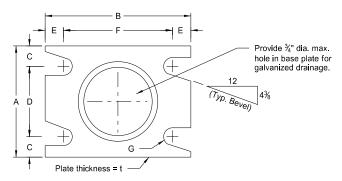
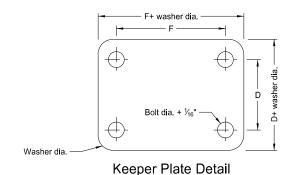
# Breakaway System for Standard Pipe Stub Post



## Base Plate Plan View

Place bevel toward roadway on approach side and away on the other side.



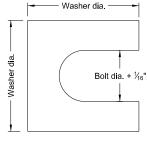
Place keeper plate above center washer between top and bottom slip bases. Fabricate keeper plate from 28 gauge material and galvanize after fabrication in conformance with ASTM A653 G60 coating.

Notes: Tack weld aluminum base plate washers to the base, when the base plate is aluminum.

Use standard drawing D-754-6 for fuse plate, hinge plate, and foundation details

- Assembly Procedure:

  1. Assemble post to stub with bolts and one flat washer between base plate and keeper plate.
- 3. Tighten all bolts the maximum possible with 12" to 15" wrench to bed washers and shims and to clean bolt threads,
- 4. Retighten bolts in a systematic order to prescribed torque. (see table)
- Loosen each bolt and fill the gaps between the thread and mating surface with thread locking liquid resin, conforming to ASTM D5363-03 (2008), forming solid, one part assemblies secure from vibration, pressure, and
- 6. Retighten each bolt to prescribed torque in the same order as initial retightening.



## Shim Detail

Furnish 2 each ±.012" thick and 2 each ±.032" thick shims per post. Fabricate shims from brass shim stock or strip in conformance with ASTM B36.

### Stub Post Connection - Type A Elevation View (Single Post)

w

Stub post

Tack weld washer

to base plate

Keeper plate Remove all galvanizing

runs or beads in washer area Direction of Traffic

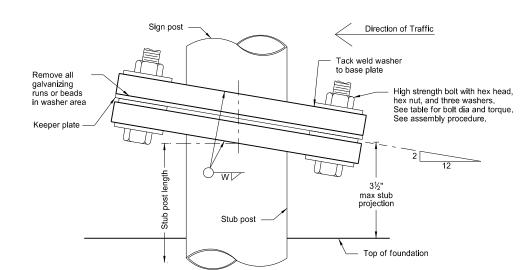
max stub

High strength bolt with hex head,

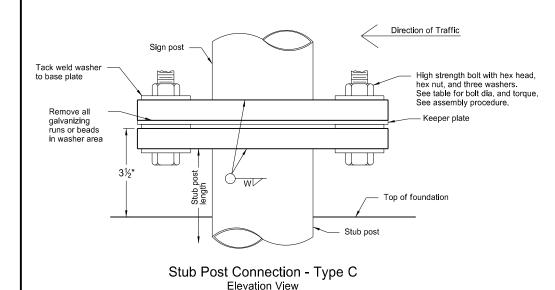
hex nut, and three washers. See table for bolt dia and torque.

See assembly procedure.

Top of foundation - slope for proper installation of bolts as required.



Stub Post Connection - Type B Elevation View (Two Posts)



(Two Posts)

					Base I	Data Tabl	е					
Nominal Post Size dia.	Bolt Size (dia. x length)	Base Bolt Torque ft. lb.	А	В	С	D	E	F	G	t	w	Stub Post Length
	I					Steel						
3½"	½"x2½"	12	5½"	8%"	<sup>13</sup> / <sub>16</sub> "	3%"	<sup>13</sup> / <sub>16</sub> "	6¾"	9/32"	3/4"	3%"	1'-6"
4"	%"x2¾"	29	5½"	8¾"	1"	3½"	1"	6¾"	11/32"	3/4"	3%"	1'-6"
5"	¾"x3½"	46	6½"	10"	11/8"	41/4"	11/8"	7¾"	13/32"	1"	7⁄ <sub>16</sub> "	2'-0"
6"	1"x4½"	61	7½"	11¾"	1%"	4¾"	1%"	9"	17/32"	1¼"	7⁄ <sub>16</sub> "	2'-0"
					Alı	uminum						
3½"	½"x2½"	12	5½"	8%"	<sup>13</sup> / <sub>16</sub> "	3%"	<sup>13</sup> / <sub>16</sub> "	6¾"	9/32"	3/4"	3%"	1'-6"
4"	%"x2¾"	29	5½"	8¾"	1"	3½"	1"	6¾"	11/32"	1"	7⁄ <sub>16</sub> "	1'-6"
5"	¾"x3½"	46	6½"	10"	11/8"	41/4"	11/8"	7¾"	13/32"	1"	1/2"	2'-0"
6"	1"x4½"	61	7½"	11¾"	1%"	4¾"	1%"	9"	17/32"	1¼"	1/2"	2'-0"

NORTH DAKOTA							
DEPARTMENT OF TRANSPORTATION							
11-21-11							
	REVISIONS						
DATE	CHANGE						
2-28-14	Removed lower post and foundation details.						
8-30-18	Updated notes to active voice.						
8-29-19	New Design Engineer PE Stamp.						

This document was originally issued and sealed by Kirk J Hoff, Registration Number PE-4683, on 8/29/19 and the original document is stored at the North Dakota Department of Transportation