



November 23, 2015 Revised August 12, 2016, Revised August 28, 2016

Ms. Virginia Spillman, PE
Engineering Manager
City of Greensboro Water Resources Department
2602 South Elm-Eugene Street
Greensboro, NC 27406

Re: Water Distribution Improvements Forest Oaks Professional Services

Dear Ms. Spillman:

Per our meeting of August 9, 2016 attached is our revised request for consideration for a Supplemental for our existing contract for the Forest Oaks Engineering Fees. Provided below is a summary leading to our request.

Our original scope anticipated that all of the proposed water line alignments would be within existing road right of way. The original design along Millpoint Rd. as discussed in our pre-design meeting reflected the alignment on the north side of the road and with existing right of way. Surveys were conducted by CH and plans were prepared. Due to the conflicts with fiber optic lines and gas lines along the north side of the road, it was then decided to reflect the water line on the south side and to contact 811 to mark the existing utilities and have CH survey the alignment. Plans were then submitted revising the alignment to the South side of Millpoint and providing the location of the located dry utilities.

Upon reviewing the numerous utility conflicts on the south side of Millpoint road, the decision was made to reflect the proposed water line on the North side of Millpoint outside of the existing right of way. During review of preliminary plans, Mr. Boyd advised CH that the gas mains needed to be shown on profile sheets. CH coordinated with Mr. Keith Lovings for this request. CH survey crew staked the location of conflicts, the gas company dug and measured down the depths. The information for the depths of the gas lines were then added to the water line profile and showed the water line depths needed to avoid the gas conflicts.

During the second official review cycle, the City of Greensboro requested the addition of a mag meter that would be tied into the SCADA system. Also additional comments included providing security fence, antennae pole, security lights, and a wooden A-frame with metal roofing for the mag meter.

While CH Engineering understands that revisions to design plans are inherent to the design process, we are only asking consideration for supplemental fees to cover a minimum amount of re-design (not all), the Level A test holes and associated surveying for the realignment, and the fees requested by our sub-consultant, AECOM/URS, for the mag meter, the wooden A-frame with metal roofing for the mag meter, security fence, antennae pole, and security lights. This supplemental would included efforts to complete the design plans to 100%.

The fees are broken out as following:

CH Engineering supplemental water line re-design fee	\$7000.00
CH Engineering Supplemental Surveying/(SUE) Effort due to realignment	\$4970.00
Sub-consultant Design by AECOM/URS (See Attached)	<u>\$7580.00</u>
a. Total Supplemental Fee Requested for Engineering & surveying	\$19,550.00
b. Supplemental fee for new surveying, easement mapping by CH (see attached)	<u>\$64,595.00</u>
Total Supplemental Fee request (a+b)	\$84,145.00

Attached please find AECOM/URS fee proposal and CH Engineering's surveying proposal for the easement mapping related work. Please let us know if you need any additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Maha A. Chambliss'.

Maha Chambliss, PE, President



CH Engineering, PLLC
WBE Certified
3220 Glen Royal Road
Raleigh, NC 27617
Tel 919 788 0224
Fax 919 788 0232
www.ch-engr.com

Ms. Virginia T. Spillman, PE
Engineering Manager
City of Greensboro
Department of Water Resources
P.O. Box 3136
Greensboro, NC 27401

Subject:

City of Greensboro – Forest Oaks Water Distribution Improvement Easement Surveys

Dear Ms. Spillman,

CH Engineering is pleased to provide this proposal for surveying services on the above referenced project.

It is our understanding the purpose of the survey is to provide (24x36) plats at 40 scale, legal sized exhibits that will be recorded as attachments and legal descriptions for approximately thirty parcels that require proposed easements along the frontage of the affected parcels to enable the design and construction of proposed water lines for the Forest Oaks Water Distribution Improvements Project located in Guilford County, N.C.

Date:

10 August 2016

Contact:

Jeff Munn

Phone:

919.788-0224
Ext. 5469

E-mail:

jmunn@ch-engr.com

Limits of Survey

The survey limits were taken from design plans prepared by CH Engineering and will include thirty parcels that require proposed easements for the installation of the proposed new water lines.

Our ref:

City of Greensboro –
Forest Oaks Easement
Surveys

General Scope of Service

- GPS control points relative to the North Carolina State Plane Coordinate system that were previously set at the project site will be used for the purpose of this survey, these points are on the horizontal datum (NAD 83/NSRS2007) adjustment for this project.
- Conventional control traverses (6,500+/- feet) will be ran between the existing GPS points to enable our survey crews to tie property corners for the thirty affected parcels.

- Property deed, plat, right of way information and existing easement research will be completed for thirty parcels and the adjacent parcels using the Guilford County GIS and the Guilford County Register of Deeds Office.
- Field ties to existing property corners will be completed for each of the thirty properties. Parcels will be mapped using the existing property corners and by using the currently recorded deeds, plats, existing right of way information and existing easement information available from the Guilford County Register of Deeds Office. The entire parcel boundaries for each of the thirty parcels will not be surveyed and should not be considered full boundary surveys.
- Staking of the proposed easements points (90) will be done after the design is completed and approved. These points will be set before the plats, easement exhibits and legal descriptions can be delivered to the City of Greensboro. Temporary construction easement points will not be staked in the field. If the number of easement points to be staked exceeds (90) additional fees will be needed to complete the staking. The estimated number of easement points was taken from preliminary design plans for the proposed waterline.
- Prepare (24x36) plats at 40 Scale for approximately thirty parcels will be completed depicting the proposed easements, existing parcel boundaries, existing right of ways and the existing easements if found. It is anticipated that (7) sheets will be required to complete this task. Plats will be signed and sealed by a North Carolina Licensed Land Surveyor. The recording of these Plats are not a part of this scope.
- Prepare a legal sized exhibit for each of the thirty parcels depicting the proposed easements, adjacent parcel boundaries, existing right of way and existing easements if found. These exhibits will be signed and sealed by a North Carolina Licensed Land Surveyor. Recording of the proposed exhibits is not part of this scope and will be completed by others.
- Prepare legal descriptions for each of the thirty parcels that will be recorded after owner signatures are obtained. Recording of the proposed legal descriptions is not part of this scope and will be completed by others.

Assumptions

- The City of Greensboro is responsible for contacting the affected property owners that require easement surveys. This will enable our survey crews to access their properties and tie or locate the property corners necessary to complete the proposed easement surveys. Copies of these property owner notification letters will be provided to CH Engineering, these copies will be given out by our survey crews when approached by property owners inquiring about why we are on their property.
- Staking of the proposed easements points will be done after the design is completed. These points will be set before the plats, easement exhibits and legal descriptions can be delivered to the City of Greensboro. Temporary construction easement points will not be staked in the field.

- The proposed easement line work will be taken from design plans created by CH Engineering, this line work will be used as the basis for the proposed easement mapping for each of the parcels.
- CH Engineering is not responsible for proposed design changes after the mapping has begun. Any revisions necessary because of design changes will be considered additional services.
- Map or plat recording is not a part of this scope.
- The only purpose of these plats or exhibits is to illustrate the proposed easements needed for the construction of the proposed water lines, parcel boundaries will be shown from actual ties made to existing property corners and by using the existing deeds and plats to accurately plot the affected parcel boundaries. These parcel boundaries should not be considered boundary surveys.
- Construction staking for the proposed improvements is not a part of this scope
- As-built surveys for the proposed improvements are not part of this proposal.
- Planimetric surveys of existing improvements are not a part of this scope.
- Replacing the existing property corners that are destroyed during construction of the proposed waterline is not a part of this scope of work.

Deliverables

- Copies for approximately (7) 24x36 plats depicting the affected parcel boundaries, proposed easements and the existing right of ways signed and sealed by a North Carolina Licensed Land Surveyor.
- Copies for each of the thirty proposed legal sized easement exhibits depicting the affected parcel boundaries, proposed easements and the existing right of ways signed and sealed by a North Carolina Licensed Land surveyor.
- Copies for each of the thirty proposed legal descriptions.

Fee

The lump sum fee for the scope of work as described above is:

Forest Oaks Easement Survey Fee: \$ 64,595.00

Schedule

CH Engineering will begin work within 2 to 3 weeks once the design plans are approved and upon receipt of an approval of this supplemental agreement.

DBE/WBE Certification

CH Engineering, PLLC is certified as a Disadvantaged Business Enterprise (DBE/WBE) with the North Carolina Department of Transportation, the City of Raleigh, Durham County, and the City of Durham, Triangle Transit Authority, Raleigh-Durham Airport, County of Charleston, SC, City of Charleston, SC and the South Carolina Department of Transportation DBE Unified Program. CH Engineering is also HUB certified as a Woman Owned Business Enterprise. CH Engineering is available and dedicated to serve its clients with experienced professionals in all facets a project may require.

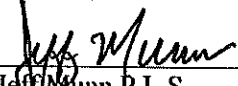
Liability Insurance

CH Engineering maintains liability insurance of \$1,000,000 professional liability for errors and omissions and is prepared to show proof of insurance upon request by the owner. We also maintain General Liability in the amount of \$2,000,000 with and aggregate of \$4,000,000. Please advise if you need copies of CH Engineering's insurance certificates for professional and general liability.

Terms of Payment

Invoices shall be submitted on a monthly basis for services rendered based on percent complete. After receipt of CH Engineering's invoice each month, client pledges to process payment to CH Engineering within 7 days from receipt of invoice.

Sincerely,


Jeff Munn P.L.S.
Survey Project Manager

8/10/16

Date

Accepted by,

City of Greensboro

Authorized Signature

Date

This proposal and its contents shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to CH Engineering, PLLC as a result of—or in connection with—the submission of this proposal, CH Engineering, PLLC and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use, or disclose the data contained in this proposal only to the extent provided in the resulting contract.



URS Corporation – North Carolina
1600 Perimeter Park Drive, Suite 400
Morrisville, North Carolina 27560
Tel: (919) 461-1100
Fax: (919) 461-1415

November 10, 2015

Ms. Maha Chambliss, PE
CH Engineering, PLLC
3220 Glen Royal Road
Raleigh, North Carolina 27617

Subject: Scope of Work and Cost Estimate for Providing Additional Engineering Services
City of Greensboro Automated Isolation Valves at Two Locations

Dear Ms. Chambliss:

CH Engineering, PLLC (CH) has asked URS Corporation – North Carolina (URS) to provide engineering assistance for the design of the relocation of two water main isolation valves located in the City of Greensboro. URS has performed an initial scope of work under Task Order No. 1 (attached) to provide details and specifications for 12-inch automated isolation valves to be installed in two separate locations as part of a larger water main improvement project (by CH Engineering). The first valve location is on West Market Street near its intersection with Arrow Road. The second valve location is on Young's Mill Road near its intersection with McConnell Road.

Input from the City of Greensboro has resulted in the identification of additional scope in order to complete the design. The additional scope is presented in this Task Order No. 1A, and is summarized below.

ADDITIONAL SCOPE OF WORK:

URS will provide the following:

- Develop specifications for magnetic flow meters at each location, including electrical feed from power source to meters and controls/monitoring panel
- Provide details for pre-designed A-frame shelter over control equipment (assumed approximately 6 feet wide) and housekeeping pads at each location. No custom structural design of the A-frame shelter is included in this proposal.
- Provide fence layout around West Market Street location and include fence and gate details and specifications
- Revise CAD-formatted plans and details to accommodate increased vault size at each location
- Coordination of SCADA integration requirements with City contractor CITI for magnetic flow meters at each location
- Siting of antennas and electrical work related to the City of Greensboro's SCADA system at each location
- Coordination with electric utility
- Develop specifications for sump pump at McConnell Road location, including electrical feed from power source to pump, controls, and discharge piping
- Coordinate between URS design team and CH Engineering design team.
- Prepare engineer's opinion of construction cost for the portions of work designed by URS.
- Manage the URS portion of the project, budget, and schedule.
- Perform quality control and quality assurance of URS design deliverables.

- Specifications will be placed directly on the details as notes.
- Provide design deliverables to CH Engineering at 90% and 100% milestones.
- Provide design that is compliant with current standards of NCDOT, NCDENR-PWS, City of Greensboro, and other regulatory agencies.
- All deliverables (plans and specifications) will be delivered electronically in CAD, Word, and pdf format.

URS understands CH Engineering is responsible for the following tasks:

- Obtaining information on buried utilities, record drawings, and existing site conditions.
- Developing base maps showing all site features including, but not limited to: utilities, roadways, curb and gutter, property/easement/right-of-way lines, overhead and underground structures, and topography.
- Developing plan and profile drawings and design for the relocated water main on either side of the vaults.
- Providing CAD assistance, standards, linetypes, plot settings, and drawing borders.
- All permitting tasks involved with this project.
- Demolition design of the existing water main and water main structures.
- Preparing traffic/pedestrian control plans.
- Preparing site and grading plans based on changes as summarized above.

This proposal was prepared with the following URS exclusions and assumptions:

- URS excludes hydraulic analysis.
- URS excludes geotechnical investigation.
- URS excludes design and specification of electrical transformers.
- URS assumes adequate power source (supply) is available within 100 feet of the proposed vault locations.
- URS excludes preparation of phasing plans or planning for service interruption.
- URS excludes site visits and project meetings.
- URS excludes bid and construction services.

PROPOSED COST:

Lump sum.....\$7,580

Personnel	Labor Classification	Billing Rate	Hours	Total Fee
Krista Paredes	Staff Civil Engineer	\$100.00	12	\$1,200
Adam Paukovich	Senior Project Civil Engineer	\$130.00	10	\$1,300
Garrett Hamilton	Senior Project Structural Engineer	\$130.00	12	\$1,560
Chuck Ziegler	Senior Project Electrical Engineer	\$130.00	24	\$3,120
Keith Pranke	Staff I&C Engineer	\$100.00	4	\$400

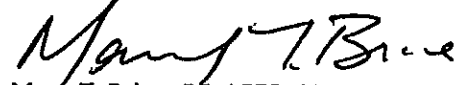
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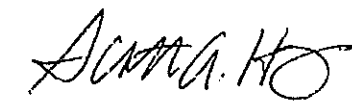
SCHEDULE:

URS can complete this scope of work in 30 days after receipt of complete design information from CH Engineering including SCADA information, mag meter parameters, and details for A-frame shelter for control equipment.

If this proposal is acceptable, please provide us with a written notice to proceed. It is a pleasure to be of service to you and the City. If you have any questions or comments, please contact us at (919) 461-1100.

Very truly yours,
URS Corporation-North Carolina


Mary T. Brice, PE, LEED AP
Project Manager


Scott A. Hartung, LEED AP
Vice President