**ITEM 633 CONTROLLER ITEM MISC.: LAYER 2 ETHERNET SWITCH**

The Contractor shall purchase and install environmentally hardened Layer 2 Ethernet switches as shown on the Plans. Layer 2 Ethernet switches shall be manufactured by comnet or Siemens. accepted MODELS are:

* Comnet MODEL CNGE11FX3TX8MS
* SIEMENS RUGGEDCOM RST916C WITH LINECORD-IEC-LOCK-US 5060811143520

All equipment shall be new and in strict accordance with the details shown on the plans and the specifications.

The division of traffic management FIBER COORDINATOR shall be contacted at 614-645-8018 seven (7) calendar days prior to installatioN.

the contractor shall install the switch in the cabinet AND make connections to the layer 2 ethernet switch AS SHOWN on communications diagrams IN THE PLANS.

All equipment shall include licenses, where required, for any software or hardware in the system.

Layer 2 Ethernet switches shall support direct connectivity to proposed and existing networks configured PROPERLY TO enablE applications to operate reliably, and with low latency.

INSTALLATION

1. POWER CABLES, PATCH CORDS, AND CABLES SHALL BE ROUTED IN A MANNER NOT BLOCK OR CROSS IN FRONT OF OTHER EQUIPMENT OR BE COMPRESS BY THE TRAFFIC CONTROLLER CABINET DOOR.
2. Install power adapter, power cables, Category 5e or Category 6 patch cords, and single mode patch cables as required and depicted on communications diagrams in the plans.
3. Make POWER CONNECTION to an available outlet on the installed surge SUPPRESSOR.
4. make the communication connections.
5. Establish and verify communications to the network AND VERIFY REMOTE CONNECTIVITY TO THE lAYER 2 ETHERNET SWITCH prior to transitioning the traffic signal controller to new system.

ethernet (RJ45) PORT assignments

THE CONTRACTOR SHALL CONNECT the DEVICES IN THE TRAFFIC SIGNAL CONTROLLER CABINET TO THE APPLICABLE PORTS IN THE ASSIGNED LOCATIONS depicted on communications diagrams in the plans. if there is a DISCREPANCY in the plans to the port assignments listed below, the assignments below is the controlling direction.

Port 1 – tRAFFIC SIGNAL CONTROLLER

PORT 2 – TRAFFIC FLOW MONITOR 1

PORT 3 – DETECTION

PORT 4 – REMOTE BATTERY MONITORING SYSTEM (RBMS)

PORT 5 – WIRELESS RADIO / CELL MODEM

PORT 6 – TRAFFIC FLOW MONITOR 2

PORT 7 – DETECTION (supplemental)

PORT 8 – BATTERY INVERTER

The Contractor shall be responsible for providing a complete, functional system including all necessary communicATion and power cables and connectors in accordance to the specifications and as specified on the plans. All miscellaneous patch and interconnect cables shall meet the proposed equipment specification requirements and shall meet EIA/TIA telecommunications standards. Additionally, fiber optic patch cables shall conform to SUPPLEMENTAL SPECIFICATION 1620. 4/2/25