**MODIFIED SPECIAL PROVISION APPROVAL REQUEST**

(REV 1-19)

**Date: 2/10/2019 District: 5 Type: Project Specific**

**Letting Month: April, 2019 FPID Number: 440900-1&2-52-01**

**Requested by: Dale W. Cody, PE Office/Phone: (407) 644-1898**

**Specification being modified: 685**

**Affected Pay Items: 685-504**

**\*Expected Cost Impact to this project: $61,000**

**\*** Give an estimate of dollar impact (added cost or cost savings) to the project if this Modified Special Provision is used in lieu of the corresponding statewide implemented specification.

**Project Description**: I-75 Florida’s Regional Advanced Mobility Elements (FRAME). This project will add additional technology along I-75 and signalized intersections located parallel to I-75 in Sumter and Marion Counties in order to provide Connected Vehicle (CV) functionality as well as signal data optimization within this region of District 5.

**Background Data:** The project includes the installation of roadside units (RSUs) that include Dedicated Short-Range Communications (DSRC) radios. The installation of RSUs will allow for the transmission of Signal Phase and Timing (SPAT) data, CV emergency vehicle preemption (EVP), and CV transit signal priority (TSP) applications. The Department desires to use power distribution units (PDU) in order to minimize maintenance calls throughout the life of this project.

**\*Name and PE Number of PE signing and sealing the Modified Special Provision:**

**\*** Project Specific Modifications to the Standard Specifications or Workbook Specifications must be signed and sealed by the Professional Engineer responsible for this Special Provision under the following statement and kept in the Project Files maintained in the District.

**PE Name: Dale W. Cody, PE PE Number: 53995**

***I hereby certify that this Specification was prepared under my responsible charge, and that it has been reviewed in accordance with procedures adopted and implemented by the Florida Department of Transportation.***

The official record of this Special Provision is the electronically signed and sealed under Rule 61G15-23.004, F.A.C.

Professional Engineer: Dale W. Cody

Date: 2/10/2019

Fla. License No.: 53995

Firm Name: Metric Engineering, Inc.

Firm Address: 525 Technology Park, Suite 153

City, State, Zip code: Lake Mary, Florida 32746

Certificate of Authorization: 2294

Pages: 1-2

**SECTION 685**

**TRAFFIC CONTROL SYSTEM AUXILIARIES**

(Rev 2-8-19)

SUBARTICLE 685-2.1 is deleted and the following substituted:

**685-2.1: General:** Use traffic control system auxiliaries listed on the Department’s Approved Product List (APL) except for the Power Distribution Unit (PDU). Equipment must be permanently marked with the manufacturer’s name or trademark, model/part number and serial number or date of manufacture.

SECTION 685 is being expanded by the following new subarticle:

**685-2.3 Power Distribution Unit (PDU):** Provide the signal/ITS cabinets with a power distribution unit which supplies eight (8) 120 VAC outlets. The unit shall be fully compatible and interoperable with the UPS unit that the power manager system is integrated to. The unit must have the following features:

* The outlet panel must be remote controllable, per outlet, to allow operators to turn off/on individual power ports via manufacturer software or web interface via the Ethernet network.
* The unit shall support SNMP protocol. SNMP traps shall be repeatable on a user defined basis.
* Each outlet shall be labeled in the user interface to reflect the proper device is connected to the appropriate outlet.
* The outlet port for the local switch shall be configured to Safe Reboot mode.
* Temperature: -30 to 165 °F (-34 to 74 °C), +/- 0.5 °C

SUBARTICLE 685-3 is deleted and the following substituted:

# Installation.

Install UPS and PDU assemblies in accordance with the manufacturer’s recommendations. All equipment used to keep the intersection signalized must be backed up and protected by the UPS. Include a UPS and PDU operation and maintenance manual in the cabinet where the UPS is installed that includes cabinet wiring schematics, electrical interconnection drawings, parts layout and parts lists.

SUBARTICLE 685-4 is deleted and the following substituted:

# Testing.

Provide a field acceptance test plan to the Engineer for approval at least 14 days prior to commencement of testing. After approval of the acceptance test plan, perform testing of the installed UPS and PDU equipment. Furnish all equipment, software, and supplies necessary for conducting the test.

SUBARTICLE 685-5 is deleted and the following substituted:

# Warranty.

Ensure the UPS and PDU includes a manufacturer’s warranty covering defects for a minimum of three years (5 years for the external batteries in accordance with 685-2.2.3) from the date of final acceptance in accordance with 5-11 and Section 608. The warranty must include provisions for providing a replacement UPS or PDU within 10 calendar days of notification for any device found to be defective during the warranty period at no cost to the FDOT or the maintaining agency.

SUBARTICLE 685-6 is deleted and the following substituted:

# Method of Measurement.

The Contract unit price for each UPS or PDU, furnished and installed, will include furnishing, placement, and testing of all equipment and materials as specified in the Contract Documents, and all tools, labor, operational software packages and firmware, supplies, support, personnel training, shop drawings, documentation (including the field acceptance test plan), and incidentals necessary for a complete and accepted installation.

SUBARTICLE 685-7 is deleted and the following substituted:

# Basis of Payment.

Price and payment will be full compensation for all work specified in this Section. Payment will be made under:

Item No. 685- 1- Uninterruptible Power Supply – each

Item No. 685- 5- Power Distribution Unit – each