



Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

November 12, 2014

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: State Specifications and Estimates Office
Section **635**
Proposed Specification: **6350202 Pull, Splice, and Junction Boxes.**

Dear Mr. Nguyen:

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

This change was proposed by Alan El-Urfali of the State Traffic Engineering and Operations Office to clarify that nominal dimensions are “minimum”; update ANSI reference; add testing requirements prohibiting supporting beams during load tests used for APL approval; and, for general formatting.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965DS or daniel.scheer@dot.state.fl.us.

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

Sincerely,

Signature on file

Daniel Scheer, P.E.
State Specifications Engineer

DS/dt

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

PULL, SPLICE, AND JUNCTION BOXES.**(REV 9-1611-12-14)**

SUBARTICLE 635-2.2.3 is deleted and the following substituted:

635-2.2.3 Dimensions: Unless otherwise shown in the Plans, provide pull and splice boxes with the following dimensions.

For signalized intersection and lighting applications, provide pull boxes with *minimum* nominal dimensions of 13 inches wide by 24 inches long (cover) and no less than 12 inches deep. Ensure the inside opening area is a minimum of 240 square inches and no inside dimension is less than 12 inches.

For fiber optic cable applications, provide pull boxes with *minimum* nominal dimensions of 24 inches wide by 36 inches long (cover) and no less than 24 inches deep.

Provide rectangular splice boxes with *minimum* nominal dimensions of 30 inches wide by 60 inches long (cover) and no less than 36 inches deep. Provide round splice boxes with a *minimum* nominal diameter of 36 inches (cover) and no less than 36 inches deep.

SUBARTICLE 635-2.2.5 is deleted and the following substituted:

635-2.2.5 Testing Requirements: Ensure pull and splice boxes meet the American National Standards Institute/Society of Cable Telecommunications Engineers (ANSI/SCTE) 77 2010³ Specification for Underground Enclosure Integrity for TIER 15 loading with the following additional clarifications and requirements:

1. Apply all environmental tests to the box and its cover.
2. All flexural testing must be conducted in accordance with an appropriate ASTM standard and clearly stated in the report.
3. Perform repetitions of Cycle 1 in Table X2.1 of ASTM G154 for a minimum duration of 1000 hours for the simulated sunlight exposure test.
4. Use deflection-measuring devices positioned to measure vertical and lateral deflection (wherever maximum deflection occurs) for the vertical sidewall load test.
5. *Conduct the lateral sidewall pressure, vertical sidewall load and cover vertical load tests without any removable or permanent wall to wall supporting beams that would interfere with located in the interior or top of the box opening design and installation and maintenance serviceability.*

—————When testing pull and splice boxes of various sizes (width x length x depth), the cover impact test, internal equipment protection test, coefficient of friction test, and all environmental tests, can be completed using a single representative box/cover (instead of samples from all box/cover sizes) as long as the test report indicates the following:

1. Materials of construction, compositions, and manufacturing processes are identical for all box and cover sizes submitted for listing on the APL.
2. Size (width x length x depth) of the representative box/cover.

ARTICLE 635-2.6 is deleted and the following substituted:

635-6 Method of Measurement.

~~635-6.1 General: Measurement for payment will be in accordance with the following work tasks:~~

~~635-6.2 Furnish and Install: The Contract unit price each for pull, splice, and junction box, furnished and installed, will consist of the pull, splice, and junction box including all required hardware for the type of box and location as specified in the Contract Documents, and all labor and materials necessary for a complete and accepted installation.~~

~~635-6.3 Furnish: The Contract unit price each for pull, splice, and junction box, furnished, will include the cost of the pull, splice, and junction box including covers, doors, locks and keys, and any necessary miscellaneous hardware specified in the Contract Documents, plus all shipping and handling costs involved in delivery as specified in the Contract Documents.~~

~~635-6.4 Install: The Contract unit price each for pull, splice, and junction box, installed, will include the cost of all labor, equipment, miscellaneous hardware and materials necessary to make a complete and accepted installation of the type box and at locations as shown in the Plans. The Engineer will supply a complete box as specified in the Contract Documents.~~

~~635-6.5 Relocate: The Contract unit price each for pull, splice, and junction box, relocate, will include the removal of the box and relocation to the location shown in the Plans. This includes the cost of all labor, equipment, miscellaneous hardware and materials necessary for a complete and accepted installation.~~

PULL, SPLICE, AND JUNCTION BOXES.**(REV 11-12-14)**

SUBARTICLE 635-2.2.3 is deleted and the following substituted:

635-2.2.3 Dimensions: Unless otherwise shown in the Plans, provide pull and splice boxes with the following dimensions.

For signalized intersection and lighting applications, provide pull boxes with minimum nominal dimensions of 13 inches wide by 24 inches long (cover) and no less than 12 inches deep. Ensure the inside opening area is a minimum of 240 square inches and no inside dimension is less than 12 inches.

For fiber optic cable applications, provide pull boxes with minimum nominal dimensions of 24 inches wide by 36 inches long (cover) and no less than 24 inches deep.

Provide rectangular splice boxes with minimum nominal dimensions of 30 inches wide by 60 inches long (cover) and no less than 36 inches deep. Provide round splice boxes with a minimum nominal diameter of 36 inches (cover) and no less than 36 inches deep.

SUBARTICLE 635-2.2.5 is deleted and the following substituted:

635-2.2.5 Testing Requirements: Ensure pull and splice boxes meet the American National Standards Institute/Society of Cable Telecommunications Engineers (ANSI/SCTE) 77 2013 Specification for Underground Enclosure Integrity for TIER 15 loading with the following additional clarifications and requirements:

1. Apply all environmental tests to the box and its cover.
2. All flexural testing must be conducted in accordance with an appropriate ASTM standard and clearly stated in the report.
3. Perform repetitions of Cycle 1 in Table X2.1 of ASTM G154 for a minimum duration of 1000 hours for the simulated sunlight exposure test.
4. Use deflection-measuring devices positioned to measure vertical and lateral deflection (wherever maximum deflection occurs) for the vertical sidewall load test.
5. Conduct the lateral sidewall pressure, vertical sidewall load and cover vertical load tests without any removable or permanent wall to wall supporting beams located in the interior or top of the box opening.

When testing pull and splice boxes of various sizes (width x length x depth), the cover impact test, internal equipment protection test, coefficient of friction test, and all environmental tests, can be completed using a single representative box/cover (instead of samples from all box/cover sizes) as long as the test report indicates the following:

1. Materials of construction, compositions, and manufacturing processes are identical for all box and cover sizes submitted for listing on the APL.
2. Size (width x length x depth) of the representative box/cover.

ARTICLE 635-2.6 is deleted and the following substituted:

635-6 Method of Measurement.

The Contract unit price each for pull, splice, and junction box, furnished and installed, will consist of the pull, splice, and junction box including all required hardware for the type of box and location as specified in the Contract Documents, and all labor and materials necessary for a complete and accepted installation.