wastewater)

McKim & Creed: Street Lee - Project Principal
Jeff Lowe - Senior Engineering Project Manager (QA/QC)
Matthew Love - Project Manager
Blake Peters- Project Engineer
Samantha Jones- Engineer Intern
Mike Tweedel- Technical Specialist (I&C)
Sam Hobi- Technical Specialist (Structural)
Arthur Anchors- Technical Specialist (Electrical)
Scot Carpenter- Survey Project Manager
Bill Wudte- Utility Engineering Project Manager
Joe Resendes- Senior Project Representative
Diane Achinelli- Sr. Administrative Assistant

OWNER'S ALLOWANCE

This Work Assignment includes an Owner's Allowance of \$20,000 for unforeseen tasks required to complete the project which will be used only with the written approval of the City. A scope description and fee breakdown will be provided to the City for any proposed use of the Owner's Allowance.

BUDGET

The work will be billed on a "LUMP SUM" basis for Tasks 1, 2 and 3 and on a "HOURLY" basis for Tasks 4 and 5 in accordance with the Professional Consulting Services Contract. The fees for the various tasks are summarized below:

Task 1 Preliminary Engineering	\$	27,163.00
Task 2 Final Design	\$	160,759.00
Task 3 Permitting	\$	7,723.00
"LUMP SUM" Subtotal	\$	195,645.00
Task 4 Bid Documents and Bidding Assistance	\$	6,886.00
Task 5 Construction Services	\$	77,266.00
"HOURLY" Subtotal	\$	84,152.00
Owner's Allowance	\$	20,000.00
TOTAL	\$	299,797.00

SCHEDULE

The schedule below assumes a 2-week review by the City of Venice for each submittal and assumes 16-weeks from submittal of bid documents to the commencement of construction. The Notice to Proceed (NTP) will be the date of approval of the Work Assignment by the City of Venice. This Work Assignment will remain in effect through the completion of the construction, certification, and acceptance of the project by City of Venice. A detailed schedule will be submitted to the City within 10-days of the NTP.

Description	Completion
	Weeks Following NTP
Project Kickoff / Site Visit	2
Survey / SUE / Geotechnical	6
60% Submittal	12
Review Meeting	14
90% Submittal / Permit Submittal	20
Review Meeting	22
100% Submittal / Issue for Bid	28
Receipt of Permits	32
Construction Notice to Proceed	44
Construction Completion	82

CORRESPONDENCE AND REPORTING PROCEDURE

All correspondence to the City shall be directed to Len Bramble and Tim Hochuli. All correspondence to McKim & Creed shall be directed to Matthew Love.

OTHER CONSIDERATIONS

1. Wetland impacts, mitigation plans and protected species permitting are not anticipated and are not included in this scope of work.
2. It is not anticipated that a FDEP Application for a Minor Revision to a Wastewater Facility will be required and are not included in this scope of work.
3. No landscaping or architectural plans are anticipated as part of this work.