
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: June 15, 2021

Originator: Joshua Turley

Phone: (850) 414-4475

Email: joshua.turley@dot.state.fl.us

Standard Plans:

Index Number: 450-010

Sheet Number (s): Sheet 1 of 2

Index Title: Florida I Beam - Typical Details and Notes

Summary of the changes:

Updated language concerning N type strands in the notes for clarity.

Commentary / Background:

Other Affected Offices / Documents: (Provide name of person contacted)

Yes	No	
☐	☒	Other Standard Plans –
☐	☒	FDOT Design Manual –
☐	☒	Basis of Estimates Manual –
☐	☒	Standard Specifications –
☐	☒	Approved Product List –
☐	☒	Construction –
☐	☒	Maintenance –

Origination Package Includes:

(Email or hand deliver package to Rick Jenkins)

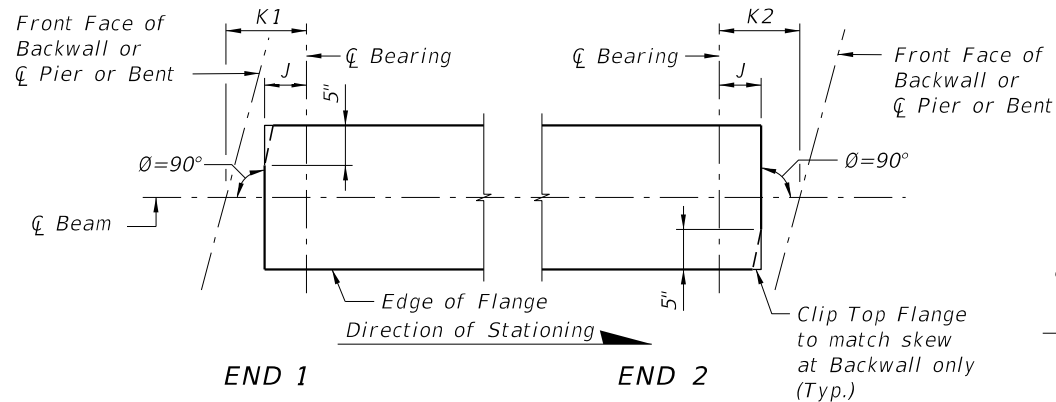
Yes	N/A	
☒	☐	Redline Mark-ups
☐	☐	Proposed Standard Plan Instruction (SPI)
☐	☐	Revised SPI
☐	☐	Other Support Documents

Implementation:

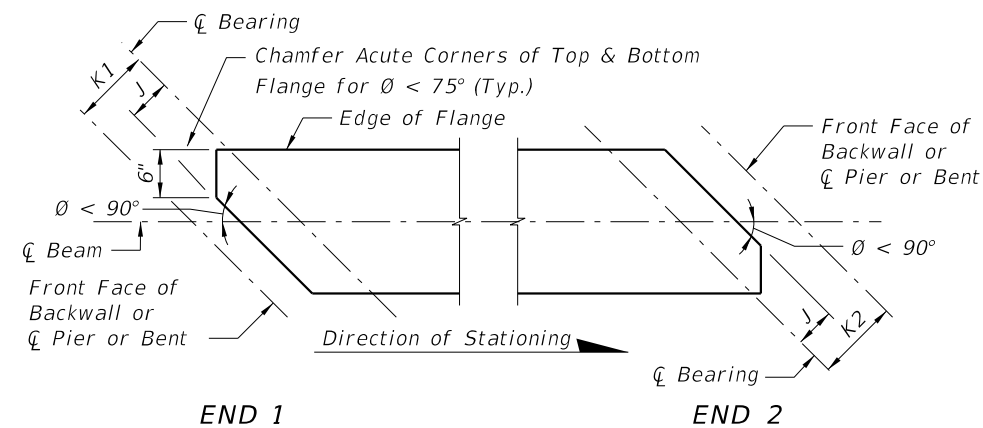
☐	Design Bulletin (Interim)
☐	DCE Memo
☒	Program Mgmt. Bulletin
☒	FY-Standard Plans (Next Release)

Contact the Roadway Design Office for assistance in completing this form

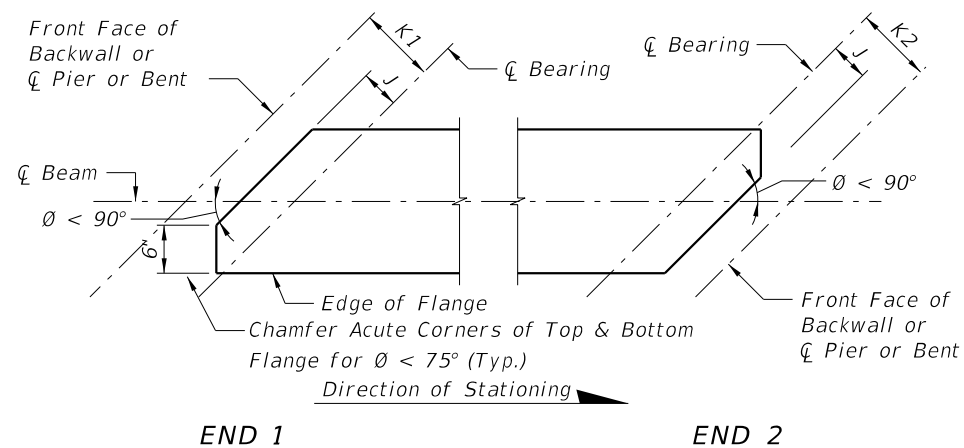
Email to: Rick Jenkins rick.jenkins@dot.state.fl.us and Darren Martin darren.martin@dot.state.fl.us



CASE 1
(Standard Orientation for New Construction)

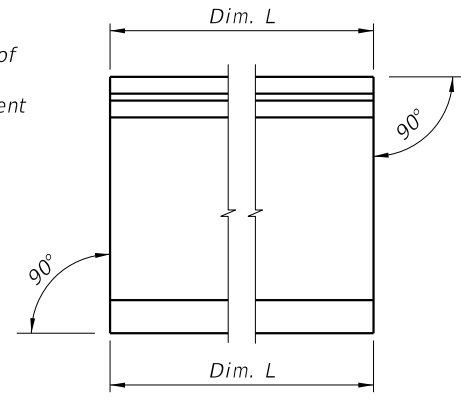


CASE 2
(Special Orientation for Widening)

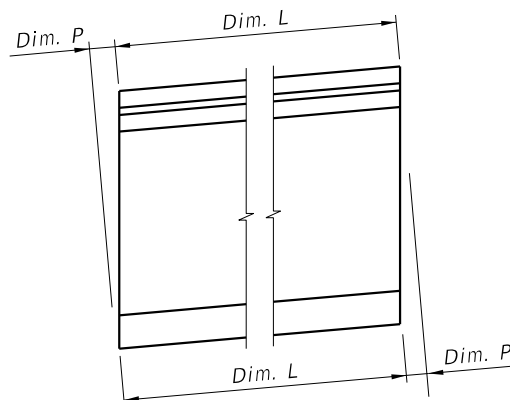


CASE 3
(Special Orientation for Widening)

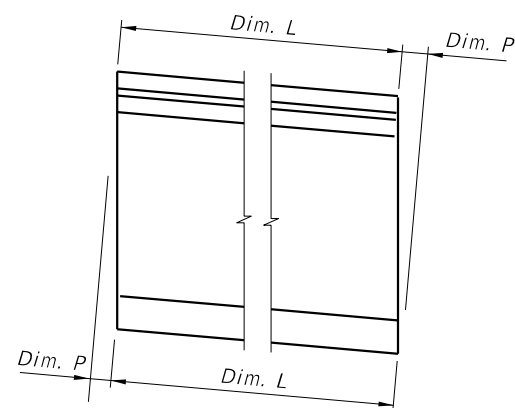
SCHEMATIC PLAN VIEWS AT BEAM ENDS



CONDITION 1
(Dim P = 0.0)



CONDITION 2

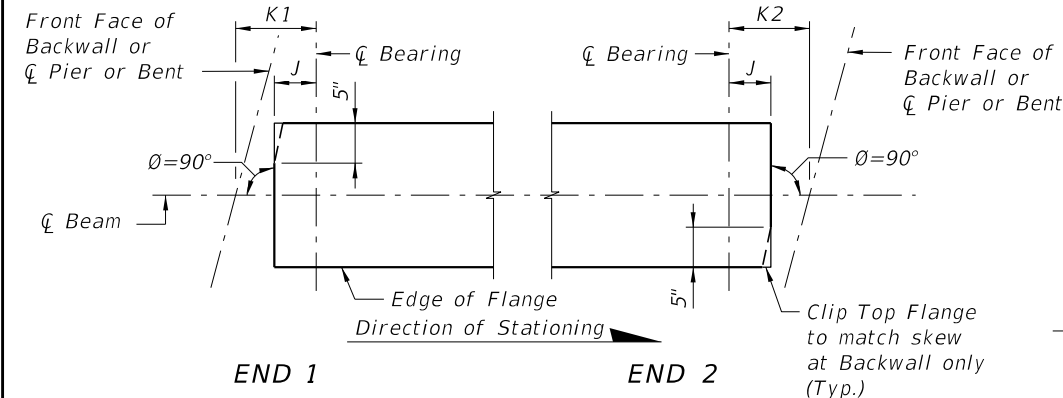


CONDITION 3

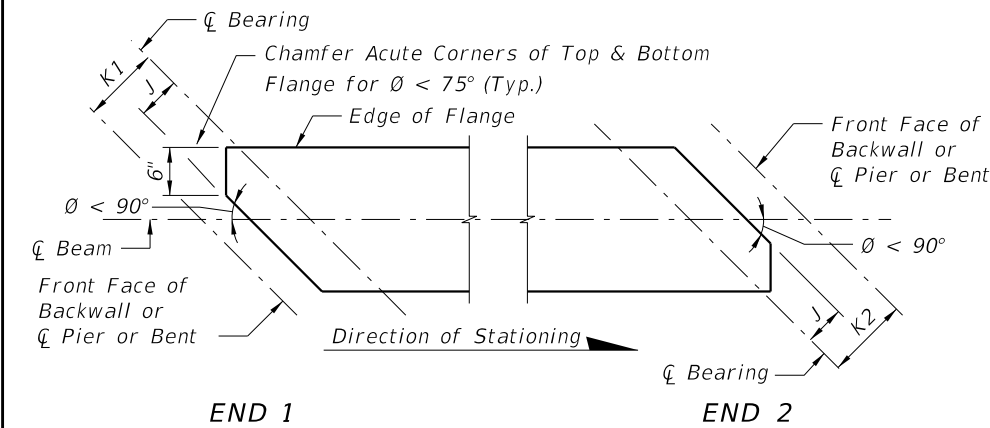
SCHEMATIC END ELEVATIONS OF BEAMS
(Showing Vertical Bevel of Beam End)

BEAM NOTES

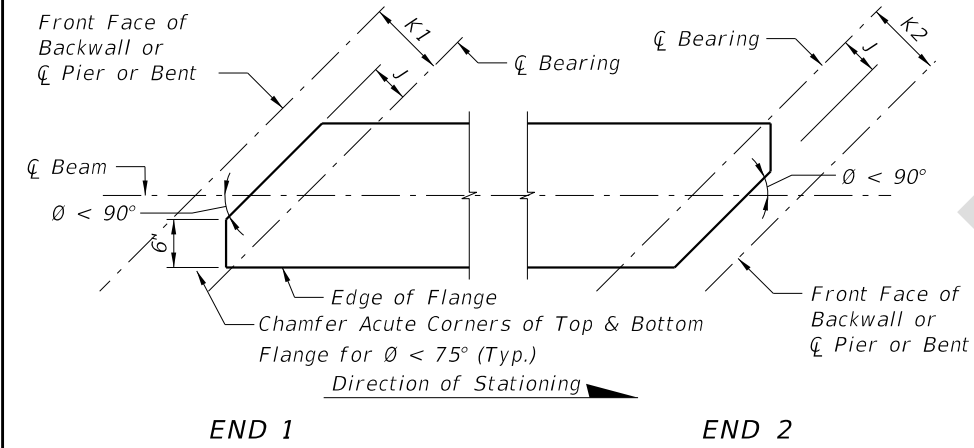
1. Work this Index with the Florida-I Beam Standard Details (Index 450-036 thru 450-096) and the Table of Beam Variables in Structures Plans.
2. All bar bend dimensions are out-to-out.
3. Concrete cover: 2 inches minimum.
4. ~~Strands N: 3/8" minimum, stressed to 10,000 lbs. each.~~ **Stress Strands N to 10 kips**
5. Place one (1) Bar 5K or 5Z at each location. Alternate the direction of the ends for each bar (see "ELEVATION AT END OF BEAM" in Standard Details).
6. Tie Bars 5K and 5Z to the fully bonded strands in the bottom or center row (see "STRAND PATTERN" on the Table of Beam Variables sheet in Structures Plans).
 - A. At the Contractor's option, the length of the bottom legs of Bars 5K and 5Z may be extended to facilitate tying to the exterior strands.
 - B. For deformed WWR, supplemental transverse #4 bars are permitted to support Pieces K & S under the cross wires on the bottom row of strands.
7. Place Bars 3C1, 3D1 and 4M1 in beam END 1, and Bars 3C2, 3D2 and 4M2 in beam END 2. END 1 and END 2 are shown on the Standard Details "ELEVATION".
8. For Beams with vertically beveled end conditions: Place first row of Bars 3C1, 3C2, 3D1, 3D2, 5K, 5Y and 5Z parallel to the end of the beam. Progressively rotate remaining bars within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For deformed WWR, cut top cross wire and rotate bars as required or reduce end cover at top of the beam to 1" minimum.
9. For beams with skewed end conditions:
 - A. Place end reinforcement parallel to the skewed end of the beam. End reinforcement is defined as Bars 3C1, 3C2, 3D1, 3D2, 5K, 4M1, 4M2, 5Y and 5Z placed within the limits of the spacing for Bars 3C in "ELEVATION AT END OF BEAM".
 - B. Beyond the limits of the spacing for Bars 3C, place Bars 3D3, 5K and 4M3 perpendicular to the longitudinal axis of the beam. Fan Bars as needed to avoid overlapping bars at the transition to Bars 3D3 and 4M3, and field cut to maintain minimum cover. Provide additional Bars 4M1, 4M2, 3D1 and 3D2 as required; additional bars are not included in the "BILL OF REINFORCING STEEL". For placement locations see Skewed Beam End Details for Widening Existing Bridges.
 - C. Adjust the dimensions of Bars 3C1, 3C2, 3D1, 3D2, 4M1 and 4M2 as shown on the Bending Diagram.
 - D. WWR is not permitted for end reinforcement Bars 3D1, 3D2, 4M1 and 4M2; use bar reinforcement.
10. Contractor Options:
 - A. Deformed WWR may be used in lieu of Bars 3D, 5K, 4M, and 5Z as shown on the Standard Details; except at skewed ends (see Note 9).
 - B. Bars 3D1, 3D2 and 3D3 may be fabricated as a single bar with a 1'-0" minimum lap splice of the top legs, or the length of the bottom legs may be extended to facilitate tying to the exterior strands.
11. Embedment of Safety Line Anchorage Devices are permitted in the top flange to accommodate fall protection systems. See shop drawings for details and spacing of any required anchorage devices.
12. For beams with ends that will not be permanently encased in concrete diaphragms, cut wedges and recess Prestressing strands at the end of the beam without damaging the surrounding concrete. See "STRAND CUTTING AND PROTECTING DETAIL" on Sheet 2. Protect end of wedged recessed strands in accordance with Specification Section 450.
13. Holes in the beam web for temporary bracing or shipping devices must be formed prior to casting. Fill holes not meeting all the following criteria in accordance with Specification Section 450.
 - A. The superstructure environmental classification is slightly or moderately aggressive
 - B. Clear cover to adjacent steel reinforcing is 1" or greater
 - C. Hole inside diameter is 2" maximum
 - D. Non-metallic, non-water absorbing forming materials such as PVC, may be left in place permanently.



CASE 1
(Standard Orientation for New Construction)

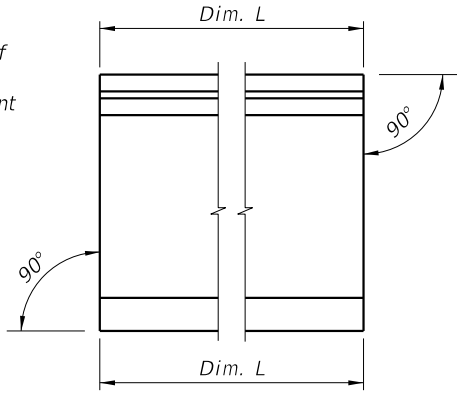


CASE 2
(Special Orientation for Widening)

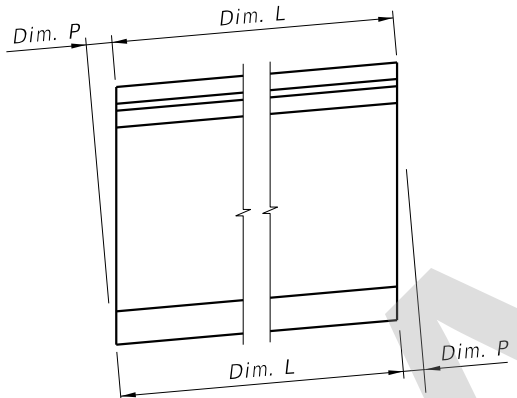


CASE 3
(Special Orientation for Widening)

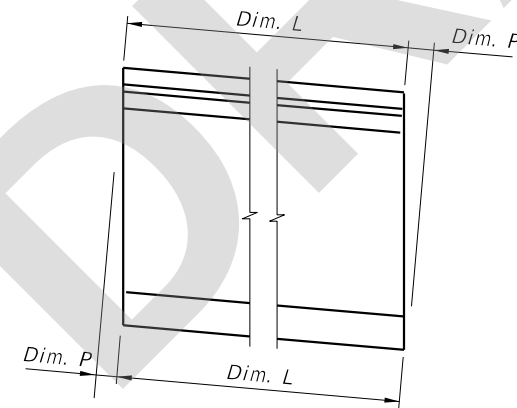
SCHEMATIC PLAN VIEWS AT BEAM ENDS



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CONDITION 2



CONDITION 3

SCHEMATIC END ELEVATIONS OF BEAMS
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BEAM NOTES

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7. Place Bars 3C1, 3D1 and 4M1 in beam END 1, and Bars 3C2, 3D2 and 4M2 in beam END 2. END 1 and END 2 are shown on the Standard Details "ELEVATION".
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SDATES \$
\$TIMES

LAST REVISION		DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	FLORIDA-I BEAM - TYPICAL DETAILS & NOTES	INDEX 450-010	SHEET 1 of 2
11/01/21	REVISION					