DESCRIPTION
This work shall consist of furnishing, installing and testing National Grid gas mains and fittings, pipe supports, and structural steel in accordance with the Contract Documents and as directed by the Engineer. The Contractor shall provide all Operator Qualified labor excluding certified pipe welders, materials (not supplied by National Grid), equipment to include cranes, transportation, permits, insurance, testing and incidentals required to install gas mains in bridge structures. Welding of the gas mains will be performed by National Grid and coordinated with the Contractor.

MATERIALS
Contractor shall submit all contractor supplied material submittals including structural steel in writing to the National Grid engineer/representative for approval. National Grid shall have 15 business days to review submittals.

Contractor is responsible to pick up all material listed below at National Grid’s Storeroom facility located at 287 Maspeth Avenue, Brooklyn NY 11211 between the hours of 7am and 3pm, Monday thru Friday. Materials furnished by National Grid shall be inspected, secured and protected by Contractor during transport and while on location/site. Below is a list of materials to be supplied by National Grid:

1. 300 mm Pritec coated steel pipe, API 5L– 42, standard wall thickness, for the gas main carrier pipe and 406 mm steel pipe casing/sleeves & 100 mm pipe for venting.
2. Steel fittings (elbows, tees, etc.)
3. Pipe rollers/Hangers
4. Valves
5. Couplings, insulated and non-insulated
6. Vent assemblies
7. Valve boxes and covers
8. Anode boxes and covers
9. Magnesium anodes and test leads
10. Pipe coating (primer, wax tape & pipe tape)
11. Miscellaneous items (studs, nuts, gaskets, tape, warning tape etc.)
12. Protection plates

The Contractor shall furnish all National Grid approved materials not specified above, which are required for the complete installation of the gas main(s) as shown on the Contract Documents and Drawings. These shall include the following as well as what is shown on the contract plans:

1. All structural steel for utility supports
2. Steel traffic plates, barricades and barriers for traffic and pedestrian protection
3. Sand for backfill material per National Grid specifications
4. Paving material for temporary and final restoration
CONSTRUCTION DETAILS
The Contractor shall provide all labor, excluding certified pipe welders, material (not supplied by National Grid), equipment, transportation, permits, insurance, pneumatic testing, pigging as required, and incidentals required to install safe natural gas mains and services. The Contractor shall directly place all gas piping including all appurtenances and install all bridge gas piping and appurtenances as shown on the Contract Documents and in accordance with National Grid specifications.

Contractor is responsible for the complete coordination with National Grid Welders, work and schedule sequencing during the installation of pipe and casing with the permanent bridgework and all live gas tie in connections performed by National Grid as indicated on the contract drawings. All gas offsets and other related work shown on the Contract Documents and offsets required due to design changes or interference conditions are included in this item.

The Contractor shall adhere to National Grid’s standards and specifications referenced below. A complete set of standards and specifications can be obtained from National Grid’s Project Engineer/Designated Representative.

Contractor shall have a crane permitted for the site. The Crane shall have sufficient capacity to lift at least one pipe casing assembly 64 meters of 300 mm in 405 mm casing suitable size into the bridge structure. Two pipe/casing assemblies are being installed in the bridge structure. Crane will be operated and assemblies will be rigged in by National Grid personnel.

The Contractor shall notify National Grid in writing of the gas main installation schedule at least thirty (30) days before the materials are required at the site. The schedule shall include line items for welding the gas mains as sequenced...

The Contractor is responsible for the receipt of all material deliveries by National Grid including the safe and proper storage at the specified location and security of materials as per National Grid Standards and Specifications. The Contractor shall inspect all material immediately upon delivery and advise National Grid promptly in writing of all damaged or missing material. All material damaged or lost after the Contractor’s inspection shall be the responsibility of the Contractor and shall be replaced in kind including transportation charges by the Contractor at no expense to National Grid or the State. Replacement material shall be equal in all respect to the National Grid supplied material and shall be approved by the Engineer/Designated Representative and National Grid in writing.

Contractor shall be responsible for all timely notifications including 3 day advance notifications by law to “Call before you Dig” (1-800-272-4480 or 811) in conformance to Rule 753 for all utility mark-outs.

The Contractor shall be responsible for the support and protection, requiring properly safeguarding the integrity, of the existing active and living gas mains and services during construction. The Contractor shall advise National Grid in advance of all work at these locations and shall exercise all the necessary safety precautions in the performance of the Contractor’s
work to protect gas and other facilities, the Contractor’s equipment and the safety of the Contractor’s personnel and the general public.

During the course of this contract the existing and/or new gas facilities will have to be supported, protected, maintained, accommodated or adjusted while installing and removing other facilities, including public utility facilities or contract work. These gas facilities are to be supported as well as protected in a manner acceptable to National Grid’s Engineer/Designated Representatives and the cost of piping, conduits and appurtenances shall be included in this item.

All gas mains, casings, vent poles, fittings, and appurtenances shall be installed in accordance with the details, dimensions and locations as shown on the Contract Documents and in accordance with National Grid specifications. Piping shall be installed 760mm minimum below grade measured from the top of the final contract pavement elevation. Any elevation deviations shall be reported to the National Grid Engineer/Designated Representative. Protective and load redistribution bridging steel plates (supplied by National Grid) approved by the National Grid Engineer shall be installed where above clearances cannot be attained.

The Contractor shall make all the necessary arrangements for National Grid to examine the new main and for the Contractor to install the Contractor’s pre-tested tie-in pieces after the conclusion of the pneumatic pressure test. Contractor is required to have the required labor with Operator Qualifications for gas pipeline installations in New York and approved by National Grid, excluding certified pipe welders, prior to performing any gas work. All pneumatic tests including the pigging, as required, of the new piping shall be performed by the Contractor on the gas mains and services and require the presence of a National Grid Engineer/Designated Representative as a witness. National Grid shall supply the gauges/dead weight tester and monitoring of the final pneumatic test minimum of 90 psig. Contractor shall notify National Grid’s Engineer/Designated Representative of the start of the pneumatic test in writing 5 days in advance.

Radiographic testing shall be performed by National Grid and all costs associated with the testing will be borne by National Grid.

The Contractor shall inspect and clean internally each length of pipe and fittings of foreign matter prior to and after installation by pulling a wired cleaning pig through the pipe. Open ends shall be capped each time pipe work is stopped to prevent foreign matter, water or animals from getting into the pipe. The Contractor shall ensure gas mains are within a minimum of 300mm clearance from any adjacent subsurface structures.

The Contractor shall excavate and backfill all trenches and other construction openings required for the installation of the gas piping and appurtenances, its cutouts and tie-ins. The Contractor shall also include in this work all sheeting, shoring; roadway plating, protective plating and temporary and/or permanent restoration within or outside the contract re-paving limits where required. This shall include supports, slings and beams installed for facility support; modifying equipment, method of operation and construction because of existing and proposed private utility and public utility facilities and the contract work; installation and removal of all proposed private utility facilities and public utility facilities and the contract work under, over and around gas facilities; hand excavation within the zone of protection of gas facilities; installation and removal
of sheeting around gas facilities; and the cost of any impact with maintenance and protection of traffic throughout the Work.

The locations and sizes of the trench shall be in accordance with National Grid specifications. Backfill material shall be sand as defined in National Grid’s specifications.

New high pressure and low pressure gas mains shall be leak tested in accordance with National Grid specifications. The Contractor may, with the approval of National Grid, pre-test a section(s) prior to final testing to insure pipe integrity prior to backfilling. The Contractor shall correct any defect(s) found and shall perform the necessary final leak test.

The Contractor shall also include with this work full and complete compensation for any and all loss of productivity, efficiency, idle time, delays, change of operation and equipment, mobilization, remobilization, demobilization, extended overhead, extended performance, added cost expense, loss of profit, or other damages or impact that may be incurred by the Contractor during all phases of contract work because of existing or proposed gas facilities.

Contractor is responsible to submit 3 copies of the final gas pipe “as built” to National Grid after the final work has been approved by the “Engineer”.

**METHOD OF MEASUREMENT**
This work will be measured on a lump sum basis.

The fixed price shown in the proposal is not to be altered in any manner by the bidder. Should the amount shown be altered, the new figure will be disregarded and the original price will be used to determine the total amount bid for the Contract.

**BASIS OF PAYMENT**
The fixed price shown shall include the cost of furnishing all labor, materials, insurance (naming National Grid additionally insured), fuel, labor and equipment necessary to satisfactorily complete the work. Progress payments will be made for this item as follows:

After award of contract, Contractor shall submit an itemized Schedule of Values for the work contemplated including but not limited to; Demolition, Excavation(s), Installation (any and all main sizes/phases/structural steel), Sheeting, Backfilling, Support and Protection, Temporary and Permanent Pavement Restoration. The Contractor shall supply the Engineer with a detailed construction schedule for each location where the work is to be performed. The schedule shall assign percentage values for each phase of the work. The Engineer will base progress payments for this item upon the accepted percentage values as the work is satisfactorily completed. The Engineer may request a revised schedule at any time. Failure upon the part of the Contractor to supply a revised schedule upon request will cause the progress payment process to be delayed.
National Grid Pertinent Specifications:
CNST5010-NYC
CNST5020-NYC
CNST5021-LI-NYC
CONT5010-LI-MA-NH-NYC
CORR6500-LI-MA-NH-NYC
MAIN5010-NYC
MAIN5108-LI-NYC
MAIN6060-LI-NYC
MAIN6100-LI-NYC
MAIN6130-LI-NYC
MAIN6140-LI-NYC
MAIN6141-LI-NYC
MAIN6142-LI-NYC
MAIN6160-NYC
MAIN6210-LI-NYC
MAIN6220-NYC
MAIN6230-NYC
MAIN6240-NYC
MAIN6260-LI-NYC
MAIN6280-NYC
MECH5010-NYC
WELD5010-LI-NYC

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Rev. No. 4 National Grid Safety Procedure Page No. i CONTRACTOR SAFETY REQUIREMENTS Date: 08/01/2008

Rev. No. 5 National Grid Safety Procedure Page No. i CONTRACTED SERVICES Date: 09/15/2008