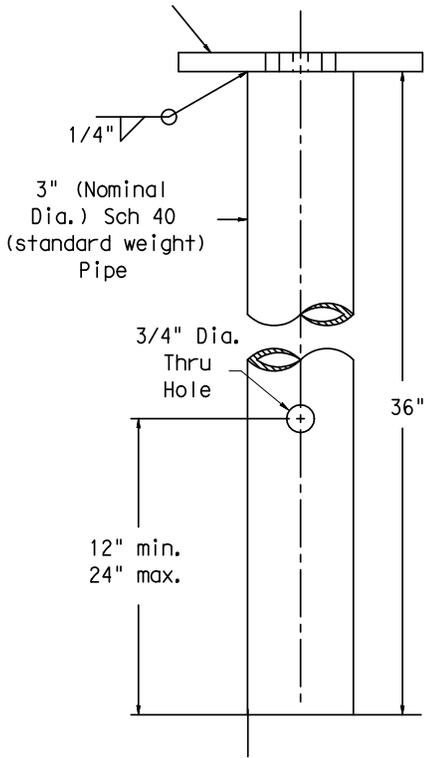
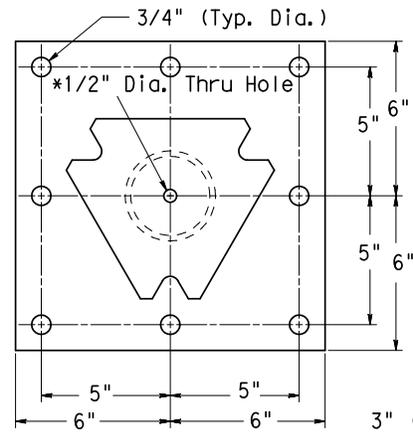


5/8" Slip Plate (see "Slip Plate Detail")

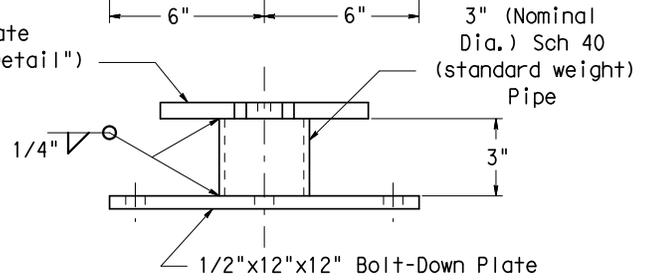


Pipe shall conform to ASTM A53 Gr B, A500 Gr B, or A501. Galvanize according to ASTM A123 after all fabrication is completed. Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

STUB



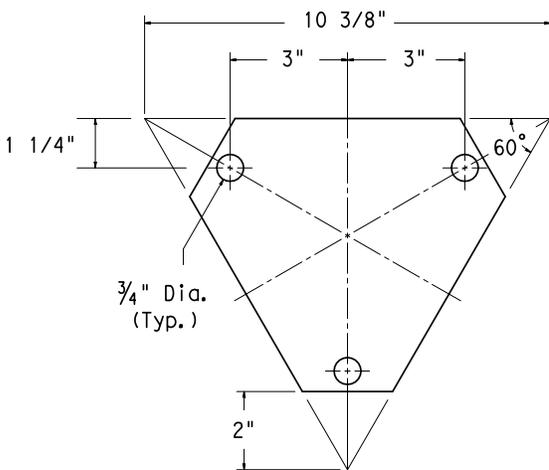
5/8" Slip Plate (see "Slip Plate Detail")



Pipe shall conform to ASTM A53 Gr B, A500 Gr B, or A501. Bolt-down plate shall conform to the same material requirements specified for the slip plate. Galvanize according to ASTM A123 after all fabrication is completed. Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

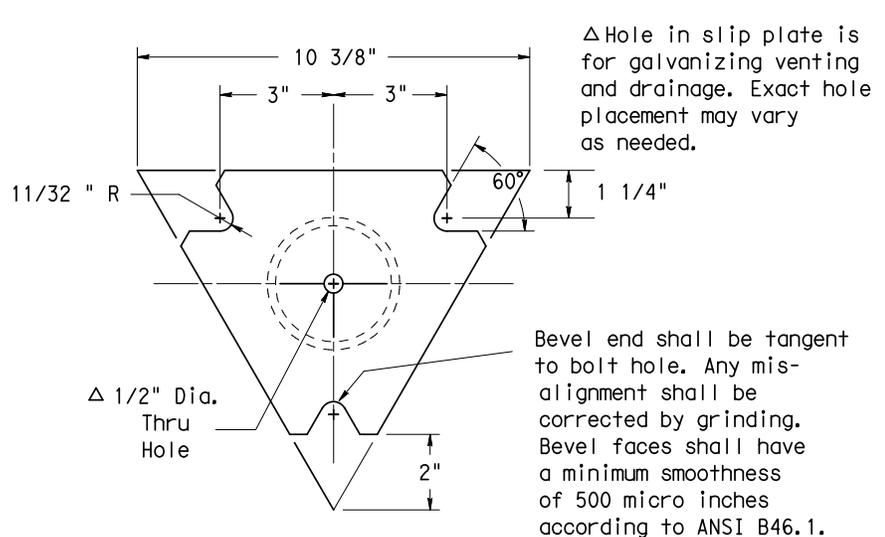
* Hole in slip plate and bolt-down plate is for galvanizing venting and drainage. Exact hole placement may vary as needed.

BOLT-DOWN ANCHOR



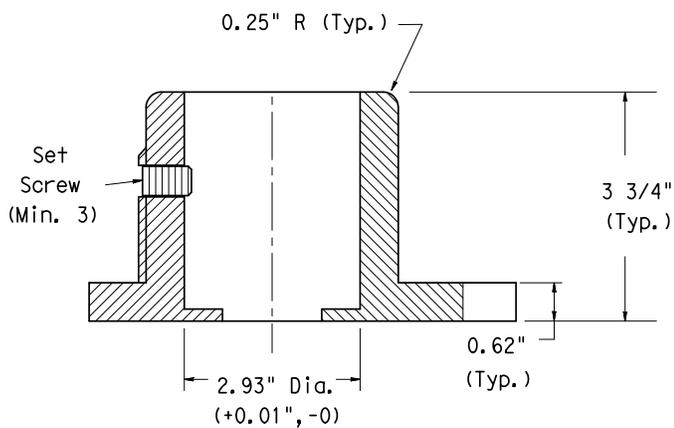
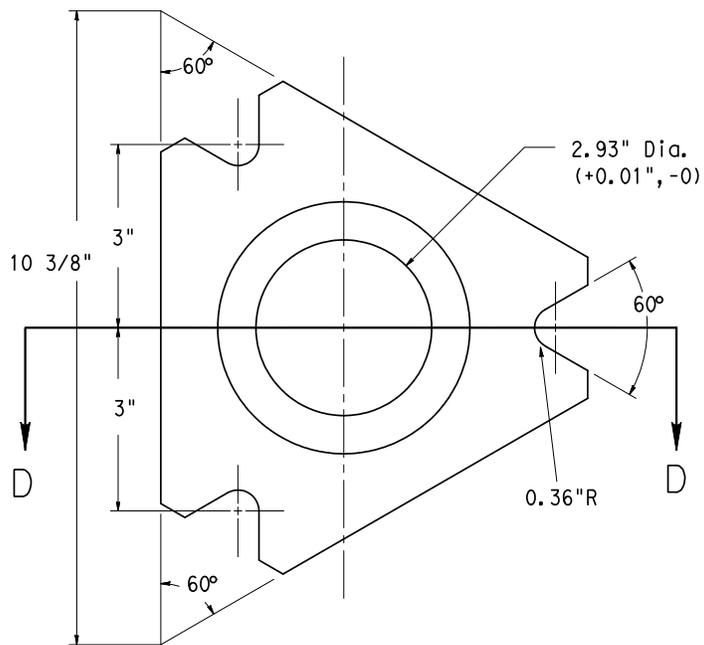
Bolt Keeper Plate shall be manufactured from 26 to 30 gauge galvanized sheet steel.

BOLT KEEPER PLATE

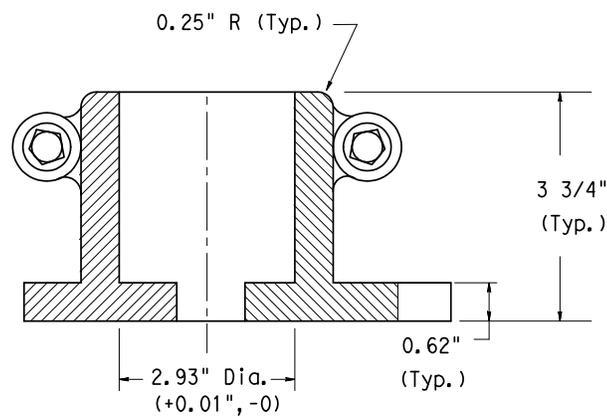


Slip plate shall conform to ASTM A36 or A572.

SLIP PLATE DETAIL



Set Screw type Section D-D



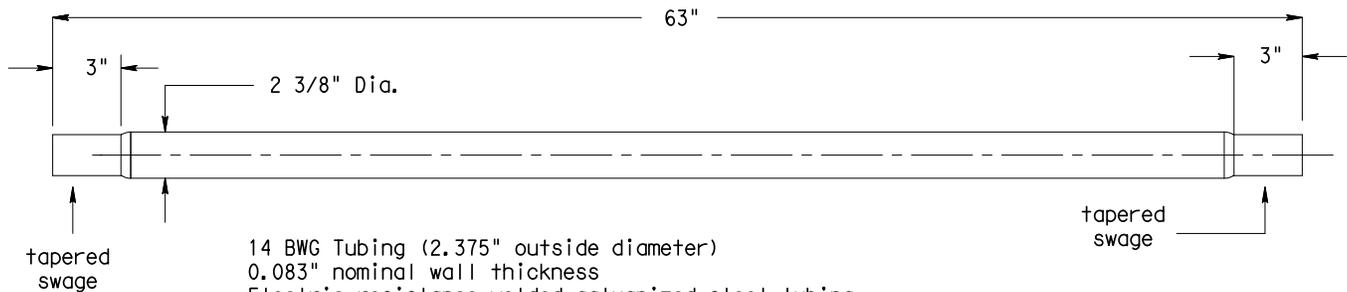
Bolt Clamp type Section D-D

Steel Slipbase fabrication shall conform to ASTM A36 or A572, if fabrication consists of ductile iron casting it shall conform to ASTM A536 Grade 65-45-12 and be galvanized per ASTM a153 Class A.

Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

A list of approved Triangular Slip bases can be found at http://www.txdot.gov/business/producer_list.htm

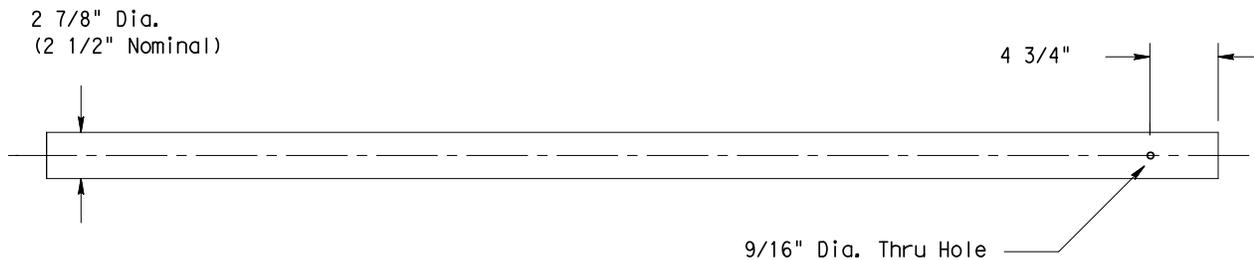
SLIPBASE DETAIL



14 BWG Tubing (2.375" outside diameter)
 0.083" nominal wall thickness
 Electric-resistance welded galvanized steel tubing
 Steel shall be SS Gr 40 per ASTM A653
 Galvanization per ASTM A653 G210. Recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
 Outside diameter (coated) shall be within the range of 2.369" to 2.381"
 Tapered swage to provide snug fit in 2.375" 13 BWG to 10 BWG tubing.

Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

EXTENDER



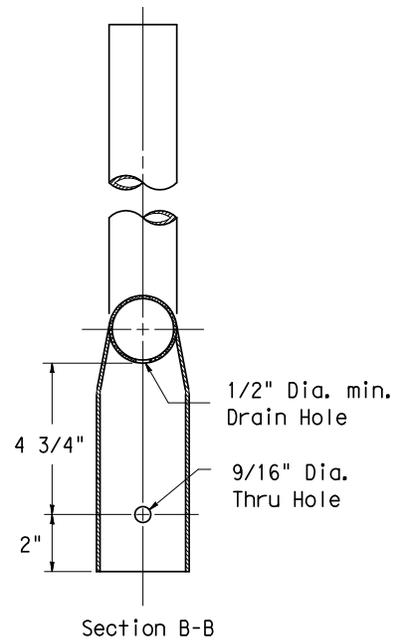
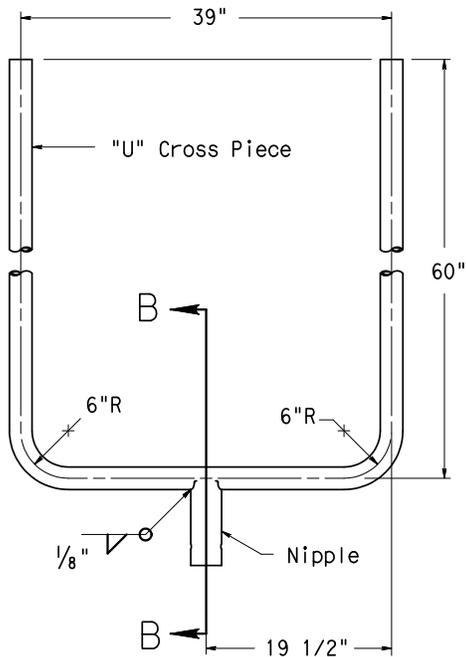
10 BWG Tubing (2.875" outside diameter)

0.134" nominal wall thickness
 Seamless or electric-resistance welded steel tubing or pipe
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 20% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
 Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
 Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

Schedule 80 Pipe (2.875" outside diameter)

0.276" nominal wall thickness
 Steel tubing per ASTM A500 Gr C
 Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
 46,000 PSI minimum yield strength
 62,000 PSI minimum tensile strength
 21% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
 Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
 Galvanization per ASTM A123.

POST



"U" CROSS PIECE

10 BWG Tubing (2.375" outside diameter)
 0.134" nominal wall thickness
 Seamless or electric-resistance welded steel tubing or pipe
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 20% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.121" to 0.147"
 Outside diameter (uncoated) shall be within the range of 2.355" to 2.395"

NIPPLE

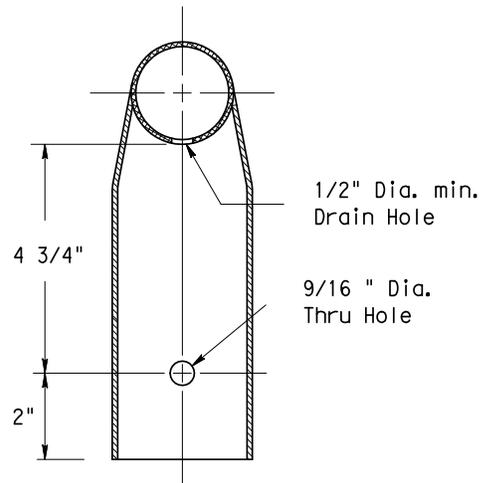
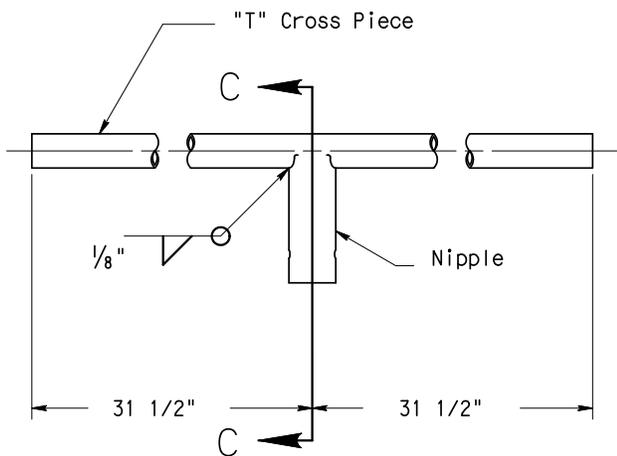
11 BWG or greater Tubing (3.25" outside diameter)
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 20% minimum elongation in 2"
 Outside diameter (uncoated) shall be within the range of 3.241" to 3.259"
 Inside diameter (uncoated) shall be a minimum of 2.93"
 Wall thickness shall be a minimum of 0.108"
 Cut length shall be 8.000" ± 0.250". Notched and coped to provide snug fit with cross piece.
 Drilled or punched as shown. Nipple shall provide snug fit with 2.875" post.
 Nipple may be dimpled to provide snug fit.

FABRICATED "U" BRACKET

Galvanize according to ASTM A123 after all fabrication is completed.

Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

PREFABRICATED "U" BRACKET-TEXAS UNIVERSAL TRIANGULAR SLIPBASE SYSTEM



Section C-C

"T" CROSS PIECE

13 BWG Tubing (2.375" outside diameter)
 0.095" nominal wall thickness
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 18% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.085" to 0.105"
 Outside diameter (uncoated) shall be within the range of 2.355" to 2.395"

NIPPLE

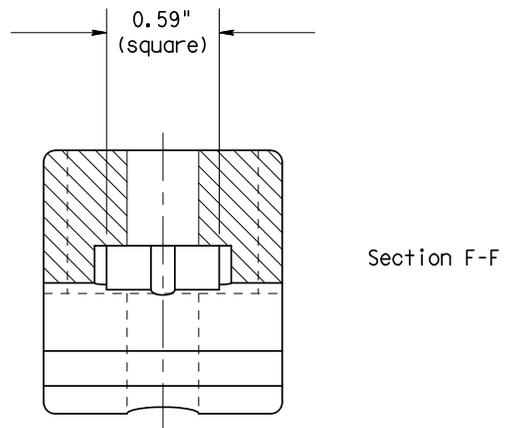
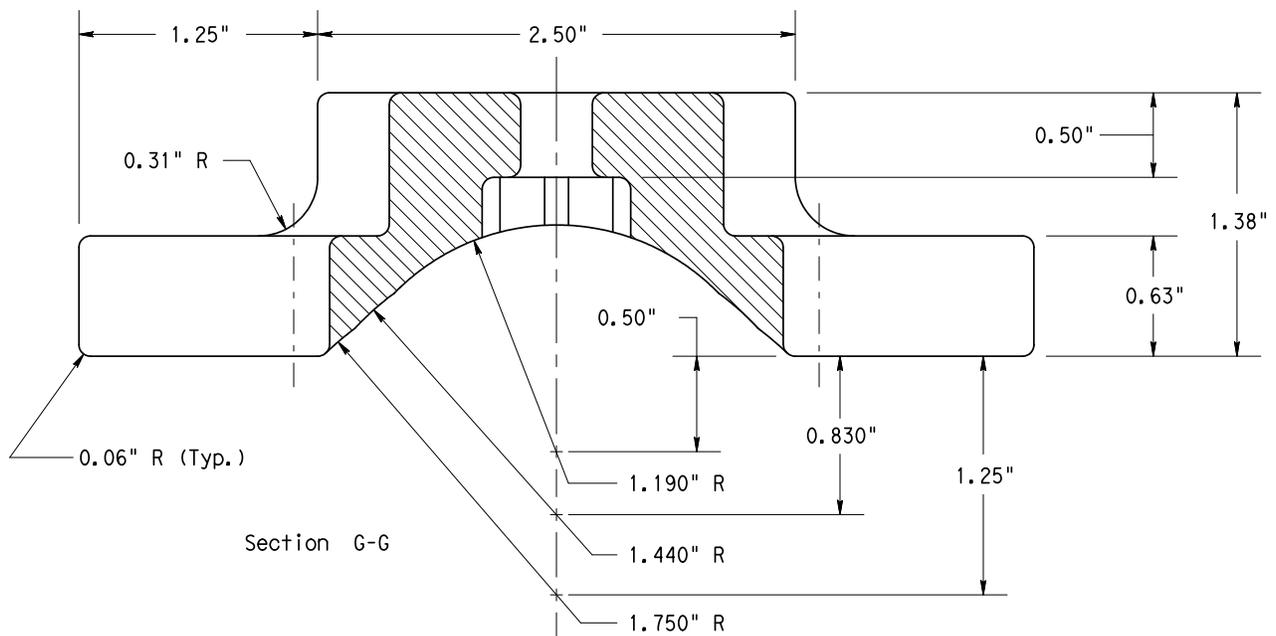
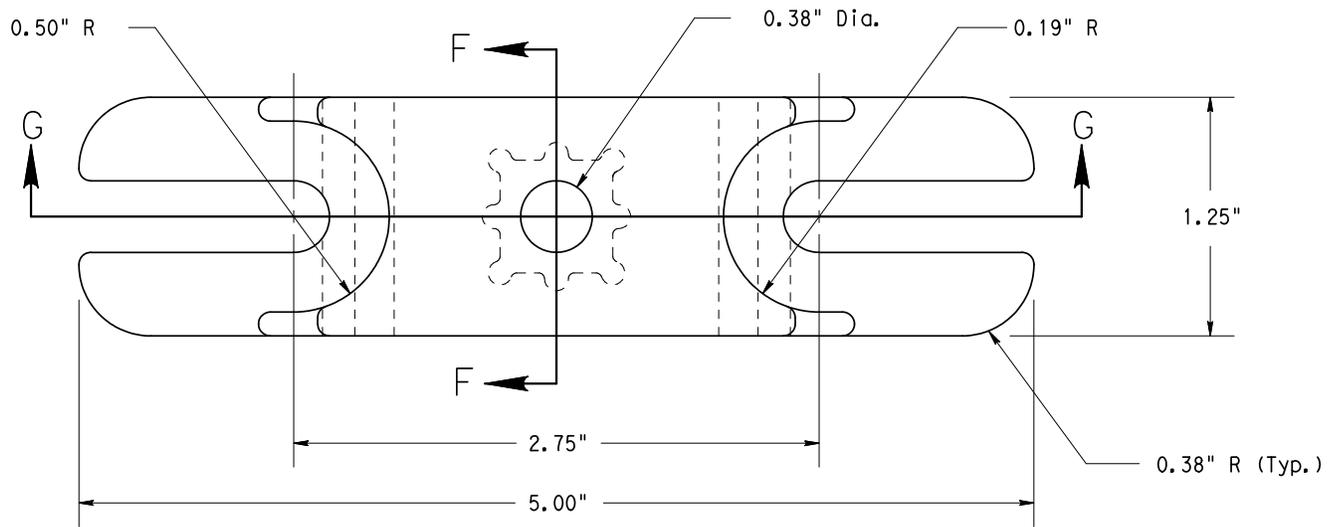
11 BWG or greater Tubing (3.25" outside diameter)
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 20% minimum elongation in 2"
 Outside diameter (uncoated) shall be within the range of 3.241" to 3.259"
 Inside diameter (uncoated) shall be a minimum of 2.93"
 Wall thickness shall be a minimum of 0.108"
 Cut length shall be 8.000" ± 0.250". Notched and coped to provide snug fit with cross piece.
 Drilled or punched as shown. Nipple shall provide snug fit with 2.875" post.
 Nipple may be dimpled to provide snug fit.

FABRICATED "T" BRACKET

Galvanize according to ASTM A123 after all fabrication is completed.

Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

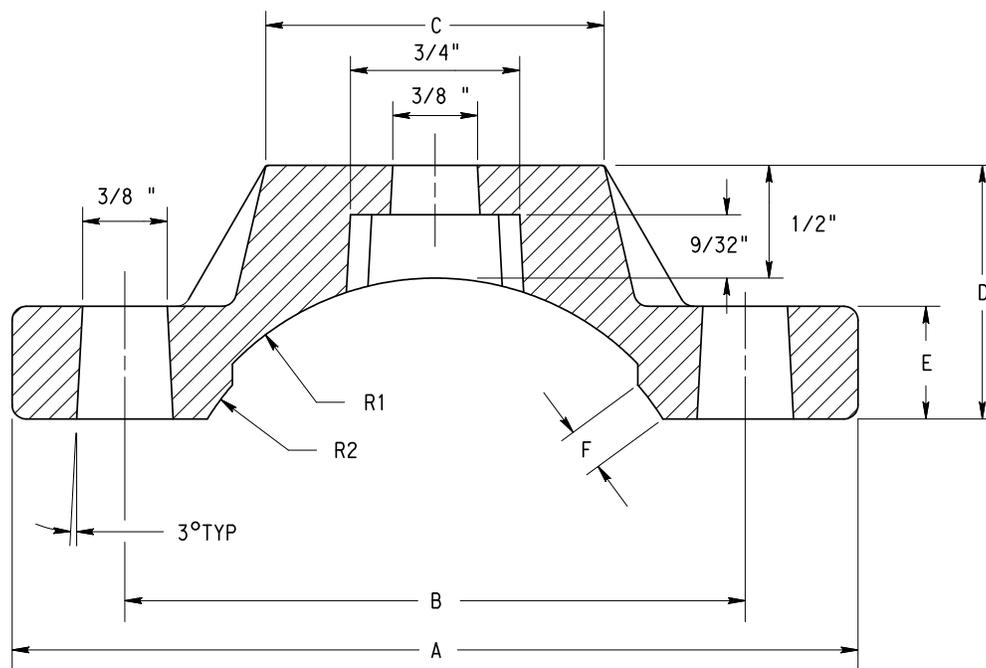
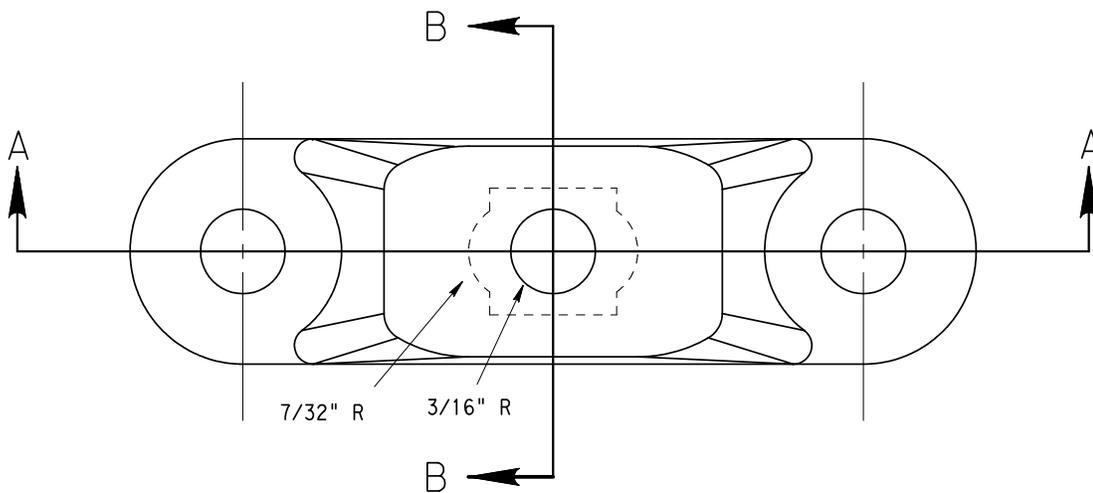
PREFABRICATED "T" BRACKET-TEXAS UNIVERSAL
 TRIANGULAR SLIPBASE SYSTEM



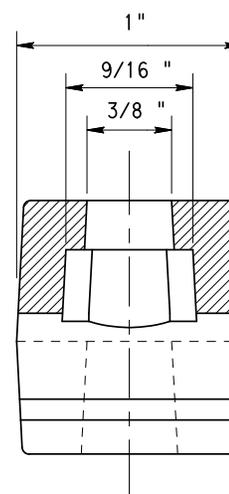
UNLESS NOTED:
 X.XXX ± 0.005"
 X.XX ± 0.010"

Sign clamp casting shall meet ASTM B85 Alloy 360.0 or A360.0, ASTM B26 Alloy 356.0-F,
 or ASTM B108 Alloy 356.0-F or A444.0-T4.

UNIVERSAL SIGN CLAMP



SECTION A - A



SECTION B - B

DIMENSIONS								
PIPE DIAMETER (NOMINAL)	A	B	C	D	E	F	R1	R2
2	3 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	1 ¹ / ₈	1 ¹ / ₂	3 ¹ / ₁₆	1 ¹ / ₄	1 ³ / ₁₆
2 ¹ / ₂	4 ¹ / ₄	3 ¹ / ₄	2	1 ¹ / ₄	1 ¹ / ₂	1 ¹ / ₄	1 ¹ / ₂	1 ⁷ / ₁₆
3	4 ⁷ / ₈	3 ⁷ / ₈	2 ¹ / ₂	1 ³ / ₈	5 ⁵ / ₈	1 ¹ / ₄	1 ¹³ / ₁₆	1 ³ / ₄

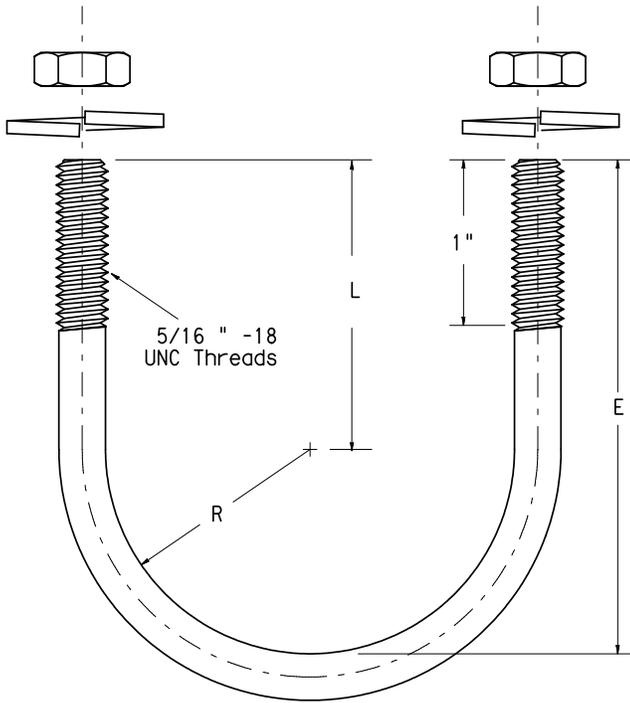
Sign clamp casting shall meet ASTM B85 Alloy 360.0 or A360.0, ASTM B26 Alloy 356.0-F, or ASTM B108 Alloy 356.0-F or A444.0-T4.

SPECIFIC SIGN CLAMP

American National Standard Hex Nut
and Helical Spring Lock Washer

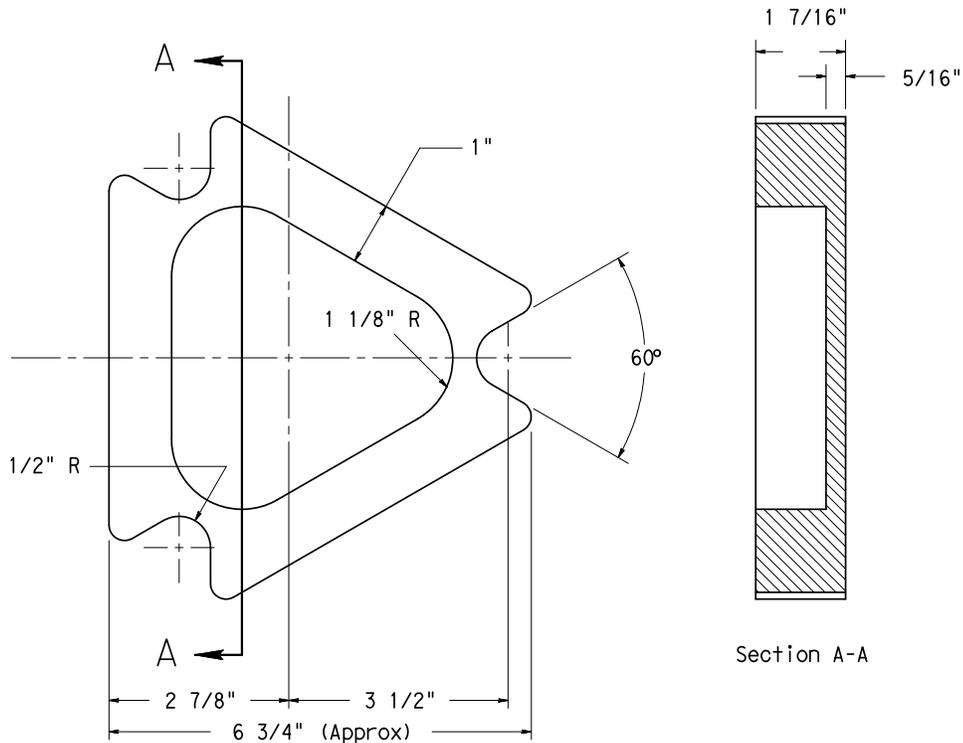
U-bolt, nut and washers shall be
manufactured according to ASTM
A307 Grade C and galvanized
according to Item 445,
"Galvanizing."

9/32" diameter stock is permissible.



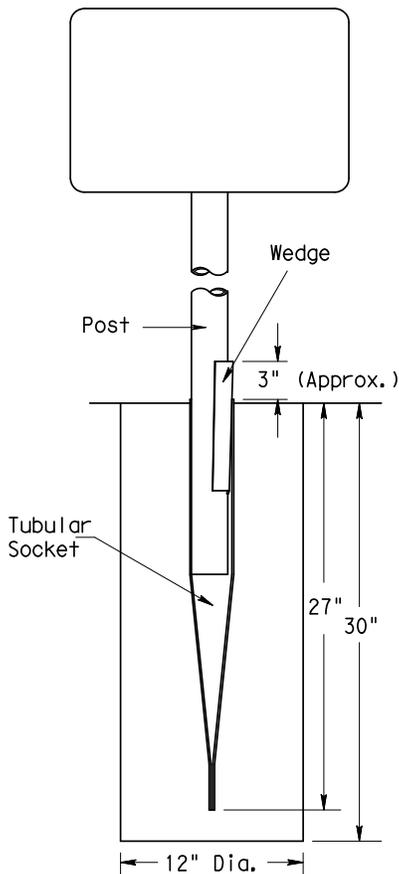
Standard Pipe Size	R	L	E
2"	1 7/32"	1 15/32"	2 11/16"
2 1/2"	1 15/32"	1 23/32"	3 3/16"
3"	1 25/32"	2 1/32"	3 13/16"

SIGN CLAMP U-BOLT

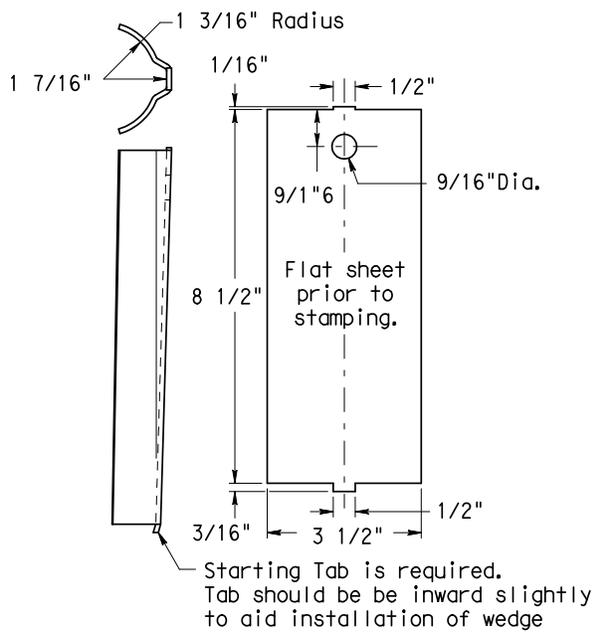


Lifting spacer shall be manufactured from 100% recycled ABS or polycarbonate plastic.
Sides may be slightly tapered to facilitate release of part from the mold.

LIFTING SPACER

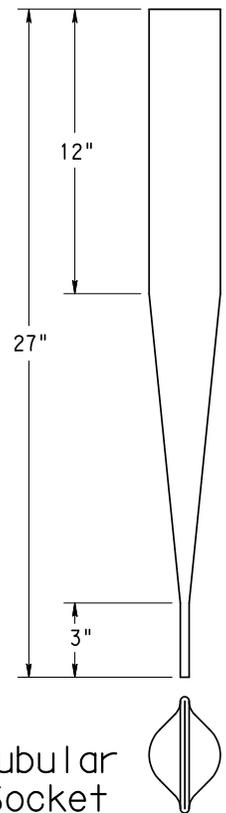


Post Detail



Wedge Detail

Wedge is fabricated from 0.109" to 0.124" thick galvanized sheet steel per ASTM A653 SS Grade 40 G210 stamped into profile shown.



Tubular Socket Detail

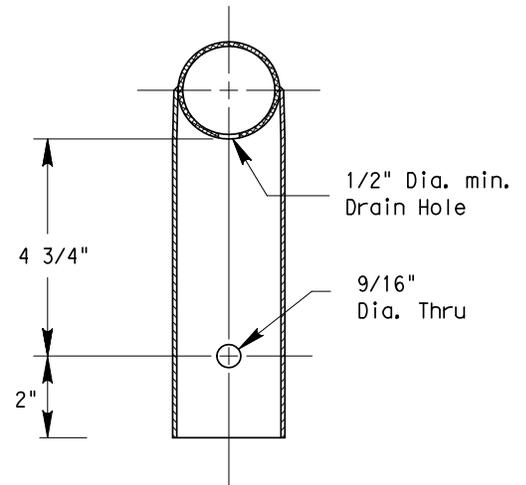
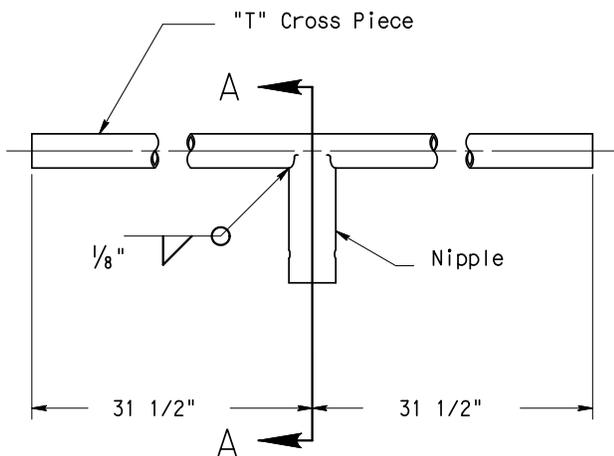
POST - 13 BWG Tubing (2.375" outside diameter)

0.095" nominal wall thickness
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steel may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 18% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.083" to 0.099"
 Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
 Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653),
 recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833

SOCKET

Tubular socket prefabricated from 12 BWG seamless or electric-resistance welded steel tubing
 2.875" outside dia. x 0.109" nominal wall thickness
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steel may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 20% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.097" to 0.113"
 Galvanization per ASTM A123 after fabrication, or per ASTM A653 G210. For precoated steel tubing
 (ASTM A653) recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

WEDGE ANCHOR SYSTEM



Section A-A

"T" CROSS PIECE

13 BWG Tubing (2.375" outside diameter)
 0.095" nominal wall thickness
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 Other steels may be used if they meet the following:
 55,000 PSI minimum yield strength
 70,000 PSI minimum tensile strength
 18% minimum elongation in 2"
 Wall thickness (uncoated) shall be within the range of 0.085" to 0.105"
 Outside diameter (uncoated) shall be within the range of 2.355" to 2.395"

NIPPLE

12 BWG or greater Tubing (2.625" outside diameter)
 0.109" nominal wall thickness. Wall thickness shall be a minimum of 0.097".
 Seamless or electric-resistance welded steel tubing
 Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 OR
 ASTM A53 Gr A Schedule 40 Pipe (2.875" outside diameter)
 Inside diameter (uncoated) shall be a minimum of 2.416"
 Cut length shall be 8.000" ± 0.250". Notched and coped to provide snug fit with cross piece.
 Drilled or punched as shown. Nipple shall provide snug fit with 2.375" post.
 Nipple may be dimpled to provide snug fit.

FABRICATED "T" BRACKET

Galvanize according to ASTM A123 after all fabrication is completed

Finished components shall be permanently marked to indicate manufacturer. Method, design and location of markings are subject to the approval of the TxDOT Traffic Standards Engineer.

PREFABRICATED "T" BRACKET FOR THIN-WALL TUBING POST