EXPECTED IMPLEMENTATION JULY 2014

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603 GENERAL REQUIREMENTS FOR TRAFFIC CONTROL SIGNALS AND DEVICES.

(REV 1-14-14) (FA 1-22-14) (7-14)

SECTION 603 is deleted and the following substituted:

SECTION 603
GENERAL REQUIREMENTS FOR TRAFFIC CONTROL SIGNALS AND DEVICES

603-1 Description.

The provisions contained in this Section include general requirements for all traffic control signals and devices.

603-2 Equipment and Materials.

603-2.1 General: Only use traffic control signals and devices meeting the requirements of the Minimum Specifications for Traffic Control Signals and Devices (MSTCSD), the Contract, and are listed on the Department's Approved Product List (APL). Manufacturers seeking evaluation of their products for the APL must submit an application in accordance with Section 6.

Only use new equipment and materials, except as specified in the Contract.

603-2.2 Exceptions: The Department may grant exceptions to the requirements of 603-2.1 by permit to evaluate new technology or for other circumstances that are found to be in the public interest.

603-2.3 Uniformity: Only use compatible units of any one item of equipment, such as signal heads, detectors, controllers, cabinets, poles, signal system or interconnection equipment, etc.

603-2.4 Hardware and Fittings Used for Installation: Ensure that all assembly hardware, including nuts, bolts, external screws and locking washers less than 5/8 inch in diameter, are Type 304 or 316 passivated stainless steel. Use stainless steel bolts, screws and studs meeting the requirements of ASTM F593. Use nuts meeting the requirements of ASTM F594. Ensure all assembly hardware greater than or equal to 5/8 inch in diameter is galvanized. Use bolts, studs, and threaded rod meeting the requirements of ASTM A307. Use structural bolts meeting the requirements of ASTM A325.

Use high-strength steel anchor bolts and U-bolts, having a minimum yield strength of 55,000 psi and a minimum ultimate strength of 90,000 psi.

603-2.5 Galvanizing: Meet the requirements of Section 962 when galvanizing for fittings and appurtenances for all structural steel (including steel poles).

603-2.6 Environmental Specifications: Ensure system electronics intended for installation outdoors or within a roadside cabinet satisfactorily performs all required functions during and after being subjected to the environmental testing described in National Electrical Manufacturers Association (NEMA) TS2, 2.2.7, 2.2.8, and 2.2.9.

603-3 Definitions.

Traffic Control Signals and Devices: Any signal or device; manually, electrically or mechanically operated, by which traffic is alternately directed to stop and permitted to proceed

DRAFT

or controlled in any manner. Traffic control signals and devices regulate, warn, or guide traffic on, over or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency having jurisdiction. Traffic control signals and devices include, but are not limited to, controller assemblies (controller cabinets and their contents); signal heads including their hanging or mounting devices; vehicle detection systems (loops, sealant, amplifier, lead-in wire, or cable); pedestrian detection systems (push button, push button housing, lead-in wires, and signal); motorist information systems, video equipment, network devices, dynamic message signs, highway advisory radios, cameras, vehicle detection systems, and other equipment used within a traffic control system.

Minimum Specifications for Traffic Control Signals and Devices (MSTCSD): The minimum specifications used for the evaluation, certification, and approval of official traffic control signals and devices and ancillary devices for use on the streets and highways of Florida. The specifications are available on the Traffic Engineering and Operations web site.

603-4 Systems Approval Requirement.

The Engineer will review and approve any system design plan of traffic control signals and devices, that is controlled or operated from a remote location by computers or similar devices, and which affects the movement of traffic on any portion of the State Highway System, prior to installation.

603-5 Submittal Data Requirements.

Prior to the installation of equipment and within 30 days after the preconstruction conference, submit a listing of all traffic control signals, devices, and hardware with APL approval numbers to the Engineer for approval on Form 750-010-02, Submittal Data - Traffic Control Equipment. Alternate or modified forms are unacceptable. Provide a separate form for each cabinet location. For non-structural equipment or materials that do not have a APL approval number, submit one copy of the manufacturer's descriptive literature and technical data fully describing the equipment to the Engineer for approval. The Engineer will submit forms received from the Contractor to the District Traffic Operations Engineer for concurrence.

Develop shop drawings for all structural support materials and other special designs, such as non-electrical, non-mechanical, or other fabricated items, which may not be specifically detailed in the Plans. Have the Specialty Engineer approve all shop drawings. Do not submit shop drawings for those items that have been previously evaluated and approved.

Provide a complete operable signal installation as specified in the Contract regardless of any failure of the Department to discover or note any unsatisfactory material.

603-6 Documentation for Electronic Equipment.

Prior to final acceptance, furnish the Engineer with two copies of the following documentary items obtained from the manufacturer for the electronic equipment listed below:

1. Operation Manual
2. Troubleshooting and Service Manual
3. Assembly and installation instructions
4. Pictorial layout of components and schematics for circuit boards
5. Parts list
6. Diagram of the field installation wiring (not applicable to the detectors)
7. Warranty information

Furnish documentary items for the following equipment:

DRAFT

1. Controllers
2. Vehicle detectors
3. Load switches
4. Flasher units
5. Preemption units
6. Conflict monitors
7. Special sequence relays
8. Cameras
9. Dynamic message signs
10. Highway advisory radios
11. Road weather information systems
12. Any other equipment which has a logic, timing, or communications function
13. Other equipment specified in the Contract Documents

603-7 Department-Furnished Equipment Installed By Contractor.

Where the Contract includes installation of Department-furnished equipment, the Department will turn over such equipment to the Contractor when the construction progress allows or as designated in the Contract. The Department will test and certify the equipment to be in proper condition and ready to use and will bear the costs of correcting any defects in the equipment prior to pick-up by the Contractor. The Engineer will coordinate the pick-up and installation of the equipment. Maintain the equipment in proper operational condition after pick-up at no cost to the Department, until either final acceptance or the equipment is returned to the Department.