



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.  
SECRETARY

July 31, 2019

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **633**  
Proposed Specification: **6330100 Communication Cable.**

Dear Mr. Nguyen:

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

The changes are proposed by Derek Vollmer of the State Traffic Engineering Research Lab (TERL) to clarify slack length for fiber optic drop cables. Extending calibration duration for splice equipment. Adding calibration duration for testing equipment.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [stefanie.maxwell@dot.state.fl.us](mailto:stefanie.maxwell@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

Signature on file

Stefanie D. Maxwell, P.E.  
Manager, Program Management Office

SM/dt

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

**COMMUNICATION CABLE.**  
**(REV 5-9-19)**

ARTICLE 633-1 is deleted and the following substituted:

**633-1 Description.**

Furnish and install underground and aerial communication cable as shown in the Plans and -Standard Plans.

SUBARTICLE 633-3.1.4 is deleted and the following substituted:

**633-3.1.4 Slack Cable Storage:** Provide and store fiber optic cable at each pull box and splice box to allow for future splices, additions, or repairs to the fiber network. Store the fiber optic cable without twisting or bending the cable below the minimum bend radius.

Store a total of 200 feet of fiber optic backbone cable in splice boxes, with 100 feet of cable on each side of the cable splice point or as shown in the Plans.

Store a minimum of 100 feet of fiber optic drop cable in splice boxes or as shown in the Plans.

Store 50 feet of spare fiber optic cable in pull boxes.

SUBARTICLE 633-3.1.5.2 is deleted and the following substituted:

**633-3.1.5.2 Splice Equipment:** Use a fusion splice machine to splice all optical fiber. Ensure that splice equipment is new from the factory, or serviced and certified by the factory or its authorized representative within the previous 612 months from the commencement of its use. Ensure that the calibration certificate is maintained in the splicing equipment case or provided electronically when requested. Submit to the Engineer documentation from the manufacturer or his authorized representative certifying compliance. Clean all splicing equipment and calibrate according to the manufacturer's recommendations prior to each splicing session at each location.

SUBARTICLE 633-3.1.8 is deleted and the following substituted:

**633-3.1.8 Installation Testing:** Notify the Engineer of cable testing at least 14 calendar days in advance. Submit the testing procedures to the Engineer for approval prior to commencement of testing. Perform all tests at 1,310/1,550 nanometer wavelengths, and include the last calibration date of all test equipment with the test parameters set on the equipment in the test documentation. Ensure that the last calibration date of all test equipment is within the last 12 months and that the calibration date certificate is firmly affixed to each piece of maintained in the test equipment case or provided electronically when requested. Test all installed fibers (terminated and un-terminated) using methods approved by the Engineer.

SUBARTICLE 633-5.1 is deleted and the following substituted:

**633-5.1 General:** The quantities to be paid will be: the length, in feet, of fiber optic cable; ~~the number, per each, of fiber optic connections;~~ ~~the number, per each, of fiber optic connection hardware;~~ and ~~the length, per foot, of twisted pair cable, accepted by the Engineer.~~

**COMMUNICATION CABLE.**  
**(REV 5-9-19)**

ARTICLE 633-1 is deleted and the following substituted:

**633-1 Description.**

Furnish and install underground and aerial communication cable as shown in the Plans and Standard Plans.

SUBARTICLE 633-3.1.4 is deleted and the following substituted:

**633-3.1.4 Slack Cable Storage:** Provide and store fiber optic cable at each pull box and splice box to allow for future splices, additions, or repairs to the fiber network. Store the fiber optic cable without twisting or bending the cable below the minimum bend radius.

Store a total of 200 feet of fiber optic backbone cable in splice boxes, with 100 feet of cable on each side of the cable splice point or as shown in the Plans.

Store a minimum of 100 feet of fiber optic drop cable in splice boxes or as shown in the Plans.

Store 50 feet of spare fiber optic cable in pull boxes.

SUBARTICLE 633-3.1.5.2 is deleted and the following substituted:

**633-3.1.5.2 Splice Equipment:** Use a fusion splice machine to splice all optical fiber. Ensure that splice equipment is new from the factory, or serviced and certified by the factory or its authorized representative within the previous 12 months from the commencement of its use. Ensure that the calibration certificate is maintained in the splicing equipment case or provided electronically when requested. Submit to the Engineer documentation from the manufacturer or his authorized representative certifying compliance. Clean all splicing equipment and calibrate according to the manufacturer's recommendations prior to each splicing session at each location.

SUBARTICLE 633-3.1.8 is deleted and the following substituted:

**633-3.1.8 Installation Testing:** Notify the Engineer of cable testing at least 14 calendar days in advance. Submit the testing procedures to the Engineer for approval prior to commencement of testing. Perform all tests at 1,310/1,550 nanometer wavelengths, and include the last calibration date of all test equipment with the test parameters set on the equipment in the test documentation. Ensure that the last calibration date of all test equipment is within the last 12 months and that the calibration certificate is maintained in the test equipment case or provided electronically when requested. Test all installed fibers (terminated and un-terminated) using methods approved by the Engineer.

SUBARTICLE 633-5.1 is deleted and the following substituted:

**633-5.1 General:** The quantities to be paid will be: the length, in feet, of fiber optic cable; the number, per each, of fiber optic connections; the number, per each, of fiber optic connection hardware; and the length, per foot, of twisted pair cable, accepted by the Engineer.