



THE COUNCIL OF THE CITY OF BINGHAMTON
STATE OF NEW YORK

Date: April 8, 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
JACOBS PROJECT MANAGEMENT CO. FOR
BAF RESTORATION AND REHABILITATION
CONSTRUCTION MANAGEMENT SERVICES
OF THE BJCJSTP

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

WHEREAS, the Commissioner of Public Works has recommended that the City enter into a professional services agreement with Jacobs Project Management Co. for construction management services for the restoration and rehabilitation of the BAF at the BJCJSTP at a cost not to exceed \$9,200,544.00, as described in the attached proposal; and

WHEREAS, funds in the amount of \$7,360,435.20 are available in budget line HX8150.500100.J1NN (Professional Services –Non Flood) and in the amount of \$1,840,108.80 in budget line HX8150.500100.J1FF (Professional Services –Flood).

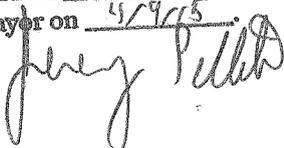
NOW, THEREFORE, the Council of the City of Binghamton, duly convened in regular session, does hereby:

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 Jacobs Project Management Co. for construction management services for the restoration and rehabilitation of the BAF at the BJCJSTP at a cost not to exceed \$9,200,544.00, as described in the attached proposal; and be it further

RESOLVED that funds in the amount of \$7,360,435.20 will be deducted from budget line HX8150.500100.J1NN (Professional Services –Non Flood) and \$1,840,108.80 from budget line HX8150.500100.J1FF (Professional Services –Flood); 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 the above to be a true copy of the legislation adopted by the Council of the City of Binghamton at a meeting held on 4/8/15. Approved by the Mayor on 4/9/15.



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



Chuck Shager, JSTP Fiscal Officer and Comptroller

Introductory No. RI5-32

Permanent No. RI5-32

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

A RESOLUTION AUTHORIZING THE MAYOR TO
ENTER INTO AN AGREEMENT WITH JACOBS
PROJECT MANAGEMENT CO. FOR BAF
RESTORATION AND REHABILITATION
CONSTRUCTION MANAGEMENT SERVICES OF THE
BJCJSTP

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

Date April 8, 2015

City Clerk Jenny Fellis

Date Presented to Mayor April 9, 2015

Date Approved 4/9/15

Mayor [Signature]

	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

PROPOSAL SUMMARY

1. Included in this email are the following documents:
 - a. Proposal Summary (this document)
 - b. Scope of Work – Consultant’s Responsibilities
 - c. Manpower Estimate – includes costs
 - d. Estimated Program Schedule
 - e. Suggested revisions and inclusions for the Binghamton/Jacobs Agreement
2. We have reached agreement with GHD on the division of responsibilities between the design engineer and the construction manager. The attached Scope of Work is the result of this effort.
3. I have spoken with Jim Tofte of Griffiths Engineering and have begun coordination efforts with him on the floodwall project.
4. We have included in our manpower and cost estimate the provision of construction management services for the following projects:

Project	Approximate Engineer’s Construction Cost Estimate
Compost Facility Demolition	\$1,000,000
Flood Repair Project	\$500,000
Floodwall Project	\$16,000,000
Backup Generator	\$3,000,000
BAF Facility Demolition	Included in BAF estimate
BAF and Ancillary Facilities Restoration and Rehabilitation	\$102,100,000
Chlorine Bypass	TBD
Anaerobic Digester Work	\$3,000,000
Total Estimated Construction Cost	\$125,600,000 + Chlorine Bypass

5. The Chlorine Bypass work is included provided it is accomplished within the anticipated duration of Jacobs’ proposal.
6. The Anaerobic Digester project is included provided it is accomplished within the anticipated duration of Jacobs’ proposal. The current plan for the project has an estimated construction cost of \$3M. If the project scope is significantly increased, then revisions to Jacobs’ manpower and cost proposals shall be considered as an additional service. Our estimate is based on assumption that the construction period for the Anaerobic Digester work will not begin until after the bulk of the Plant Restoration and Rehabilitation project work has been completed, per the attached summary schedule. This is recommended in order to minimize conflicts and interferences.
7. Jacobs will not invoice for any Other Direct Costs currently anticipated for the life of the project, including the lease on the office space. If the City of Binghamton should request a service that requires an extraordinary expense, then that preapproved expense may be invoiced. We find that invoicing for Other Direct Costs increases the potential for errors in invoices and certainly leads to aggravation for everyone who must submit or approve them.

8. The office space we will lease in the Hillside Building will become a Jacobs corporate office from which we intend to conduct business on other Jacobs' projects in the area. Jacobs has absorbed a portion of the anticipated costs for the office without passing them through to the City because Jacobs is investing in our growth in the area. We would request, however, that if Jacobs' contract is terminated, then the City would reimburse Jacobs for the remaining cost of the lease of the office.
9. We have offered space within our office to GHD for their project representative. We strongly believe that working within the same office will lead to a greater level of teamwork.
10. Our cost proposal assumes that the Work will be constructed within the milestones established by the consent decree, plus coverage during a one year warranty period. We understand these dates to be:
 - a. BAF Phase 1 – Initial Flows through a partially completed facility – by 4/1/2017
 - b. BAF - Remaining Work – by 12/29/2017
 - c. End of BAF warranty period – 12/29/2018
11. The graphic of the program schedule depicts the consent decree deadlines and proposed sequencing that is presented in GHD's engineering report. Jacobs has not had an opportunity to determine if additional consequential sequencing relationships or restraints exist that may impact the schedule, nor have we had the opportunity at this point in time to verify that the durations that we have assigned to the activities are achievable.
12. Our proposed manpower plan is based on the attached CPM program schedule.
13. We are suggesting that the City of Binghamton establish a contingency fund within our contract in order to more easily administer changes to the Jacobs scope of work. This proposed option should be weighed against the procedures that must be followed to enact a change order to the Jacobs contract. The contingency fund would be administered by the City. The cost of construction management services are directly related to the duration of the construction activities on site. Delays in the construction phase will directly impact the cost of construction management services. We suggest that the contingency fund be based on the projected CM cost for the most active three month period.
14. Our proposed billing rates can be found within the manpower estimate. We are proposing an automatic 3% increase in billing rates yearly on the anniversary date of the contract execution. We will produce an official billing rate schedule for the execution of the contract.
15. We will meet or exceed the minimum requirements of the "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. We understand the MBE/WBE combined goal to be 20%.
16. Here are the bottom line numbers from our proposal:
 - a. Proposed cost for basic services (all projects listed above) = \$9,200,544
 - b. The period the cost projection covers is from April 1, 2015 through December 31, 2018.
 - c. Our suggested contingency fund would equal \$773,644 and be in addition to the cost for basic services.

Scope of Work – Consultant’s Responsibilities
City of Binghamton
Construction Management/Administration Services –
Restoration and Rehabilitation of the
Binghamton-Johnson City Joint Sewage Treatment Plant

I. BASIC SERVICES

A. CONSTRUCTABILITY REVIEW

1. Review and provide written comments on all design plans, specifications, and contract documents for constructability with Owner and Design Consultant prior to project letting.
2. Perform constructability review of project plans and specifications resulting in a written report outlining the results of the review. Reviews shall concentrate on major areas of construction identifying conflicts between plans and specifications, scheduling problems, unsatisfactory space and access situations, clearances, non-compatibility of materials, etc.
3. Provide a review of the Design Consultant’s construction cost estimate from final design drawings and specifications received from the Design Consultant.
4. Prepare a Critical Path Method (CPM) schedule to include enough detail to use as a management tool. Schedule shall present a logical phasing and sequencing of project activities.

B. PRE-CONSTRUCTION PHASE SERVICES

1. The Owner will provide the procurement functions of bid advertisement, issuing addenda, acceptance of the bid submittals, the review of bids, the notifications of award, and execution of construction contracts. The Design Consultant will be primarily responsible for providing the proposed contractual modifications that are necessary to include in a contract addendum. The CM/CA will support the Owner and the Design Consultant as appropriate.
2. Assist with the pre-bid meeting.
3. Assist with the review of bids. Review bids to determine if they are complete, that the bidder has provided the required documentation to demonstrate that the bidder is responsible and the bidder’s submittal is responsive; and report these findings to the Owner for the Owner’s action. The Owner shall make the final determination of the acceptance of bid submittals and is responsible for the final determination of the award of construction contracts.
4. Coordinate and chair the pre-construction meeting and issue minutes.
5. Draft the Contractor(s) Notice to Proceed for issuance by the Owner.
6. Conduct a Client Expectation Survey to inform the CM/CA of the Owner’s priorities, procedures and expectations for the performance of the CM/CA contract.
7. Prepare a Project Procedures Manual to codify the CM/CA procedures and team. The purpose of the Project Procedures Manual is to prepare the CM/CA team so that it is organized to deliver on its contractual obligations in accordance with the Owner’s expectations. An organization chart of the CM/CA team and its reporting relationships with the Owner will be included. The decision making procedure will be documented.

C. CONSTRUCTION PHASE SERVICES

Scope of Work – Consultant’s Responsibilities
City of Binghamton
Construction Management/Administration Services –
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1. Construction Administration
 - a. Establish and maintain document tracking system for all project construction records and required contract documents (electronic copies required).
 - b. Maintain a project directory of contracts and file index.
 - c. Maintain the project files. Date stamp, log and distribute all incoming correspondence. Log and distribute all outgoing correspondence.
 - d. Maintain daily sign-in and sign-out log for all personnel visiting or working on the project site.
 - e. Maintain accurate project cost records, including monthly payments, change orders, etc. and the effect on the established project budget.
 - f. Provide written monthly progress update/status reports to the Owner and Owners by not later than the fifth business day of the month (for the period ending as of the last day of the month) and meet with the Owner and Owners when requested to review monthly progress reports and discuss Project status.
 - g. The CM/CA shall coordinate with the Owner’s consultants retained to recover damages from the deficiencies of past construction projects and flood damages (Simmons Recovery and Couch White LLP).
2. Construction Management
 - a. Coordinate and chair bi-weekly construction progress meetings. Prepare an agenda, conduct, and provide minutes for job meetings.
 - b. Review the contractor’s submittal schedule and list of proposed subcontractors.
 - c. Review submittals and shop drawings, and coordinate review process with the Design Consultant.
 - d. During the course of the work, verify that certificates, Operation & Maintenance Manuals, and other data required to be assembled and furnished by the Contractor are applicable to the items actually installed, are complete and accurate.
 - e. Coordinate such events as plant shutdowns, tie-ins and other major activities with plant, inspection and Contractor personnel.
 - f. Advise the Owner and make recommendations for exercising the Owner’s contract prerogatives, such as giving the Contractor notice to accelerate the progress when the schedule goals are in jeopardy due to Contractor failings, withholding payment for cause, and other prerogatives when required in an effort to achieve contract compliance.
3. Schedule Management
 - a. Review the contractor’s project schedule.

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- b. Review periodic updates of all schedules with Project Representative and Contractor.
 - c. Provide milestone schedule to be submitted on a monthly basis.
4. Contractor Payments
- a. Review the contractor’s schedule of values.
 - b. Review, recommend, and certify contractor applications for payment.
 - c. If it should be found that a Contractor(s) has failed to comply with the provisions of its contract in any way or detail, such failures and subsequent compliance will be the sole responsibility of the Contractor(s). By issuing a Certificate for Payment and by processing applications for payment, the CM shall not be deemed to represent that it has made any examination to ascertain how and for what purpose the Contractor(s) has used the previous monies paid on account of the construction contract sum.
5. Contract Clarifications and Changes
- a. Report any unanticipated changes in site conditions to the Plant Superintendent and the Project Representative and coordinate efforts to minimize disruptions to Plant operations and prepare recommendations.
 - b. Clarify the intent and scope of the Construction Documents. The Design Consultant will determine the intent of all technical design related issues.
 - c. Process requests for information (“RFI”) regarding means and intent to the Design Consultant and provide the contractor with appropriate and timely response.
 - d. Prepare field orders. Provide recommendations, in consultation with the Design Consultant, when field orders are required.
 - e. Prepare, or coordinate with the Design Consultant to prepare supplementary drawings required to resolve conflicts with actual field conditions encountered.
 - f. Participate in the timely resolution of conflicts discovered in the Contract Documents. CM will assist in formulating resolutions to problems encountered on site such as unforeseen conditions or field conditions varying from those indicated in the Contract Documents.
 - g. Investigate differing site conditions reported by the Contractor and provide documentation and report findings and observations.
 - h. Evaluate for validity and reasonableness, any request made by the Contractor for additional time or compensation on the project and submit a recommendation of action to the Project Representative. Maintain complete, accurate cost account and other records of work involved. Maintain a current file of all disputed work items including alleged extra work, delay, and other potential claim items.

Scope of Work -- Consultant's Responsibilities
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Binghamton-Johnson City Joint Sewage Treatment Plant

- i. Review and negotiate, in consultation with the Design Consultant, contractor change order requests. Design Consultant shall review change orders before submission to Owner. Design Engineer may sign change orders to indicate acceptance. Change Orders will not require the Design Engineer's approval.
 - j. Prepare proposed Change Orders for the Owner's approval and execution.
 - k. The CM/CA is to maintain a set of record drawings and specifications showing changes from the original contract documents. The CM/CA is to verify that the Contractor's record drawings are kept up to date throughout the construction of the project, and shall verify that these record documents are complete. The CM/CA will transmit these record drawings to the design engineer when construction has been completed. The design engineer will prepare as-built contract documents.
6. Construction Inspection / Observation
- a. Maintain a construction site presence to monitor contractor activities and schedule, perform quality assurance, observe safety practices, coordinate construction sequencing, and monitor and report on daily, weekly, and overall project progress.
 - b. Inspect materials and system equipment for contract specification compliance.
 - c. Provide documentation of inspections. Each Inspector shall file a daily inspection report.
 - d. Photograph the site as needed to document the progress of the work.
 - e. Reject in writing non-conforming material, equipment, and or work and certify the completion of corrective action by the contractor. Make recommendations in conjunction with the Design Consultant to Owner for the proposed resolution of work that is defective or not in conformance with the Contract Documents.
 - f. Conduct and participate in concealed space observations, system start-up observations, systems integration / operational demonstrations.
 - g. Verify that tests, equipment and system start-ups, and operating and maintenance instructions are conducted or transmitted as required by the Contract Documents and in the presence of the Design Consultant and required personnel. Coordinate between the Contractor, Owner, and equipment suppliers to verify proper start-up services are provided for all major pieces of equipment. Verify that the Contractor maintains adequate records thereof. Observe, record, and report to the Owner appropriate details relative to the test procedures and start-up.
 - h. Daily inspections and observations will not cause the CM/CA to be responsible for those duties and responsibilities which belong to the Engineer(s) or the Contractor(s), and which include, but are not limited to, the Engineer's obligation to produce clear, accurate drawings and specifications and the Contractor(s) responsibilities for the techniques and sequences of construction and safety precautions incidental thereto, and for performing the construction work in accordance with the Contract Documents.
 - i. Each contractor will have the responsibility for the safety and health issues relating to their workers at each individual site. Each contractor will be required to submit a Safety and Health

Scope of Work – Consultant’s Responsibilities
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Plan that meets the overall objectives of the Project Safety Program. The contractor will be held accountable for all safety and health rule violations and deficiencies. This Safety and Health Plan will govern the total scope of the contractor's work including subcontractors. Contractors will be required to meet all legal, regulatory and insurance obligations in all aspects and phases of their work at these sites. The CM/CA shall assist the Owner in monitoring of Contractor(s)'s safety and health related records and documentation. The CM/CA shall not be responsible for the adequacy or completeness of any Contractor's safety programs and procedures, nor the Contractor's implementation of or compliance with its safety programs.

7. Construction Contract Close-Out

- a. The CM/CA shall prepare a matrix of deliverables, to include at a minimum: As Built Documents, O&M Literature, required spare parts, and training. The CM shall monitor submittal of deliverables and confirm the satisfactory receipt of each item.
- b. Compile an operations & maintenance (O&M) manual consisting of the individual O&M manuals of the equipment provided by the Contractors. The required contents of the O&M manuals shall be specified by the design engineer in the construction contract documents. The design engineer shall review and approve the individual O&M submittals from the Contractors. The manual will be subdivided by major process equipment. Three (3) paper copies of the operations & maintenance manual, along with one electronic (pdf) copy of the manual will be provided. Paper copies will be bound in three-ring binders.
- c. Verify that all required equipment testing has been completed and certification of proper installation and operation has been received. Receive all required manufacturer startup reports.
- d. Verify that all required training for operation and maintenance has been performed. Coordinate between the Contractor, Owner, and equipment suppliers to verify proper training is provided on all major pieces of equipment.
- e. Verify that all specified extended warranties have been received.
- f. Conduct and participate in Substantial Completion or pre-final work observations to determine the Dates of Substantial Completion, and Final work.
- g. Develop punch list, monitor work, and certify completion and final payment.
- h. Assist Owner, in conjunction with the Design Consultant, at the conclusion of corrective actions on punch-list items, to make a comprehensive review of the project, and provide a report to the Owner that will indicate whether the work performed is in accordance with Contract Documents, and make recommendations for final payments.
- i. Conduct a final inspection in the company of the Owner, Design Consultant and Contractor. Prepare a final punch list of items to be corrected as a prerequisite to issuing the Certificate of Final Acceptance. Later verify that all items on the punch list have been completed or corrected and make recommendations to the Owner concerning Final Acceptance.

D. POST-CONSTRUCTION PHASE SERVICES

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1. Provide quarterly inspections during the warranty period, but not more than one year.
2. Assist the Owner during the one-year warranty period following issuance of substantial completion to the Contractor. These services may include:
 - a. Coordinating between the Contractor and/or equipment suppliers for any operational or maintenance issues that arise during the one-year warranty period. Communicate with the Contractor any remedial actions to be provided and coordinate the work with the Owner.
 - b. Manage the Contractor’s “Punch List” to verify that all outstanding items are satisfactorily corrected prior to recommending final payment or release of retainage. Facilitate meetings with the Owner and Contractor as necessary to review outstanding “Punch List” items.
3. Provide the Owner with complete sets of Post Construction Documents in electronic format, including but not limited to the following:
 - a. Regulatory Compliance – Building Permit, NYSDEC Permit, Zoning, and other as required
 - b. Historic – Phase I, II, or III Cultural Investigations – Determination of no effect
 - c. Record Documents - As-Built Drawings prepared by the Design Engineer, Photographs, O&M Manuals, Warranty Documents, and all associated Project Documents, Inspection and Testing Reports
 - d. Procurement – For all project contracts - Announcement, Affidavit, Request for Proposal (“RFP”), Invitation to Bid (“ITB”), Bid Tab, Letter of Intent, Contract, Plans & Specifications, Insurance/Bonds
 - e. Invoices –Equipment, materials, Project Management, Construction Management, Construction, Renovation, Testing, and other Professional Engineer’s Certification.

II. ADDITIONAL SERVICES – NOT IN BASE CONTRACT SCOPE

- A. *Public Outreach and Communications* – Provide a specialist in Public Outreach and Communications to assist the Owner in the presentation of project information to the public, government offices or elected officials.
- B. *Contractor Claims* – When a Contractor disagrees the Owner’s final determination on disputed work or proposed contract modifications; the following services may be requested of the CM/CA by the Owner as Additional Services:
 1. *Claims Analysis*: The CM/CA shall analyze the Contractor’s claims for extension of time and cost impact, using the schedule reports. An impact evaluation report will be prepared which will reflect the actual impact to the schedule. The report will also provide a narrative including a recommendation for action to the Owner.
 2. *Evaluate Claim Cost*: The CM/CA shall prepare an estimate based on the alleged cause of claims submitted by the Contractor(s) and will prepare alternate estimates based on varying scenarios of the claim cause. These estimates will be transmitted to the Owner and will be used in claims rulings and negotiations.

Scope of Work – Consultant’s Responsibilities
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3. *Legal Advice:* The CM/CA shall work with the Owner’s attorney in a joint defense with the Owner and Design Consultant in the analysis of contract determinations, negotiation strategies, communications and resolution.
 4. *Contractor Claims Negotiations:* The CM/CA shall negotiate claims with the Contractor(s) on behalf of the Owner. The CM will make a final recommendation to the Owner concerning settlement or other appropriate action.
- C. *Asset Management* – Provide assistance with the selection and implementation of an asset management program for the BJCJSTP.

III. CONSULTANT’S SCHEDULE OF HOURLY RATES:

- A. Attachment _____ contains the proposed hourly rates per labor classification for each of the firms on the Jacobs team. These rates will apply for the period from _____ through _____. On each _____ thereafter, the hourly rates will be increased by 3% from the previous year’s hourly rates.

IV. CONTINGENCY

- A. A contingency fund shall be created to pay for the continuation of CM/CA services during delays of any kind to the project schedule. This contingency fund will be administered by the Owner. The contingency fund shall be sufficient to cover CM/CA services for three months.

V. OTHER DIRECT COSTS

- A. Jacobs will not invoice the City of Binghamton for normal other direct costs associated with providing construction management / construction administration services under this contract. If the City of Binghamton should request a service that requires an extraordinary expense, then that preapproved expense may be invoiced.

VI. RETAINAGE

- A. There will be no retainage on this contract.

VII. APPORTIONING INVOICES FOR THE COST OF FLOOD RELATED SERVICES

- A. The cost of the CM/CA’s services that are attributed to the recovery from damages caused by flooding shall be apportioned from the total cost of each invoice by applying a pre-determined percentage factor.

MANPOWER ESTIMATE
CONSTRUCTION MANAGEMENT/ADMINISTRATION SERVICES

103%

POSITION	NAME	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Hours Total	Billing Rate	Total
Jacobs Project Management Co.																
Project Manager	Doug Most	40	40	50	40	40	50	40	40	50	0	0	0	390	\$ 264.20	\$ 103,038
Senior Construction Manager	Jerry Nystrom	160	152	200	152	160	192	160	152	192	0	0	0	1520	\$ 217.80	\$ 330,756
Construction Manager (Demolition Contracts)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 199.01	\$ -
Construction Manager (Flood Wall)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 199.01	\$ -
Lead Civil/Structural Engineer	TBD	160	152	200	0	0	0	0	0	0	0	0	0	0	\$ 160.73	\$ 77,174
Lead Electrical, I&C and Commissioning	Dan Ryan	160	152	200	152	160	192	160	152	192	0	0	0	1520	\$ 160.73	\$ 244,302
Mid-Level Project Engineer	TBD	160	152	200	152	160	192	160	152	192	0	0	0	1520	\$ 160.73	\$ 244,302
Junior Inspector (Civil/Structural)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 97.48	\$ -
Junior Inspector (Mechanical)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 97.48	\$ -
Junior Inspector (Electrical)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 97.48	\$ -
Scheduler	TBD	16	16	16	16	16	16	16	16	16	0	0	0	144	\$ 179.05	\$ 25,784
Senior Project Controls Manager	Ron Mallett	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 271.33	\$ -
ITS Support Desk	Carol Craig	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 100.50	\$ -
Systems Technician	Borchik	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 116.99	\$ -
IT Technical Services Manager	Stephens	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 198.25	\$ -
Constructability Team Leader	Elles Megees	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 244.61	\$ -
Constructability Review - Engineer	Various	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 180.03	\$ -
Cost Estimator / Scheduler	Gallo/Abella	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 122.75	\$ -
Winstead Management Group																
Lead Mechanical Engineer	TBD	160	152	200	152	160	192	0	0	0	0	0	0	1016	\$ 147.52	\$ 149,876
Mid-Level Administrative Assistant	TBD	160	152	200	152	160	192	160	152	192	0	0	0	1520	\$ 87.42	\$ 132,876
Junior Inspector (Civil/Structural)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 91.79	\$ -

MANPOWER ESTIMATE
CONSTRUCTION MANAGEMENT/ADMINISTRATION SERVICES

POSITION	NAME	Grand Totals	
		Hours	Cost
Jacobs Project Management Co.			
Project Manager	Doug Most	2,040	\$ 513,404
Senior Construction Manager	Jerry Nystrom	7,656	\$ 1,589,446
Construction Manager (Demolition Contracts)	TBD	3,088	\$ 567,948
Construction Manager (Flood Wall)	TBD	2,224	\$ 406,747
Lead Civil/Structural Engineer	TBD	5,872	\$ 814,425
Lead Electrical, I&C and Commissioning	Dan Ryan	6,892	\$ 1,248,385
Mid-Level Project Engineer	TBD	7,656	\$ 884,327
Junior Inspector (Civil/Structural)	TBD	2,768	\$ 251,833
Junior Inspector (Mechanical)	TBD	2,888	\$ 268,165
Junior Inspector (Electrical)	TBD	2,888	\$ 268,165
Scheduler	TBD	1,456	\$ 245,440
Senior Project Controls Manager	Ron Mplott	100	\$ 24,830
ITS Support Desk	Carol Craig	20	\$ 1,840
Systems Technician	Borchik	120	\$ 12,848
IT Technical Services Manager	Stephens	40	\$ 7,267
Constructability Team Leader	Eles Magarea	176	\$ 39,368
Constructability Review - Engineer	Various	320	\$ 52,720
Cost Estimator / Scheduler	Gallo/Abella	192	\$ 21,588
Winstead Management Group			
Lead Mechanical Engineer	TBD	6,176	\$ 871,414
Mid-Level Administrative Assistant	TBD	7,656	\$ 638,632
Junior Inspector (Civil/Structural)	TBD	5,404	\$ 471,872
		Jacobs - Labor Total	\$ 7,218,728
		Winstead Management Group - Labor Total	\$ 1,981,819
		Total Labor	\$ 9,200,544
		Other Direct Costs	\$ -
		Total	\$ 9,200,544

MANPOWER ESTIMATE
CONSTRUCTION MANAGEMENT/ADMINISTRATION SERVICES

103%

POSITION	NAME	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Hours Total	Billing Rate	Total
Jacobs Project Management Co.																
Project Manager	Doug Most	40	40	50	40	40	50	40	40	50	40	40	50	520	\$ 256.50	\$ 133,383
Senior Construction Manager	Jerry Nystrom	180	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 211.26	\$ 429,290
Construction Manager (Demolition Contracts)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 193.21	\$ -
Construction Manager (Flood Wall)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 193.21	\$ -
Lead Civil/Structural Engineer	TBD	160	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 146.34	\$ 297,365
Lead Electrical, I&C and Commissioning	Dan Ryan	160	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 180.99	\$ 367,763
Mid-Level Project Engineer	TBD	160	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 117.54	\$ 238,846
Junior Inspector (Civil/Structural)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 94.64	\$ -
Junior Inspector (Mechanical)	TBD	160	152	200	152	180	192	0	0	0	0	0	0	1016	\$ 94.64	\$ 96,158
Junior Inspector (Electrical)	TBD	160	152	200	152	180	192	0	0	0	0	0	0	1016	\$ 94.64	\$ 96,158
Scheduler	TBD	40	16	16	16	16	16	16	16	16	16	32	16	232	\$ 173.84	\$ 40,330
Senior Project Controls Manager	Ron Mallett	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 263.42	\$ -
ITS Support Desk	Carol Craig	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 97.58	\$ -
Systems Technician	Borchik	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 113.59	\$ -
IT Technical Services Manager	Stephens	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 192.47	\$ -
Constructability Team Leader	Elias Magezes	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 237.48	\$ -
Constructability Review - Engineer	Various	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 174.78	\$ -
Cost Estimator / Scheduler	Gallo/Abella	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 119.18	\$ -
Winstead Management Group																
Lead Mechanical Engineer	TBD	160	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 143.22	\$ 291,026
Mid-Level Administrative Assistant	TBD	160	152	200	152	180	192	180	152	192	152	160	200	2032	\$ 84.87	\$ 172,460
Junior Inspector (Civil/Structural)	TBD	160	152	200	152	180	192	180	152	192	0	0	0	1520	\$ 89.12	\$ 135,456

MANPOWER ESTIMATE
CONSTRUCTION MANAGEMENT/ADMINISTRATION SERVICES

103%

POSITION	NAME	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Hours Total	Billing Rate	Total
Jacobs Project Management Co.																
Project Manager	Doug Most	40	40	50	40	40	50	40	40	50	40	40	50	520	\$ 249.03	\$ 129,498
Senior Construction Manager	Jerry Nystrom	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 205.11	\$ 416,787
Construction Manager (Demolition Contracts)	TBD	160	152	200	152	160	162	0	0	0	0	0	0	1016	\$ 187.59	\$ 190,589
Construction Manager (Flood Wall)	TBD	160	152	0	0	0	0	0	0	0	0	0	0	312	\$ 187.59	\$ 58,527
Lead Civil/Structural Engineer	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 142.08	\$ 289,703
Lead Electrical, I&C and Commissioning	Dan Ryan	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 175.71	\$ 357,051
Mid-Level Project Engineer	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 114.12	\$ 231,889
Junior Inspector (Civil/Structural)	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 91.89	\$ 188,333
Junior Inspector (Mechanical)	TBD	0	152	200	152	160	162	160	152	192	152	160	0	1832	\$ 91.89	\$ 169,309
Junior Inspector (Electrical)	TBD	0	152	200	152	160	162	160	152	192	152	160	200	1872	\$ 91.89	\$ 172,009
Scheduler	TBD	40	40	40	40	40	40	40	40	40	40	40	40	480	\$ 168.77	\$ 81,011
Senior Project Controls Manager	Ron Mallett	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 265.75	\$ -
ITS Support Desk	Carol Craig	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 94.74	\$ -
Systems Technician	Borchik	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 110.26	\$ -
IT Technical Services Manager	Stephens	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 168.87	\$ -
Constructability Team Leader	Elles Mageeas	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 230.57	\$ -
Constructability Review - Engineer	Various	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 169.89	\$ -
Cost Estimator / Scheduler	Gallo/Abella	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 115.71	\$ -
Winstead Management Group																
Lead Mechanical Engineer	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 139.05	\$ 282,550
Mid-Level Administrative Assistant	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 82.40	\$ 167,437
Junior Inspector (Civil/Structural)	TBD	160	152	200	152	160	162	160	152	192	152	160	200	2032	\$ 86.52	\$ 176,800

MANPOWER ESTIMATE
CONSTRUCTION MANAGEMENT/ADMINISTRATION SERVICES

POSITION	NAME	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Hours Total	Billing Rate	Total
Jacobs Project Management Co.																
Project Manager	Doug Most	80	80	60	40	40	80	40	40	50	40	40	50	610	\$ 241.78	\$ 147,486
Senior Construction Manager	Jerry Nystrom	160	162	200	162	160	232	160	162	192	162	160	200	2072	\$ 199.14	\$ 412,613
Construction Manager (Demolition Contracts)	TBD	160	162	200	162	160	232	160	162	192	162	160	200	2072	\$ 182.12	\$ 377,360
Construction Manager (Flood Wall)	TBD	0	162	200	162	160	232	160	162	192	162	160	200	1912	\$ 182.12	\$ 348,220
Lead Civil/Structural Engineer	TBD	0	0	0	0	0	80	160	162	192	162	160	200	1098	\$ 137.94	\$ 151,183
Lead Electrical, I&C and Commissioning	Dan Ryan	0	0	0	80	80	232	160	162	192	162	160	200	1408	\$ 170.60	\$ 240,200
Mid-Level Project Engineer	TBD	160	162	200	162	160	232	160	162	192	162	160	200	2072	\$ 110.79	\$ 229,567
Junior Inspector (Civil/Structural)	TBD	0	0	0	0	0	0	80	162	192	162	160	200	930	\$ 89.21	\$ 83,499
Junior Inspector (Mechanical)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 89.21	\$ -
Junior Inspector (Electrical)	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 89.21	\$ -
Scheduler	TBD	40	80	80	40	40	40	80	40	40	40	40	40	600	\$ 163.86	\$ 98,315
Senior Project Controls Manager	Ron Mallett	80	40	0	0	0	0	0	0	0	0	0	0	100	\$ 248.30	\$ 24,830
ITS Support Desk	Carol Craig	20	0	0	0	0	0	0	0	0	0	0	0	20	\$ 91.98	\$ 1,840
Systems Technician	Borchik	60	60	0	0	0	0	0	0	0	0	0	0	120	\$ 107.06	\$ 12,848
IT Technical Services Manager	Stephens	40	0	0	0	0	0	0	0	0	0	0	0	40	\$ 181.43	\$ 7,267
Constructability Team Leader	Elias Mageeas	32	64	80	0	0	0	0	0	0	0	0	0	176	\$ 223.85	\$ 39,398
Constructability Review - Engineer	Various	58	104	160	0	0	0	0	0	0	0	0	0	320	\$ 164.75	\$ 52,720
Cost Estimator / Scheduler	Gallo/Abella	48	84	80	0	0	0	0	0	0	0	0	0	192	\$ 112.34	\$ 21,568
Winstead Management Group																
Lead Mechanical Engineer	TBD	0	0	0	0	0	80	160	162	192	162	160	200	1088	\$ 135.00	\$ 147,960
Mid-Level Administrative Assistant	TBD	160	162	200	162	160	232	160	162	192	162	160	200	2072	\$ 80.00	\$ 165,760
Junior Inspector (Civil/Structural)	TBD	0	162	200	162	160	232	160	162	192	162	160	200	1912	\$ 84.00	\$ 160,608