

Origination Form

Specifications

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Date:	2025-06-24T20:29:50Z	Associated Specs:	458, 932

Summary:

New section 962-10.5 added for Galvanized Steel Sidewalk Cover Plates. Modular Joints language in section 458 was relocated from Division II to Division III, with minor formatting adjustments made during the transition.

Justification:

It was determined that the language is more closely aligned with manufacturer and fabricator instructions.

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?

N/A

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

N/A

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

None

How does this change improve efficiency or quality?

N/A

Which FDOT offices does the change impact?

N/A

What is the impact to districts with this change?

N/A

Does the change shift risk and to who?

N/A

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.

STRUCTURAL STEEL AND MISCELLANEOUS METAL ITEMS (OTHER THAN ALUMINUM)
(REV 6-25-25)

ARTICLE 962-10 is expanded by the following:

962-10.5 Galvanized Steel Sidewalk Cover Plates: Cover Plates shall be slip resistant, random hatch matrix or suitable pattern, galvanized steel sidewalk fabricated from steel meeting the requirements of ASTM A36 or ASTM A709, Grade 36 or 50. Do not use diamond plate or surface applied slip resistant tapes, films, nonmetallic coatings or other similar materials. Fabricate cover plates in accordance with Standard Plans, Indexes 458-100 and 458-110. After shop fabrication, hot-dip galvanize cover plates in accordance with Section 962. Galvanized sidewalk cover plates shall have a minimum coefficient of friction on the top surface of 0.8 in dry condition, and 0.65 in a wet condition, as determined by ASTM F1677-05 or ASTM F1679-04. Furnish flat head stainless steel sleeve anchors in accordance with ASTM F593 Group 1 Alloy 304 for attaching sidewalk cover plates.

SECTION 962 is expanded by the following:

962-13 Modular Joints.

Furnish modular joints meeting the following material requirements:

<u>Table 962-17</u> <u>Component Material Requirements</u>	
<u>Solid Separation Beams, Steel Extrusions, Support Bars, Plate and Milled Steel Shapes</u>	<u>ASTM A588 or ASTM A572, Grade 50</u>
<u>Box Seals</u>	<u>ASTM D3542</u>
<u>Strip Seals</u>	<u>ASTM D5973</u>
<u>Seal Adhesive</u>	<u>ASTM D4070</u>
<u>Stud Shear Connectors and Threaded Studs</u>	<u>ASTM A108</u>
<u>Stainless Steel Sliding Plates</u>	<u>ASTM A240, Type 316</u>
<u>PTFE Sliding Surface</u>	<u>ASTM D4895</u>
<u>*Provide seals with hardness Type A durometer equal to 55 (plus or minus 5) by ASTM D2240.</u>	

Supply test results from the manufacturer verifying the maximum coefficient of friction between mating surfaces. Testing must be performed by an independent testing laboratory according to the manufacturer's stated precompression values for the system to a minimum of two million cycles. Maximum allowed coefficient of friction is 0.10.

Bond PTFE (polytetrafluorethylene) using a heat cured, high temperature epoxy capable of withstanding temperatures of minus 40°F to plus 250°F.

For springs, bearing, and equidistance devices (i.e. control springs), use the same material composition and formulation, manufacturer, fabrication procedure and configuration as those used in the prequalification test. Components manufactured from polyurethane compounds are not permitted.

962-13.1 Fabrication: Perform all steel fabrication in accordance with the requirements of Section 460.

After fabrication, hot-dip galvanize all non-stainless steel metal surfaces in accordance with Section 962.

Joint systems must be designed in accordance with the latest edition of AASHTO LRFD Bridge Design Specifications. Supply joint systems for which identical full-size specimens have been subjected to full life-cycle fatigue testing.

Except for sliding plates, provide all load bearing structural steel components with a 3/8 inch minimum thickness in any direction. Construct edge rails consisting of a monolithic steel shape with a machined or extruded retainer cavity. Multiple component welded steel shapes to achieve a final member cross section or seal retainer cavity are not permitted. Attach separation beams to individual support bars with a complete joint penetration weld.

Support each separation beam with a dedicated support bar connected by a complete joint penetration welded connection. Use of bolted connections, yokes, or other means to directly attach separation beams to support bars is not permitted. Maintain equal spacing between separation beams at all stages of movement.

Contain support bars with bearings capable of transferring all imposed loads to the structure and allow the support bar to freely move within the limits of the expansion joint.

Fabricate a full length modular joint system as one piece. Only a minimal number of splices in an individual joint may be permitted where a construction joint is specifically required by the Plans, joint segment length exceeds 50 feet, or approved by the Engineer in writing.

When phased construction is permitted fabricate each segment to exactly fit that portion of superstructure, including sidewalks, under construction in each specific phase. Connect segments with a bolted splice to ensure continuity. Fit segments with temporary seals. Lubricant adhesive is not required for temporary seals. Submit watertight seal details for the splice. Shop inspection will be conducted at the discretion of the Engineer in accordance with Article 5-6.

Fabricate final seal assembly as one single, continuous component. Splicing of seals in the field is not permitted.

Provide lifting devices and devices to maintain the preset opening of the joint at a uniform spacing of not greater than 15 feet along the length of the joint. Provide at least three of these preset opening devices per joint segment. Provide lifting and preset opening devices that function and then are removed without damaging the modular joint system assemblies or galvanized coating.

Prior to shipment, preset the joint opening in accordance with the joint opening as shown in the Plans at 70°F.

Prior to installation, place the centerbeam/support bar assembly on a flat surface to verify the support bars lay in a single plane, with no part of the bottom of any support bar exceeding 0.25 inches off the surface. The subassembly may be straightened. No more than three attempts may be made to heat-straighten the subassembly.

Polish stainless steel sliding surfaces to an 8 μ-inch mirror finish.

962-13.2 Certification: Submit a certification showing that the product meets the Modular Joint requirements of this Article.

