ORIGINATION FORM -

Proposed Revisions to a Standard Plans Index

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

Contact Information:

Date: May 2, 2023

Originator: Joshua Turley Phone: (850) 414-4475

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

Standard Plans:

Index Number: 700-020 Sheet Number (s): 1, 2, & 3

Index Title: MULTI-COLUMN GROUND SIGN

Summary of the changes:

- Sheet 1: Revised bolts in the Hanger Beams to show correctly.
- Sheet 2: Added Foundation Notes to allow for precast concrete foundation with an octagon shape as a substitute for the circular shaped foundation shown.
- Sheet 3: Revised bolts in the Hanger Beams to show correctly.

Commentary / Background:

Sheets 1 & 3: The bolts were not showing correctly in the elevation details.

Sheet 2: A non-circular, octagon shaft option was requested by industry to simplify formwork. (Revision by Richard Stepp)

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

Yes	No		
\checkmark		Other Standard Plans – 700-030	
	/	FDOT Design Manual –	
	✓	Basis of Estimates Manual –	
	✓	Standard Specifications –	
	/	Approved Product List –	
	✓	Construction –	
	✓	Maintenance –	
<u>Origir</u>	natio	n Package Includes: (Submit package to Rick Jenkins)	Implementation:
Yes	N/A	4	Design Bulletin (Interim)
		Redline Mark-ups	DCE Memo
		Revised or Proposed Standard Plan Instruction (SPI)	Program Mgmt. Bulletin
		Other Support Documents	FY-Standard Plans (Next Release)

Contact the Roadway Design Office for assistance in completing this form

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Proposed Revisions to a Standard Plans Index

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

Contact Information:

Date: June 29, 2023 Originator: Dana Knox

Phone: (850) 410-5413

Email: Dana.Knox@dot.state.fl.us

Summary of the changes:

Standard Plans:

Index Number: 700-020 Sheet Number (s): 1 and 3

Index Title: Multi-Column Ground Sign

On both sheets changed all reference of length to width and all reference to depth to height.

Commentary / Background:

The change is to be consistent with how the MUTCD dimensions signs. Section 700 and 995 will also need to be updated to be consistent with MUTCD.

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

Yes No

☐ ✓ Other Standard Plans —

☐ FDOT Design Manual —

☐ Basis of Estimates Manual —

☐ Standard Specifications — Daniel Strickland

☐ Approved Product List —

☐ Construction —

☐ Maintenance —

Origination Package Includes: (Submit package to Rick Jenkins)

Yes N/A

✓ Redline Mark-ups

☐ Revised or Proposed Standard Plan Instruction (SPI)

☐ Other Support Documents

Implementation:

☐ Design Bulletin (Interim)
☐ DCE Memo

Program Mgmt. Bulletin

✓ FY-Standard Plans (Next Release)

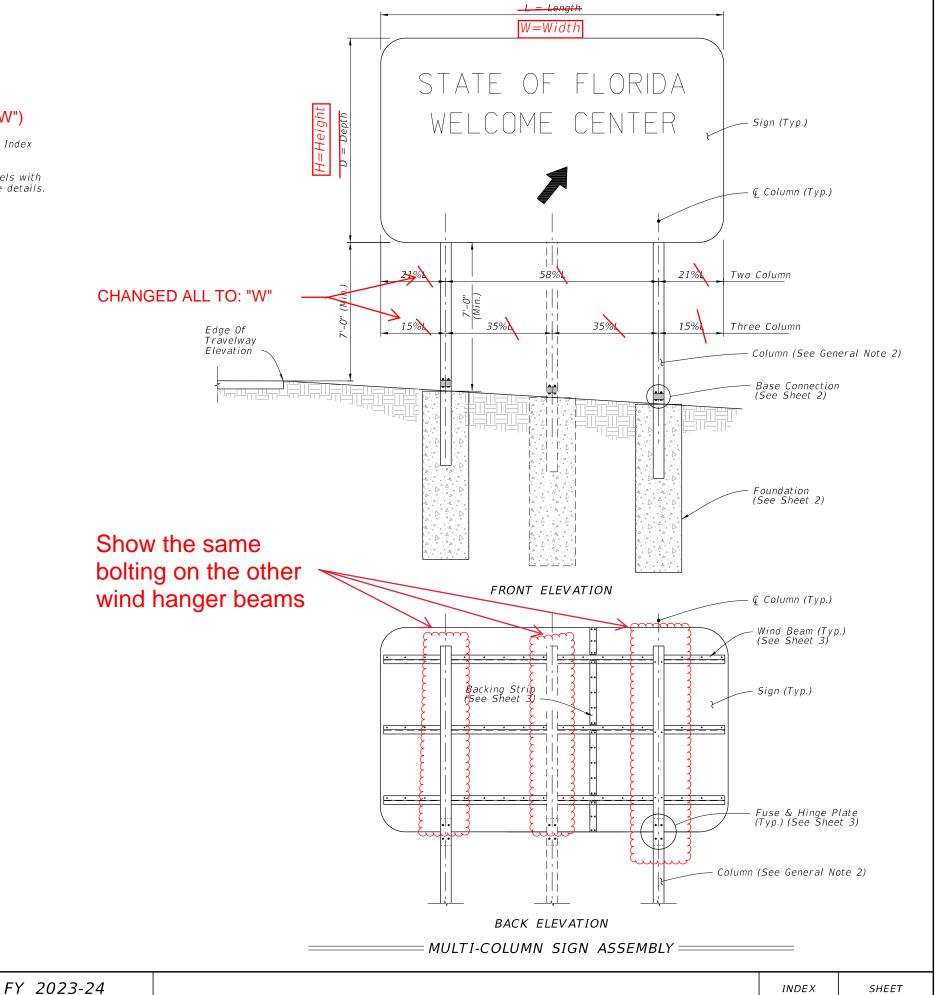
Contact the Roadway Design Office for assistance in completing this form

GENERAL NOTES:

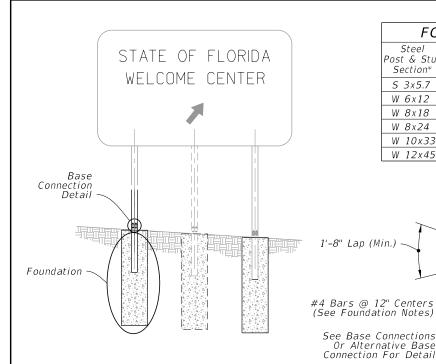
- 1. Meet the requirements of Specification 700.
- 2. Verify Column lengths in the field prior to fabrication.
- 3. Shop drawings:

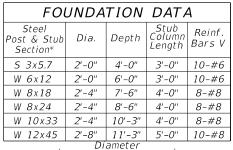
- CHANGED TO: width ("W")
- A. Sign Support Shop drawings are not required when fabricated in accordance with this Index and support columns do not exceed the length shown in the plans by more than 2'-0".
- B. Sign Panels: Horizontal panel splices are allowed at interior wind beams for sign panels with a depth ("D") greater than 10 feet. Shop drawings required for horizontal panel splice details.
- height ("H")
 C. When sing urawings are required, obtain approval prior to fabrication.

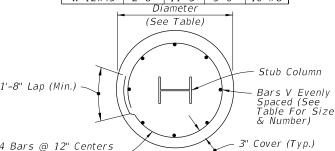
CHANGE TO: height ("H")











#4 Bars @ 12" Centers (See Foundation Notes)

== MULTI-COLUMN SIGN ASSEMBLY ===

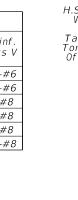
FOUNDATION NOTES:

The Contractor may use Welded Wire Reinforcement (WWR) for foundation reinforcing.

At the Contractors option, the #4 tie bars at 12" o.c. may be replaced by D10 Spiral Wire @ 6" pitch, with three flat turns at the top and one flat turn at the bottom in accordance with Specification 415.

BASE CONNECTION NOTES:

- 1. Assembly of Base Instructions:
- A. Place one washer on each Base Bolt between the Bottom Base Plate and the head of high strength Base Bolt; place the next washer between the Bottom Base Plate and the Bolt Keeper Plate; add the Top Base Plate section and place the third washer between the Top Base Plate and the Nut
- B. Shim as required to plumb column. Provide 2-0.0149" thick (28 gauge) and 2-0.0329" thick (21 gauge) shims per column.
- 2. H.S. Base Bolt L Tightening Instructions:
- A. Tighten Base Bolts to the maximum possible with a 12" to 15" wrench (this will bed the washers and shims and clear the bolt threads).
- B. Loosen each Base Bolt one turn.
- C. Under the supervision of the Engineer, use a calibrated wrench to tighten bolts to the torque prescribed in the Table. Over tightened Base Bolts will not be permitted.
- D. Burr threads at junction with nut to prevent nut loosening. Treat damaged galvanizing.
- 3. Assemble Post to Stub with Base Bolts and three flat washers per bolt (See Base Connection Details). Tighten Base Bolts in accordance with Instructions with
- 4. Weld Base Plate to Post & Stub or if using the Alternate Connection Detail weld Base Plate and Stiffeners to Post
- 5. Orient Stub Post according to direction of traffic.



H.S. Base Bolt With 3

Washers & Hex Nut

Table for Bolt Dia. &

Torque See Assembly

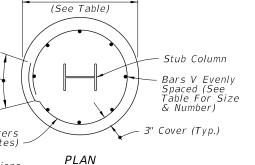
Remove All

Galvanizing Runs Or Beads

In Washer Area

Of Base Instructions.

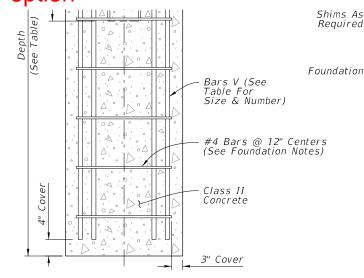
on Each Bolt. See

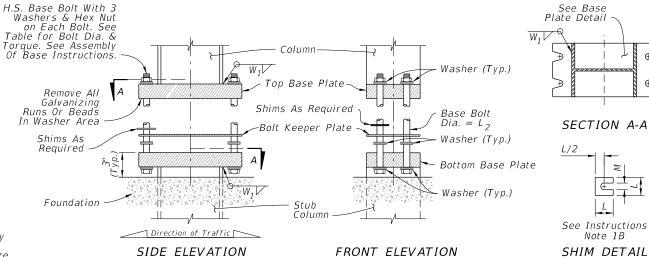


Or Alternative Base - Ç Of Foundation & Stub Column

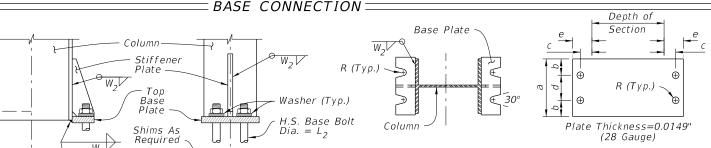
Revised note to add precast foundation option

Added note to explain the precast octagon shape option





		BASE CONNECTION DATA										
Steel Post & Stub Section*	А	В	С	D	R	t ₁	L ₂	W ₁	Torque (Ibf*in)	L	М	
S 3x5.7	4"	7"	3/4"	2"	5/16"	1"	1/2"	1/4"	90 ± 20	1-1/4"	9/16"	
W 6x12	4"	10"	3/4"	2"	3/8"	1-5/8"	5/8"	1/4"	270 ± 45	1-3/8"	11/16"	
W 8x18	5-1/4"	12-1/2"	7/8"	2-3/4"	7/16"	1-3/4"	3/4"	3/8"	445 ± 75	1-3/4"	13/16"	
W 8x24	6-1/2"	12-1/2"	7/8"	3-1/4"	7/16"	1-3/4"	3/4"	3/8"	445 ± 75	2-1/8"	13/16"	
W 10x33	8"	16"	1-1/4"	4-3/4"	9/16"	2"	1"	1/2"	580 ± 90	2-3/8"	1-1/16"	
W 12x45	10"	18"	1-1/4"	6"	9/16"	2"	1"	1/2"	580 ± 90	2-3/4"	1-1/16"	
* Designati	ions: (N	ominal D	epth in	inches)	x (weig	nht in po	ounds pe	er linear	foot).			



- Washer (Typ.)

Washer (Typ.)

- Bottom Base Plate

SECTION B-B

BOLT KEEPER PLATE DETAIL

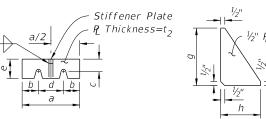
STIFFENER PLATE DETAIL

Plate Thickness=0.0149" (28 Gauge)

BOLT KEEPER PLATE DETAIL

BASE PLATE DETAIL

P_Thickness=t1



FRONT ELEVATION

Keeper Plate

→ Direction of Traffic

SIDE ELEVATION

ALTERNATIVE BASE CONNECTION DATA

BASE PLATE DETAIL

	THE BUSE CONVECTION BUTTON											
Steel Section*	а	b	С	d	е	t ₂	L ₂	R	Torque (lbf*in)	g	h	W ₂
W 6x12	4-3/4"	1-1/8"	1-3/16"	2-1/2"	2"	1/2"	5/8"	3/8"	270±45	5-1/8"	2"	1/4"
W 8x18	5-3/4"	1-1/2"	1-3/8"	2-3/4"	2-3/16"	5/8"	3/4"	7/16"	445±75	6-1/4"	2-3/16"	1/4"
W 8x24	7"	1-3/4"	1-3/8"	3-1/2"	2-3/8"	3/4"	3/4"	7/16"	445±75	8"	2-3/8"	5/16"
W 10x33	8"	2"	1-9/16"	4"	2-3/4"	3/4"	1"	9/16"	580±90	8"	2-3/4"	5/16"
W 12x45	8"	2"	1-9/16"	4"	3"	3/4"	1"	9/16"	580+90	8"	3"	5/16"

st Designations: (Nominal Depth in inches) x (weight in pounds per linear foot).

ALTERNATIVE BASE CONNECTION =

FOUNDATION AND BASE CONNECTION DETAILS

DESCRIPTION: REVISION 11/01/2



ELEVATION

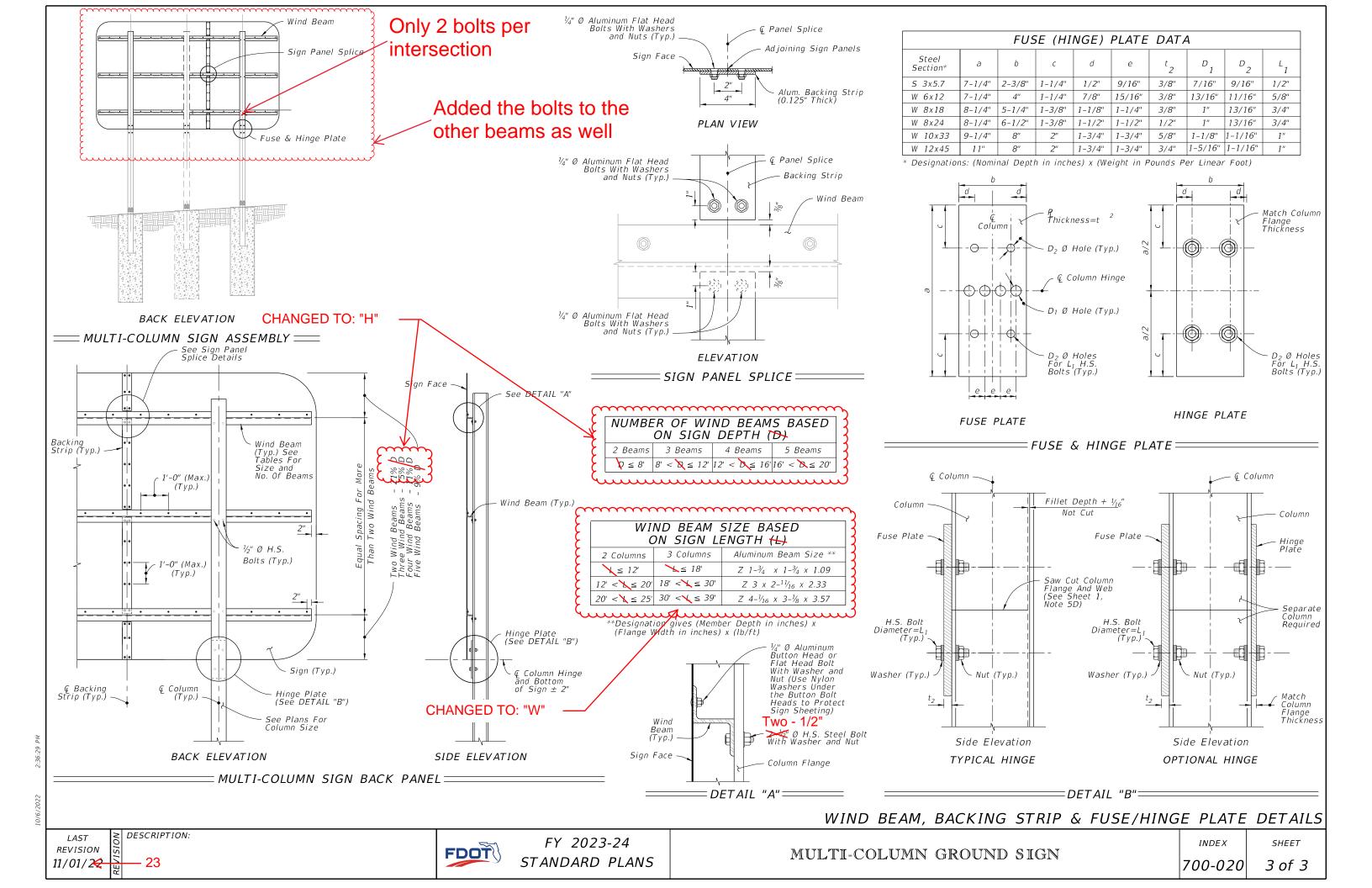
FOUNDATION =

FY 2023-24 STANDARD PLANS

MULTI-COLUMN GROUND SIGN

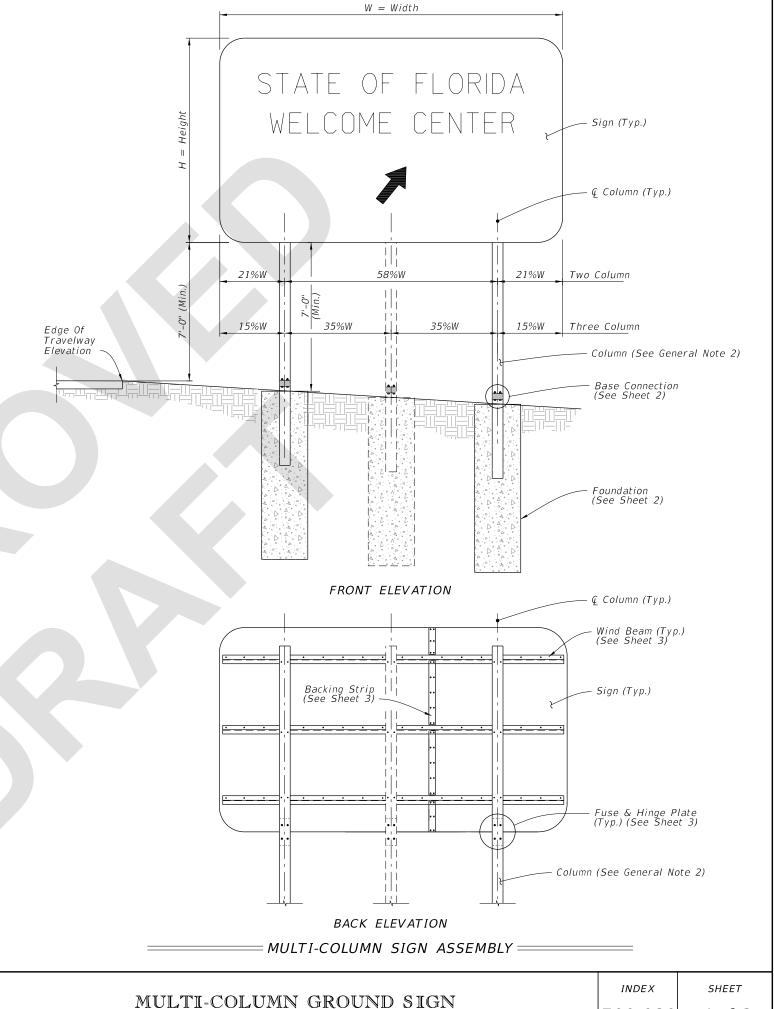
INDEX

SHEET 2 of 3



GENERAL NOTES:

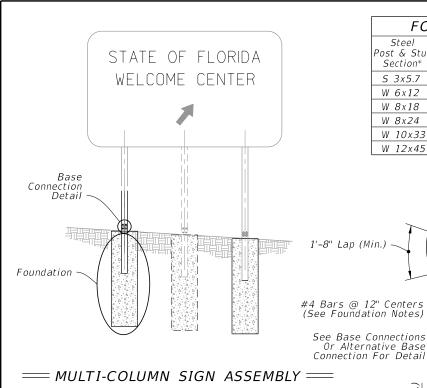
- 1. Meet the requirements of Specification 700.
- 2. Verify Column lengths in the field prior to fabrication.
- 3. Shop drawings:
- A. Sign Support Shop drawings are not required when fabricated in accordance with this Index and support columns do not exceed the width ("W") shown in the plans by more than 2'-0".
- B. Sign Panels: Horizontal panel splices are allowed at interior wind beams for sign panels with a height ("H") greater than 10 feet. Shop drawings required for horizontal panel splice details.
- C. When shop drawings are required, obtain approval prior to fabrication.



REVISION 11/01/23

DESCRIPTION:

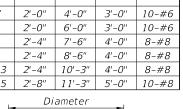
FDOT



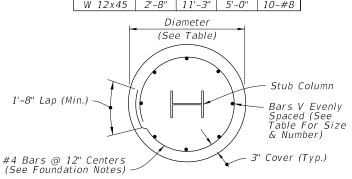
FOUNDATION DATA										
Steel Post & Stub Section*	Dia.	Depth	Stub Column Length	Reinf. Bars V						
S 3x5.7	2'-0"	4'-0"	3'-0"	10-#6						
W 6x12	2'-0"	6'-0"	3'-0"	10-#6						
W 8x18	2'-4"	7'-6"	4'-0''	8-#8						
W 8x24	2'-4"	8'-6"	4'-0''	8-#8						
W 10x33	2'-4"	10'-3"	4'-0''	8-#8						
W 12x45	2'-8"	11'-3"	5'-0"	10-#8						

PLAN

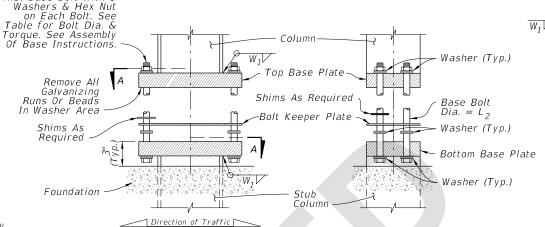
Connection For Detail



H.S. Base Bolt With 3



- Ç Of Foundation & Stub Column



SIDE ELEVATION

Steel

Post & Stul

Section*

S 3x5.7

W 6x12

W 8x18

W 8x24

W 10x33

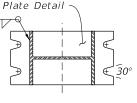
W 12x45

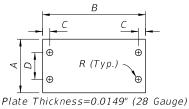
8"

10"

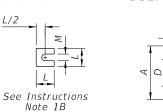
18"

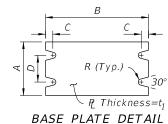
|1-1/4''|





SECTION A-A BOLT KEEPER PLATE DETAIL





SHIM DETAIL

 $|580 \pm 90| 2-3/4" |1-1/16"$

BASE CONNECTION DATA SHIM Torque Μ R (lbf*in) 90 ± 20 3/4" 5/16" 1/2" 1/4" -1/4" 9/16" 10" 3/4" 3/8" 1-5/8" 5/8" 1/4" 270 ± 45 1-3/8" | 11/16' 5-1/4" | 12-1/2" 7/8" 2-3/4" 7/16" 1-3/4" 3/4" 3/8" 445 ± 75 1-3/4" | 13/16' 6-1/2" | 12-1/2" 7/8" 3-1/4" 7/16" 1-3/4" 3/4" 3/8" 445 ± 75 2-1/8" | 13/16' 16" 1-1/4" 4-3/4" 9/16" 1/2" 580 ± 90 2-3/8" 1-1/16'

1/2"

6" st Designations: (Nominal Depth in inches) x (weight in pounds per linear foot).

9/16"

FRONT ELEVATION

FOUNDATION NOTES:

The foundation may be either precast or cast-in-place. Use Reinforcing bars or equivalent Welded Wire Reinforcement.

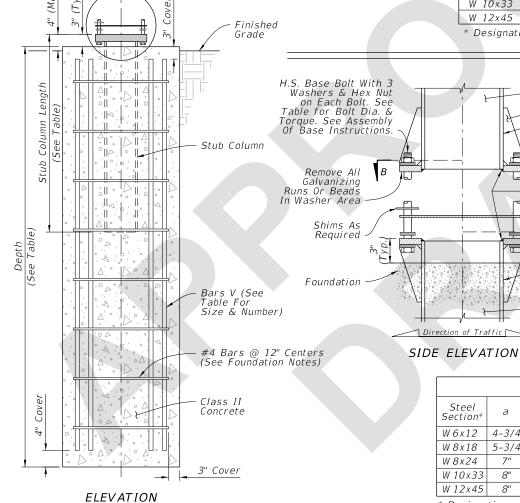
At the Contractor's option, the #4 tie bars at 12" o.c. may be replaced by D10 Spiral Wire @ 6" pitch, with three flat turns at the top and one flat turn at the bottom in accordance with Specification 415.

For precast foundations, the circular cross section shown may be substituted with an octagon shape. The out-to-out distance between parallel edges must be greater than or equal to the diameter in the Foundation Data table. Use the same reinforcing diameter with centered placement and a minimum 3" cover.

BASE CONNECTION NOTES:

- 1. Assembly of Base Instructions.
- A. Place one washer on each Base Bolt between the Bottom Base Plate and the head of high strength Base Bolt; place the next washer between the Bottom Base Plate and the Bolt Keeper Plate; add the Top Base Plate section and place the third washer between the Top Base
- B. Shim as required to plumb column. Provide 2-0.0149" thick (28 gauge) and 2-0.0329" thick (21 gauge) shims
- 2. H.S. Base Bolt L Tightening Instructions:
- A. Tighten Base Bolts to the maximum possible with a 12" to 15" wrench (this will bed the washers and shims and clear the bolt threads).
- B. Loosen each Base Bolt one turn
- C. Under the supervision of the Engineer, use a calibrated wrench to tighten bolts to the torque prescribed in the Table. Over tightened Base Bolts will not be permitted.
- D. Burr threads at junction with nut to prevent nut loosening. Treat damaged galvanizing.
- 3. Assemble Post to Stub with Base Bolts and three flat washers per bolt (See Base Connection Details). Tighten Base Bolts in accordance with Instructions with
- 4. Weld Base Plate to Post & Stub or if using the Alternate Connection Detail weld Base Plate and Stiffeners to Post
- 5. Orient Stub Post according to direction of traffic.

DESCRIPTION:



BASE CONNECTION = Depth of Base Plate Section Wal Stiffener R (Tvp. Wal R(Typ.)Bas'e Plate · Washer (Typ.) H.S. Base Bolt Plate Thickness=0.0149" Shims As $Dia. = L_2$ (28 Gauge) Required SECTION B-B BOLT KEEPER PLATE DETAIL Keeper Plate - Washer (Typ.) Stiffener Plate Bottom Base Plate - PL Thickness=t₇ Washer (Typ.) → Direction of Traffic
→

	ALTERNATIVE BASE CONNECTION DATA											
Steel Section*	а	b	С	d	е	t ₂	L ₂	R	Torque (Ibf*in)	g	h	W_2
W 6x12	4-3/4"	1-1/8"	1-3/16"	2-1/2"	2"	1/2"	5/8"	3/8"	270±45	5-1/8"	2"	1/4"
W 8x18	5-3/4"	1-1/2"	1-3/8"	2-3/4"	2-3/16"	5/8"	3/4"	7/16"	445±75	6-1/4"	2-3/16"	1/4"
W 8x24	7"	1-3/4"	1-3/8"	3-1/2"	2-3/8"	3/4"	3/4"	7/16"	445±75	8"	2-3/8"	5/16"
W 10x33	8"	2"	1-9/16"	4"	2-3/4"	3/4"	1"	9/16"	580±90	8"	2-3/4"	5/16"
W 12x45	8"	2"	1-9/16"	4"	3"	3/4"	1"	9/16"	580±90	8"	3"	5/16"

^{*} Designations: (Nominal Depth in inches) x (weight in pounds per linear foot).

FRONT ELEVATION

ALTERNATIVE BASE CONNECTION =

FOUNDATION AND BASE CONNECTION DETAILS

BASE PLATE DETAIL

REVISION 11/01/23

FDOT

FOUNDATION =

STIFFENER PLATE DETAIL

