



**THE COUNCIL OF THE CITY OF BINGHAMTON  
STATE OF NEW YORK**

Date: November 4, 2015

Sponsored by Council Members: Motsavage, Papastrat, Mihalko, Berg, Matzo

Introduced by Committee: Finance

**RESOLUTION**

*entitled*

A RESOLUTION AUTHORIZING THE MAYOR TO ENTER INTO AN AGREEMENT WITH GHD FOR WORK ORDER NO. 8 FOR SOLIDS HANDLING, OUTFALL AND LAB RENOVATION FOR THE BAF RESTORATION AND REHABILITATION AT THE JOINT SEWAGE TREATMENT FACILITY

WHEREAS, the City of Binghamton (the "City") is a joint owner of the Binghamton-Johnson City Joint Sewage Treatment Facilities (the "JSTF") with the Village of Johnson City (the "Village"); and

WHEREAS, the Commissioner of Public Works has recommended that the City enter into an agreement with GHD for solids handling, plant outfall and laboratory renovation for the restoration and rehabilitation of the BAF at the JSTF at a cost not to exceed \$1,551,000.00, as described in the attached proposal; and

WHEREAS, funds are available from budget line HX8150.500200.J11NN (\$1,163,250.00) and budget line HX8150.500200.J11FF (\$387,750.00).

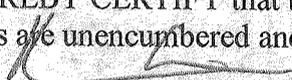
NOW, THEREFORE, the Council of the City of Binghamton, duly convened in regular session, does hereby:

RESOLVE that the Mayor, or his designee, is hereby authorized to enter into an agreement, approved as to form and content by the Office of Corporation Counsel, with GHD for solids handling, plant outfall and laboratory renovation for the restoration and rehabilitation of the BAF at the JSTF at a cost not to exceed \$1,551,000.00, as described in the attached proposal; and be it further

RESOLVED that such funds shall be deducted from budget line HX8150.500200.J11NN (\$1,163,250.00) and budget line HX8150.500200.J11FF (\$387,750.00); and be it further

RESOLVED that this Resolution shall be effective upon approval of the Board of Trustees of the Village of Johnson City.

I HEREBY CERTIFY that the above described funds are unencumbered and available.

  
\_\_\_\_\_  
Chuck Shager, JSTF Fiscal Officer and Comptroller

Introductory No. R15-109

Permanent No. R15-108

Sponsored by City Council Members:  
Motsavage, Papastrat, Mihalko, Berg, Matzo

A RESOLUTION AUTHORIZING THE MAYOR TO  
ENTER INTO AN AGREEMENT WITH GHD FOR  
WORK ORDER NO. 8 FOR SOLIDS HANDLING,  
OUTFALL AND LAB RENOVATION FOR THE BAF  
RESTORATION AND REHABILITATION AT THE  
JOINT SEWAGE TREATMENT FACILITY

The within Resolution was adopted by the Council of  
the City of Binghamton.

11/4/15  
Date

Hammond (Deputy)  
City Clerk

11/5/15  
Date Presented to Mayor

11/5/15  
Date Approved  
Richard D. Ford  
Mayor

|           | Ayes | Nays | Abstain | Absent |
|-----------|------|------|---------|--------|
| Motsavage | ✓    |      |         |        |
| Mihalko   | ✓    |      |         |        |
| Rennia    |      | ✓    |         |        |
| Webb      |      | ✓    |         |        |
| Papastrat | ✓    |      |         |        |
| Matzo     | ✓    |      |         |        |
| Berg      | ✓    |      |         |        |
| Total     | 5    | 2    | 0       | 0      |

Code of the City of Binghamton

Adopted  Defeated

5 Ayes 2 Nays 0 Abstain 0 Absent

I hereby certify the above to be a true copy  
of the legislation adopted by the Council  
of the City of Binghamton at a meeting  
held on 11/4/15. Approved by the  
Mayor on 11/5/15.

Richard D. Ford (Deputy)



# Work Order-08

## Solids Handling, Outfall and Lab Renovation Final Design

### I. DESCRIPTION

An engineering evaluation of the Binghamton Johnson City Joint Sewage Treatment Plant (BJCJSTP) is currently being completed for the solids handling process, the plant outfall and renovating the on-site laboratory. Based on preliminary findings of these evaluations the solids handling process requires a significant restoration and upgrade, and the plant outfall requires replacement in-kind and modifications to the river near the outfall.

A general summary of work for the solids handling process includes:

- Develop Emergency Solids Handling Plan
- Restoration of Digester No. 3
- New Dual Membrane Covers For Existing Digesters
- Replace Existing Digested Sludge Pumps and Grinders (update previous GHD design)
- Replace Sludge Heat Exchangers Hx-1 and Hx-2 (update previous GHD design)
- Replace/Service Equipment In Existing Digester Building (update previous GHD design)
- Digester Gas Treatment and Energy Recovery Building
- Digester Gas Treatment and Energy Recovery Equipment
- Sludge Thickener Building
- Sludge Thickener Equipment
- New Digester Sludge Feed Pumps and Grinders
- Replace One Dewatering Centrifuge
- Reconfiguration of Sludge Discharge Conveyors
- Replace Post-Lime Sludge Stabilization System

A general summary of work for the plant outfall includes:

- Removal of Gravel Bar
- In-Stream Deflectors
- River Modeling
- Wetland Delineation and Threatened/Endangered Species Evaluation
- Outfall Design
- Permit Preparation

A general summary of work for the laboratory renovation includes:

- Renovate existing 60-ft by 25-ft administration/laboratory area in Building 10 as a new laboratory
- Demolish and rebuild of interior walls. Exterior walls to remain the same
- Provide new doors and windows
- Provide new roof

### II. SCOPE OF SERVICES FOR FINAL DESIGN

#### A. Solids Handling Design

1. Digesters No. 1 and No. 2
  - a. Rehabilitate existing digester by completing non-structural concrete repairs.
  - b. Install new dual-membrane digester covers
  - c. Construct digester overflow boxes to allow digesters to operate at constant level
2. Digester No. 3
  - a. Rehabilitate existing digester by sealing cracks and applying waterproofing sealing coating and completing non-structural concrete repairs.
  - b. Install new dual membrane digester cover



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3. Digester Building
  - a. Replace mechanical and electrical equipment, instrumentation and controls that were damaged by flooding that occurred in October 2011.
  - b. Replace existing ductile iron piping installed for digester gas service with welded stainless steel piping
4. Biogas Treatment and Energy Recovery System
  - a. New skid-mounted system designed for treatment and compression of digester gas. Gas treatment will include removal of particulate matter, moisture, hydrogen sulfide, and siloxanes.
  - b. Three new 65 kW integrated combined heat and power (CHP) microturbine modules
5. Sludge Thickening Facilities for Separate Thickening of Sludge from Stage 1 and Stage 2 Biological Wastewater Filter Systems
  - a. Two new thickened sludge blending tanks. Tanks will be of cast-in-place reinforced concrete design and will be equipped with covers and ventilated to existing, on-site odor control facilities
  - b. New sludge pumps and grinders
6. New Building for Sludge Thickeners and Energy Recovery
7. Post Lime Sludge Stabilization Facilities
  - a. Replace existing equipment, instrumentation and controls, including silo for bulk storage of hydrated lime, bin activator and lime feed screw, lime-sludge mixer and associated instrumentation and controls.
8. Centrifuge
  - a. Replace existing Centrifuge model 505
9. Sludge Discharge Conveyors
  - a. Remove existing sludge screw auger system. Install two new screw augers, one each for Centrifuge No. 1 and Centrifuge No. 2. Install one new sludge pump for Centrifuge No. 1 and Centrifuge No. 2. Install one new sludge pump for Centrifuge No. 3. Connect to Post Lime Sludge Stabilization Facilities
10. Site-Civil grading and yard piping
11. Structural and architectural design for the facilities
12. Electrical design for the facilities
13. Instrumentation design for the facilities. Equipment will be PLC based and "SCADA ready," for integration into the existing plant-wide SCADA network
14. HVAC design for the facilities. The building will be in accordance with applicable codes (10-States Standards and NFPA 820)
15. Meetings
  - a. Four general client meetings
  - b. two regulatory meetings
  - c. three design review meetings (60%, 90% and 100%)

### B. Plant Outfall Design

1. Field Reconnaissance
  - a) Two site visits
2. Bathymetric Survey
  - a. 550-ft x 650-ft
  - b. One survey before and one survey after gravel bar removal
3. Design of gravel bar removal
4. Design of in-stream deflectors
5. Design of in-river diffuser pipe
  - a. Replace diffuser pipe in-kind
6. Hydraulic Modeling
  - a. 2-dimensional



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7. Permitting
  - a. Wetland and stream delineation
  - b. RTE species habitat evaluation
  - c. Wetland and stream permitting (DEC and Army Corp, only)
8. Meetings
  - a. three general client meetings
  - b. two regulatory meetings
  - c. two design review meetings (60% and 100%)

### C. Laboratory Renovation Design

1. Site Visit and Planning with Staff
  - a. One site and planning visit
  - b. Two design review meeting
2. Laboratory Design
  - a. 60-ft x 25-ft area (demo and new floor plans and elevations)
  - b. Interior wall structural analysis. Exterior walls to remain the same
  - c. HVAC and plumbing
  - d. Low voltage electrical
3. Roof, Doors and Windows
  - a. Replace existing roof and doors and windows of 60-ft x 25-ft structure

### D. Other Services

1. Provide Project Management, including:
  - a) This task allows for the project planning, routine management, administration, and coordination of the work efforts for the final design activities. Included in this task is the appropriate coordination with the City, the Plant Staff and engineering team members, management of the project, monitoring of budget and schedule, and administrative assistance for NYSDEC and EFC.
2. This Work Order does not include bidding and construction phase services; the fees for these services will be presented in amendment to this Work Order upon completion of the final design when the schedule and scope can be better defined.

### III. DELIVERABLES

- A. Two Work Plans: (1) Solids Handling and (2) Plant Outfall
- B. 30 Percent, 60 Percent and 100 Percent Solids Handling Design Bid Documents
- C. 60 Percent and 100 Percent Plant Outfall Design Bid Documents
- D. Plant Outfall Permitting Documents as City as Applicant

### IV. KEY PERSONNEL

| Representative of Owner | Engineering Team |
|-------------------------|------------------|
| Gary Holmes             | Michael Tamblin  |
| Cathy Young             | Howard LaFever   |
|                         | Bruce Munn       |
|                         | John LaGorga     |
|                         | John Revette     |
|                         | Brain Swift      |
|                         | Jeff Daniel      |
|                         | George Fowler    |



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### V. SCHEDULE

| Task   | Completion Date                 |
|--|---------------------------------|
| Solids Handling 100 Percent Design Bid Documents | 360 days from Notice to Proceed |
| Plant Outfall Permit Documents                   | 90 days from Notice to Proceed  |
| Plant Outfall 100 Percent Design Bid Documents   | 180 days from Notice to Proceed |

### VI. COMPENSATION

- A. The Owner will be billed for actual labor hours charged at the billing rates contained in Attachment A, plus direct project expenses (e.g., identifiable reproduction costs, shipping charges). The compensation for the Scope of Services outlined in Section II is estimated to be \$1,551,000, as indicated in the Fee Schedule in Table 1.
- B. Payments for the work will be due monthly on the basis of statements submitted by GHD Consulting Services Inc. for the work performed during the period.
- C. Additional services beyond the Scope of Services will be considered extra work and will necessitate additional compensation.

### VII. STANDARD TERMS AND CONDITIONS

The services described above will be completed as Work Order-08 under the Terms and Conditions of the Agreement dated September 30, 2014 between GHD Consulting Services Inc. and the City of Binghamton.

### VIII. NEW YORK CLEAN WATER STATE REVOLVING FUND CONTRACTING REQUIREMENTS

GHD Consulting Services Inc. will comply with the applicable provisions of "Required Terms for Project Contracts and Subcontracts" as defined in the NY State Revolving Fund Bid Packet for Non-construction Contracts and Service Providers, as prepared by the New York State Environmental Facilities Corporation. Refer to Attachment B.

This Work Order is duly executed between Consultant and Client by signature or City Resolution (Attachment C). Upon execution of this Work Order, Consultant is authorized to proceed with the work.

CONSULTANT:

CLIENT:

**GHD CONSULTING SERVICES INC.**

**CITY OF BINGHAMTON**

By: \_\_\_\_\_  
Michael E. Tamblin, P.E.

By: \_\_\_\_\_

Title: \_\_\_\_\_  
Principal

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_





# Work Order-08

## Solids Handling, Outfall and Lab Renovation Final Design

### ATTACHMENT A RATE SCHEDULE

#### 1.1 GHD CONSULTING SERVICES HOURLY RATES

CLIENT shall pay Compensation for labor based on CONSULTANT's rate schedule below. The Rate Schedule provided below shall be in effect through completion of this Work Order:

| Labor Category                      | Hourly Rate |
|-------------------------------------|-------------|
| Project Director                    | \$220.00    |
| Senior Technical Advisor            | \$210.00    |
| Technical Advisor                   | \$180.00    |
| Senior Project Manager              | \$170.00    |
| Senior Engineer                     | \$160.00    |
| Project Manager                     | \$140.00    |
| Project Engineer II                 | \$130.00    |
| Project Engineer I                  | \$120.00    |
| Engineer or Scientist II            | \$110.00    |
| Engineer or Scientist I             | \$100.00    |
| Architect                           | \$110.00    |
| Managing Designer                   | \$140.00    |
| Senior Designer                     | \$110.00    |
| Designer                            | \$100.00    |
| Senior Drafter                      | \$85.00     |
| Drafter                             | \$70.00     |
| Technician                          | \$65.00     |
| Construction Project Representative | \$90.00     |
| Field Technician                    | \$60.00     |
| Secretarial/Word Processing         | \$70.00     |

#### 1.2 JL RICHARDS HOURLY RATES

CLIENT shall pay Compensation for labor based on CONSULTANT's rate schedule below. The Rate Schedule provided below shall be in effect through completion of this Work Order:

| Labor Category              | Hourly Rate |
|-----------------------------|-------------|
| Project Director            | \$190.00    |
| Technical Advisor           | \$185.00    |
| Senior Project Manager      | \$185.00    |
| Senior Engineer             | \$160.00    |
| Project Manager             | \$140.00    |
| Project Engineer            | \$120.00    |
| Designer-Drafter            | \$110.00    |
| Secretarial/Word Processing | \$70.00     |



## Work Order-08

### Solids Handling, Outfall and Lab Renovation Final Design

#### 1.3 Non-salary expenses and outside services attributable to the Project

CLIENT shall pay Compensation for expenses based on CONSULTANT's rate schedule below. The Rate Schedule provided below shall be in effect through completion of this Work Order:

- 1.3.1 Actual receipted cost of accommodations (not to exceed \$120 US per night)
- 1.3.2 A per diem for meals and expenses: \$46 US (overnight) or \$28 (full day) or \$16 (partial day).
- 1.3.3 Mileage calculated at the federal reimbursement rate established by the U.S. General Services Administration for privately owned vehicles in effect on the date of the occurrence;
- 1.3.4 The identifiable costs of reproduction, printing, and binding and postage and shipping applicable to the Project;
- 1.3.5 The actual cost of outside services and subcontractors;
- 1.3.6 Actual receipted cost of field equipment rental supplied by a vendor for use on the Project;
- 1.3.7 The actual cost of permits and fees required for the project and paid by CONSULTANT;
- 1.3.8 The actual cost for additional insurance required by the Owner in excess of CONSULTANT's normal coverage's or limits;
- 1.3.9 The actual cost of premiums paid on overtime worked.



# **Work Order-08**

## **Solids Handling, Outfall and Lab Renovation Final Design**

### **ATTACHMENT B**

**Required Terms for Project Contracts and Subcontracts as defined in the NY State Revolving Fund Bid Packet for Non-construction Contracts and Service Providers**