
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: May 12, 2022

Originator: Rick Jenkins

Phone: (850) 414-4355

Email: Rick.Jenkins@dot.state.fl.us

Standard Plans:

Index Number: 700-030

Sheet Number (s): 1 of 1

Index Title: Wind and Hanger Beams for Overhead Signs

Summary of the changes:

Added New General Note 1 - "Meet requirements of Specification 700."; Deleted Notes 6 and 7; Renumbered Notes; Updated General Note references in the TYPICAL SIGN FOR OVERHEAD TRUSS details; Changed the tolerance symbol "+/-" for the edge distance of the bottom U-bolt to a "Min."

Commentary / Background:

The 700 Index Series is being edited to remove material information and other information that is located in the Standard Specifications. Revisions are being made to Specification Sections 700, 962 and 965 in conjunction with these changes.

A tolerance of +/- suggests that the 1 1/2" dimension could be less and by some undefined amount. While any additional edge distance would not be structurally significant we wanted to put a lower limit on the edge distance.

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

- | Yes | No | |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual – Dewayne Carver |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Basis of Estimates Manual – Ryan Gray |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Standard Specifications – Daniel Strickland |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – Missy Hollis |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – Jason Russell |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – Deanna Hutchison |

Origination Package Includes: (Submit package to Rick Jenkins)

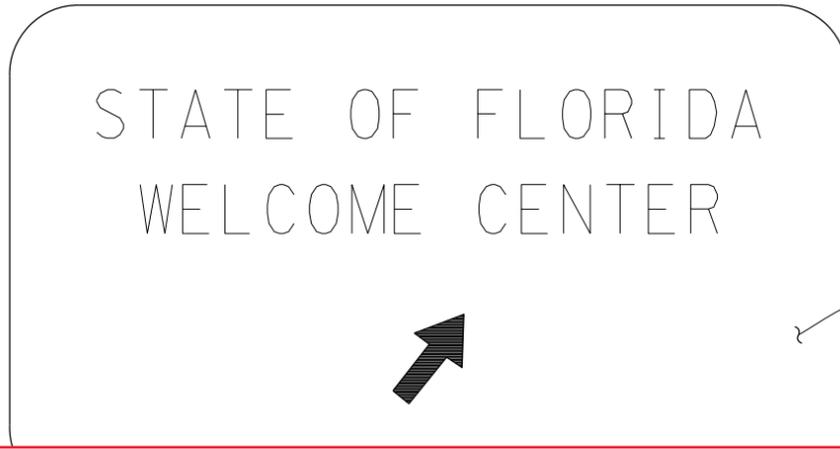
- | Yes | N/A | |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input type="checkbox"/> | Revised or Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/> | <input type="checkbox"/> | Other Support Documents |

Implementation:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> | Design Bulletin (Interim) |
| <input type="checkbox"/> | DCE Memo |
| <input type="checkbox"/> | Program Mgmt. Bulletin |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

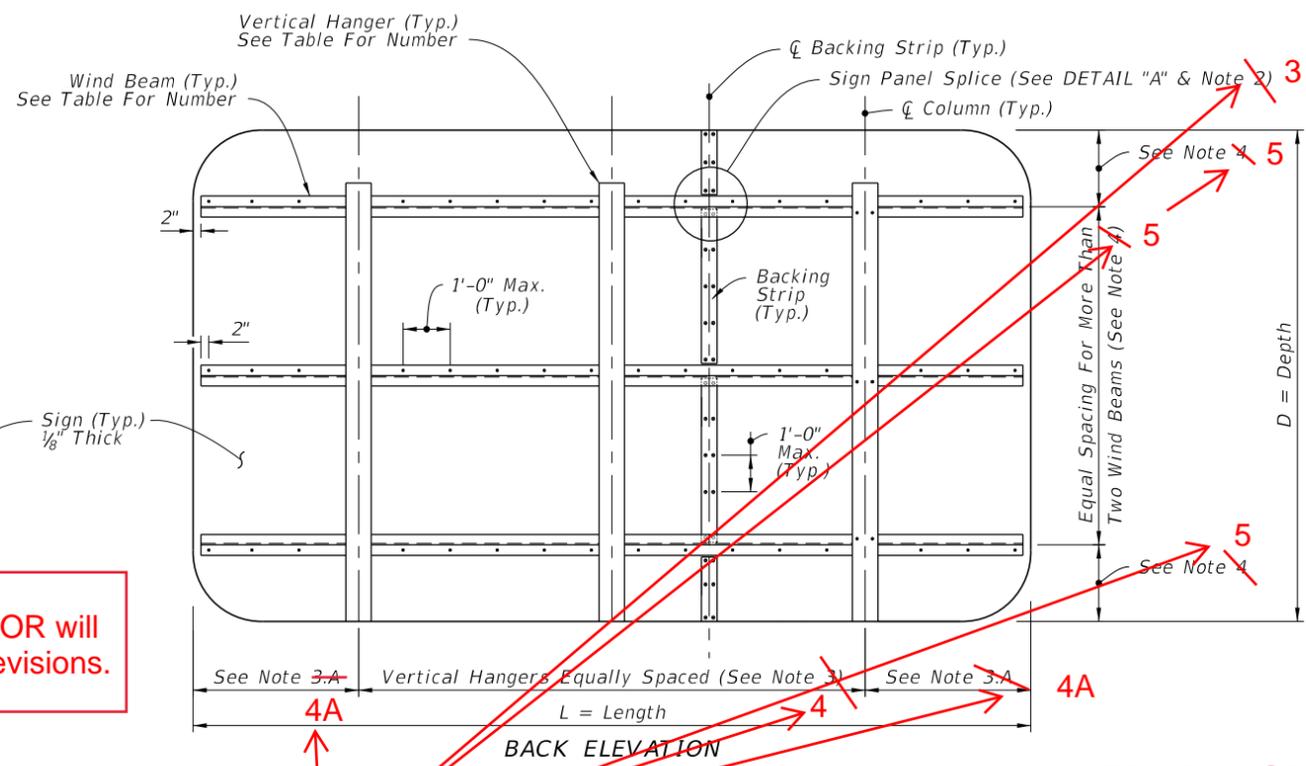
Contact the Roadway Design Office for assistance in completing this form

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

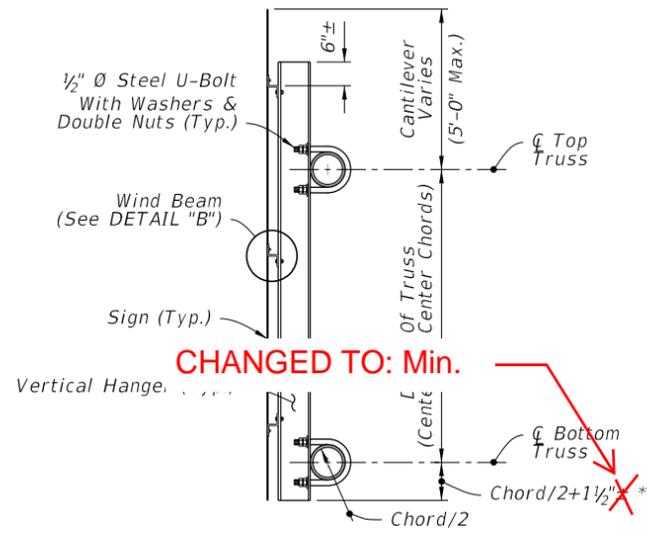


GENERAL COMMENT: Some material information was deleted. Information is either already covered in Standard Specifications OR will be added to Section 700, 962 or 965 in conjunction with these revisions.

FRONT ELEVATION



BACK ELEVATION



SIDE ELEVATION

TYPICAL SIGN FOR OVERHEAD TRUSS

UPDATED: References (See General Note...)

ADDED NEW NOTE 1: Meet the requirements of Specification 700.

WIND BEAM TABLE (Z 3 x 2 1/16 x 2.33)

Number of Horizontal Wind Beams Based on Sign Depth (D)

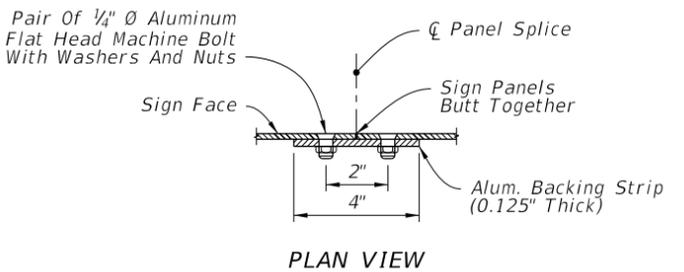
	2 Beams	3 Beams	4 Beams	5 Beams	6 Beams
D ≤ 5'					
5' < D ≤ 9'					
9' < D ≤ 12'					
12' < D ≤ 15'					
15' < D ≤ 18'					

HANGER TABLE (I 6 X 4 x 4.69 or Z 5 x 3 1/4 x 4.01)

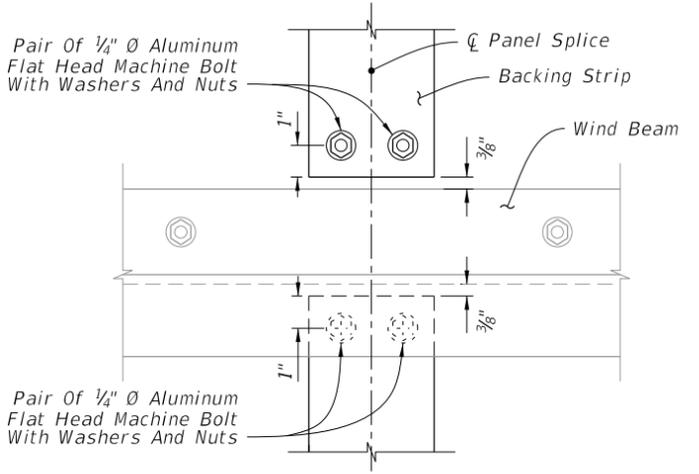
Number of Vertical Hanger Beams Based on Wind Speed and Sign Length (L)

	2 Hangers	3 Hangers	4 Hangers	5 Hangers	6 Hangers
130 mph	L ≤ 20'	20' < L ≤ 30'	30' < L ≤ 40'	40' < L ≤ 50'	--
150 mph	L ≤ 18'	18' < L ≤ 27'	27' < L ≤ 35'	35' < L ≤ 45'	45' < L ≤ 50'
170 mph	L ≤ 15'	15' < L ≤ 20'	20' < L ≤ 28'	28' < L ≤ 35'	35' < L ≤ 43'

NOTE: For Monroe County designs, use 170 mph values but with Z 5 x 3-1/4 x 6.19 vertical hanger beams only.

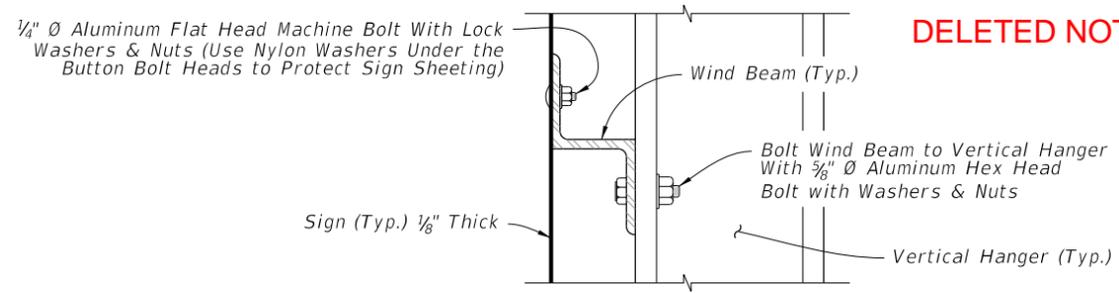


PLAN VIEW



ELEVATION
SIGN PANEL SPLICE

DETAIL "A"

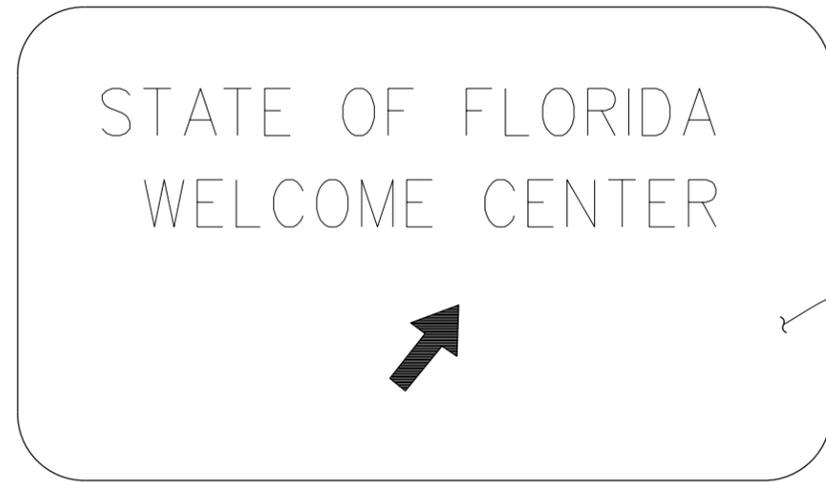


DETAIL "B"

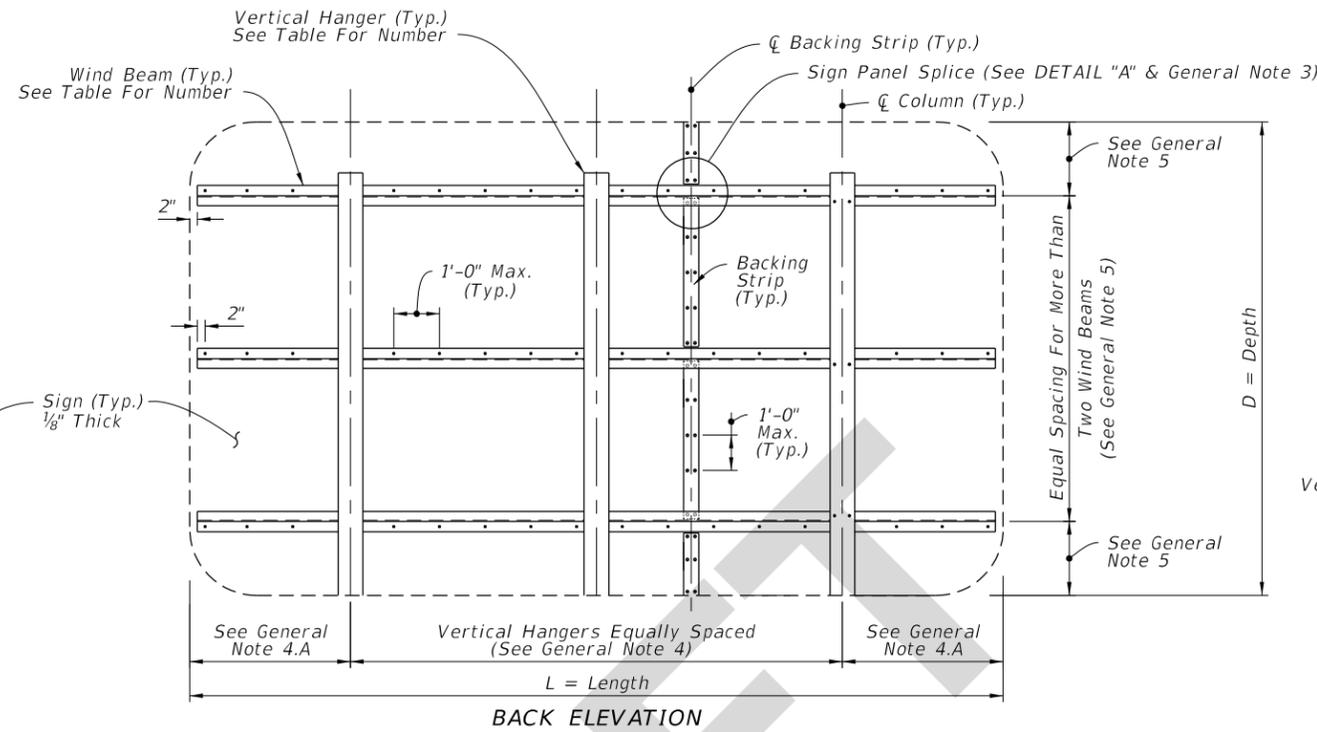
1. GENERAL NOTES
2. Work this Index with Index 700-040 and 700-041.
3. The number and location of the Panel Splices are determined by the Sign Face supplier.
4. Spacing of Vertical Hangers:
 - A. Two Vertical Hanger = 21.0% L
Three Vertical Hanger = 15.0% L
Four Vertical Hanger = 11.0% L
Five Vertical Hanger = 9.0% L
Six Vertical Hanger = 7.0% L
 - B. Spacing of vertical hangers may be varied slightly as necessary to clear the truss struts and diagonals at panel points
5. Spacing of Wind Beams:
 - Two Wind Beams = 21.0% D
Three Wind Beams = 15.0% D
Four Wind Beams = 11.0% D
Five Wind Beams = 9.0% D
Six Wind Beams = 7.0% D
6. Shop Drawings:
 - A. Required for Sign Panels deeper than 10'-0" with a horizontal panel splice.
 - B. Splice must be located in between interior Zee Supports and only allowed on signs greater than 10'-0".
6. Materials:
 - A. Aluminum:
 - a. Bars and Extruded Shapes: ASTM B221, Alloy 6061-T6 or Alloy 6351-T5
 - b. Structural Shapes: ASTM B221, Alloy 6061-T6
 - c. Flat Head and Hex Head Machine Bolts: ASTM F468, Alloy 2024-T4
 - d. Hex Nuts: ASTM F467, Alloy 6061-T6 or Alloy 6262-T9
 - e. Washers: ASTM B221, Alclad 2024-T4
 - B. Steel:
 - a. U-Bolts: ASTM A449 or ASTM A193 B7
 - b. Nuts: ASTM A563, 2 per leg
 - c. Washers: ASTM F436, (Flat Washers)
7. Coatings:
 - A. Aluminum Bolts, Nuts and Washers: Anodic (0.0002 inches min) and chromate sealed.
 - B. Galvanized Steel Bolts, Nuts and Washers: ASTM F2320.
7. Wind Speed by county: see Index 715-010.

DELETED NOTES

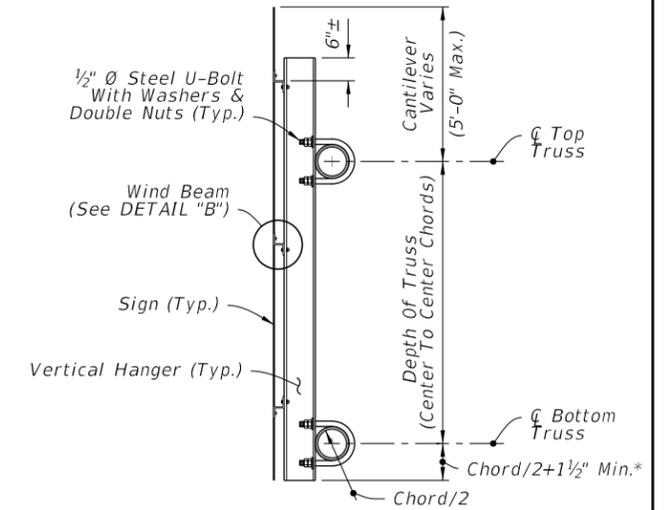
9/22/2021 1:47:04 PM



FRONT ELEVATION



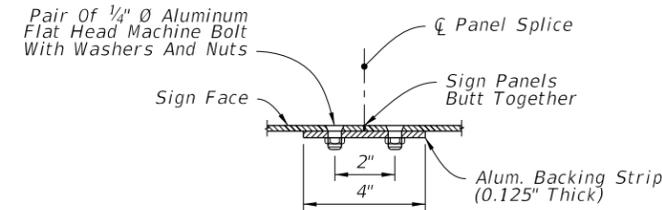
BACK ELEVATION



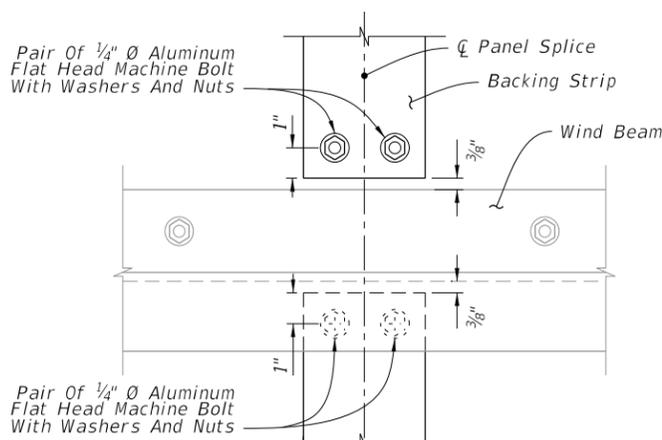
SIDE ELEVATION

*Bottom Justified Shown, Center Justified Similar.

TYPICAL SIGN FOR OVERHEAD TRUSS



PLAN VIEW



ELEVATION

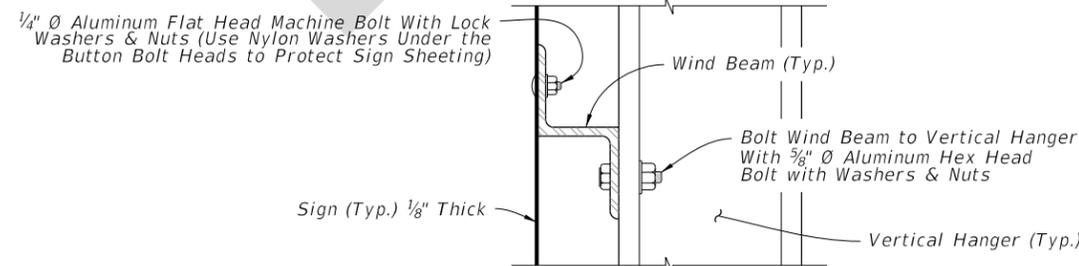
SIGN PANEL SPLICE

DETAIL "A"

WIND BEAM TABLE (Z 3 x 2 1/16 x 2.33)					
Number of Horizontal Wind Beams Based on Sign Depth (D)					
2 Beams	3 Beams	4 Beams	5 Beams	6 Beams	
D ≤ 5'	5' < D ≤ 9'	9' < D ≤ 12'	12' < D ≤ 15'	15' < D ≤ 18'	

HANGER TABLE (I 6 X 4 x 4.69 or Z 5 x 3 1/4 x 4.01)					
Number of Vertical Hanger Beams Based on Wind Speed and Sign Length (L)					
	2 Hangers	3 Hangers	4 Hangers	5 Hangers	6 Hangers
130 mph	L ≤ 20'	20' < L ≤ 30'	30' < L ≤ 40'	40' < L ≤ 50'	--
150 mph	L ≤ 18'	18' < L ≤ 27'	27' < L ≤ 35'	35' < L ≤ 45'	45' < L ≤ 50'
170 mph	L ≤ 15'	15' < L ≤ 20'	20' < L ≤ 28'	28' < L ≤ 35'	35' < L ≤ 43'

NOTE: For Monroe County designs, use 170 mph values but with Z 5 x 3-1/4 x 6.19 vertical hanger beams only.



DETAIL "B"

GENERAL NOTES

- Meet the requirements of Specification 700.
- Work this Index with Index 700-040 and 700-041.
- The number and location of the Panel Splices are determined by the Sign Face supplier.
- Spacing of Vertical Hangers:
 - Two Vertical Hanger = 21.0% L
 - Three Vertical Hanger = 15.0% L
 - Four Vertical Hanger = 11.0% L
 - Five Vertical Hanger = 9.0% L
 - Six Vertical Hanger = 7.0% L
- Spacing of Wind Beams:
 - Two Wind Beams = 21.0% D
 - Three Wind Beams = 15.0% D
 - Four Wind Beams = 11.0% D
 - Five Wind Beams = 9.0% D
 - Six Wind Beams = 7.0% D
- Shop Drawings:
 - Required for Sign Panels deeper than 10'-0" with a horizontal panel splice.
 - Splice must be located in between interior Zee Supports and only allowed on signs greater than 10'-0".
- Wind Speed by county: see Index 715-010.

11.05.40 AM
6/13/2022