

In addition to the convenience outlet as described under Subsection 815.41, "Controllers", of the Standard Specifications for Highways and Bridges a lamp with an on/off switch shall be installed in the Controller Cabinet.

The Contractor shall supply the City/Town with a printout of the controller unit's program sheets.

Flashing Operation

Changes from automatic flashing to stop-and-go operation and from stop-and-go to automatic flashing operation shall occur as set forth in Section 4D.12 of the MUTCD.

Malfunction Management Unit

The malfunction management unit (MMU) shall comply with Section 4 of the NEMA TS 2 Standard. The MMU shall be capable of operating as either a Type 16 with 16 channels (8 vehicle, 4 pedestrian, 4 overlap) or a Type 12 with 12 channels (8 vehicle, 4 overlap). The MMU's supplied shall be configured to operate as Type 16 units.

The MMU's in either the Type 16 or Type 12 configuration shall be capable of operating in a NEMA TS 2 Type 1 cabinet or a NEMA TS 1 cabinet without loss of functionality.

Loop Detectors

The amplifier for wire loop detectors shall include rack mounted, two (2) channel detector unit, Type C. Each loop detector shall operate on presence mode, unless noted otherwise on plans. Detector units shall be self-tuning with 0-30 second delay extension timer.

As shown on the Plans, each series of loops shall be routed to its own channel of the dual channel amplifier. In this way, it shall be possible to distinguish between vehicle calls on an approach basis.

Splicing for loop detectors shall be done on the day of the loop wire installation to prevent the entrance of any moisture into the plastic tubing.

Bicycle Loop Detectors

Bicycle loops shall be wired to separate amplifiers so that they may be tuned separately from vehicle detectors. Only amplifiers that measure absolute differences in inductance shall be used for bicycle detection. Bicycle detection loops shall be in the binder course or the existing pavement to prevent damage to the pavement surface by the saw-cuts.

Wiring and Service Connections

Traffic Signal cable shall be of Type 2, 12-gauge, 20 conductor. Openings, where cables enter the base of a cabinet, shall be sealed with an approved elastic sealing compound. The open ends of conduits entering or leaving mast-arm poles, posts and pull boxes shall also be sealed with the approved elastic sealing compound.

The work for service connections shall consist of furnishing and installing all materials and equipment to deliver power to traffic signals and related electrical systems.

All service connections to the power source shall be made by the Electric Company as stipulated under "Notice to Owners of Utilities".