PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included:

1. The Contractor shall provide all materials, equipment, and labor necessary for the removal of surface water and as required for the installation and maintenance of silt and erosion control devices.
2 Design, furnish, install, operate, maintain and remove temporary dewatering systems as necessary to lower and control (predrain) groundwater levels as necessary for the installation of sewer and appurtenances.
3. The Contractor shall design, build all drains and perform all ditching, pumping, bailing, and all other work necessary to keep the excavation clear of ground water, sewage, or storm water during the progress of the work and until the finished work is safe from damage.

1.2 CONTRACTOR'S RESPONSIBILITY

A. The Contractor shall be solely responsible for the design, operation and execution of methods for controlling surface water and predraining groundwater. Contractor shall employ staff or subcontract the dewatering and groundwater control to a recognized company with at least 5 years of experience in management, design, installation and operation of dewatering systems of the complexity required for the project.

B. The Contractor shall be solely responsible for, and shall repair without additional cost to the Owner, any damage to properties, buildings or structures, sewers and other utility installations, pavements, sidewalks, and work that may result from settlement, dewatering, or surface water control operations. The Contractor shall also be soley responsible for any failure of any mechanical or electrical component of the system.

C. Review of the Contractors dewatering systems and field monitoring by the Engineer shall not relieve the Contractor of his responsibilities for the Work.

1.3 SUBMITTALS TO THE ENGINEER

A. The Contractor shall submit a Dewatering Plan to the Engineer at least fourteen (14) days prior to any excavations. The plan of proposed Dewatering Plan shall include, at a minimum:

1. Methods of dewatering and schedule of operation
2. Number, type, size, and location of proposed dewatering units.
3. Power supply and standby power supply.
4. Methods and location of disposal of water.
5. As appropriate, wellpoint tip elevations, wellpoint locations, well point spacing, deep well elevations and deep well spacing.
6 Trench excavation drainage methods including drainage layers, sump construction details and sump pump application.
7. Proposed location of observation wells (piezometers), used to determine water levels, methods of dewatering.

B. The Contractor shall furnish to the Engineer, in writing, their plan for surface water management plan before beginning the construction work for which the diversion is required. The surface water management plan submittal shall provide information on sources of power to be used, as well as the locations of sumps, pumps, wells, discharge points, filtering methods, and other key features. Acceptance of this plan will not relieve the Contractor of responsibility for completing the work as specified.

1.4 QUALITY ASSURANCE

A. The Contractor shall use the following reference manuals to assure quality where the drawings or technical specifications are silent:

1. "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," dated August 1992, prepared by Rockingham County Conservation District.

2. "Unified Facilities Criteria (UFC) – Dewatering and Groundwater Control", dated January 16, 2004, prepared by the Department of Defense.

1.5 SUBSURFACE CONDITIONS

A. Locations of test borings and pits are shown on the Drawings. Boring logs are included in the Section A-3 Geotechnical Report of the Bidding Requirements of the Project Manual. Contractor must make their own interpretation of subsurface conditions that may affect means and methods of construction.

B. Variations in subsurface conditions should be anticipated by the Contractor when planning and estimating the work. Water levels can be expected to vary with season, precipitation, tide elevations and stages of nearby brooks and, therefore, water levels encountered at the time of construction may differ from any that are shown on the boring and test pit logs.

PART 2- PRODUCTS

2.1 SEDIMENT CONTROL

A. Acceptable material: Pumped Sediment Removal Filter: Dirtbag® manufactured by "The BMP Store" (www.thebmpstore.com/dirtbag.htm) or approved equal.

B. If proposed by the Contractor, the use of polymers for turbidity control may be considered only if prior approval is obtained by the Contractor from the New Hampshire Department of Environmental Services (NHDES). Contractor is solely responsible for, obtaining NHDES approval and any necessary testing. The use of such products is incidental to the project and shall be at no additional cost to the owner.

PART 3 - EXECUTION

3.1 GENERAL

A. Control surface water and predrain groundwater such that excavation to final grade is made in-the-dry, maintain undisturbed bearing soils and insure that softening and/or disturbance due to the presence of seepage of water does not occur.

B. Perform all construction and backfilling in-the-dry. Flotation of completed portions of the Work is prohibited.

3.2 DIVERTING SURFACE WATER

A. The Contractor shall build, maintain, and operate all cofferdams, channels, flumes, sumps, and other temporary diversion and protection works needed to divert surface water through or around the construction site and away from the construction work while construction is in progress. Storm runoff from disturbed areas must discharge into a filtering device prior to discharge into a natural drainage way or storm sewer.

B. Follow manufacture's recommendations for installation, maintenance, removal and disposal of filtering devices.

3.3 TEMPORARY GROUNDWATER OBSERVATION WELLS

A. At least seven (7) days prior to commencing excavation and at locations approved by the Engineer, install temporary groundwater observation wells on or near the proposed alignment of the pipe centerline.

B. Temporary groundwater observation wells shall consist of a screened or slotted wellpoint and riser pipe. The wellpoint tip shall be placed at least two feet below the proposed bottom of excavation level or to an elevation approved by the Engineer.

C. The contractor's proposed locations of the wells will be reviewed for approval by the Engineer. It is anticipated that temporary observation well spacing will generally vary within the range of 100 feet to 300 feet.

D. Evaluate water level readings in the wells to confirm that the groundwater level has been lowered as specified such that excavation to final grade can be made in-the-dry.

E. Make water level readings and submit to the Engineer, to confirm effectiveness of dewatering prior to final excavation. Permit the Engineer to make independent readings of water levels in wells.

F. Leave temporary groundwater observation wells in place until immediately prior to final excavation at the well locations.

3.4 DEWATERING

A. Construct all pipelines, concrete work, pipe bedding, and backfill in-the-dry. Excavate in-the-dry and not until the water level, as indicated by groundwater observation wells, is a minimum of twelve inches below the proposed bottom of final excavation within the trench limits.

B. At least two weeks prior to the start of construction, in any areas of anticipated dewatering, submit a proposed initial plan for removal of water, method of excavation and support of the excavation to the Engineer for review. Do not proceed with construction in any of these areas until the initial plan has been reviewed and

commented upon by the Engineer. Concurrence by the Engineer with the Contractor's initial plan shall be the Engineer's agreement that the plan is satisfactory for initial trial. It is expected that the initial plan may need modifications to suit the variable soil/water conditions to be encountered along the route. Notify Engineer in writing of any changes made to accommodate field conditions and changes to the work.

C. Install piezometers in accordance with Paragraph 3.3.

D. Provide and maintain, at all times during construction, proper equipment and facilities to promptly and adequately remove and dispose of all water entering excavations. Keep undisturbed subgrade foundation conditions until the fill, structure or pipes to be built thereon have been completed to such an extent that they will not be floated or otherwise damaged by allowing water levels to return to natural elevations.

E. Conduct dewatering, at all times, in such a manner to preserve the natural undisturbed capacity of the subgrade soils at the bottom of excavations. Evaluate the impact of the anticipated subsurface soil/water conditions on the proposed method of excavation and removal of water.

F. Where groundwater level is above the bottom of the proposed excavation level and cannot be controlled by open pumping methods, install, operate and maintain a pumped dewatering system, including wellpoints or closely spaced wells. Predrain the soils prior to final excavation, and maintain the lowered groundwater level until construction has been completed to such an extent that the structure, pipeline or fill will not be floated or otherwise damaged. The type of system, spacing of dewatering units and other details of the work will vary depending on soil/water conditions at particular locations.

G. Dewater and excavate in a manner which does not cause loss of ground or disturbance to the pipe bearing soil or soil supporting overlying or adjacent structures.

H. Surround wellpoints and other dewatering units with suitable filter sand to prevent fines from being removed by pumping.

I. Pump the dewatering system continuously until pipe is adequately backfilled. Provide for continuous system operation when necessary, including nights, weekends and holidays. Arrange for stand-by pumps and appropriate backup power if electrical power is the primary energy source for a dewatering system.

J. Monitor operations to verify that the system(s) lower the groundwater piezometric levels at a rate required to maintain a dry excavation resulting in a stable subgrade for pipe installation.

K. Collect water entering the excavation from precipitation or surface runoff in shallow ditches around the perimeter of the excavation, drain to sump and pump from the excavation to maintain a bottom free from standing water.

L. Dispose of drainage in an approved area so that backflow, pollution, or public nuisance will not occur.

3.5 DISCHARGE OF WATER

A. Provide all means necessary for discharge water to meet New Hampshire Department of Environmental Services (NHDES) water quality standard (10 NTU). .
B. Water pumped from excavations shall be piped to points discharging into sedimentation basins or filter devices in a manner which will not cause downstream siltation or damage to adjacent properties or vegetation.

3.6 EROSION CONTROL PROVISIONS

A. The discharge from pumping operations during dewatering operations shall be contained by a device so constructed as to prevent silt from spreading off-site.
B. Prior to removal of all sediment control devices, all retained silt or other materials shall be removed at no additional cost to the Owner.

3.7 REMOVAL OF TEMPORARY WORKS

A. After the temporary works have served their purpose, the Contractor shall remove them or level and grade them to the extend required to present a sightly appearance and to prevent any obstruction of the flow of water or any other interference with the operation of or access to the permanent works.
B. Remove piezomenters, pumping system components and piping when groundwater control is no longer required. Fill all abandoned well and piezometer holes.

3.8 ENVIRONMENTAL PERMITS

A. All work under this section shall be done in accordance with all federal, state, and local regulations, laws, and rules which may apply and any individual permits that have been obtained for the project.
B. The Contractor shall obtain and all file notifications required by state and federal law and as identified on the Drawings.
C. Any permits requiring the Contractor’s signature shall be signed and an original copy provided to the Owner.
D. The Contractor shall post and maintain any permit requiring posting at the project site.

END OF SECTION

ADDENDUM NO. 1

Dated: January 4, 2007

City of Portsmouth, New Hampshire

BORTHWICK AVENUE SEWER UPGRADE

SRF Project No. CS 330106-066

All items included in this Addendum shall clarify, correct, or change the Contract Documents (Project Manual and Plans) as originally issued. This Addendum forms a part of the Contract Documents and supplements, clarifies, and/or modifies them as follows:

PROJECT MANUAL:

Change to Table of Contents

- Delete "Division 4, Masonry". See Section 02601 Sewer Manholes regarding masonry.

Changes to Division A. Bidding Requirements

Advertisement to Bid

- Page A-1.1, **Change** the Bid opening date from January 12, 2007 to January 18, 2007.

Information to Bidders

- Page A-2.1, **Change** the Bid opening date from January 12, 2007 to January 18, 2007.

- The contact personnel for utility companies that abut the sewer construction site are as follows:

Northern Utilities /Bay State Gas	**603-436-0310**
Bart Maderios	ext. 5211
Pager	603-248-5178
Bmaderios@niscource.com	
Tim Bickford	ext. 5340
PSNH	**800-362-7764**
Portsmouth Area Work Center	603-436-7708
Celine Bilodeau-Bouchard (ROW issues)	603-634-3200

Bid (form)

- **Replace** "Bid" and "Bid Schedule", pages A-4.1 through A-4.8 with this addendum's Attachment B "Bid" and "Bid Schedule" , pages A-4.1 through A-4.8. Changes to the Bid Schedule include:
    - Bid Item No. 2 changed to Bid Item 2A
    - Bid Item No. 2B added
    - Bid Item 5: Pre-construction Video Inspection added; change quantity from 3,900 LF to 5,800 LF.
    - Bid Item No. 14A – Steel Sheeting added
    - Bid Item No.16 – Piezometers added
    - Bid Item No.17 – Deep Well or Wellpoint Dewatering added

Changes to Division D. Federal Provisions, Rules, Regulations and Forms

- **Revise** page number of page titled "**D-4.1** Notice to Labor Unions or Other Organizations" to read "**D-3.1** Notice to Labor Unions or Other Organizations".

Changes to Division E. Specifications

- **Revise** Section 01025 Measurement and Payment as follows:
    - Page 3, **Change** Paragraph 1.8.A.12 to read: "Trench dewatering by open pumping methods and treatment/filtering of discharge water are incidental to the pipe installation. Piezometer installation and well dewatering methods (deep well or well points) are paid under separate items.

    - Page 4, **Add** to Paragraph 1.8.A: "20. Preparation of lateral support plan(s) as required in Section 02200."

    - Page 4, **Change** Paragraph 1.10.B.4 to read: "Said unit price shall include full compensation for all trench dewatering by open pumping methods required to install the pipe and manholes in-the-dry including furnishing, installing, operating, and removal of such systems. Piezometer installation and well dewatering methods (deep well or well points) are paid under separate items.

    - Page 8, **Change** the first sentence in Item No. 5, Paragraph B.1 to read: "Payment for furnishing **pre- and** post-construction inspection....."

    - Page 12, paragraph 1.26. **Replace A.2** in its entirety with the following:

      "Limits of payment for depth of timber sheeting shall be 12-inches below the invert of the sewer <u>to 12-inches above the crown of the sewer pipe except between Sta. 13+00 to Sta. 14+05 where the upper limit of payment is to the original ground surface.</u>"

    - Page 12, paragraph 1.26. **Add** the following after A.2:

      3. Timber sheeting removed, or left in place outside the defined payment limits, is incidental to the project and shall not be considered for payment under this item.

Page 12, **Add** the following paragraph after Item No. 14:

1.27 **ITEM NO. 14A**: FURNISH AND INSTALL STEEL SHEETING LEFT IN PLACE

A. Method of Measurement:

1. Steel sheeting, where ordered left in place, will be measured by the square foot of sheeting driven based on nominal widths and depths.
2. Limits of payment for depth of steel sheeting shall be 12-inches below the invert of the sewer to 12-inches above the crown of the sewer pipe except between Sta. 13+00 to Sta. 14+05 where upper the limit of payment is to the original ground surface.
3. Steel sheeting removed, or left in place outside the defined payment limits, is incidental to the project and shall not be considered for payment under this item.

B. Basis of Payment:

1. Payment shall constitute full compensation for furnishing and installing that steel sheeting which the Engineer has directed to be left in place including swales, braces, and spacers. The accepted quantity of sheeting will be paid for at the contract unit price per square foot of sheeting.

- Page 12, **Change** paragraph header "1.23 ITEM NO 15...." to read "1.28 ITEM NO.15...."

- Page 12, **Add** the following paragraphs after Item No. 15:

1.29 **ITEM NO. 16:** FURNISH AND INSTALL PIEZOMETERS

A. Method of Measurement:

1. Piezometers and associated work will be paid on a unit basis for each piezometer completed, regardless of depth.

B. Basis of Payment:

1. Payment for furnishing and installing each completed piezometer shall include drilling, excavation, sand filter, pipe, screen and couplings,
2. Said unit price shall also constitute full compensation for furnishing and installing all materials, labor, equipment and tools necessary for maintaining and removing each piezometer.

1.30 **ITEM NO. 17:** FURNISH, INSTALL AND OPERATE DEEP WELL OR WELLPOINT DEWATERING SYSTEM

A. Method of Measurement:

1. Deep well or wellpoint dewatering system and associated work to be furnished and installed under this item shall be measured for payment by the linear foot along the centerline of the sewer trench adequately dewatered, and influenced by the dewatering system, to install pipe the sewer pipe and manholes in the dry.

2. Dewatering for sewer laterals at the backwater valve is incidental to this item and will not be considered for additional payment.
3. Dewatering of trench beyond the influence of the deep well or wellpoint dewatering system shall not be considered for payment.
4. Trench dewatering by open pumping methods is incidental to the pipe installation and shall not be paid under this item.

B. Basis of Payment:

1. Deep well or wellpoint dewatering system shall be paid for at the contract price per linear foot.
2. Payment at the contract unit price for installation of a deep well or wellpoint dewatering system shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to design, install, develop and test the deep well or wellpoint dewatering system.
3. Said unit price shall also constitute full compensation for operating and maintaining the deep well or wellpoint dewatering system including labor, motors, pumps, and energy costs to lower and control (pre-drain) groundwater levels as necessary for the installation of sewer and appurtenances.
4. Said unit price shall also constitute full compensation for filtering or otherwise treating discharge water to meet regulatory standards.
5. Said unit price shall also constitute full compensation for removal of all equipment, filling of well holes and repair of any damages resulting from the dewatering operations.

- **Division 2 Site Work** (Contents of Division): **Replace** Section 02400 Dewatering with Section 02401 Dewatering and Groundwater Control.

- **Section 02200 Earthwork :**
  - Page 4, **Add** to Paragraph 1.3 the following paragraph:
    "B. Contractor to submit to Engineer an evaluation and design of lateral support system for trench excavation prepared by a profession engineer licensed in New Hampshire."

  - Page 6, **Add** to Paragraph 3.6.B after last sentence:
    "Evaluation and design of temporary lateral support shall consider the **special conditions adjacent to gas company tanks near Station 13+50** as identified on Page 9 of the geotechnical report provided in the Information for Bidders. The evaluation and design shall be incidental to the project with no additional cost to the Owner."

- **Section 02400: Replace** Section 02400 Dewatering in its entirety with Section 02401 Dewatering and Groundwater Control (Attachment B).

PLANS:

Changes to Sheet G-1.0

- **Add** Note 1A to Sewer Video Inspection Notes to read: "Following sewer cleaning by the City per Note 1 and prior to installation of sewer pipe, the Contractor shall perform a video inspection of the existing 12" sewer pipe from SMH # 529 to SMH # 1393 on Cate Street."

- **Change** Scale in title block from 1"=200' to 1"=100'. Note that the graphic scale is correct at 1"=100'.

QUESTIONS AND CLARIFICATIONS

Trench Support

- **Question** received from a Bidder via fax on 12/15/06: "...where do you plan on using the timber sheeting? Depending on the depth of the sheeting, would it be more feasible to use steel sheeting?"
  Answer: It is the Contractor's option to use steel sheeting, timber sheeting, trench boxes, etc. for trench sidewall support. All types of sidewall support are considered incidental to the project with the exception that timber or steel sheeting left in place shall be considered for payment as defined in Bid Item Nos. 14 or 14A

MBE/WBE Requirements:

- Documentation of Minority and Women's Business Enterprises (MBE/WBE) Solicitation efforts must be provided within fifteen (15) days after bid opening. NHDES staff has verified that Certified mail with return receipts, **or copies of faxes with proof of receipt,** will be sufficient to document solicitation of sub-bids.

Bidders: Acknowledge receipt of this Addendum within your Proposal. Failure to do so may subject a Bidder to disqualification.

Peter H. Rice, P.E., City Engineer
Portsmouth DPW, Water & Sewer Divisions
680 Peverly Hill Road
Portsmouth, NH 03801

Attachments:

Attachment A - Meeting notes from Pre-Bid Meeting December 20, 2006
Attachment B – Bid (form)
Attachment C - Specification Section 02401 Dewatering and Groundwater Control

Attachment B of Addendum No. 1

A-4.1

BID

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____
(Corporation, Partnership, Individual)

To the City of Portsmouth, New Hampshire (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the construction of Borthwick Avenue Sewer Upgrade in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to the BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to complete the PROJECT within:

90 consecutive calendar days for substantial completion.

10 additional consecutive calendar days for contract completion.

Liquidated damages will be in the amount of $ 750.00 for each calendar day of delay from the date established for substantial completion and $ 750.00 for each calendar day of delay from the date established for contract completion, as provided in Section 18 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

_____

_____

_____

The Bidder is requested to state below what works of a similar character to that included in the proposed contract he has done to give references that will enable the Owner to judge his experience, skill, and business standing. All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, add separate sheets.

1. Name of Bidder.
2. Permanent Main Office address.
3. When organized?
4. Where incorporated?
5. Is bidder registered with the Secretary of the State to do business in New Hampshire?
6. How many years have you engaged in the contracting business under your present firm name? Also state names and dates of previous firm names, if any.
7. Contracts on hand. (Schedule these, showing gross amount of each contract and the approximate anticipated dates of completion.)
8. General character of work performed by your company.
9. Have you ever failed to complete any work awarded you in the scheduled contract time, including approved time extensions? ___(Yes) __(No).
   If so, where and why?
10. Have you ever defaulted on a contract? ___(Yes) __(No).
    If so, where and why?
11. Have you ever had liquidated damages assessed on a contract? (Yes) (No).
    If so, where and why?
12. List the ten contracts of $100,000 or more recently executed by your company, stating approximate cost for each, describing the nature of the work, and the month and year completed. Include at least one (1) utility line project where groundwater was controlled with deep wells or wellpoints. Include at least one (1) project in New Hampshire that involved wetland crossings and provide the associated NHDES Wetland Bureau approval numbers. If you have performed fewer than ten contracts of $100,000 or more, provide all project history since the date of organization or the last three years.
13. List your major equipment available for this contract.
14. List your key personnel such as Project Superintendent and foreman available for this contract.
15. List any subcontractors whom you would expect to use for the following (unless this work is to be done by your own organization):
    a. Civil Engineering
    b. Dewatering
    c. Utility Installation
    d. Paving
    e. Other work

16. With what banks do you business?

Do you grant the Engineer permission to contact this (these) institutions? ___(Yes) __ (No)

NOTE: Bidders may be required to furnish their latest financial statement as part of the award process.

Respectfully submitted:

_____ _____
Signature Address

_____ _____
Title Date

_____ Being duly sworn, deposes and says that he is

_____ of _____
(Name of Organization)

and that the answers to the foregoing questions and all statements contained therein are true and correct.

Sworn to before me this _____ day of _____ , 20 _____

_____
Notary Public

My commission expires _____

(Seal - If BID is by Corporation)

ATTEST: _____

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

NOTE: BIDS shall include sales tax and all other applicable taxes and fees.

BID SCHEDULE

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit price and lump sum amounts:

Bid Item No.	Estimated Quantity	Bid Item Description (Unit Price in Words)	Unit Price in Figures (Dollars and Cents)	Extended Total in Figures (Dollars and Cents)
1A	1,973 L.F.	Furnish and install 18-inch PVC SDR 35 sewer pipe all depths, including earth excavation, fittings, backfill, dewatering and by-pass pumping, _____ _____Dollars and _____Cents per Linear Foot	_____ Linear Foot	_____
1B	126 L.F.	Furnish and install 10-inch PVC SDR 35 sewer pipe all depths, including earth excavation, fittings, backfill, dewatering and by-pass pumping, : _____ _____Dollars and _____Cents per Linear Foot	_____ Linear Foot	_____
2A	96 V.F.	Furnish and install standard 4-foot diameter sewer manholes: _____ _____Dollars and _____Cents per Vertical Foot	_____ Vertical Foot	_____
2B	2 Each	Furnish and install connections to existing sewer manholes: _____ _____Dollars and _____Cents per Each	_____ Each	_____

A - 4.5				
Bid Item No.	Estimated Quantity	Bid Item Description (Unit Price in Words)	Unit Price in Figures (Dollars and Cents)	Extended Total in Figures (Dollars and Cents)
3A	15* L.F.	Furnish and install 6-inch service connections all depths, including earth excavation, fittings, backfill and dewatering: _____ _____Dollars and _____Cents per Linear Foot	_____ Linear Foot	_____
3B	1 L.S.	Furnish and install backwater valve with pipe and couplings on existing sewer service as shown on Drawings: _____ _____Dollars and _____Cents per Lump Sum	_____ Lump Sum	_____
3C	2 Each	Furnish and install sewer service Chimney: _____ _____Dollars and _____Cents per Each	_____ Each	_____
4	1 L.S.	Plug and abandon existing sewer mains and/or remove and dispose existing sewer main and sewer manholes as shown on Drawings: _____ _____Dollars and _____Cents per Lump Sum	_____ Lump Sum	_____

A - 4.6				
Bid Item No.	Estimated Quantity	Bid Item Description (Unit Price in Words)	Unit Price in Figures (Dollars and Cents)	Extended Total in Figures (Dollars and Cents)
5	5,800 L.F.	Furnish pre and post-construction sewer video inspections: _____ _____Dollars and _____Cents per Linear Foot	_____ Linear Foot	_____
6	1 L.S.	Furnish, install and remove temporary wetland protection measures including but not limited to siltation barriers, temporary access materials, including non-woven geotextile and gravel; all measures required to meet wetland permit conditions _____ _____Dollars and _____Cents per Lump Sum	_____ Lump Sum	_____
7	50* C.Y.	Ledge excavation and disposal including backfill of suitable material: (Minimum $50/C.Y., Maximum $150/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
8	50* C.Y.	Additional excavation: (Minimum $3/C.Y., Maximum $6/C.Y.): _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
9	50* C.Y.	Furnish and install additional screened gravel or crushed stone bedding: (Minimum $10/C.Y., Maximum $20/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____

A - 4.7				
Bid Item No.	Estimated Quantity	Bid Item Description (Unit Price in Words)	Unit Price in Figures (Dollars and Cents)	Extended Total in Figures (Dollars and Cents)
10	20* C.Y.	Furnish and install additional bank-run gravel borrow: (Minimum $6/C.Y., Maximum $15/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
11	20* C.Y.	Furnish and install sand fill where ordered: (Minimum $3/C.Y., Maximum $10/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
12	20* C.Y.	Furnish and install crushed gravel where ordered: (Minimum $6/C.Y., Maximum $20/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
13	20* C.Y.	Furnish and install flowable fill where ordered: (Minimum $50/C.Y., Maximum $150/C.Y.) _____ _____Dollars and _____Cents per Cubic Yard	_____ Cubic Yard	_____
14	5,000* S.F.	Furnish and install timber sheeting where ordered left in place: _____ _____Dollars and _____Cents per Square Foot	_____ Square Foot	_____

A - 4.8				
Bid Item No.	Estimated Quantity	Bid Item Description (Unit Price in Words)	Unit Price in Figures (Dollars and Cents)	Extended Total in Figures (Dollars and Cents)
14A	5,000* S.F.	Furnish and install steel sheeting where ordered left in place: _____ _____Dollars and _____Cents per Square Foot	_____ Square Foot	_____
15	1,200 S.Y.	Furnish and install non-woven geotextile where shown and as ordered by engineer _____ _____Dollars and _____Cents per Square Yard	_____ Square Yard	_____
16	10 Each	Furnish and install piezometers _____ _____Dollars and _____Cents per Each	_____ Each	_____
17	2,000* L.F.	Furnish, install, operate and remove deep well or wellpoint dewatering system: (Minimum $25/L.F.) _____ _____Dollars and _____Cents per L.F. (along sewer route)	_____ Linear Foot	_____

* Indeterminate quantity

Total (in figures) $_____

BIDS shall include sales tax and all other applicable taxes and fees.

PRICES WRITTEN IN WORDS SHALL GOVERN AND UNIT PRICES SHALL GOVERN OVER EXTENDED TOTALS WHEN DISCREPANCIES OCCUR.

The Bidder shall state on pages A-4.2 and A-4.3 work performed of a similar character to the proposed contract and to give references that will enable the Owner to judge the experience, skill, and business standing.

Attachment A of Addendum No.1

PRE-BID MEETING NOTES

BORTHWICK AVENUE SEWER UPGRADE

CITY OF PORTSMOUTH, NEW HAMPSHIRE

SRF Project No. CS-330106-066

MANDATORY PRE-BID MEETING

December 20, 2006

Portsmouth Department of Public Works
680 Peverly Hill Road
Portsmouth, NH

Attendees	Representing	Telephone	
Peter Rice	City of Portsmouth	603-766-1411	
David Allen	City of Portsmouth		
Brian Hilliard	NHDES		
Jeffrey Clifford	Altus Engineering, Inc.	603-433-2335	Portsmouth office
James Kerivan	Altus Engineering, Inc.	603-664-2204	Strafford office

INTRODUCTION

Peter Rice, City Engineer Water and Sewer Division introduced attendees from the City, Altus Engineering and the New Hampshire Department of Environmental Services (NHDES). Peter provided an summary of the project and the City's ongoing sewer programs.

Background

- Original 12" VC line was constructed in 1941 to serve military housing.
- Sewer has a history of blockages, infiltration, and structural failure.
- Replacement is identified in the City's *201 Facilities Plan Update*, dated 1999
- Upstream portion of the sewer line was replaced in the 1980's with 18" pipe as part of the Portsmouth Regional Hospital construction project.
- Downstream 12" VC shall remain
- Video of pipe inspection may be viewed by appointment.

Project Description

- Installation of approximately 2,100 LF of 18" and 10" PVC pipe
- The work is cross-country and located within new easements
- 1st portion to SMH #5 deviates from the original sewer route

- From SMH #5 to existing SMH #524 behind the Jackson Gray Building, the new line follows the existing sewer
- Bypass pumping required for portions of the work
- Wetlands impacts and restoration is required in accordance with permit
- Backwater valve to be placed in service line to Building at # 455 US Route 1
- Video inspection is required following construction

Funding

The project is being funded through local funds and the NHDES State Revolving Fund Loan (SRF).

BIDDING

Mandatory Pre-Bid Meeting

Attendance at the Pre-bid meeting is mandatory. Bids from contractors not on the attendance list will be rejected.

Bid Date

Bids are due at the City of Portsmouth Purchasing Department, City Hall, 1 Junkins Ave. Portsmouth, NH 03801 by 2:00 p.m., Friday, January ~~12~~, 2007 (revised after meeting to **January 18, 2007** per Addendum No. 1). Bid Proposals must be submitted in accordance with the Information for Bidders.

General Requirements

1. 5% Bid Bond
2. Federal Wage Rates are NOT required
3. Retainage is 10% up to 50% completion
4. Note Special Conditions modifying NHDES State Standard Conditions. Insurance and bonds to be on City Forms.
5. **Note groundwater control and wetland experience requirements listed in the Bid (form) on Page A-4.2.**

MBE/WBE Requirements

The NHDES SRF program requires the Contractor to encourage participation by Minority and Women's Business Enterprises (MBE/WBE). Requirements for MBE/WBE are specified in Section A and Section D of the Project Manual. Documentation of MBE/WBE solicitation efforts must be provided within 15 days after the bid opening. **Certified mail (or facsimile with verification of receipt, as noted in Addendum No. 1) will document solicitation of sub-bids.** The City will review the documentation and determine its adequacy prior to forwarding the information to the NHDES for approval.

The NHDES requires more diligence in the preparation of the MBE/WBE documentation if the goals are not met. The General Contractor is expected to demonstrate due diligence in soliciting proposals from WBE/MBE firms. The WBE/MBE firms need to be on the registered NHDOT list of WBE/MBE firms or on the registered roster of another state. Certified letters to the solicited firms must clearly define the scope of services requested,

state where to obtain plans, specify the date the quotation is due and whom the potential WBE/MBE bidder should contact at the Contractor's office. This should be done **as part of your bid preparation** and not wait until after bidding. Failure to provide the necessary documentation could result in a bid being deemed unresponsive and therefore rejected.

NHDES Requirements

NHDES will monitor construction of the project. A NHDES approved sign is required for the project. A copy of the sign detail is included at the end of Section D. A dimensioned color copy of the sign is available at the NHDES website at www.des.state.nh.us/wwe/revforms.htm and in the specifications.

Geotechnical Report

The Information for Bidders includes a Geotechnical Report and boring logs for the project area. The report outlines soil characteristics likely to be encountered, construction dewatering, temporary lateral support, and compaction.

Pipe installation must be completed in-the-dry. The contractor will need to design, install operate and maintain an appropriate dewatering system. The proposed dewatering plan will be reviewed by the geotechnical engineer. [Note: Addendum No. 1 adds bid items for piezometers and dewatering systems]

Note discussion of lateral support adjacent to the tanks at Station 13+50 on Page 9 of the geotechnical report. The contractor is expected to coordinate with the gas company, the electric company and other property owners. The sewer route runs parallel to a gas line to PSMH #4 and crosses through a gas company facility.

Permanent mounding of the trench is not allowed in wetland areas; post-construction grades need to match pre-construction grade.

CONSTRUCTION

Construction Schedule

This project is expected to be constructed this winter. The *Notice of Intent to Award* and *Notice to Proceed* will be issued as soon as possible after bidding. Start date will likely be a function of receipt of acceptable MBE/WBE documentation, bonds, and insurance.

Substantial Completion

- 90 days from Notice to Proceed

Final completion

- 100 days of the Notice to Proceed.

Easements

Easements have been obtained from 4 of the 5 property owners at this time. The PSNH easement is drafted, received technical approval and is awaiting final signature.

Bidders need to coordinate with property owners for access.

Staging Area

The Contractor is responsible for locating and securing an appropriate staging area. Storage materials must not block access to private properties and utilities

Active Sewer Lines

The existing sewer is an active interceptor, servicing the Borthwick Avenue area and beyond. Continuous service must be maintained throughout construction. Grease nodules were noted in the pipe during video inspection in March 2000 and are likely to be encountered in the existing sewer line and possibly in the bypass flow. The Project Manual includes *Section 01518 - By-Pass Pumping.* A plan for providing continued sewer service is required before any interruption of flow will be allowed. Do not overload downstream sewer.

NHDES Wetlands Permit

- Copy of the permit is provided in Appendix I of the Project Manual
- The Permit references the NHDES Site Specific Program, however no Site Specific permit was required since the area of disturbance is less than 100,000 SF.
- Contractor to attend pre-construction meeting with NHDES. The wetland scientist will also attend the meeting.
- Dewatering discharge must meet turbidity standards. If proposed for turbidity control, use of polymers needs approval from NHDES.
- Permit outlines specific times for stabilization and restoration.
- Wetland topsoil to be stripped, segregated and replaced at top of trench
- Heavy seeding is specified to minimize invasive species
- Condition 28: this report will be prepared by NHSC, the project wetland scientist.

Compaction

Alternative methods to the standard steel drum vibratory compactor may be necessary for these soils and the moisture conditions encountered. Compaction tests will be performed at regular intervals by an independent soils laboratory to determine the adequacy of the compaction effort. The City Engineer noted that it is intended that the existing on-site excavated soil will be used as trench backfill following good construction procedure and the geotechnical report's recommendation.

Ledge / Blasting

The borings indicate refusal (or ledge) near the pipe invert. The drawings also show the approximate ledge profile from the record drawings of the original 1941 pipe installation. Contractors are reminded that the City of Portsmouth has a more restrict Blasting Ordinance than most New Hampshire Communities.

Utilities

Existing utilities are located along the project including gas lines, electric, telephone and abandoned water lines. Note the gas line within the PSNH property. Contractor shall verify the existence and location of all utilities.

Existing sewer lines to be abandoned will be capped. The section form SMH #529 to SMH #528 will be filled with sand. Other sections will only be capped. Abandoned water lines are to be capped.

Testing

All sewers, sewer laterals, and sewer manholes will be tested. All sewer and compaction testing shall be at the contractor's expense.

Post Construction Video

Purpose is to document new sewer installation and verify that no debris or blockages are present in the downstream 12" VC line.

Addendum

An addendum will be issued and include:

1. Pre-bid Meeting Notes.
2. Page after D-2.1 should be numbered D-3.1
3. Table of Contents: there is no Division 4; manhole masonry is specified in Section 02601 Sewer Manholes.

[Note: Subsequent to the meeting additional addendum items were included].