Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

August 14, 2025

Daniel Holt, PE, PTOE
Director, Project Delivery
Director, Technical Services
FHWA
400 West Washington Street, Suite 4200
Orlando, FL 32801

Re: State Specifications Office
Section: 685
Proposed Specification: **6850202 Traffic Control System Auxiliaries**

Dear Mr. Holt:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Ronald Meyer to clarify/consolidate requirements applicable to all UPS cabinets. The language needs to be changed to update requirements to better meet stakeholder needs, reflect current technologies and practices, and incorporate lessons learned during product evaluations at the FDOT Traffic Engineering Research Lab.

Please review and transmit your comments, if any, within two weeks (10 business days). Comments should be sent via email daniel.strickland@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at (850) 414-4130.

Sincerely,

Signature on File

Daniel Strickland, P.E.
State Specifications Engineer

DS/jb
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

TRAFFIC CONTROL SYSTEM AUXILIARIES
(REV 6-29-25)

ARTICLE 685-2 is deleted and the following substituted:

685-2 Materials.

685-2.1: General: Meet the following requirements:

Uninterruptible Power Supply* .....Section 996
Remote Power Management Unit* .....Section 996
*Use products listed on the Department's APL.

685-2.2 Uninterruptible Power Supply (UPS): Use a line interactive or online/double-conversion UPS as shown in the Plans. UPS assemblies must be designed for installation in a roadside NEMA 3R enclosure to provide battery backup functionality for traffic control systems, including traffic signal and intelligent transportation system (ITS) devices. UPS assemblies must include batteries provided by the UPS manufacturer or in accordance with manufacturer's requirements. Batteries must be sealed and require no maintenance, cause no corrosion, and be capable of maintaining 80% of original capacity and performance for a minimum of five years.

Loss of utility power, transfer from utility power to battery power, and transfer back to utility power must not interfere with normal operation of connected equipment. In the event of UPS failure or battery depletion, connected equipment must be energized automatically upon restoration of utility power.

Removal and replacement of the UPS must not disrupt the operation of the equipment being protected.

All harnesses necessary to connect and operate the system must be included.

685-2.2.1 ~~Electrical~~UPS for ITS Cabinet: UPS assemblies used to provide backup power in an ITS cabinet must provide a minimum of 350 watts (at 120 V_{AC}) of continuous backup power for a minimum of two hours unless otherwise shown in the Plans.

685-2.2.2 UPS for Traffic Signal Controller Cabinet: —UPS assemblies used to provide backup power in a traffic signal controller cabinet must provide a minimum 400 watts (at 120 V_{AC}) of continuous power for a minimum of 6.5 hours unless otherwise shown in the Plans.

685-2.2. ~~2~~3 ~~Traffic Signal~~ UPS Cabinets: Cabinets used to house traffic signal UPS assemblies must be designed to be mounted to the side of a traffic cabinet or base mounted. All UPS ~~C~~cabinets must meet the requirements of Section 676 and must include shelves and rack rails to house all UPS system components including the UPS, batteries, harnesses, switches, surge protective device, power terminal block and a generator hookup with transfer switch. The UPS cabinet must allow a maintenance technician to safely insert power for ~~traffic signal~~ continued operation of connected equipment while the UPS or associated equipment is serviced or replaced.

A surge protective device must be installed where the supply circuit enters the cabinet in accordance with 620-2.7.1.

685-2.2. 3~~2~~.1 Transfer Switch and Generator Access Panel: The cabinet must include an automatic transfer switch and generator access panel in accordance with Section 676. The generator access door must not protrude more than 1 inch when closed.

685-2.3 Remote Power Management Unit (RPMU): Use a RPMU as shown in the

Plans. The RPMU must be designed for installation in a roadside Traffic Cabinet to provide remote control of electrical receptacles.

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