

BRIDGE INSTRUMENTATION FOR INTEGRAL ABUTMENTS

****From East Montpelier BRF 028-3(36)**

xx. DESCRIPTION. This work shall consist of coordinating with the Agency's Instrumentation Consultant to make sure all of the bridge monitoring instrumentation is installed as shown on the Plans.

xx. MATERIALS. Materials shall meet the requirements of the following Subsections:

Mortar, Type IV.....	707.03
PVC Plastic Pipe.....	710.06
Structural Steel.....	714.02
Steel Piling.....	730.01
Electrical Conduit.....	752.08
Junction Box.....	752.12

Concrete shall meet the requirements of Section 541 for Concrete, Class B.

Reinforcing steel shall meet the requirements of Section 507.

Manholes and covers shall meet the requirements of Section 604.

xx. GENERAL CONSTRUCTION REQUIREMENTS. The work required under this Section includes but is not limited to:

- (a) Installing, welding, cutting, bolting, mortaring, grouting, and physical attachment necessary to install the gages shown on the Plans;
- (b) Installing telephone and electrical service for the data collection;
- (c) Provide OSHA complaint access for the Agency's Instrumentation Consultant to all gages to which the Consultant needs access;
- (d) Providing notice when installation of gages will proceed;
- (e) Coordinating construction activities with the schedule of the Agency's Instrumentation Consultant;
- (f) Installing and coordinating for the replacement of gages damaged during construction. Gage replacement will only occur when the gages can be reasonably accessed;
- (g) Installing gage supports, including reference piles and concrete blocks and pads; and
- (h) Installing gage protection, including PVC, conduit, pile enclosures, electrical boxes, and structural steel shapes.

10/1/2012

xx. COORDINATION MEETING. A coordination meeting will be held with the Contractor, VAOT, and the Agency's Instrumentation Consultant prior to construction. This meeting will provide an opportunity to discuss issues, project scheduling, and protocols with all involved parties.

xx. INSTALLATION. The Contractor is responsible for the proper installation of the instrumentation and any replacement gages. Instrumentation shall be installed in accordance with the manufacturer's instructions at the locations indicated on the Plans.

Instrumentation wiring and exposed sensors shall be protected from environmental conditions and vandalism. For protection, all instrumentation wiring runs shall be routed through sufficient gage and size conduit, unless otherwise noted on the Plans. All data acquisition equipment shall be housed in an approved long-term corrosion resistant enclosure meeting requirements of NEMA Type 4.

Required electrical and telecommunications lines shall be installed by the Contractor. Accounts will be set up with the electric and telecommunications companies for the duration of the project. At the end of the project, these accounts will be transferred to the Vermont Agency of Transportation.

The Contractor shall provide a total of 5 days lag time to the construction schedule to account for delays associated with installing, verifying, and/or replacing instrumentation.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Bridge Instrumentation for Integral Abutments) to be measured for payment will be on a lump sum basis in the complete and accepted work for all work necessary to install the specified bridge instrumentation not paid for under a separate Contract item.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Bridge Instrumentation for Integral Abutments) will be paid for at the Contract lump sum price. Payment will be full compensation for performing all work specified and for providing all labor, materials, equipment, tools, and incidentals necessary to complete the work.

Partial payments will be made as follows:

- (a) The first payment of 25 percent of the Contract lump sum price will be paid with the first biweekly estimate.
- (b) The second payment of 50 percent of the Contract lump sum price will be made on the first biweekly estimate following the completion of 50 percent of the Contract.
- (c) Payment for the remainder of the Contract lump sum price will be made upon substantial completion of the project.

Payment will be made under:

10/1/2012

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Bridge Instrumentation for Integral Abutments)	Lump Sum