

CITY OF CROSSVILLE

SIGNAL SPECIFICATIONS (Revised June 28, 2019)

- **Controller Equipment Cabinet:** Controller equipment cabinets shall be eight phase, weatherproof aluminum and shall be installed in accordance with the TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.26 (Latest Revision) and TDOT Standard Drawing T-SG-5 (Latest Revision). Cabinets shall be concrete pad mounted. An additional concrete pad is required to be placed in front of the cabinet doors which shall be a minimum 64 inches wide by 36 inches long and a minimum thickness of 6 inches. The concrete pad shall be utilized for maintenance and servicing of the cabinets and components.
- **Battery Back-Ups:** Battery back-ups are required for signal installations and shall be Myers MP 2000 (uninterrupted power supply). Battery backups shall be installed in a separate weatherproof aluminum cabinet, adjacent to the controller equipment cabinet. Battery Backups shall be installed in accordance to TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.27 (Latest Revision).
- **Cantilever Signal Supports:** Cantilever signal supports shall be installed in accordance with the TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.32 (Latest Revision) and TDOT Standard Drawings T-SG-9 and T-SG-10 (Latest Revisions). Span wiring signal supports may be allowed in certain intersections if cantilever signal supports cannot be utilized, all proposed span wiring must be reviewed and accepted by the City of Crossville Engineering Department prior to installation. Aluminum or steel poles are required on traffic signals for the City of Crossville.
- **Signal Controllers:** Signal controllers are required to be PEEK ATC-1000 controllers with NEMA TS2 Type 2 I/O Module and GreenWave ATC Software. PEEK Double Diamond Monitors shall be used. Traffic Signal Controllers and Monitors shall be installed in accordance to TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.25 (Latest Revision).
- **Vehicle Detection:** Vehicle detection shall be microwave Wavetronix Smartsensor Matrix for stop bar detection and Wavetronix Smartsensor Advance for advanced detection with a CLICK 650 SDLC Cabinet Interface Device. Traffic Signal Radar Detection Systems shall be installed in accordance to TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.29 (Latest Revision).

- **Signal Heads:** Signal heads shall be black aluminum with L.E.D. lighting, installed in accordance with TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.24 (Latest Revision) and TDOT Standard Drawings T-SG-7 through T-SG-7S (Latest Revision) as per the number of approaches.
- **Pedestrian Signals:** Pedestrian signals shall be countdown pedestrian signals installed in accordance to TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.29 (E) (Latest Revision) and TDOT Standard Drawing T-SG-6 (Latest Revision).
- **Coordination Equipment:** Coordination equipment is required to be PEEK M3000 Master Controller where inter-connect is necessary, where time based coordination is utilized without inter-connect, ELTEC GPS 1000 equipment shall be required. Coordination Equipment shall be installed in accordance to TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.27 (Latest Revision). Fiber optics cable shall be utilized for most inter-connects. Where fiber optics cable cannot be utilized, ENCOM 5200 radios shall be installed. Said radios must be reviewed and accepted by the City of Crossville Engineering Department prior to installation.
- **Pull Boxes:** Pull boxes shall be TDOT Type B with traffic rated lids and shall be installed in accordance with TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.12 (Latest Revision) and TDOT Standard Drawing T-SG-2 (Latest Revision).
- **Wiring:** Wiring shall be 14 gauge or larger and installed in accordance with TDOT Standard Specifications for Road and Bridge Construction Manual January 1, 2015, Section 730.17 (Latest Revision).