Origination Form

Specifications

Name:	Ronald Meyer	**Standard Specification Section:**	635
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Date:	2025-06-12T18:42:03Z	**Associated Specs:**	996

Summary:

Edited to update and move material requirements to Section 996 as appropriate.

Justification:

Proposing changes to minimum requirements for embedded junction boxes based on manufacturer recommendations and FDOT project experience.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No
Materials Manual		No
Traffic Engineering Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

Yes. Changes reflect stakeholder needs, update and clarify technical requirements, and improve consistency of specification content.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

No expected financial impact.

What impact does the change have on production or construction schedules?

No expected impacts to production or construction schedules.

How does this change improve efficiency or quality?

Changes improve efficiency and quality by updating requirements to address user needs, fostering consistency, and adhering to standardized formatting styles.

Which FDOT offices does the change impact?

Traffic Engineering and Operations Office, Construction Office.

What is the impact to districts with this change?

No significant impact.

Does the change shift risk and to who?

Proposed updates do not shift risk.

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: https://www.fdot.gov/programmanagement/Specs.shtm

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

PULL BOXES, SPLICE BOXES, JUNCTION BOXES, AND FIBER OPTIC SPLICE VAULTS
(REV 6-12-25)

ARTICLE 635-2 is deleted and the following substituted:

635-2 Materials.

635-2.1 General: Meet the following requirements:

Pull and Splice Boxes* 996-5
Fiber Optic Splice Vault 996-5
Junction Boxes ..... ~~635-2.3~~996-5
Toll Site Pull Boxes* 996-5

*Use products listed on the Department's Approved Product List (APL).

635-2.2 Pull Boxes, Splice Boxes, and Fiber Optic Splice Vaults:

635-2.2.1 General: Ensure the bodies and covers of these products are free of flaws such as cracks, sharp, broken, or uneven edges, and voids.

635-2.2.2 Marking: Mark boxes in accordance with 996-5.

635-2.3 Junction Boxes:

635-2.3.1 Fabrication: Provide galvanized steel, aluminum or NEMA 4X non-metallic junction boxes in accordance with 996-5. Ensure all attachment hardware is Type 316 or 304, passivated stainless steel.

~~Ensure the outside surface has a smooth, uniform finish. Ensure boxes are free of burrs, pits, sharp corners and dents. Ensure all welds are neatly formed and free of cracks, blow holes, and other irregularities.~~

635-2.3.1.1 Aerial Junction Boxes: Unless otherwise shown in the Plans, provide aerial junction boxes with minimum inside dimensions of 8 inches wide by 8 inches long and at least 3 inches deep.

635-2.3.1.2 Mounted Junction Boxes: ~~Provide mounted junction boxes fabricated of 5052 sheet aluminum alloy with a minimum thickness of 1/8 inch. Ensure all mounted junction boxes have a hinged door and lock as specified in Section 676.~~

Unless otherwise shown in the Plans, provide mounted junction boxes for the following installations:

For pole and cabinet mounted installations, provide junction boxes with minimum inside dimensions of 13 inches long by 10 inches wide and at least 3 inches deep.

For base mounted installations, provide junction boxes with minimum inside dimensions of 21 inches long by 10 inches wide and at least 8 inches deep.

635-2.3.1.3 Embedded Junction Boxes: Provide weatherproof embedded junction boxes for use in concrete structures or traffic railings. Include gasketed weatherproof covers made of the same material as the box and stainless steel, tamper resistant screws for securing the cover. Use galvanized steel boxes with covers that are a minimum thickness of 3/8" for embedded junction boxes exposed to vehicular impacts.~~Fabricate galvanized steel boxes and their covers from steel meeting the requirements of ASTM A36 and galvanized in accordance with ASTM A123.~~

For embedded junction boxes not exposed to vehicular impacts, provide the following types of junction boxes. Where the structure's environmental classification

is slightly or moderately aggressive, provide a galvanized steel or NEMA 4X (non-metallic) box, as approved by the Engineer. Where the structure's environmental classification is extremely aggressive, provide a NEMA 4X (non-metallic) box, unless otherwise directed by the Engineer.

For embedded junction boxes exposed to vehicular impacts, provide a galvanized steel box regardless of the structure's environmental classification.

635-2.3.2 Barrier Terminal Blocks: Provide a barrier terminal block with a minimum of ten positions and rated at 600 V_{AC} in all aerial and mounted junction boxes. Ensure each terminal block position has two screws electrically connected by a shorting bar or other Department approved method. Ensure all terminal block positions are numbered sequentially.