

## **CITY OF HENDERSONVILLE TRAFFIC SIGNAL SPECIFICATIONS**

- **CONTROLLER EQUIPMENT CABINET:** Controller equipment cabinets shall be NEMA TS-2 Type 1, 44" X 26" X 56" weatherproof aluminum with slide out drawer. Cabinet shall be installed in accordance with the TDOT Specifications for Road and Bridge Construction Manual, Section 730 and TDOT Standard Drawing T-SG-5. Traffic signal cabinets installed within the City of Hendersonville shall also meet the following standards:
  - 16 Position TS-2 Type 1 Horizontal Main Panel
  - MMU – 16E Malfunction Management Unit, ATC compatible
  - TS-2 Cabinet Power Supply
  - 12 Load Switches
  - Pre-emption shall be Sonem 2000
  - Green Energy ZX1000-36 Super Capacitor Power Module
  - DBL MXU-36 Series - Uninterruptible Power

The cabinet shall be complete with all incidental and auxiliary equipment necessary for installation and operation required to fully operate the traffic signal as shown on the plans. This shall include plug-ins for generators to run the intersection in the event of a power outage exceeding 2 hours.

Cabinets shall be concrete pad mounted with an additional pad to be placed in front of cabinet doors. The additional pad shall be a minimum of 64"x36".

- **SIGNAL CONTROLLERS:** Signal controllers are required to be Econolite Cobalt-C ATC model with 16 channel RENO MMU capable of providing fully actuated operation, containing an Ethernet port for communications to the City network and complete with all software, firmware and cabinet connections to allow the signal to operate in the City of Hendersonville network.
- **CANTILEVER SIGNAL SUPPORTS:** Cantilever signal supports shall be installed in accordance with the TDOT Standard Specifications for Road and Bridge Construction Manual Section 730 and TDOT Standard Drawing T-SG-10. All signal poles at intersections shall be mast arm installations and black glossy powder coated galvanized steel. Span wire installations shall not be permitted unless written approve is obtained from City of Hendersonville. The mast arm length shall be calculated in five (5) feet increments (i.e. 20', 25' 30', etc). Security lighting shall be provided on signal poles to ensure intersections are property lit with LED fixtures.

- **VEHICLE DETECTION:** Vehicle Detection shall be Wavetronix Smartsensor Matrix for stop bar detection and Wavetronix Smartsensor Advance for advanced detection. Inductive loops in the pavement or video detection shall not be permitted unless written approval is obtained from the City of Hendersonville.
- **SIGNAL HEADS:** Signal heads shall be aluminum with 12” LEDs. The entire signal head display shall be black in color with yellow retroreflective strip per TDOT Standard Drawing T-SG-9A.
- **PEDESTRIAN SIGNAL HEADS:** Pedestrian signals shall be countdown pedestrian signals installed in accordance with TDOT Standard Drawing T-SG-7. The mounting hardware shall be aluminum. If attached to a signal pole, all pedestrian signal heads shall be mounted utilizing clamshell type hardware.
- **ACCESSIBLE PEDESTRIAN SIGNALS AND DETECTORS:** Accessible pedestrian signals (APS) and detectors shall be Polara iNavigator iNS2 two wire APS. The MUTCD pedestrian actuation sign R10-3e shall accompany the APS. The APS shall have a black glossy finish to match the traffic signal poles, mast arms, and pedestrian pedestal poles.
- **COORDINATION EQUIPMENT:** Coordination equipment is required to have full connectivity with Econolite Centrac software. Fiber optics cable shall be utilized for all interconnects.
- **PULL BOXES:** Pull boxes shall be TDOT Type B with traffic rated lids and shall be installed in accordance with TDOT Standard Drawing T-SG-2.