

WATER MAIN ON BRIDGE

****From Bennington BRF 1000(16)**

- xx. DESCRIPTION. This work shall consist of the fabrication, delivery, installation, and testing of a water main within the limits indicated on the Plans.

The work under this Section shall be performed in accordance with these provisions, the Plans, State of Vermont Water Supply Division Standards, and Section 629 of the Standard Specifications.

- xx. MATERIALS. Materials shall meet the requirements indicated in the Plans and the following Subsections:

Crushed Stone Bedding.....	TABLE 704.02A
Granular Backfill for Structures.....	704.08
Copper Water Tube, Seamless.....	740.04
Ductile Iron Pipe, Cement Lined.....	740.07
Chlorine Solution.....	742.01

The type and details of all water main components shall be approved by the Engineer prior to purchase.

Push-on pipe and fittings shall be Atlantic States Tyton Joint Pipe and Fittings or approved equal.

Restraint joint pipe and fittings shall be Atlantic States TR FLEX Pipe and Fittings or approved equal. Restraint of field cut pipe shall be provided with Atlantic States TR FLEX GRIPPER® Ring, TR FLEX Pipe field weldments, or approved equal.

Pipe insulation, curb boxes, sleeves, and hangar supports shall conform to the details specified in the Plans. Insulation shall include all accessories complete with proper jackets or facings as required by the Plans and field conditions.

Valve boxes shall be General Foundries valve box, two piece, slip type; item number 30666. Top piece shall be top with bottom flange. Lid shall be marked "Water" and shall be non-lockable. Box length shall be adequate to allow a minimum 4" overlap of sections with top extended to final grade.

Gate valves shall conform to AWWA C-515 Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service, be open right with a minimum working pressure of 250 psi. Ends shall be mechanical joint and shall be restrained with "Megalug" retainer glands. Gate valves shall have stainless steel nuts and bolts. Each valve shall have markers name, pressure rating, and year of manufacture cast in the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to twice the specified working pressure. Manufacturers shall be Kennedy Valve, McWane, Inc., Clow Valve or approved equal.

Hydrants shall be Kennedy Guardian or approved equal conforming to the following requirements:

- (a) 5-1/4" main valve opening;
- (b) (2) 2-1/2" hose nozzles;
- (c) 4-1/2" steamer nozzle with Storz connection;
- (d) 6" MJ connection;
- (e) 6'-0" depth of bury;
- (f) Red color;
- (g) 1-1/2" Pentagon operating nut;
- (h) Open right.

Corporation stops shall be ball valve type, no-lead in compliance with NSF-61 and shall conform to the details specified in the Plans.

Concrete thrust blocks shall conform to the requirements of Section 541 for Concrete, Class B.

- xx. GENERAL. The Contractor shall provide Fabrication Drawings indicating all pipe joints, hanger locations, pipe materials, and associated appurtenances prior to purchase and installation.

The Contractor shall notify the Engineer and the Town a minimum of 48 hours in advance of any service disruption.

The Contractor shall adjust the portion of the water main pipe on bridge so that a pipe joint does not occur within 2 feet of any pipe hanger assembly.

- xx. BEDDING FOR PIPE. Ductile iron pipe shall be bedded as detailed in the Plans.

- xx. JOINING PIPE. The electrical conductivity of the pipeline and attached services shall be maintained at all joints, couplings, valves, and fittings through the use of four brass wedges at each joint.

- xx. PRESSURE AND LEAKAGE TESTS. For the pressure test, the Contractor shall develop and maintain for two hours, 150 percent of the working pressure measured in psi (pounds per square inch) or 200 psi, whichever is greater.

- xx. BACKFILLING. Bedding material shall conform to the details specified in the Plans.

- xx. PIPE INSULATION. In order to prevent rain and other forms of moisture from penetrating the jacket, the Contractor shall seal all joints in the insulation and jacket with suitable mastics or other sealants which will maintain waterproof seal.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision ((Water Main on Bridge) of the size and type specified to be measured for payment will be on a lump sum basis in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Water Main on Bridge) of the type and size specified will be paid for at the Contract lump sum price. Payment will be full compensation for furnishing, transporting, handling, and installing the materials specified; all appurtenant work and materials necessary for a complete installation, including but not limited to excavation, bedding, backfill, pipe, fittings, joint restraints, insulation, jacket, pipe supports, threaded rods, and sleeves; for making all necessary connections; for making the required submittals; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made as follows:

A payment of 10% of the Contract lump sum price will be made when all submittals have been made and all required permits have been obtained.

A payment of 80% of the Contract lump sum price will be made when the new water main has been installed on the bridge, all necessary adjustments have been made, all tests have been successfully completed, and the line has been placed in service to the satisfaction of the Engineer.

The remaining 10% of the Contract lump sum price will be paid once the new water main has provided continuous trouble-free service for a period of 30 calendar days as determined by the Engineer.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Water Main on Bridge) (<input checked="" type="checkbox"/> MM) (<input checked="" type="checkbox"/>)	Lump Sum