



Florida Department of Transportation

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MEMORANDUM

DATE: June 28, 2016

TO: Specification Review Distribution List

FROM: Dan Hurtado, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **6110203 Acceptance Procedures for Traffic Control Signals and Devices.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

The changes are proposed by Russell Allen of the Traffic Engineering and Operations Office to provide further clarification and detail for As-Built Documentation requirements.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at

<http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx> .

Comments received after **July 26, 2016**, may not be considered. Your input is encouraged.

DH/ot
Attachment

**ACCEPTANCE PROCEDURES FOR TRAFFIC CONTROL SIGNALS AND DEVICES.
(REV 5-316-1-16)**

SUBARTICLE 611-2.2 is deleted and the following substituted:

611-2.2 Final Acceptance: The Engineer will make inspection for final acceptance of traffic control signal and device installations as part of all work under the Contract in accordance with 5-11, only after satisfactory completion of all field tests of completed installations and on the basis of a comprehensive ~~final~~ field inspection of all equipment installations. Submit Form 750-010-02, Submittal Data – Traffic Control Equipment for each cabinet location, to the Engineer. The Engineer will make the final inspection with a Contractor's representative and, when applicable, a representative of the agency designated to accept maintenance responsibility. The Engineer will submit the approved form to the District Traffic Operations Engineer and place a hard copy in the cabinet at each location. Transfer warranties and guarantees on equipment to the Department in accordance with Section 608. For traffic signal installations, submit form 700-010-22, Final Acceptance of Traffic Signal Installation(s) and Transfer of Maintenance, to the Engineer.

SUBARTICLE 611-2.3 is deleted and the following substituted:

611-2.3 As-Built ~~Drawings~~ Documentation: As a condition precedent to acceptance under 611-2.1 or 611-2.2, submit signed and sealed as-built drawings; *and other as-built data for all installations, using ~~Feature Import Templates~~ for use in the Department's ITS Facility ~~Management (ITSFM) System, of for all installations.~~ Feature ~~Import Templates~~ can be found on the Department's web site:*
http://www.dot.state.fl.us/trafficoperations/ITS/Projects_Telecom/ITSFM/ITSFM.shtm.

611-2.3.1 Submittal Requirements: Submit as-built plans for review by the Engineer. As-built plans must be PDF files, in the same scale as the Contract Plans, and formatted on 11 inch by 17 inch sheets. Signing and pavement marking plan sheets may be used instead of signalization plan sheets, if a substantial number of changes from the original Plans must be recorded. If, in the opinion of the Engineer, the changes cannot be clearly delineated on the existing drawings, clearly delineate all changes on 11 inch by 17 inch detail sheets, enlarged 200% from the reproductions.

Submit fiber optic splicing diagrams detailing all cable splices, terminations, equipment port assignments, and optical circuits *path names* within the communication network. *Include cable manufacturer, type, strand count, and cable sequential reading at each pull box entrance/exit, each side of the splice enclosure, and at patch panel terminations.*

As-built submittals must include an inventory of all traffic control signals and devices, and support structures. The inventory must include horizontal position geographic coordinate data collected using Differential Global Positioning System (DGPS) equipment. The inventory must include the manufacturer, model, and serial number for each device or completed assembly. Submit coordinate data for pull boxes as well as conduit and cable at 100 foot intervals including changes in direction. *All support structures, equipment cabinets and other fixed location features ~~will~~ must be assigned a unique ~~Site ID~~ ~~Name~~ to create a common*

association between the as-built plans, inventory forms, and the ITSFM system. Submit as-built data using Feature Import Templates for use with the Department's ITSFM System. Include data for all components listed in 611-2.3.2, except those listed in 611-2.3.2.2 (Loops and Detection Zones) and 611-2.3.2.5 (Signal Heads). Feature Import Templates can be found on the Department's web site:

http://www.dot.state.fl.us/trafficoperations/ITS/Projects_Telecom/ITSFM/ITSFM.shtm

Aerial photographs may be submitted with as-built *plan* submittals to provide supplementary information. The aerials should not include extra features such as the right of way, baseline, or roadway edges. The aerials may be used as a base for the as-built plans with mile post and offset dimensions. Make any corrections resulting from the Engineer's review, and resubmit as-built plans as a condition precedent to acceptance of the installation.

611-2.3.2 Components: As a minimum, identify all traffic control devices, poles, support structures, cabinets, pull and splice boxes, hubs, *conduit duct banks*, access points, and power services, *and utility demarcation points*.

611-2.3.2.1 Conduit and Cable: Identify all conduit and cable with unique line styles for routing (~~Cconduit, Electrical, and Joint-Use~~ *trenched overhead, conduit, saw cut, etc.*) that are clearly identified in a legend on each *plan* sheet. Identify the type of cable (example - 7 conductor signal cable) and label the number of conductors, fiber strands or other identifying features of the cable. For conduit *duct banks*, clearly note conduit *and/or innerduct* size, *length*, and number of runs.

611-2.3.2.2 Loops and Detection Zones: Identify the location of all installed loops (including the distance from the stop bar for the advance loops), the path of each loop to the pull box, the loop window and the path of the loop lead-in to the controller cabinet. Identify the device location and the approximate detection area for detection systems that are not embedded in or under pavement.

611-2.3.2.3 Pull Boxes: Label unused and out of service pull boxes clearly. Show distances to each pull box from the nearest edgeline, stop bar, or other permanent feature. If an edgeline is not near a pull box or would not clearly identify its location, a fixed monument may be used (example - FDOT pole or structure).

611-2.3.2.4 Poles: Identify poles from the nearest edgeline of both approaches. If an edgeline is not near a pole or would not clearly identify its location, a fixed monument may be used.

611-2.3.2.5 Signal Heads: As-built plans must show the final location of signal heads. Each signal head shall be identified by its corresponding movement number.

611-2.3.2.6 Cabinet: The type of cabinet and inventory of internal components must be documented. Controller manufacturer along with the controller model number shall be submitted for all traffic signal cabinets. A cabinet corner "blow up" shall be submitted detailing pull box locations with all conduit and cable.

611-2.3.3 Compensation: All costs incurred in submitting as-built drawings are incidental to the other items of work associated with traffic control signals and devices.