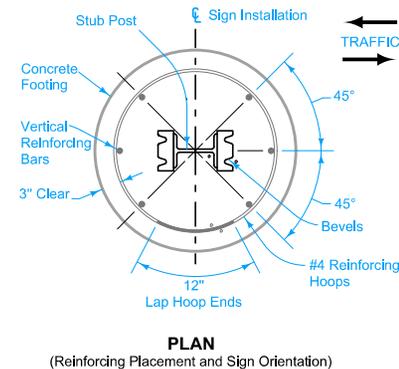


POST DATA	
Post Size	Stub Post Length
W 6 x 9	2'-6"
W 6 x 12	
W 6 x 15	
W 8 x 18	
W 8 x 21	3'-0"
W 10 x 22	
W 10 x 26	
W 12 x 26	

ALTERNATE DESIGN FOOTING IN SOLID ROCK ③



Plumb signpost by installing brass stock or strip shims complying with ASTM B36. Furnish two shims each of 0.012" and 0.032" thickness (total of 4 per post).

Construct the footing as shown for normal footing in earth. Where solid rock is encountered, the alternate design for footing in solid rock may be used with the approval of the Engineer.

Dispose of all excavation for the footing in the area adjacent to the footing and shape to normal ground contour, unless directed otherwise by the Engineer.

Hold the stub post in proper position by an approved device to ensure that it remains in proper position upon completion of concrete placement.

The contract price for size of footing required is full compensation for footing as detailed hereon, including all necessary excavation regardless of character.

- ① Not for single post installations.
- ② Lengths are for normal footings. Required length may vary where alternate rock design is used.
- ③ Set vertical bars in solid rock as follows:
 1. Drill holes twice bar diameter and fill with water.
 2. When hole is fully saturated, blow water out and fill two-thirds depth with sand cement mortar.
 3. Insert bar and consolidate mortar.
 4. Fill hole to top with mortar.

Possible Contract Item:
Concrete Footing for Breakaway Sign Post
Steel Breakaway Sign Post for Type A or B Signs

FOOTING REINFORCING DATA					
Post Size	Stub Length	Footing		Vertical Rein. Bar	
		Diameter	Depth	Size	Length ②
W6x9	2'-6"	2'-0"	6'-0"	No. 6	5'-8"
W6x12	2'-6"	2'-0"	6'-0"	No. 6	5'-8"
W6x15	2'-6"	2'-0"	6'-6"	No. 6	6'-2"
W8x18	2'-6"	2'-0"	7'-0"	No. 6	6'-8"
W8x21	3'-0"	2'-8"	7'-6"	No. 8	7'-2"
W10x22	3'-0"	2'-8"	8'-0"	No. 8	7'-8"
W10x26	3'-0"	2'-8"	8'-6"	No. 8	8'-2"
W12x26	3'-0"	2'-8"	9'-0"	No. 8	8'-8"

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STANDARD ROAD PLAN

REVISIONS: Updated welds. Modified notes. Rearranged drawings.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

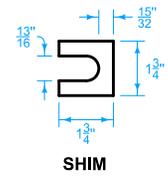
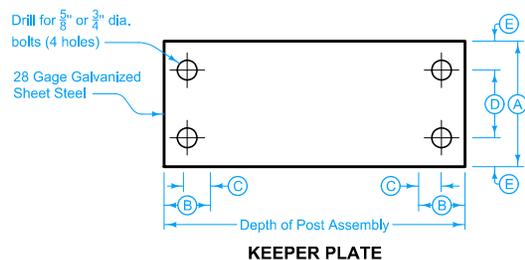
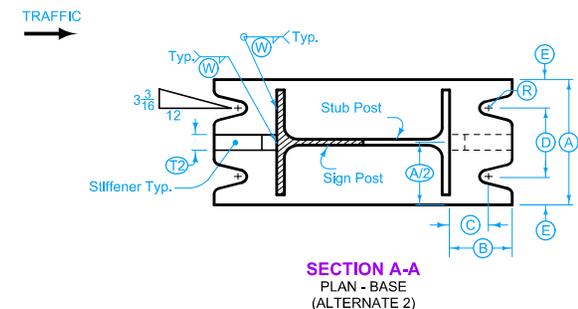
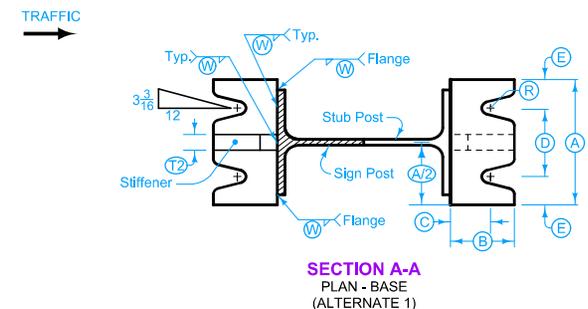
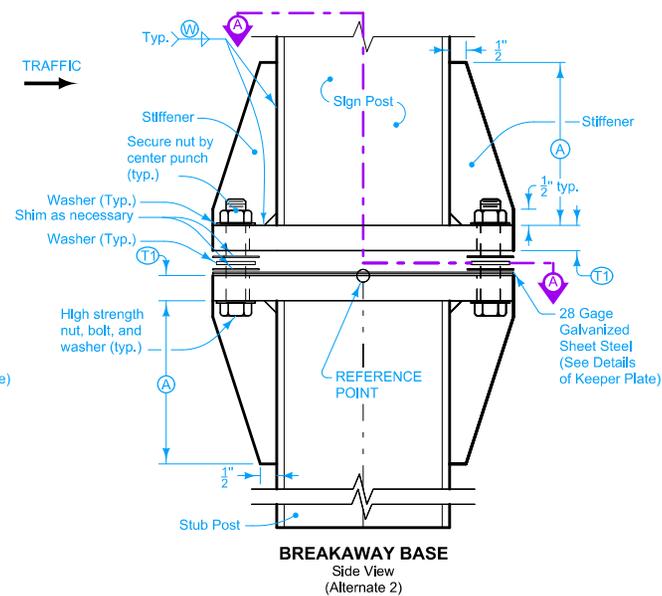
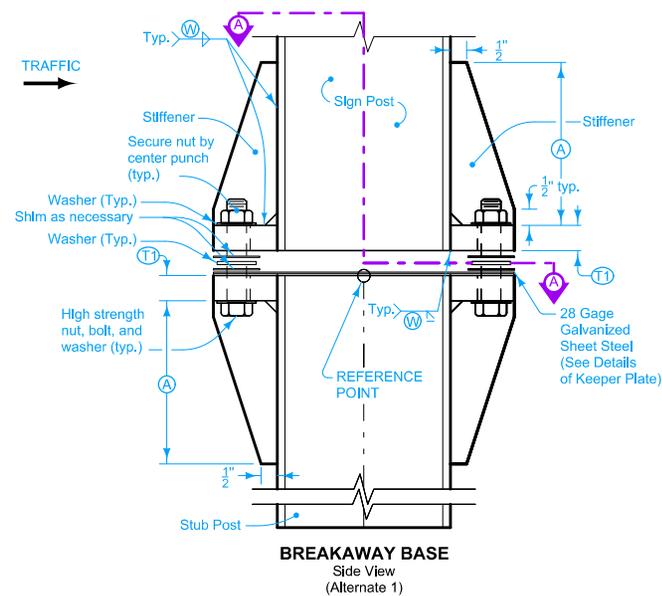
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SHEET 1 of 3

SUPPORT STRUCTURES -
STEEL BREAKAWAY POSTS



BREAKAWAY BASE DATA										
Post Size	Bolt Size & Torque	A	B	C	D	E	T1	T2	W	R
W 6 x 9	3/8" dia. x 2 3/4" Torque = 37.50 ft. lbs.	5"	2"	1 1/4"	2 3/4"	1 3/8"	3/4"	1"	1"	1 1/2"
W 6 x 12										
W 6 x 15										
W 8 x 18										
W 8 x 21	3/8" dia. x 3 1/2" Torque = 62.50 ft. lbs.	6"	2 1/4"	1 3/8"	3 1/2"	1 1/2"	1"	1 1/4"	5/16"	1 3/32"
W 10 x 22										
W 10 x 26										
W 12 x 26										

The following Base Plate alternates are considered equivalent:

Alternate 1 - Weld base plates (2 each), to sides of signpost and stub post flanges.

Alternate 2 - Weld base plate (1 each) to end of sign post and stub post. Properly match and align the bolt holes and notches in the stub post plate and the sign post plate as indicated herein.

Grind smooth all welds and galvanizing between Base Plates.

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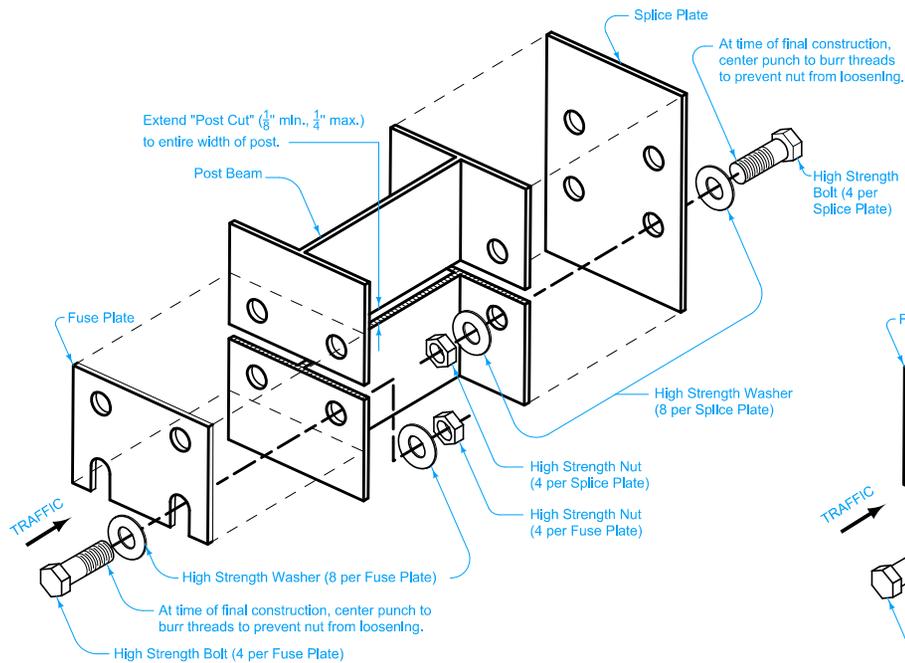
STANDARD ROAD PLAN

REVISIONS: Updated welds. Modified notes. Rearranged drawings.

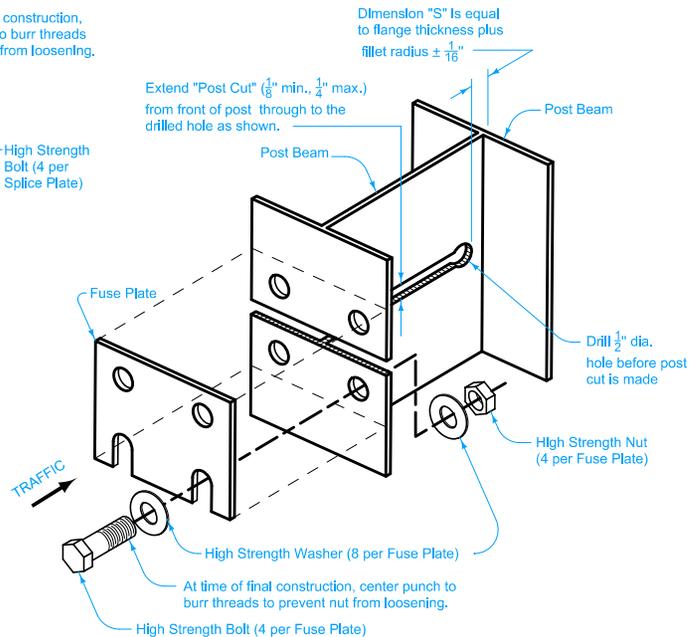
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SUPPORT STRUCTURES - STEEL BREAKAWAY POSTS

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SHEET 2 of 3		



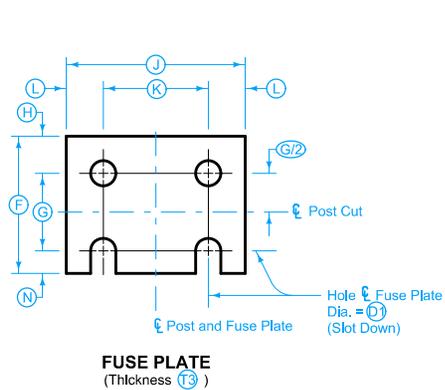
Hinge Alternate 1
(With Splice Plate)



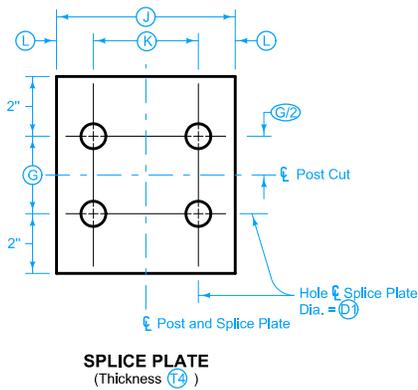
Hinge Alternate 2
(One-Piece Post)

④ If post is to be transported after cut is made, bolt a Splice Plate to front of post to prevent damage to the post.

FUSE PLATE ASSEMBLY



FUSE PLATE
(Thickness T3)



SPLICE PLATE
(Thickness T4)

Bolt Size	Torque
1/2"	100 Ft. Lbs.
5/8"	180 Ft. Lbs.
3/4"	320 Ft. Lbs.
7/8"	470 Ft. Lbs.

Post Size	Bolt Dia.	FUSE AND SPLICE PLATE DATA									
		F	G	H	J	K	L	N	D	T3	T4
W6x9	1/2"	3 3/8"	2"	1 3/8"	4"	2 1/4"	7 7/8"	3 1/2"	5 1/8"	1 1/4"	1 1/4"
W6x12	5/8"	3 3/4"	2"	1 3/8"	4"	2 1/4"	7 7/8"	5 1/8"	11 1/8"	3 1/8"	1 1/4"
W6x15	3/4"	4 1/2"	2 1/2"	1 3/4"	6"	3 1/2"	11 1/4"	3 3/4"	13 1/8"	1 1/2"	1 1/4"
W8x18	3/4"	4 1/2"	2 3/2"	1 3/4"	6"	2 3/4"	11 1/4"	3 3/4"	13 1/8"	1 1/2"	1 1/4"
W8x21	7/8"	4 7/8"	2 1/2"	1 3/2"	5 1/4"	2 3/4"	11 1/4"	7 7/8"	15 1/8"	1 1/2"	1 1/4"
W10x22	7/8"	5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	11 1/2"	7 7/8"	15 1/8"	1 1/2"	1 1/4"
W10x26	7/8"	5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	11 1/2"	6 7/8"	15 1/8"	1 1/2"	1 1/4"
W12x26	7/8"	5 3/8"	3"	1 1/2"	6 1/4"	3 1/2"	11 1/2"	7 7/8"	15 1/8"	1 1/2"	1 1/4"

<p>Iowa Department of Transportation</p> <p>STANDARD ROAD PLAN</p> <p>REVISIONS: Updated welds. Modified notes. Rearranged drawings.</p> <p><i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p>SUPPORT STRUCTURES - STEEL BREAKAWAY POSTS</p>	<p>REVISION</p> <p>5 10-16-12</p>
	<p>SI-113</p> <p>SHEET 3 of 3</p>