



Memo

TO: Mayor Manier and City Council
FROM: Ed Andrews, Public Works Director
DATE: May 12, 2017
SUBJECT: WTP#1 Construction Inspection

At the May 1st Public Works Meeting and the May 8th Committee of the Whole, an update to the pending improvements at Water Treatment Plant #2. The permit set was submitted in April, with the IEPA's review notice estimating a 65 day was started. This review and subsequent key dates for a bid letting were discussed with the committee, along with consideration for bidding assistance and construction observation with CMT.

The current cost of construction of the project is estimated at \$375,000. This includes the construction of chlorine room on the east side of the building and two new cast-in-place concrete brine tanks on the west side. This project is IEPA mandated from earlier findings.

A time and materials assistance contract has been prepared by CMT, attached herewith and is estimated at \$51,200 using an average of three (3) four hour days per week of onsite during the construction of the project.

This matter has been placed on the City Council consent agenda of Monday, May 15, 2017 for review and approval.

cc: File

**City of Washington
Engineering Services Work Order**

WORK ORDER 17-1

Project Description

Water Treatment Plant No. 1 - 2017 Improvement Project – Bidding and Construction Phase Services

Services to be Provided

Refer to the attached Exhibit A

Schedule

Work will begin upon receipt of this executed Engineering Services Work Order and will be completed within 210 calendar days and submitted for appropriate review and approval.

Compensation

Compensation for the services provided under this Engineering Services Work Order will be in accordance with the manner selected below.

☒ On a time and expense basis in accordance with the current year's Schedule of Hourly Charges which is subject to change at the beginning of each calendar year. Reimbursable direct expenses will be invoiced at cost. Professional or Subconsultant services performed by another firm will be invoiced at cost plus ten percent. It is estimated that the compensation for the above services, including reimbursable expenses, will not exceed \$51,200.00.

☐ At the lump sum amount of \$ _____.

The compensation for the above services, including reimbursable expenses, will be invoiced as the work is performed. (See Exhibit A for additional information.)

Approval & Notice to Proceed

Issued By: City of Washington

Accepted By: Crawford, Murphy & Tilly, Inc.

Signed: _____

Signed: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

EXHIBIT A
City of Washington, Illinois
Water Treatment Plant #1 Improvement Project

SCOPE OF SERVICES

The **Scope of the Improvements** for the **Water Treatment Plant #1 Improvement Project** includes the following items:

- The construction of a new fluoride storage/feed room. Room will be located adjacent to the existing chlorine storage/feed room on the east side of the Water Treatment Plant #1.
- The construction of two new brine tanks (to provide approximately 30 days of storage per 10 state standards). Brine tanks will be located on the west side of the existing Water Treatment Plant #1.

BIDDING PHASE ENGINEERING SERVICES

1. **Reproduce and Distribute Contract Documents.** Print plans and specifications and mail or deliver to vendors, contractors and plan houses.
2. **Maintain Inventory of Plan Holders.** Develop and maintain planholders list as required to distribute addenda when necessary and to provide planholders list for distribution to plan houses, vendors and contractors.
3. **Pre-Bid Meeting.** Prepare meeting agenda. Attend/conduct pre-bid meeting and prepare and distribute meeting minutes.
4. **Issue Addenda.** Prepare and issue addenda as required for clarification of the contract documents.
5. **Respond to Questions.** Respond to contractor and vendor questions as required for clarification or bidding requirements.
6. **Attend Bid Opening.** Attend bid opening and assist with the opening of the contractors' proposals and recording of contractor information.
7. **Prepare Bid Tabulation.** Tabulate bids and prepare and distribute bid tabulation.
8. **Evaluate bids and make recommendation.** Evaluate contractor proposals for compliance with bidding documents and make a recommendation to owner for award of construction contract.
9. **Prepare Owner/Contractor Agreement.** Prepare agreement between owner and contractor (construction agreement). Prepare Notice of Award and Notice to Proceed.

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City of Washington, Illinois
Water Treatment Plant #1 Improvement Project

SCOPE OF SERVICES

CONSTRUCTION PHASE ENGINEERING SERVICES

The Construction Engineering Services include items as shown in the anticipated scope of work presented below. Note that these services consist of two parts – Construction Administration (Office and On-Site activities by office personnel) and On-Site Observation (Resident Engineering). The Construction Engineering Services shall begin after the completion of the Bidding Phase, only in the event that suitable Bids are obtained and the City has issued a Notice of Award with the intention of constructing the project. The Construction Engineering Services will continue throughout construction of the Work, and shall be complete following final completion and acceptance of the project by the City. The Construction Engineering Services have been estimated based upon a construction contract time of 150 days after the Notice to Proceed has been issued to the Contractor.

CONSTRUCTION ADMINISTRATION

1. Shop Drawing Review

Shop drawings will be submitted for review within the disciplines of the work, including equipment, concrete, structural materials, masonry, electrical components, etc.

2. Pre-Construction Meeting

CMT will conduct a pre-construction meeting with the contractor and subcontractors following the award of the contract and prepare minutes.

3. Review of Contractor Payment Requests

CMT will review the contractor's monthly pay requests for comparison with the schedule of values and the actual work completed in order to verify the amount requested.

4. Responding to Requests for Information and Changes During Construction (Change Orders, Field Orders)

This item includes design interpretation, addressing contractor questions in the field, preparing change or field orders to address changes in the work, etc. The effort associated with this item is dependent upon many factors, including items that may arise during construction that could not have been known during design. CMT has budgeted time to address such items based upon past experience on related or similar projects.

5. Project Correspondence

CMT will maintain correspondence during construction with the contractor, subcontractors, material and equipment suppliers, the City, and other entities.

EXHIBIT A
City of Washington, Illinois
Water Treatment Plant #1 Improvement Project

SCOPE OF SERVICES

6. Attend/Conduct Contractor Payment/Progress Meetings

CMT will be on-site monthly to review work progress as compared with payment requested by the contractor. A walk-through inspection and meeting will be held to discuss the progress of the work, the payment application, critical path items, schedule adherence, coordination issues, maintaining the existing pump station in service, and other items related to the project. CMT will prepare and distribute minutes of the meetings.

7. Review Final Payment Package and Lien Waivers

CMT will review the final payment application and corresponding documents (lien waivers, certifications, warranties, etc.) from the contractor, including items from subcontractors and suppliers prior to issuance of final payment.

8. Project Record Documents

CMT will obtain the marked-up contract drawings (note: marking up the drawings to reflect actual construction is the responsibility of the contractor) and transfer the information to the original CAD files to create a set of As-Built Drawings for the City.

CONSTRUCTION OBSERVATION

9. Part-Time On-Site Observation

CMT will provide limited on-site observation of the work in conjunction with major work activities such as equipment deliveries, concrete placement, etc; and other times when detailed inspection of the work is needed. CMT's on-site services may be performed at various times by the project designers (various disciplines), the project manager, or a qualified technician. On-site observation was based upon approximately 4 hours per day, 3 days per week for 4 months.

10. Attend Equipment Start-up Activities

CMT will attend equipment start-up activities. Start-up and certification of equipment is the responsibility of the equipment manufacturer. Training of plant personnel shall also be conducted by the manufacturer.

11. Prepare Substantial Completion Punch List

CMT will visit the site once substantial completion is reached to prepare a punch list.

12. Conduct Project Close-Out Final Inspection

CMT will visit the site to confirm completion of the punch list items and the fulfillment of the contract requirements.

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City of Washington, Illinois
Water Treatment Plant #1 Improvement Project

SCOPE OF SERVICES

Budgeted Cost and Estimated Schedule

The estimated completion for the bidding and construction phase services is approximately 7 months after receipt of a signed Agreement authorizing CMT to proceed on a time and expense basis for an amount not to exceed Fifty-One Thousand Two Hundred Dollars and No Cents (\$51,200.00).

Assumptions

- One (1) bidding period
- 5-month construction schedule.
- CMT will be on-site for an average of 4 hours per working day, 3 days a week for 4 months of the overall construction schedule. It was assumed that the first 2 weeks of the construction schedule would not require limited on-site observation since it would mainly consist of shop drawing review and mobilization. It was also assumed the final 2 weeks (final cleanup and punchlist items) of the construction schedule would also not require limited on-site observation.

Additional Services not included in the Upper Limit of Compensation

- No construction staking/surveying will be required.
- Concrete Testing and Compaction Testing is by others.