


ORIGINATION FORM

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

Contact Information:

Date: July 17, 2018
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Standard Plans:

Index Number: **700-030**
Sheet Number (s): 1
Index Title: Wind & Hanger Beams for Overhead Signs (was Overhead Sign Panels) 

Summary of the changes:

Changed the Title; Separated current table into two tables. Changed Note 8. Deleted Maximum chord spacing from SIDE ELEVATION. Changed % spacing for hangers; Changed to flat washers

Commentary / Background:

Title was changed to better describe what is covered in the Standard. To clarify requirements of wind beams vs hangers table is separated and updated as necessary. Additional hanger requirement was added for 180 mph wind zone.

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – |

Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

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

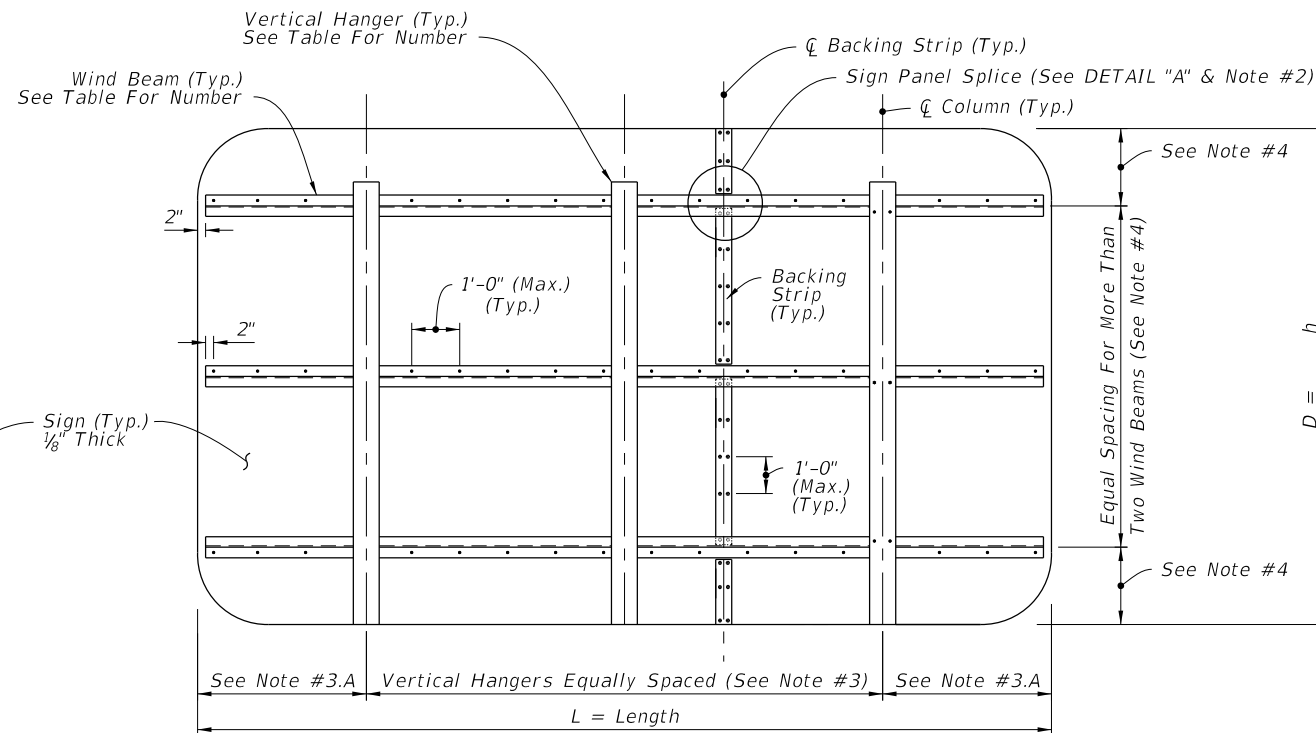
Implementation:

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

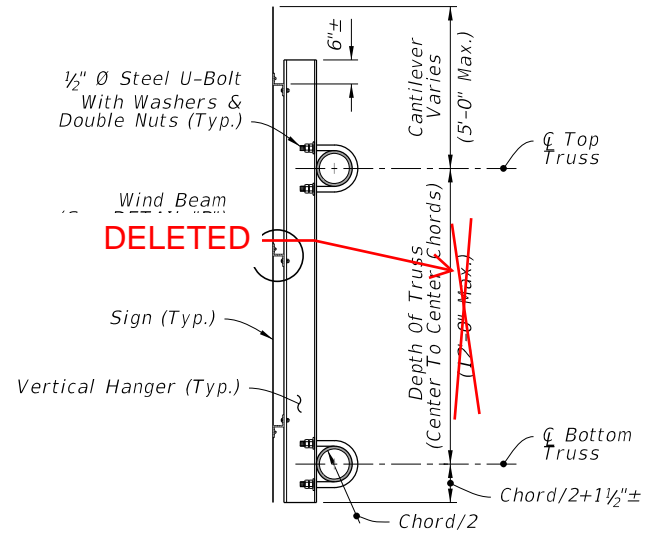
Contact the Roadway Design Office for assistance in completing this form



FRONT ELEVATION

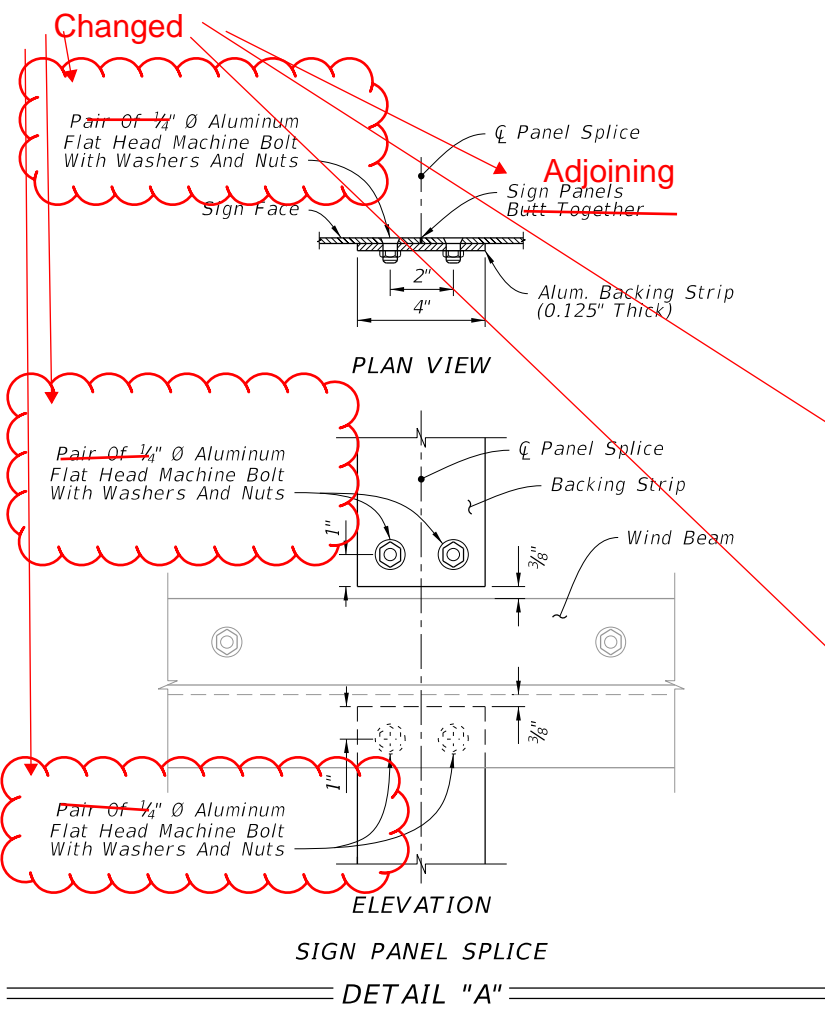


BACK ELEVATION



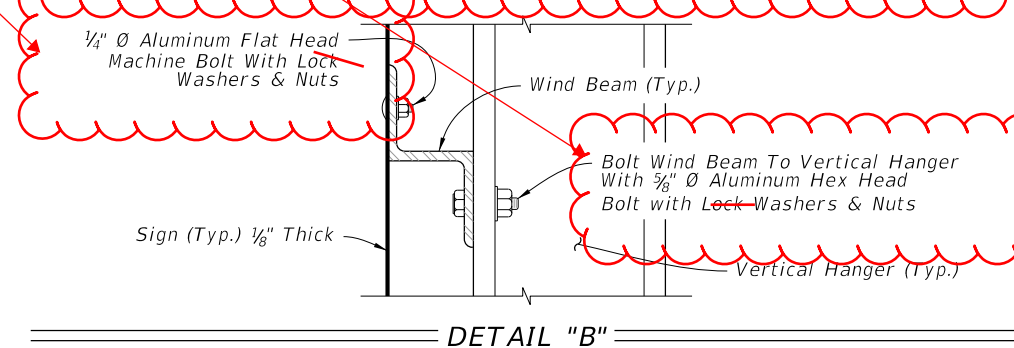
SIDE ELEVATION

TYPICAL SIGN FOR OVERHEAD TRUSS



DETAIL "A"

WIND BEAMS AND VERTICAL HANGERS			Number Of 1 6x4.69 or Z 5x3 1/4 x6.19 Vertical Hanger Beams For Sign Length					
Number Of Z 3x2 1/8 x2.33 Horiz. Wind Beams For Sign Depth And Wind			2 Hangers	3 Hangers	4 Hangers	5 Hangers	6 Hangers	
Wind M.P.H.	No. Beams	Max. Depth	Max Length	Max Length	Max Length	Max Length	Max Length	
170	2	5'	20'	30'	40'	45'	X	
170	3	9'	20'	30'	40'	45'	X	
170	4	12'	15'	22'	30'	38'	45'	
170	5	15'	CHANGED TABLE		38'	45'		
170	6	18'			38'	45'		
150	2	5'	25'	38'	45'	X	X	
150	3	9'	25'	38'	45'	X	X	
150	4	12'	20'	25'	38'	45'	X	
150	5	15'	20'	25'	38'	45'	X	
150	6	18'	20'	25'	38'	45'	X	
130	2	5'	35'	45'	X	X	X	
130	3	9'	35'	45'	X	X	X	
130	4	12'	25'	35'	45'	X	X	
130	5	15'	25'	35'	45'	X	X	
130	6	18'	25'	35'	45'	X	X	



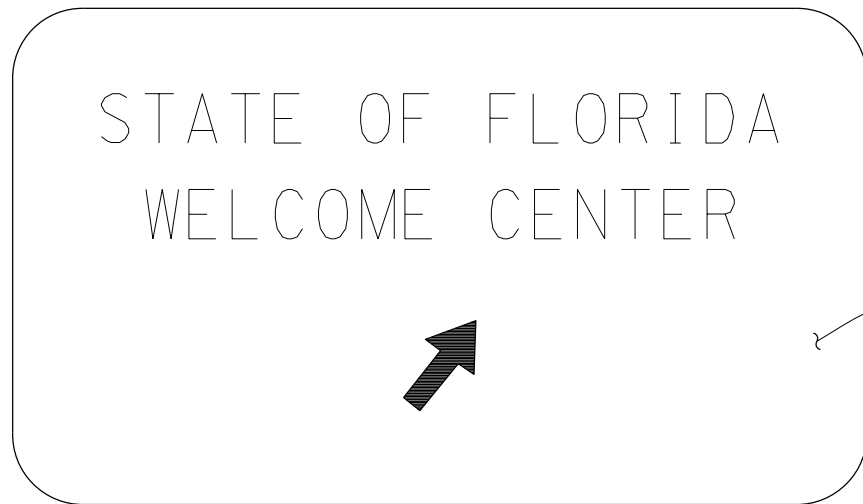
DETAIL "B"

GENERAL NOTES

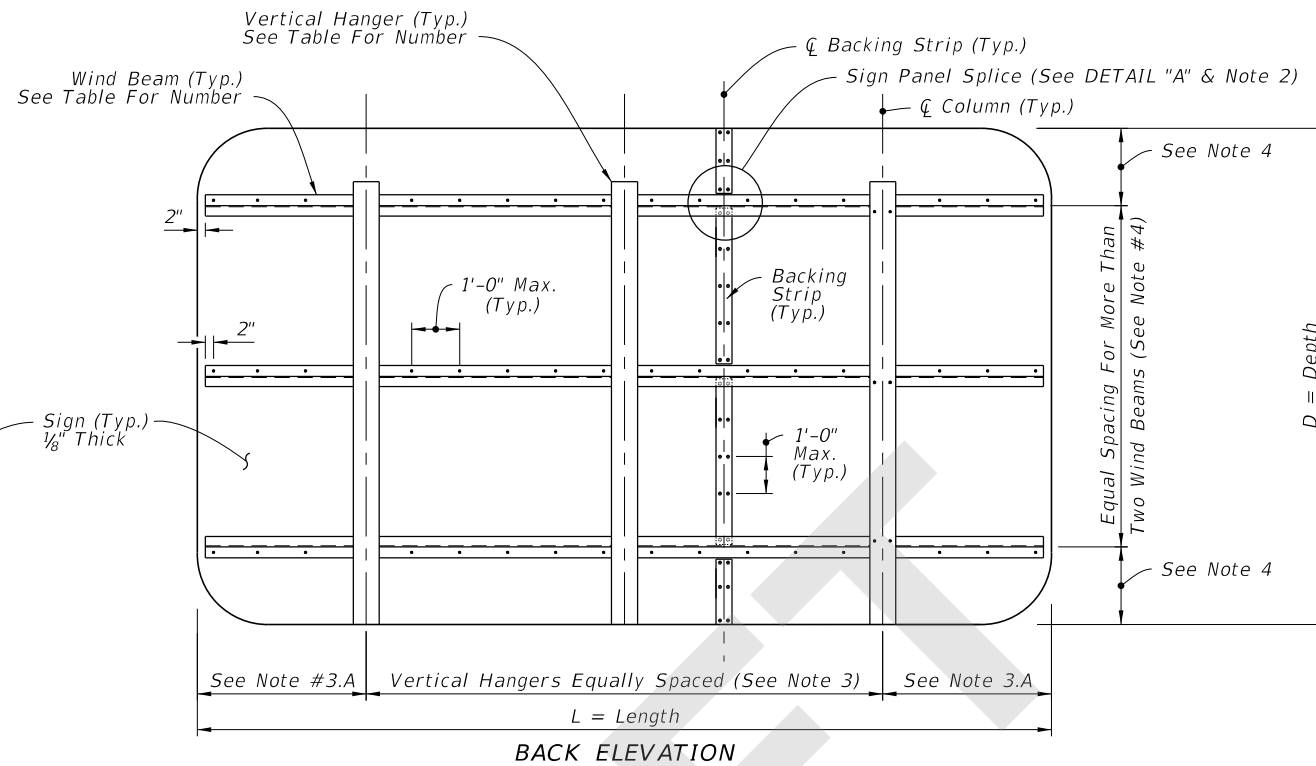
- Work this Index with Index 700-040 and 700-041.
- The number and location of the Panel Splices are determined by the Sign Face supplier.
- Spacing of Vertical Hangers:
 - A. Two Vertical Hanger = 21.0% L **15**
 - Three Vertical Hanger = 14.5% L **11**
 - Four Vertical Hanger = 10.7% L **9**
 - Five Vertical Hanger = 8.5% L **9**
 - Six Vertical Hanger = 7.0% L **9**
- Spacing of Wind Beams:
 - Two Wind Beams = 21.0% D **15**
 - Three Wind Beams = 14.5% D **11**
 - Four Wind Beams = 10.7% D **9**
 - Five Wind Beams = 8.5% D **9**
 - Six Wind Beams = 7.0% D **9**
- 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".
- Materials:
 - A. Aluminum:
 - a. Bars, and Extruded Shapes: ASTM B 221, Alloy 6061-T6 or Alloy 6351-T5
 - b. Structural Shapes: ASTM B308, 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. Lock Washers: ASTM B221, Alclad 2024-T4
 - B. Steel:
 - a. U-Bolts: ASTM A449 or ASTM A193 B7
 - b. Nuts: ASTM F563, 2 per leg
 - c. Washers: ASTM F436, (Flat Washers)
- Coatings:
 - A. Aluminum Bolts, Nuts and Washers: Anodic (0.0002 inches min) and chromate sealed.
 - B. Galvanized Steel Bolts, Nuts and Washers: ASTM F2329
- Wind Speed by county: see Index 715-010.

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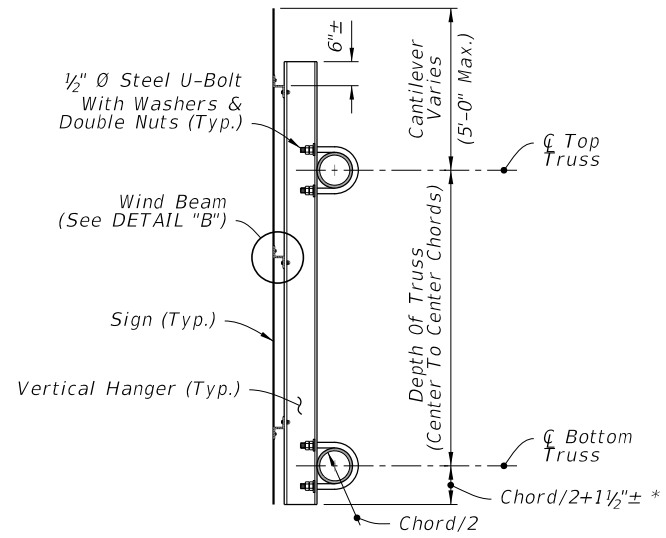
LAST REVISION	DESCRIPTION
11/01/17	11/01/18



FRONT ELEVATION

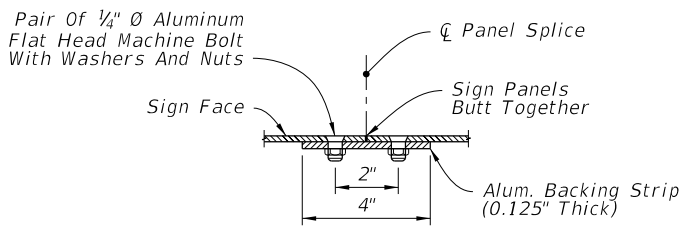


BACK ELEVATION

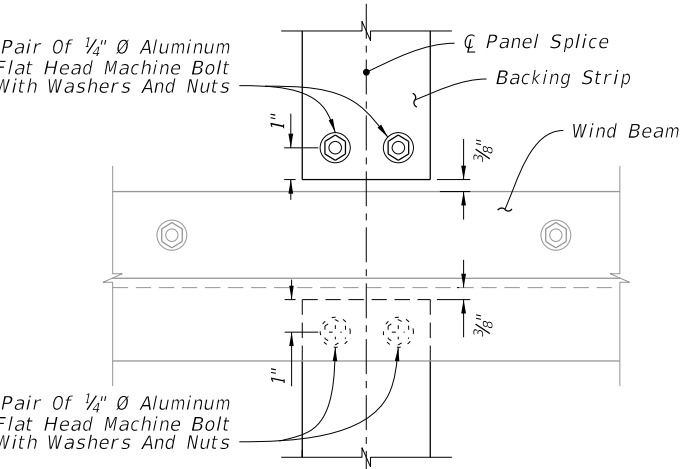


SIDE ELEVATION

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)

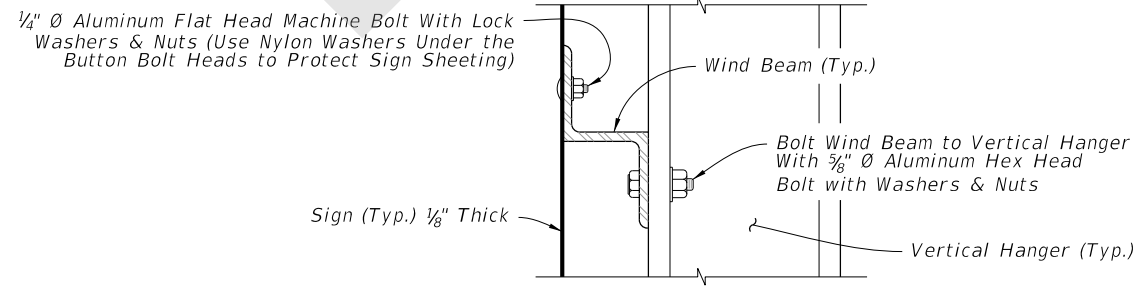
2 Beams	3 Beams	4 Beams	5 Beams	5 Beams
D ≤ 5'	5' < D ≤ 9'	9' < D ≤ 12'	12' < D ≤ 15'	15' < D ≤ 18'

HANGER TABLE (I 6 x 4.69 or Z 5 x 3 1/4 x 6.19)

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

- Work this Index with Index 700-040 and 700-041.
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- 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
- 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:
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 - B. Splice must be located in between interior Zee Supports and only allowed on signs greater than 10'-0".
- Materials:
 - A. Aluminum:
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 - b. Structural Shapes: ASTM B308, 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 F563, 2 per leg
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- Coatings:
 - A. Aluminum Bolts, Nuts and Washers: Anodic (0.0002 inches min) and chromate sealed.
 - B. Galvanized Steel Bolts, Nuts and Washers: ASTM F2329
- Wind Speed by county: see Index 715-010.

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