WM Group

Our Mission: To exceed your expectations

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July 12, 2007

Mr. Courtney McCracken
Project Manager
Brown Facilities Management
295 Lloyd Avenue
Providence, RI 02912

Re: Utilities Renewal and Upgrades - Task H7

Dear Courtney:

We are pleased to submit our proposal to provide civil, mechanical, and electrical engineering services for the Task H7 of the Utilities Renewal and Upgrades project as follows:

A. Project Understanding

The H7 entails running HTHW and CHW pipeline from JWW to the buildings on the Main Green and Lincoln Field campuses, and running MTHW between buildings. The new piping will run direct buried, in building interior and in existing tunnels. The total pipe route length (in trench, tunnel or building) is approximately 1650 feet.

Existing air cooled chillers at Wilson will be demolished. Buildings with steam-to-MTHW heat exchangers will be replaced with HTHW-to-MTHW heat exchangers. Existing steam distribution piping will be either removed or abandoned. HTHW, MTHW and CHW piping will be connected to existing piping systems in the buildings. Tie-in to existing piping systems will occur in the following buildings and tunnel:

- JW Wilson
- Walter Hall
- Faunce
- Lyman
- Hunter Lab
- Soloman
- Maxcy
- Littlefield
- JCB Library
- Wilson
- Sayles
- Carrs House
- Utility tunnel between John Hay and Hope
- Hegeman

- Caswell
- Metcalf Chem
- Metcalf Res.

The extent of piping work is as shown on the attached drawing, H7-SCOPE.

B. Project Approach and Scope of Work

Programming Phase:

The programming phase is to develop the pipe routing, sizes, and extent of pipe run. The work has been completed as shown on the H7-SCOPE drawing.

In addition, we have studied the options of extending HTHW and CHW piping to serve buildings on the west side of the Main Green Campus (Hope, Manning, University Hall, Slater and Rhode Island Hall), as well as the faculty club buildings south of George Street.

Detailed Design Phase:

1. We will retain SEA as our sub-consultant for the civil engineering work including but not limited to the items listed below. Detailed scope of work is outlined in the SEA's proposal of July 11, 2007 (attached).
   - Existing condition and topographic survey
   - Utility designation including subsurface utility engineering (soft dig). Due to heavy underground utilities in the main campus area, a total of 96 soft dig locations are proposed.
   - Easement application
   - Utility company coordination
   - Drawings and specifications for civil, landscaping, surface preparation, soil preservation and restoration, utility crossing and profiles.

2. We will survey the existing mechanical rooms in the buildings listed above and develop plans to connect building system to the new HTHW, MTHW and/or CHW pipelines. There are a total of 16 buildings.

3. We will survey the utility tunnels between John Hay and Hope, between Lyman and Littlefield, and on Lincoln Field to determine if the existing tunnel is adequate for the new pipelines. For the areas the tunnel is inadequate, alternate plans will be developed for the routing of the proposed pipelines.

4. For the buildings that are currently using yard steam to MTHW for heating, we will study and design an alternate system to use MTHW directly. The objective is to eliminate the yard steam distribution in the tunnel along the east Main Green buildings.

5. We will prepare piping installation drawings and specifications for HTHW, CHW and MTHW pipelines. We will submit 95% complete construction documents for review. Upon receiving comments, we will complete the construction documents in one week.

6. We will prepare stress analysis for the HTHW and MTHW pipelines. The design of the piping system will be based on using expansion loops in lieu of expansion joints.

7. We will attend bi-weekly meetings during the design phase (estimated at 10 meetings).

Bid Assistance:

1. We will attend a pre-bid meeting, and respond to RFI's from bidders. We will issue addenda as required.

2. After award of contract and finalizing of the scope of project, we will prepare the conformance drawings.

Construction Services:

1. We will review shop drawings and stress analysis prepared by piping manufacturer.

2. Attend construction meetings, respond to RFI's and issue Bulletins as required.

3. Witness and sign off for the cleaning, flushing and pressure testing of the piping work performed by contractor.

4. Prepare punch list and sign off for the substantial completion.

C. Work Not Included

- Geotechnical Investigation
- Filing for permits with authorities having jurisdiction
- Environmental and soil remedial work
- Landscaping architectural work

D. Compensation

Our engineering fee comprises the following:

• SEA Design Phase	$369,540
• SEA Construction Services	$ 68,750
• WMGE Design Phase	$320,000
• WMGE Bid Assistance	$ 15,000
• WMGE Construction Services	(To be charged to the Utilities Renewal Project)
Total	**$773,290**

We appreciate the opportunity to provide our services to you. If you have any questions with regard to the above, please do not hesitate to contact us.

Very truly yours,

WM Group Engineers, P.C.

Douglas Wen, P.E.
Vice President