

ELECTRIC POWER BOARD AND CABINET

**\*\*From Rutland City-Proctor STP 2728(1) Rutland City NH 2716(1)  
Rutland City STP 019-3(57)**

- xx. DESCRIPTION. This work shall consist of furnishing and installing an electric power board and cabinet, and appurtenances, complete and fully operational, at the location indicated in the Plans and as directed by the Engineer.
- xx. GENERAL. The power board cabinet foundation shall be included with this item. At least two 3 inch conduit sweeps with caps shall be installed in the foundation for future use. A PVC sleeve may be used to facilitate the installation of a 10 foot long, 5/8 inch copper clad ground rod. The panel board and cabinet service connection costs shall be included.

This item shall include all costs for permits, certificates, or inspections. In addition the Utility Company charges from Green Mountain Power (GMP) shall be included. All work shall be in accordance with the National Electric Code, local codes and requirements, and the requirements of GMP. The Contractor shall be responsible for all incidental work necessary and associated with providing the power board and cabinet, including coordination of this work with the Utility Company. Any required electrical service connection to the power board will be provided by the Utility Company. The Contractor will be responsible for coordinating with GMP for work in the vicinity of the project. The Contractor shall anticipate the problems inherent in coordination of the work with required issuance of work orders and the subsequent scheduling by GMP.

A 3 inch conduit is required for the service connection. Any reducing fittings or couplings required for connections to the meter socket shall be included. Although the schematic wiring diagram may not indicate a service disconnecting means on the line side of the meter, the installation of such shall be in accordance with the Utility Company's requirements for cold sequence metering of 120/208 or 120/240VAC equipment where necessary. The Contractor shall provide all necessary equipment fuses or circuit breaker and meter sockets approved by the Utility Company. The meter sockets shall be mounted as part of the cabinet and must be completely accessible to the Utility Company.

The power board cabinet enclosure shall be constructed based on NEMA 3R standards or better, and shall be manufactured from minimum 0.125 inch thick aluminum type 5052-H32 with two adjustable "C" mounting channels on both side walls and back wall. The enclosure(s) shall be double flanged out on all four sides. The enclosure(s) shall be properly ventilated and shall be provided with vent filters. All exterior seams shall be continuously welded. External hardware shall be stainless steel and all internal hardware shall be stainless steel. The door mechanism shall be equipped with three point latching system and nylon rollers at top and bottom. The handle shall be 3/4 inch diameter stainless steel and shall have provisions for padlocking. The main door shall be sealed with a closed cell neoprene gasket. The main door shall be heavy gauge continuous hinge with 1/4 inch diameter stainless steel hinge pin secured with 1/4-20 stainless steel carriage bolts and stainless steel nylock nuts. The finish shall be natural aluminum per

Federal Specifications QQA-250/8. The enclosure shall be UL listed for use in housing electrical equipment. The enclosure shall be black in color, matching the existing traffic control cabinets in the project area.

The interior of the load center cabinet shall contain a 100 amp power board, with 100A main breaker and branch breakers, sized as noted on the Plans, grounding equipment, lightning arrestor, photoelectric cell, contactor, timer, and appurtenances necessary to provide a complete and fully operational system. In addition, a convenience duplex G.F.C.I. receptacle shall be included in the cabinet for maintenance. A 10 foot long, 5/8 inch copper clad ground rod shall be installed at the load center cabinet and shall measure 25 ohms to earth ground maximum.

Additional ground rods may be driven in adjacent handholes and bonded together in order to meet this requirement. The short circuit interrupter capacity of all equipment shall be coordinated to meet the requirements of the Utility Company.

The electric details shown in the Contract Documents are schematic; the Contractor shall install the equipment in accordance to all governing regulations and to the Department's satisfaction.

- xx. SUBMITTALS. The Contractor shall submit Fabrication Drawing(s) of the proposed load center cabinet, foundation, and all equipment contained within. This shall be scaled drawing(s) indicating dimensions of all equipment.
- xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Electric Power Board and Cabinet) to be measured for payment will be on a lump sum basis for providing the electric power board and cabinet in the complete and accepted work.
- xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Electric Power Board and Cabinet) will be paid for at the Contract lump sum price. Payment will be full compensation for installing the power board and cabinet and required control devices and appurtenances, concrete pad, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.645 Special Provision (Electric Power Board and Cabinet)	Lump Sum