



Hazen and Sawyer  
629 Green Valley Road, Suite 200  
Greensboro, NC 27408 • 336.292.7490

May 23, 2016

Mr. Brian Boyd  
City of Greensboro  
Post Office Box 31360  
Greensboro, NC 27402

**Re: Proposal for Mitchell WTP Raw Water Transmission Mains Evaluation**

Dear Mr. Boyd:

Hazen and Sawyer (Hazen) is pleased to submit this Scope of Services Supplemental Agreement to support of the City of Greensboro's (City's) evaluation and rehabilitation of the raw water transmission mains supplying the Mitchell Water Treatment Plant. This project will help the City prioritize capital improvement needs for the raw water pipelines.

Hazen and the City signed an On-Call Professional Services Agreement dated January 29, 2014, for a duration of three years with allowance for two extensions of one year each. This master agreement allows Hazen and Sawyer to provide services for assigned projects as set forth in a Scope of Services Supplemental Agreement. This proposal defines the scope for a supplemental agreement to perform engineering services as noted below.

*Scope of Work*

**Phase 1 - Work to be Completed Prior to Taking Offline the Air Harbor Reservoir**

Task 1-1: Determine any needs for surge suppression for the raw water piping under direct pumping scenarios by completing the following:

- a. Inspect with City staff the condition and operation of the existing surge valves at the Lake Brandt Pump Station and at the Mitchell WTP;
- b. Build and validate a surge simulation model of the raw water system from the Lake Brandt Pump Station to the Mitchell WTP and simulate potential surge conditions. This task includes converting the existing steady-state hydraulic model of the raw water system to a surge model and adding additional data describing pipeline, pump, and control valve characteristics. This task will include validating the surge model by comparing its predictions to measurements during normal pump startup and shutdown, simulating pump trips and rapid closing of the flow control valves, and testing surge suppression devices to protect the system, including consideration of installing combination air/vacuum valves along the transmission mains.
- c. Recommend capital, maintenance, and/or operational improvements to minimize potential impacts related to hydraulic surge.

Task 1-2: Identify improvements for redundant piping upstream of, and around, the Air Harbor Reservoir by completing the following:

- a. Recommend reconfiguration of valves and/or piping modifications between the Lake Brandt Pump Station and the Air Harbor Reservoir to maximize redundancy and the use of the reservoir;
- b. Investigate the integrity of the existing PCCP pipe between the Lake Brandt Pump Station and the Air Harbor Reservoir. Hazen has discussed the specific pipeline with Pure Technologies, and Pure has provided a detailed scope and fee to perform an *in-situ* inspection and evaluation of the pipe. Hazen will also partner with Westcott, Small & Associates (WSAA) to design piping insertion points for the Pure equipment. Proposals from Pure and from WSAA are attached as Exhibit 2, and the fees from these proposals have been included within the Hazen fee in Exhibit 1. M/WBE affidavits are included in Exhibit 3.
- c. Assess the location of existing valves and crossovers along the pipelines between the Air Harbor Reservoir and the Mitchell WTP, and prioritize valve replacement based on criticality under worst-case pipe break scenarios.

Task 1-3: Evaluate alternative scenarios for improvements to the raw water system by completing the following:

- a. Use the previously prepared and validated hydraulic model of the raw water transmission mains to delineate the hydraulic advantages, if any, of raising the overflow elevation and working range of the Air Harbor Reservoir; and
- b. Use the hydraulic model to evaluate the advantages, if any, for increasing pipeline sizes between the Air Harbor Reservoir and the critical high points along the existing pipe route to the Mitchell WTP.

## **Phase 2: Short-Term Transmission Main Work**

Task 2-1: Assess the condition of the existing pipelines installed circa 1920s. Evaluate the pipelines using a desktop analysis and any available information obtained from the valve replacements or pipe coupons.

Task 2-2: Review potential rehabilitation technologies for each pipe type, condition, and age, including a planning-level estimate of costs associated with the options.

Task 2-3: Provide recommendations for pipe replacement at the urban loop crossing.

Task 2-4: Present results of the evaluations from Phases 1 and 2, including the following:

- a. Meet with City staff to present findings and preliminary recommendations; and

- b. Prepare a brief technical memorandum summarizing results of the evaluation, including estimated costs of any recommended capital improvements and a project schedule for completion of the improvements.

## *Proposed Fee*

Hazen proposes to perform the work outlined in this Proposal as a total not-to-exceed amount of \$285,440, which includes \$131,000 for services by Pure Technologies and \$16,500 for services by Westcott, Small & Associates. Charges will be invoiced on an hourly rate basis as indicated in Exhibit 1, which also includes an estimate of labor hours. Mileage will be billed at rates allowed by the United States Internal Revenue Service, currently \$0.54 per mile. Other expenses will be billed at cost.

## *Cooperation by the City*

This proposal assumes the City will provide:

- Operational and installation information about the raw water piping, Air Harbor Reservoir, and the Lake Brandt Raw Water Pump Station.
- Labor, materials, and rights-of-entry required for Pure Technologies to access the PCCP raw water main as detailed on Page 3 of Pure's proposal included as Exhibit 2. Hazen will be responsible for designing the access points and coordinating with the City or City's subcontractor that will perform the required work.

## *Schedule*

Hazen will begin this project in July 2016 and estimates completion within 270 days of Notice to Proceed and pending scheduling and performance of work by Pure Technologies.

Please call me if you have any questions about this proposal.

Sincerely yours,



Jeffrey R. Cruickshank, PE  
Greensboro Office Manager

cc: Virginia Spillman, PE (City)  
Barry Parsons (City)  
Scott Alpert, PhD, PE (Hazen)



**Exhibit 1: Estimate of Labor Hours and Fees**

Category			Project Director / QC	Project Manager	Senior Project Engineer	Project Engineer	Engineer	Field Services	Administrative Support			
Job Class (for Invoicing)			Vice President	Associate	Associate	Senior Principal Engineer	Principal Engineer	Senior Field Coordinator	Administrator			
Staff Member			Cruikshank / Wang	Alpert	Espinosa, Buswell	Broadbent	Collett	Widderich	Huffman			
Hourly Rate			\$230	\$170	\$165	\$150	\$110	\$145	\$75			
Task Number	Item	Task Name	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Expenses (Direct+ 0%)	Total Labor Hours	Total NTE Fee
Task 1-1	a	Project Kickoff & inspect surge valves	16	24	-	8	-	-	-	\$500	48	\$9,460
	b	Build surge model	2	4	4	56	-	12	-	\$100	78	\$12,040
	c	Recommend improvements for surge control	8	4	8	48	-	-	-	\$200	68	\$11,240
Task 1-2	a	Recommend valve reconfiguration at reservoir	2	16	4	4	-	-	-	\$0	26	\$4,440
	b	Investigate integrity of PCCP pipe	2	24	64	-	-	-	-	\$147,500*	90	\$162,600
	c	Assess valves/crossovers and prioritize replacement	4	40	16	-	16	-	-	\$0	76	\$12,120
Task 1-3	a	Model raising reservoir and evaluate advantages	2	16	16	-	-	-	-	\$0	34	\$5,820
	b	Model increasing pipe sizes and evaluate advantages	2	16	24	-	-	-	-	\$0	42	\$7,140
Task 2-1	a	Desktop analysis of 1920s pipe	2	24	32	-	-	12	-	\$0	70	\$11,560
Task 2-2	a	Evaluate rehab technologies	-	16	24	-	-	-	-	\$0	40	\$6,680
Task 2-3	a	Define Urban Loop pipe replacement	4	24	24	-	-	-	-	\$0	52	\$8,960
Task 2-4	a	Estimate CIP cost and schedule	4	40	16	8	-	-	-	\$0	68	\$11,560
	b	Present preliminary recommendations	4	16	8	8	-	-	-	\$400	36	\$6,560
	c	Respond to review comments and prepare tech memo	4	48	16	4	24	-	4	\$0	100	\$15,260
<b>TOTAL Project Cost Ceiling</b>			<b>56</b>	<b>312</b>	<b>256</b>	<b>136</b>	<b>40</b>	<b>24</b>	<b>4</b>	<b>\$148,700</b>	<b>828</b>	<b>\$285,440</b>

\* Includes \$131,000 to Pure Technologies and \$16,500 to Westcott, Small & Associates



**Exhibit 2: Proposals from Subcontractors:  
Pure Technologies  
Westcott, Small & Associates, Inc.**



December 7, 2015

Matthew D. Buswell, PE.  
Associate  
Hazen and Sawyer, P.C.  
4011 Westchase Blvd., Suite 500  
Raleigh, North Carolina 27607

RE: City of Greensboro Raw Water Transmission main Condition Assessment

Dear Mr. Buswell:

Pure Technologies U.S. Inc. (Pure Technologies) is pleased to submit this proposal to Hazen & Sawyer, P.C. (Hazen & Sawyer) for the inspection and evaluation of the City of Greensboro (City) raw water transmission main. This water main was constructed using 36-inch diameter prestressed concrete cylinder pipe (PCCP) manufactured International Pipe and Ceramics Corporation. It is our understanding that the pipeline is currently not in operation and the City wishes to determine the condition of this pipeline prior to resuming operation.

## SCOPE OF WORK

### *Pipeline Condition Assessment*

Electromagnetic data collected using the PureRobotics™ platform will detect prestressing wire breaks; and is important for evaluating the structural condition of the pipeline. A video inspection will also be performed, focusing on the condition of the joints, as well as any mortar loss or separation that can be observed. Potential impacts to the visual survey include accumulated sediment/debris and sags in the pipeline that cannot be dewatered. Sonar will be used to locate and quantify sediment accumulation in these locations.

Pure Technologies will meet with the City and Hazen & Sawyer; perform a site visit to verify; and, inspect access locations and potential challenges in order to develop the Project Plan. This proposal is developed recognizing that deployment will need to be coordinated with City Staff due to the length and location of the transmission main, location of insertion/extraction points, and pump station isolation. It is our understanding that City and/or Hazen & Sawyer will facilitate all civil activity to provide access into the pipeline including excavation, tapping, shoring and other activities necessary to access valves and appurtenances identified as being critical to the performance of the assessment. The detailed planning document will include anticipated civil work will be submitted for review and comment prior to initiating the inspection.

This scope of services is based on pipe information provided Hazen & Sawyer. Available information includes the following:

- Pipe Summary Lay Schedule shop drawing submittal approved January 1966 (International Pipe and Ceramics Corporation; and,

- Pipe Specifications dated January 1965.

### ***Data Analysis and Reporting***

Engineers and analysts will review all collected data and prepare a summary of findings and recommendations. Pure Technologies will perform the following:

- Determine the number of broken prestressing wires in each inspected pipe section inspected;
- Perform an AWWA C301/C304 structural evaluation of each pipe class design;
- Develop a 3-D, nonlinear finite element model for the subject pipeline to generate a performance curve for each design class soil depth combination for each pipe with broken prestressing wires;
- Determine the predicted condition of each section of pipe using the electromagnetic inspection data and performance curve developed by the model; and,
- Provide a detailed report documenting the structural analysis performed and the predicted condition of each pipe section.

Pure Technologies will furnish all labor, materials, equipment, tools and supplies to perform the inspection, unless noted otherwise under this scope of services. Anticipated responsibilities for both parties will be further detailed in the project planning document.

### **DELIVERABLES**

Pure Technologies will provide the following deliverables:

- A detailed project plan will be submitted to Hazen & Sawyer prior to the assessment in electronic PDF format. The project plan will be provided approximately two weeks prior to the inspection and is dependent on the receipt of existing project data.
- Electronic PDF copy of the Draft Report will be generated and delivered to the Hazen & Sawyer within 8 weeks following inspection.
- A Final Report will be submitted within two weeks following receipt of review comments.

### **SCHEDULE**

The proposed schedule for the PureRobotics™ inspection is based on a Notice to Proceed (NTP) in January 2016:

- |                             |                                           |
|-----------------------------|-------------------------------------------|
| • Site Visit                | 1-2 weeks following NTP                   |
| • Project Planning Document | 2-4 weeks following NTP                   |
| • PureRobotics™ Inspection  | 1-3 weeks following approved Project Plan |
| • Analysis and Draft Report | 8 weeks from completion of the inspection |



- Review period 1 week from receipt of the draft report
- Final Report 2 weeks from receipt of review comments

## PROPOSED FEE AND PAYMENT SCHEDULE

Pure Technologies will deliver electromagnetic inspection of the 36-inch diameter PCCP utilizing PureRobotics™ platform. The not to exceed cost for this project is detailed in the table below and assumes a single mobilization.

Item	Description	Unit	Unit Price	Quantity	Total Price
1	Project Planning and Mobilization	EA	\$ 50,000.00	1	\$ 50,000.00
2	Electromagnetic/Sonar/Visual Inspection and Data Analysis on PureRobotics™ Platform	MI	\$ 50,000.00	1.1	\$ 55,000.00
3	Structural Analysis Performance Curves and Project Reporting	LS	\$ 26,000.00	1	\$ 26,000.00
Total Project Cost					\$ 131,000.00

Payment of services rendered by Pure will be invoiced accordingly:

Service	Fee	Invoicing Period
Project Planning and Mobilization	\$ 50,000.00	Upon Completion of Project Planning Document
Electromagnetic/Sonar/Visual Inspection and Data Analysis on PureRobotics™ Platform	\$ 55,000.00	Upon Completion of PureRobotics™ Inspection
Structural Analysis and Draft Report	\$ 13,000.00	Upon Completion of the Draft Report
Final Report	\$ 13,000.00	Upon Completion of the Final Report

### *Mobilization & Project Planning Summary*

The following is a summary of basic items covered under the mobilization line item included in this proposal:

- Project Start-up
- Project document review
- Preliminary site visit and review
- Pre-inspection coordination/meetings
- Planning document development



- Equipment and staffing logistics to and from the project site
- Tool calibration
- Pre-inspection activities required in advance of the scheduled inspection date

*City of Greensboro and/or Hazen & Sawyer Responsibilities:*

- Provision of any required legal right-of-entry on the property for insertion and extraction;
- Provide support personnel during the inspection for access to system features typically restricted to client personnel;
- Authorize the preparation of and/or modify existing pipeline fittings and structures for insertion and extraction of the tool, as necessary;
- Operation of valves for insertion and extraction of the tools;
- Provide and maintain safe and reasonable access to all insertion sites throughout the inspection, as required; and,
- Render confined space areas safe for the services, including locking and tagging pumps, valves, and motors.

Pure Technologies is excited by the opportunity to perform the proposed scope of work. We are committed to providing you with a successful project. If you have any questions or comments, please do not hesitate to contact me at 407.408.7631.

Best regards,



William J. Craven, P.E.

Southeast Business Development Manager

[william.craven@puretechltd.com](mailto:william.craven@puretechltd.com)

Attachments

Schedule A: Standard Terms & Conditions for PureRobotics™ service contract

# **PUREROBOTICS™ SERVICE CONTRACT**

## **TERMS AND CONDITIONS**

### **ARTICLE I - SERVICE ACCEPTANCE**

Pure Technologies Ltd. ("Pure") is under contract to perform inspection services ("Service") using a proprietary tool called by the **PureRobotics™** division of Pure ("**PureRobotics™**") consisting of a modular, long range, multi-sensor inspection system capable to record a data on the condition of the subject pipeline. **The PureRobotics™ data** is recorded and documented in a report. Once all data is successfully recorded through the **PureRobotics™ System**, Pure will deliver the reports to the Customer which shall constitute final acceptance of the Service by Pure to the Customer (the "Acceptance").

### **ARTICLE II - CONFIDENTIAL INFORMATION**

Each party acknowledges that it may receive confidential information from the other party pursuant to this Agreement. "Confidential Information" means any information designated in writing as Confidential Information by the disclosing party. During the period this Agreement is in effect, and at all times thereafter, each party shall (a) safeguard the Confidential Information with the same degree of care that it uses to protect its own Confidential Information, but no less than reasonable care; (b) maintain the confidentiality of such information; (c) not use such information except as permitted under this Agreement; and (d) not disseminate, disclose, sell, publish, or otherwise make available such information to any third party without the prior written consent of the disclosing party.

**The obligations of the parties with respect to confidentiality shall survive the termination of this Agreement.**

### **ARTICLE III - DEFAULT**

A material breach or default by a party ("Defaulting Party") of any terms, conditions, warranties or representations provided in this Agreement shall give rise to an event of default ("Default"). The other party may, at its option, terminate this Agreement upon giving the Defaulting Party notice in writing of the specific details of the alleged Default and where the Defaulting Party has not remedied such Default within thirty (30) days of receipt of such notice. All amounts outstanding hereunder from Customer to Pure shall immediately be due and payable on Default of Customer which is not cured in the manner required by this Section.

### **ARTICLE IV - LIMIT OF LIABILITY**

**Notwithstanding anything to the contrary contained herein, in no event shall Pure be liable to the Customer for costs of procurement of substitute goods or services, lost profits, lost sales, or business expenditures, investments, business commitments, loss of any goodwill, or for any indirect, special, exemplary, consequential, or incidental damages arising out of, or related to, this Agreement, however caused or under any theory of liability, even if Pure has been advised of the possibility of such damages. Pure's total cumulative liability hereunder, from all causes of action of any kind shall in no event exceed the amount paid by the Customer for the portion of the services under this Agreement. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy.**

### **ARTICLE V - GOVERNING LAW**

This Agreement shall be construed in accordance with, and the rights of the parties governed by, the laws in force in the State of North Carolina and the parties agree to irrevocably attorn to the jurisdiction of the courts of the State of North Carolina and further agree that any proceedings shall only be taken in respect of this Agreement in such courts.

### **ARTICLE VI - FORCE MAJEURE**

Neither party hereto shall be liable to the other, for any failure of or delay in the performance of its obligations hereunder nor be deemed to be in breach of this Agreement, if such failure or delay has arisen from "Force Majeure". For the purpose of this Agreement "Force Majeure" shall mean any cause not reasonably in the control of Pure or Customer as the case may be, including, without limitation, acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, earthquakes, fires, storms, floods, high water, wash outs, inclement weather, power failure, telecommunications disruption or failure, orders or acts of civil or military authorities, civil disturbances, or explosions.

**Where either party hereto is prevented from carrying out its obligations hereunder due to Force Majeure, such obligations so far as they are affected by Force Majeure shall be suspended during the operation of any such event of Force Majeure. The party prevented from carrying out its obligations hereunder due to Force Majeure shall where practical, make reasonable efforts to give notice of the occurrence of such Force Majeure to the other party hereto.**

### **ARTICLE VII - TERMINATION**

**This agreement may be canceled or terminated with or without cause by either party by giving thirty (30) days written notice to the other party. The Customer will be responsible for payment on any services received up until the termination date.**

### **ARTICLE VIII - LIMITATION OF ACTIONS**

Pure and the Customer agree that if a dispute resolution mechanism is not successful in resolving a dispute under this Agreement or any Schedule, any legal action must be commenced within two (2) years of the date of the cause of action complained of.

#### **ARTICLE IX - EFFECT OF WAIVER**

No delay or omission to exercise any right or remedy accruing to either party upon any breach or default of the other party will impair any such right or remedy or be construed to be a waiver of any such breach or default, nor will a waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval on the part of either party of any breach or default under this Agreement or of any provision or condition hereof, must be in writing and will effect only to the extent in such specifically set forth. All remedies, either under this Agreement, under any agreement entered into in conjunction with this Agreement, or at law or in equity or otherwise afforded to either party, are cumulative and not alternate.

#### **ARTICLE X – OTHER TERMS AND CONDITIONS**

Notwithstanding anything to the contrary contained herein, the following additional terms and conditions are part of this Agreement and will be in full force and effect upon execution of this Agreement:

- 1) *Performance of Service:* Pure shall perform the services necessary to complete the inspection of the project in accordance with the procedures described in the proposal, in a timely and professional manner, consistent with industry standards, at a location, place and time as stipulated in the proposal.
- 2) *Temporary Conditions Present:* The PureRobotics™ device records data on the condition of the pipeline at the time of inspection. In some cases conditions at the time of inspection may differ for those present during normal pipeline operations. As a result, Pure hereby notifies the Customer that temporary conditions may affect the validity of the inspection.
- 3) *Reimbursable Costs incurred due to Unexpected Occurrences:* In addition to Pure's Fee and general conditions payable hereunder the Customer shall reimburse Pure for costs reasonably and necessarily incurred not compensated by insurance (hereinafter the "Reimbursable Costs") due to unforeseen or unexpected circumstances described below:
  - a) If delays occur due to parties other than Pure, Pure shall be reimbursed for the delay at a rate of \$3,000 per day per crew plus \$2,000 for equipment. Should delays occur due to Pure, no additional costs will apply; and
  - b) If at the time of performing services under this agreement an obstruction, low pipeline velocity or an unforeseen circumstance which are not attributed to Pure the PureRobotics™ device unattainable, Pure shall be reimbursed for the sum of \$5,000 for the planning efforts and mobilization on the project. If the device is unattainable due to actions by Pure, no reimbursement shall be provided.

As a condition precedent to payment for such costs, Pure must give written notice to the Customer within 48-hours after incurring such costs.

4) As part of the planning process for a PureRobotics project, Pure will estimate the length of survey that should be achievable during the inspection. The customer is hereby notified that pipeline conditions may exist that will limit the length the PureRobotics device can traverse inside the pipe. These condition may include, but not limited to, higher or lower than expected interior pipe wall friction, steep slopes, multiple bends, or pipeline blockage. As a result the actual traversable length obtained during the inspection may be less than the length estimated during the planning or proposal phases of the project. Pure is not responsible for any costs that may be associated with attaining shorter inspection lengths or providing any additional support including but not limited to additional access manholes, logistical support to access the pipe at other locations, or additional mobilizations required to inspect portions of pipe that were not accessible during previous inspections.

#### **ARTICLE XI - ENUREMENT**

Subject to the terms hereof, this Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors, assigns and legal representatives.



May 19, 2016

Matthew D. Buswell, PE  
Hazen and Sawyer  
4011 Westchase Blvd., Suite 500  
Raleigh, NC 27607

RE: CONTRACT FOR ENGINEERING SERVICES -  
CITY OF GREENSBORO RAW WATER TRANSMISSION MAIN EVALUATION

Dear Mr. Buswell:

Westcott, Small & Associates, PLLC ("WSAA") is pleased to submit this contract to provide the requested engineering services associated with the Raw Water Transmission Main Evaluation in Greensboro, NC. WSAA will serve as a sub-consultant to Hazen and Sawyer (Hazen) to assist in a project developed by the City of Greensboro Water Resources Department. Design services are limited to up to three access points for insertion of robotic equipment into an existing 36" PCCCP line.

**SCOPE OF SERVICES:**

Based on our understanding of the project, we will provide the following services:

**Inspection Phase:**

1. WSAA will meet with Hazen and the City of Greensboro to verify project scope and timeframe.
2. WSAA will assist Hazen and Pure Technologies in the performance of a one-day site inspection.
3. Based upon the outcome of the site inspection, WSAA will develop construction plans for the insertion of valves as necessary to allow for robotic equipment access into the existing pipe at up to three locations. Site/utility plans will be developed.
4. WSAA will provide PDF versions of the plans to Hazen for comment by Hazen, Pure Technologies and the owner.
5. WSAA will address owner and consultant comments and issue a set of drawings for bid.
6. WSAA will develop a technical specification for the work included in the construction drawings.
7. WSAA will combine the technical specification and the City of Greensboro's Standard front end (provided by the Water Resources Department) into a single project manual.
8. WSAA will attend up to four meetings with the owner, Hazen and/or subconsultants.
9. WSAA will attend a prebid meeting and will provide the City with written answers to contractors' questions during the bid period in order for the City to issue addenda.
10. WSAA will attend the bid opening and assist the owner in evaluating the bids received.

**SPECIFICALLY EXCLUDED FROM THIS FEE:**

1. Surveying
2. Review Fees, Inspection Fees, Impact Fees, Meter Fees, Capacity Use Fees, Bonds, etc.
3. Permitting & Plan Review

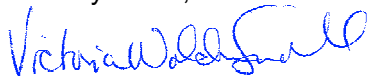
4. Attendance of P&Z and City Council Meetings
5. Rezoning & Special Use Permit
6. Off-site improvements
7. Construction Administration
8. Traffic Impact Analysis and/or Signal Design
9. Geotechnical Engineering/Testing
10. LEED Documentation
11. Lighting Design
12. Retaining Wall Design
13. Utility Location
14. Cost Estimates
15. Irrigation, Gas, Telephones, Electrical Service Design
16. Erosion Control Design
17. Asbuilt Drawings

**FEES:**

We propose to perform the scope of services described above on an hourly rate, not to exceed \$16,500. All services will be provided in accordance with the attached Terms and Conditions (Attachment B). If additional services become necessary, we will acquire written authorization in advance from the Client, and bill for these services in accordance with the attached Schedule of Rates (Attachment A) or at an agreed to lump sum fee. Please note that any required surveying will need to be provided by Hazen or the owner.

WSAA reserves the right to temporarily install a sign on the site during construction identifying WSAA as the contracted engineer and to use images of the site and project in marketing materials. We look forward to working with you on this project.

Sincerely Yours,



Victoria Waldron Small, PE  
Principal

Attachments: Schedule of Rates (Attachment A)  
Terms and Conditions (Attachment B)

AGREED TO AND ACCEPTED

Signature: \_\_\_\_\_

Printed Name & Title: \_\_\_\_\_

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

## Attachment A

### Schedule of Rates

<b>Staff</b>	<b>Hourly Rate</b>
Principal	\$150.00/hour
Professional Engineer	\$135.00/hour
Engineering Intern	\$75.00/hour
Field Technician	\$75.00/hour
Engineering Draftsman	\$55.00/hour
Administrative	\$35.00/hour
Outside Consultants	Cost *1.1
Prints	\$2.00/sheet
Mileage	\$0.58/mile

1. Charges are due and payable fifteen (15) days after the invoice date. Interest will be charged at the rate of 1% per month for outstanding balances over one month old.
2. Construction administration staff will be billed at equivalent grade, depending on qualifications.
3. Time spent providing depositions or courtroom testimony will be billed at 150% of the hourly rate.

## Attachment B

### TERMS AND CONDITIONS

Section 1. Services. The Client hereby agrees to engage Westcott Small & Associates, PLLC (hereinafter referred to as WSAA) and WSAA hereby agrees to perform certain services for the party to whom the agreement letter is addressed (hereinafter referred to as Client) in accordance with the scope in the authorizing agreement.

Section 2. Client's Responsibilities. The Client agrees to provide WSAA with all existing data, plans, and other information in the Client's possession, which are necessary for the performance of Services. The Client further agrees to provide any additional data, plans, or other information as may be specified in authorized work orders.

Section 3. Standard of Care and Warranty. WSAA agrees that its Services will be performed with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions and circumstances. No other warranty, expressed or implied, is made. WSAA's interpretations and recommendations may be based on the results of test borings by others, surveys or other investigative work. The Client recognizes that subsurface conditions elsewhere in the work area may differ from those at the exploration locations and that conditions may change over time. WSAA will not be responsible for the interpretation or use by others of data developed by WSAA.

Section 4. Compensation. The lump sum fee for WSAA's services includes labor, overhead and profit. WSAA will prepare monthly invoices based on WSAA's estimate of the proportion of the total services actually completed during the billing period to the lump sum fee. If an up front retainer was required then the retainer will be applied to the final billing of the project.

Section 5. Payment. Invoices are due fifteen (15) days from the invoice date. Client agrees to pay a finance charge equal to one percent (1%) per month on past due accounts. Invoices not paid within 90 days from the invoice date will be given to an attorney for collection and a stop work order will be issued on the project. Client agrees to reimburse WSAA for all fees associated with collection. Invoices for Services performed on a time-and-materials basis will be submitted showing labor (hours worked) and total expenses, but not actual documentation. If requested by the Client, documentation will be provided by WSAA at the cost of providing such documentation including labor and copying costs.

Section 6. Notices. Communications from the Client shall be to WSAA's designated project manager or principal-in-charge of the work. Oral communications shall be confirmed in writing.

Section 7. Opinions of Cost. WSAA makes no representation concerning any opinions of cost provided in connection with these services other than that all cost figures represent our professional opinion of probable cost. WSAA shall not be responsible for fluctuations in cost factors.

Section 8. Confidentiality. WSAA shall maintain as confidential and not disclose to others without Client's prior written consent, all information obtained from Client, not otherwise previously known to WSAA in the public domain, as Client expressly designates in writing to be "Confidential." The provisions of this paragraph shall not apply to information in whatever form which (i) is published or comes into the public domain through no fault of WSAA, (ii) is published by or obtained from a third party who is under no obligation to keep the information confidential, or (iii) is required to be disclosed by law on order of a court, administrative agency or other authority with proper jurisdiction.

Section 9 Independent Contractor. WSAA's relationship with the Client under this Agreement shall be that of independent contractor. The employees, methods, equipment, and facilities used by WSAA shall at all times be under its exclusive direction and control, and the Client shall not exercise control over WSAA except insofar as may be necessary to ensure performance and compliance with this Agreement.

Section 10. Insurance. WSAA agrees to purchase and maintain at its own expense general liability insurance, and automobile liability insurance. Certificates of insurance shall be provided to Client upon request in writing. Within the

limits and conditions of such insurance, WSAA agrees to reimburse the Client for any damages sustained by the Client which are covered by WSAA's insurance to the extent of the limitations and exclusions contained within said insurance policies and Sections 11 and 12 of this Agreement. WSAA agrees to purchase additional insurance as requested by the Client (presuming such insurance is available) provided the premiums for such additional insurance are reimbursed by the Client.

Section 11. Indemnification. WSAA shall indemnify, and hold the Client harmless from and against any claim asserted by any person or entity (other than an officer, director, employee or agent of Client) arising out of WSAA's negligent acts, errors, or omissions, subject to the limitations and exclusions contained herein in Sections 12 and 14. Client shall indemnify and hold WSAA harmless from and against any claim asserted by any person or entity (other than an officer, director, employee, or subcontractor of WSAA) arising out of Client's negligent acts, errors, or omissions.

Section 12. Liability Limitation. WSAA's liability to the Client for any loss or damage, including, but not limited to, special and consequential damages, arising out of or in connection with this Agreement from any cause, including WSAA's professional negligence, errors, or omissions shall not exceed the greater of \$10,000 or the compensation received by WSAA hereunder, and Client hereby releases WSAA from any liability above such amount.

Section 13. Jobsite Safety. Neither the professional activities of WSAA nor the presence of the WSAA employees and subcontractors at a construction site, shall relieve the General Contractor and any other entity of their obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending or coordinating all portions of the Work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory agencies. WSAA personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any earth or safety precautions. The client agrees that the General Contractor is solely responsible for jobsite safety, and warrants that this intent shall be made evident in the Client's agreement with the General Contractor.

Section 14. Disputes. If a dispute arises relating to the performance of the Services covered by this Agreement, and legal or other costs are incurred, the prevailing party shall be entitled to recover all reasonable costs incurred in the defense of the claim, including staff time at current billing rates, court costs, attorney's fees, and other claim-related expenses. In the event of any litigation, Client agrees to pay to Engineer interest on all past due balances at the rate of twelve percent (12 %) per annum.

Section 15. Termination. This Agreement may be terminated by either party upon thirty (30) days written notice in the event of substantial failure of performance by the other party or if the Client suspends the work for more than three months. In the event of termination, WSAA shall be paid for services performed prior to the termination notice date plus reasonable termination expenses, including the cost of completing analyses, records, and reports necessary to document job status at the time of termination.

Section 16. No Waiver. The failure of a party to enforce strictly any provision of this Agreement shall not be deemed to act as a waiver of any provision, including the provision not so enforced.

Section 17. Choice of Law. This Agreement is deemed to be made under and shall be construed according to the laws of the State of North Carolina.

Section 18. Successors and Assignments. The Client and WSAA each binds itself and its successors, executors, administrators, and assigns to the other party of this Agreement and to the successors, executors, administrators, and assigns of such other party, in respect to all covenants of this Agreement.

Section 19. Amendments. All modifications to this agreement shall be made in writing and approved by both Client and WSAA.



Section 20. Severability. The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provision were omitted.

Section 21. Entire Agreement. This Agreement, including all attachments authorized hereunder, constitutes the entire agreement between the parties hereto and it supersedes all prior or contemporaneous agreements, whether oral or written, with respect to the subject matter hereof. In case of conflict or inconsistency between this Agreement and any other contract documents, this Agreement shall control. No agreement hereafter made between the parties shall be binding on either party unless reduced to writing and signed by an authorized officer of the party sought to be bound.



Post Office Box 31360  
Greensboro, NC 27402

Mr. Brian Boyd  
City of Greensboro

### **Exhibit 3: M/WBE Forms**

**Subcontractor Utilization Commitment Affidavit** Contract Number: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

Name of Prime Contractor: **Hazen and Sawyer** Project Name: **Mitchell WTP Raw Water Transmission Mains Evaluation**

The Bidder/Participant must indicate all subcontracts (M/WBE & NON-M/WBE) it intends to utilize as follows:

MBE	WBE	NON M/WBE	Subcontractor Name & County**	Nature of Work to be Performed	% Utilization
	X		Westcott, Small & Associates, PLLC Guilford County, NC	Engineering Services (Design of utility access points)	6%
		X	Pure Technologies, Ltd.	In-situ Inspection and Condition Assessment of Piping	46%
<b>**Only M/WBE firms that are certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and have a significant business presence within the Greensboro MSA (Guilford, Randolph, Rockingham, Forsyth, Stokes, Davie, Yadkin, Davidson, Alamance and Surry Counties) will be counted towards the M/WBE goal(s).</b>				<b>Total NON-M/WBE Utilization Commitment</b>	<b>46%</b>
				<b>Total MBE Utilization Commitment</b>	<b>0%</b>
				<b>Total WBE Utilization Commitment</b>	<b>6%</b>

(Submit Additional pages, if necessary)

Pursuant to "Special Instructions to Bidders Regarding Compliance with the City of Greensboro Minority and Women Business Enterprise (MWBE) Program Policies", the Bidder certifies that the above Minority/Women-owned Business Enterprise(s) was (were) contacted in good faith.

The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith.



Date: May 23, 2016 Name of Authorized Officer: James N. Struve, PE  
 Signature: [Signature] Title: Vice President  
 State of North Carolina County of Mecklenburg  
 Notary Public [Signature] My commission expires: 9/28/18

FORM D – Letter of Intent to Perform as a M/WBE Subcontractor Contract Number: \_\_\_\_\_

Name of Prime Contractor: Hazen Sawyer Project Name: Raw Water Transmission  
Main Evaluation

The undersigned intends to perform work in connection with the above project as:

	Minority Business Enterprise	<input checked="" type="checkbox"/>	Women Business Enterprise
	Individual		A Corporation
	A Partnership		A Joint Venture

The undersigned is certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and have a significant business presence within the Greensboro MSA (Guilford, Randolph, Rockingham, Forsyth, Stokes, Davie, Yadkin, Davidson, Alamance and Surry Counties).

The undersigned is prepared to provide the work (described below) in connection with the above project at the following price: \$ 16,500

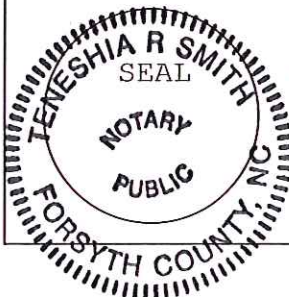
You have projected the following commencement date for such work, and the undersigned is projecting completion of such work as follows:

Description of the Work	Projected Commencement Date	Projected Completion Date
<u>Contract Documents for</u>		
<u>access ports</u>		

0 % of the dollar value of the subcontract will be sub-let to non-minority/women contractors. The undersigned will enter into a formal agreement for the above work with you conditioned upon your execution of a contract with the City of Greensboro.

Pursuant to "Special Instructions to Bidders Regarding Compliance with the City of Greensboro Minority and Women Business Enterprise (MWBE) Program Policies", the Bidder certifies that the above Minority/Women-owned Business Enterprise(s) was (were) contacted in good faith.

The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith.



Date: 5/19/16 Company Name: Westcott, Small & Assoc.  
Signature: [Signature] Name of Authorized Officer: Victoria Waldman Small  
Title: Principal  
State of North Carolina County of Guilford  
Notary Public Teneisha R. Smith My commission expires: 2/9/2019