CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			1	8

General Notes and Sign Location Detail

REVISIONS

PREL. TRACING ____ DESIGN ____ CHKD. ____

GENERAL NOTES

1. DESIGN CRITERIA ARE BASED ON "STANDARD SPECIFICATIONS FOR STRUCUTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS," 1994 BY AASHTO. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DELAWARE DEPARTMENT OF HIGHWAYS AND TRANSPORTATION, 2002 - STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR THIS PROJECT.

2. BREAKAWAY POST SHALL CONFORM TO AASHTO M188 (ASTM A441) AND BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123). CLASS 'B' CONCRETE WITH ULTIMATE COMPRESSION STRENGTH fc' = 3,000 PSI. SHALL BE USED IN ALL FOOTINGS; BAR REINFORCEMENTS SHALL CONFORM TO AASHTO M31 (ASTM A615)

3. AN AUGER SHALL BE USED TO DRILL THROUGH TE SOIL UP TO THE DESIRED DEPTH OF FOUNDATION. REINFORCED CONCRETE SHALL BE PLACED ON UNDISTURBED SOIL TO SECURE A FIRM CONTACT BETWEEN SOIL AND CONCRETE. FOOTING TOPS SHALL BE FORMED TO A DEPTH OF 3" BELOW GROUND SURFACE.

4. MAXIMUM PROJECTION ABOVE GROUND LINE FOR FOOTING OR ANCHOR PLATE SHALL BE LIMITED TO 4". WHERE NECESSARY, A PORTION OF CONCRETE IN THE FOUNDATION SHALL BE CHAMFERED PARALLEL TO THE EARTH SLOPE IN ORDER TO MINIMIZE FOOTING PROJECTION ABOVE GROUND.

5. COMPLETE DETAILS OF BREAKAWAY COUPLINGS, ANCHOR PLATES, AND BOLTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE BRIDGE ENGINEER.

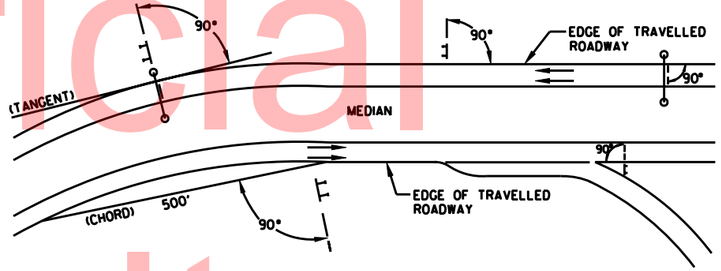
6. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT VEHICLE CRASH TESTING REPORTS INDICATING SATISFACTORY PERFORMANCE OF THE BREAKAWAY MECHANISM WITH BREAKAWAY COUPLINGS AND FUSE PLATES UNDER THE FOLLOWING CONDITIONS:

   WEIGHT OF VEHICLE = 1800 LBS. OR EQUIVALENT
   RANGE OF SPEED AT IMPACT = 20 MPH TO 60 MPH
   IMPACT ANGLE = OMNIDIRECTIONAL
   MAXIMUM CHANGE OF VELOCITY = 10 FPS

7. ALL DIMENSIONS AFFECTED BY THE GEOMETRICS OF THE EXISTING STRUCTURE ARE TO BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY CONSTRUCTION IS DONE AND BEFORE ANY STRUCTURAL STELL IS ORDERED OR FABRICATED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS REQUIRED TO CHECK DETAIL DRAWINGS.

8. ALL STRUCTURAL STEEL SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM, BOLTS, NUTS, AND WASHERS SHALL BE HOT-DIPPED OR MECHANICALLY GALVANIZED. THE COATING SHALL MEET THE ADHERENCE THICKNESS AND QUALITY REQUIREMENTS OF ASTM A153. STRUCTURAL STEEL TO BE GALVANIZED AFTER FABRICATION, EXCEPT AS NOTED. STEEL POSTS SHALL BE ASTM A36 UNLESS OTHERWISE NOTED.

ORIENTATION OF SIGN FACES



ROADSIDE SIGNS

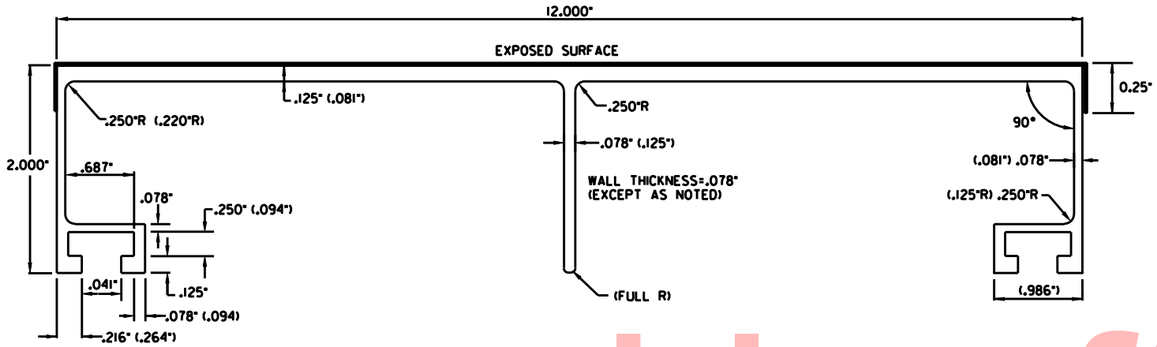
1. VERTICAL ALIGNMENT
   POSITION PANEL SO FACE IS PLUMB.
2. HORIZONTAL ALIGNMENT (SEE DIAGRAM ABOVE)
   A). ON STRAIGHT ROADWAY SECTIONS, ANGLE OF SIGN FACE TO ROADWAY SHALL BE 90 TO EDGE OF ROAD.
   B). ON THE INSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL MAKES AN ANGEL OF 90 WITH A CHORD BETWEEN A POINT ON NEAR EDGE OF PAVEMENT AT SIGN LOCATION AND A POINT ON EDGE OF PAVEMENT 500' IN ADVANCE OF SIGN.
   C). ON THE OUTSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT THE SIGN LOCATION.
   D.) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.

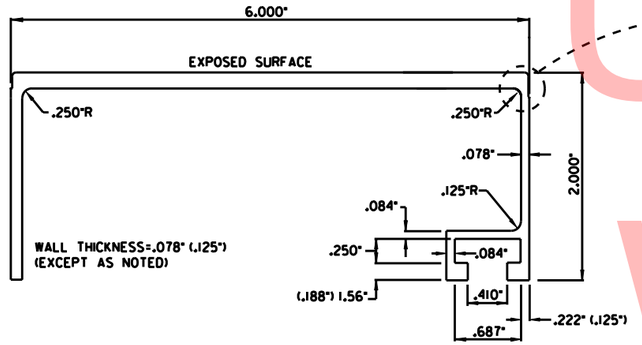
GROUND MOUNT SIGN LOCATION DETAIL

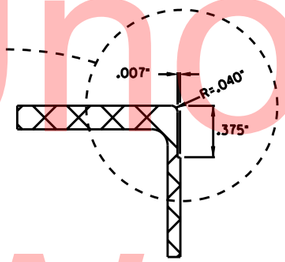
Unofficial Website Copy

CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			2	8

Extruded Aluminum Details



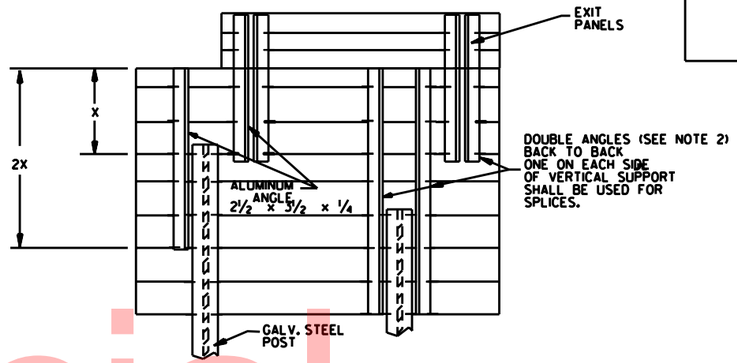


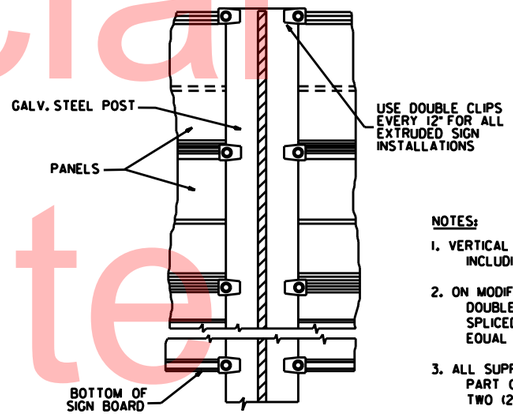


INSERT DETAIL 'A'

NOTES:

1. ALUMINUM PANELS MAY HAVE SQUARE CORNERS OR NOTCHED CORNERS AS SHOWN. NO OTHER TYPE CORNERS ARE ACCEPTABLE.
2. ALTERNATE DIMENSIONS INDICATED IN PARENTHESES ARE ACCEPTABLE.



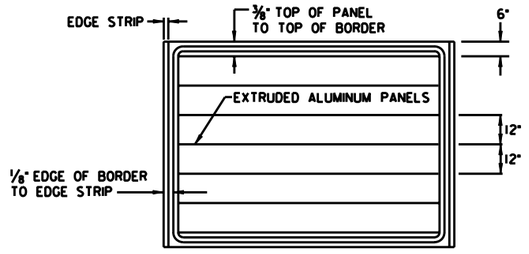


NOTES:

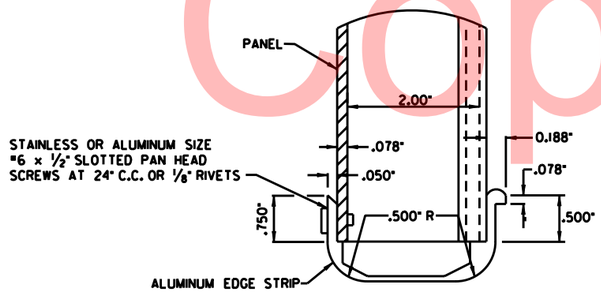
1. VERTICAL SUPPORTS ARE TO BE CONTINOUS TO ENTIRE HEIGHT OF SIGN, INCLUDING EXIT PANEL WHERE APPLICABLE.
2. ON MODIFICATIONS NON-CONTINUOUS SUPPORTS WILL BE PERMITTED. SPLICE DOUBLE SHALL EXTEND A MIN. DISTANCE OF 'X' NOTED ABOVE. SPLICED SECTIONS 'X' OF 6'-0" OR MORE SHALL HAVE A W6 x 9 OR EQUAL SECTION ATTACHED TO FULL HEIGHT OF SIGN.
3. ALL SUPPORTS SHALL BE POST CLIPPED AT 12" INTERVALS. THE BOTTOM PART OF THE SPLICED SUPPORT SHALL BE ATTACHED WITH AT LEAST TWO (2) POST CLIPS.

EXTRUDED ALUMINUM DETAILS
SIGN PANEL DIMENSIONS

NOT TO SCALE



BORDER DETAIL

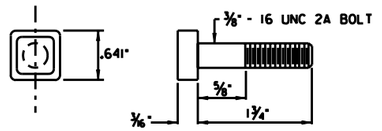


NOTE:
EDGE STRIP SHALL BE PLACED ON BOTH SIDES OF ALL EXTRUDED PANEL SIGNS.

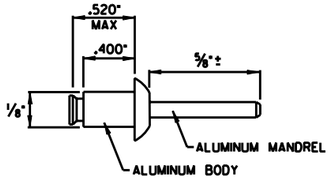
DETAIL OF EDGE STRIP

VERTICAL SUPPORT ATTACHMENT

NOT TO SCALE



POST CLIP BOLT
(TYPICAL)



DETAIL OF A BLIND RIVET FOR CUTOUT LETTER
(TYPICAL)

EXTRUDED ALUMINUM DETAILS

NOT TO SCALE

REVISIONS

DESIGN — CHKD. — PREL. TRACING

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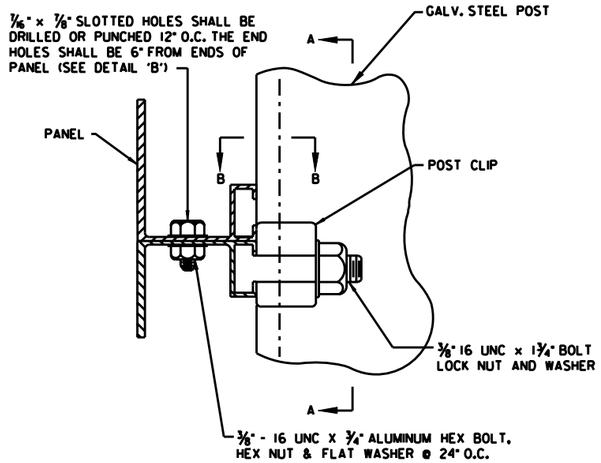
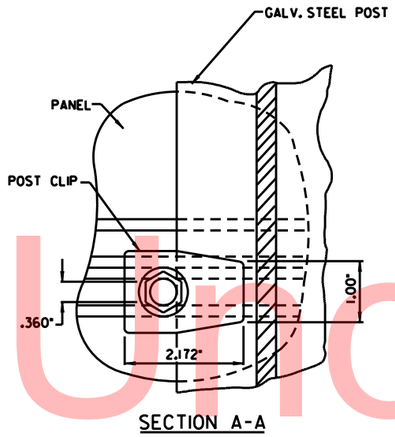
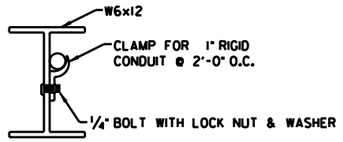
CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			3	8

Extruded Assembly and Attachment Details

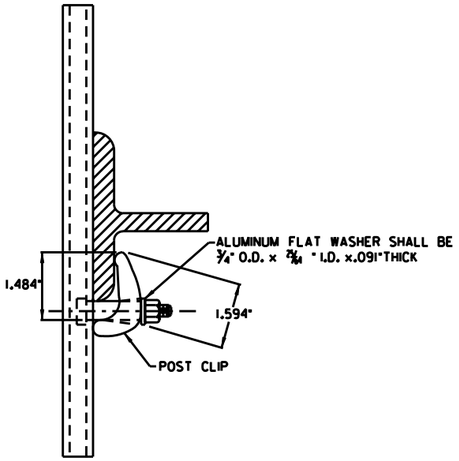




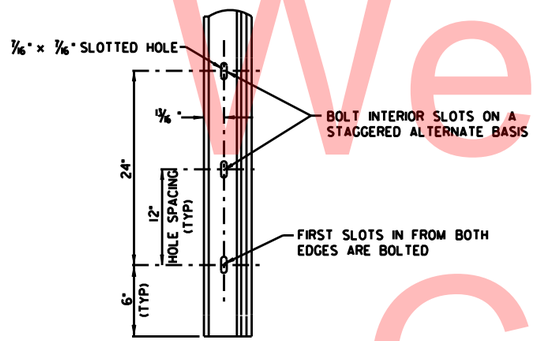
SECTION A-A



SECTION C-C



SECTION B-B

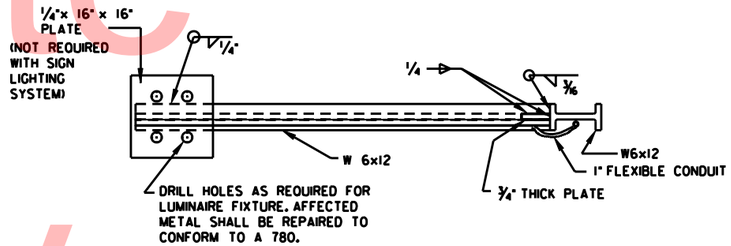


DETAIL 'B'

BOLTS..... B211, ALLOY 2024-T4, 6262-T9 OR 6061-T6
FLAT WASHERS..... B209, ALLOY 2024-T4
RIVETS..... ALLOY 5052
NUTS..... B211, ALLOY 2017-T4
POST CLIPS..... B108, ALLOY 356-T6

DETAILS FOR ASSEMBLING SIGN PANELS

NOT TO SCALE



SECTION B-B

NOTE: 1" DIA. CONDUIT SHALL BE ATTACHED TO BOTTOM CHORD OF TRUSS SPAN USING CONDUIT CLAMPS SPACED AT 5'-0" ON CENTER.

SIGN LUMINAIRE SUPPORTS MOUNTING FOR EXISTING STRUCTURES

NOT TO SCALE

REVISIONS

DESIGN

CHKD.

PREL. TRACING

Unofficial Website Copy

CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			4	8

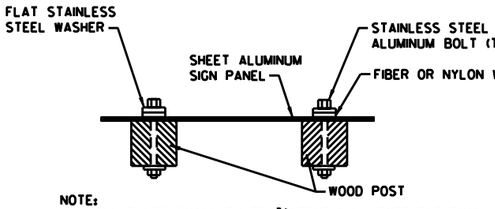
Extruded Sign Panels and Sign Post Details

REVISIONS

DESIGN

CHKD.

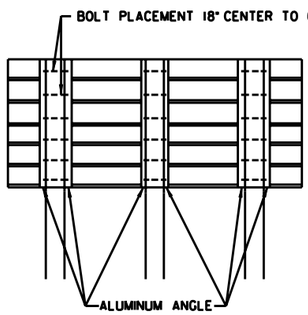
PREL. TRACING

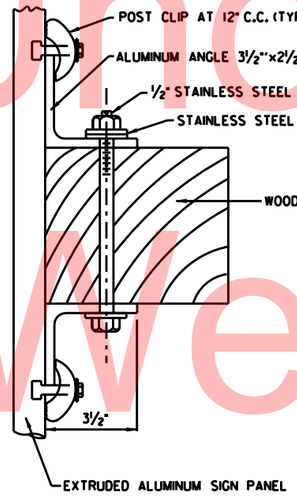


NOTE:
ALL BOLTS SHALL TO BE ⅜" F593 (18-8 TYPE 303-304) STAINLESS STEEL OR ANODIZED ALUMINUM HEX HEAD BOLT WITH WASHERS AND NUTS

SHEET ALUMINUM SIGN PANEL

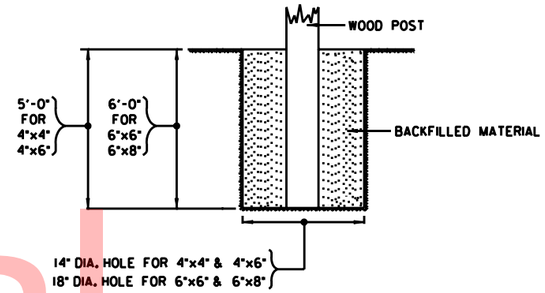
NOT TO SCALE





EXTRUDED ALUMINUM SIGN PANEL

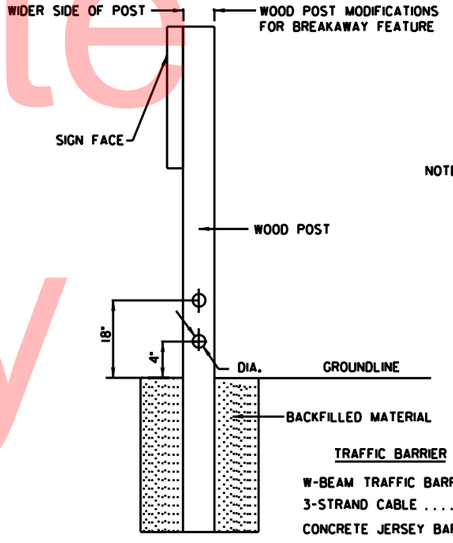
NOT TO SCALE



NOTE:
TREATED WOODEN POST TO BE PLACED IN PRE-DUG HOLE IN GROUND, BACKFILLED USING SUITABLE MATERIAL AND TAMPED THOROUGHLY TO PROVIDE A RIGID SUB-SURFACE CONDITION AROUND THE POST.

TYPICAL FOUNDATION FOR WOOD SUPPORTS

NOT TO SCALE



POST SIZE	HOLE DIA. (IN.)
4"x4"	--
4"x6"	1½"
6"x6"	2"
6"x8"	3"

NOTES:
1. ALL WOOD POSTS LARGER THAN 4"x4" SHALL BE DRILLED WITH TWO HOLES CENTERED 4" AND 18" ABOVE THE GROUNDLINE AND PERPENDICULAR TO THE ROADWAY.
2. WOOD POSTS SHOULD NOT BE MODIFIED BY DRILLING HOLES WHEN; THE POSTS ARE PROTECTED BY PHYSICAL TRAFFIC BARRIERS WITH THE PROPER MINIMUM DEFLECTION DISTANCE PROVIDED.

TRAFFIC BARRIER	OFFSET TO SIGN EDGE
W-BEAM TRAFFIC BARRIER	6' FROM RAIL FACE
3-STRAND CABLE	11'-6"
CONCRETE JERSEY BARRIER	2' FROM FACE
BARRIER CURB	2' MIN. (6' MIN. PREFERABLE)

WOOD POST MODIFICATIONS FOR BREAKAWAY FEATURE

NOT TO SCALE

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CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			5	8

Sign Post Details

Post Selection Table - Two Posts

W Feet	L_B Feet	Height "H" in Feet											
		4	5	6	7	8	9	10	11	12	13	14	15
6	6	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x12	W6x12	W6x12
	8	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15
	10	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15
	12	W6x9	W6x9	W6x12	W6x12	W6x12	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W6x15
	14	W6x9	W6x12	W6x12	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W6x15	W6x15	W8x18
	16	W6x12	W6x12	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W6x15	W6x15	W8x18	W8x21
8	6	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x9	W6x12	W6x12	W6x12	W6x15	W6x15
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	16	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W12x26	W14x30	W14x30	W14x34	W14x38
20	6	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W10x22	W12x26	W14x30
	8	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W10x22	W14x30	W14x30
	10	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W10x22	W12x26	W12x26	W14x30	W14x34
	12	W6x12	W6x15	W8x18	W8x21	W8x21	W10x22	W10x26	W12x26	W12x26	W14x30	W14x34	W14x38
	14	W6x15	W8x18	W8x18	W8x21	W8x21	W10x26	W10x26	W12x26	W14x30	W14x30	W14x38	W14x38
	16	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W12x26	W14x30	W14x34	W14x38	W14x43

Post Selection Table - Three Posts

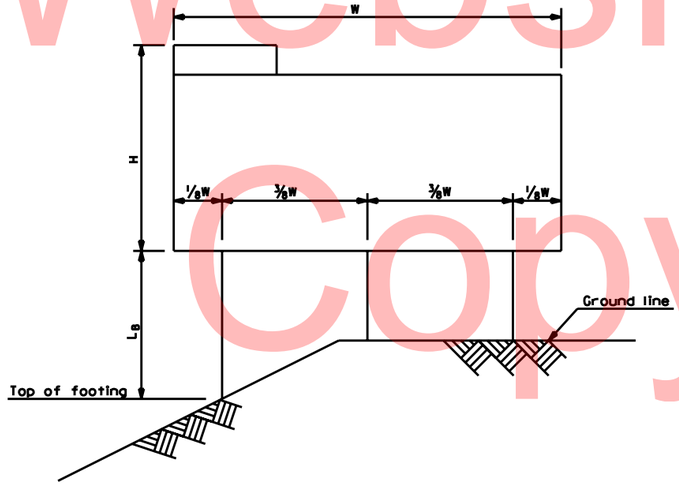
W Feet	L_B Feet	Height "H" in Feet											
		4	5	6	7	8	9	10	11	12	13	14	15
22	6	W6x9	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x21	W10x22
	8	W6x9	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W10x26	W12x26
	10	W6x9	W6x12	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W10x26	W12x26
	12	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W8x21	W10x26	W12x26	W12x26
	14	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W8x21	W10x26	W10x26	W12x26	W14x30	W14x30
	16	W6x15	W6x15	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W14x30	W14x30	W14x30
24	6	W6x9	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x18	W10x22
	8	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x18	W10x26	W12x26
	10	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W10x26	W12x26
	12	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W8x21	W10x26	W12x26	W14x30
	14	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W8x21	W10x26	W10x26	W12x26	W14x30	W14x30
	16	W6x15	W6x15	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W14x30	W14x34	W14x34
26	6	W6x9	W6x9	W6x9	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x18	W10x22	W12x26
	8	W6x9	W6x9	W6x12	W6x15	W6x15	W6x15	W6x15	W8x18	W8x18	W10x22	W12x26	W14x30
	10	W6x12	W6x12	W6x15	W6x15	W6x15	W6x15	W6x15	W8x18	W8x21	W10x22	W12x26	W14x30
	12	W6x12	W6x12	W8x18	W8x18	W8x18	W8x21	W8x21	W10x22	W10x26	W12x26	W12x26	W14x30
	14	W6x15	W8x18	W8x18	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W12x26	W14x30	W14x34
	16	W6x15	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W12x26	W14x30	W14x34	W14x34
28	6	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W10x22	W12x26	W12x26
	8	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x18	W10x22	W14x30	W14x30
	10	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W8x21	W10x22	W12x26	W14x30	W14x34
	12	W6x12	W6x15	W6x15	W8x18	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W14x30	W14x34
	14	W6x15	W8x18	W8x18	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W14x30	W14x34	W14x34
	16	W6x15	W8x18	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W14x30	W14x30	W14x34	W14x38
30	6	W6x9	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W10x22	W12x26	W14x30
	8	W6x9	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x18	W8x21	W10x22	W14x30	W14x30
	10	W6x12	W6x12	W6x15	W6x15	W6x15	W8x18	W8x21	W8x21	W10x22	W12x26	W14x30	W14x30
	12	W6x12	W6x15	W8x18	W8x18	W8x21	W8x21	W10x22	W10x26	W12x26	W14x30	W14x34	W14x38
	14	W6x15	W8x18	W8x21	W8x21	W10x26	W10x26	W12x26	W12x26	W14x30	W14x34	W14x38	W14x38
	16	W6x15	W8x21	W8x21	W10x26	W10x26	W10x26	W12x26	W12x26	W14x30	W14x34	W14x38	W14x43

General Notes for Selection of Sign Support Posts

1. Determine values of "W", "H" and "L_B" as indicated in sketches "A" or "B".
   W = Maximum width of sign.
   H = Maximum height of sign.
   L_B = Maximum distance between top of a footing and bottom of sign.
2. For selection of posts, enter Tables with values of "W", "H" and "L_B".
3. For a size between those values of "W", "H" and "L" in the table, use next highest foot value.
4. All post sizes shown in upright lettering are A36 steel; all post sizes shown in slanted lettering with a crosshatched background are A441 or A572, grade 50 steel.
5. Use the longest post to slect all the post sizes.
6. No more than 2 posts may be erected within any 7-foot path, the total combined weight of all posts within a 7-foot path should not exceed 45 Lbs. per ft. The total combined weight of all posts within a 7-foot path should not exceed 600 Lbs. below the post hinge.
7. Transpo Industries or approved equal.

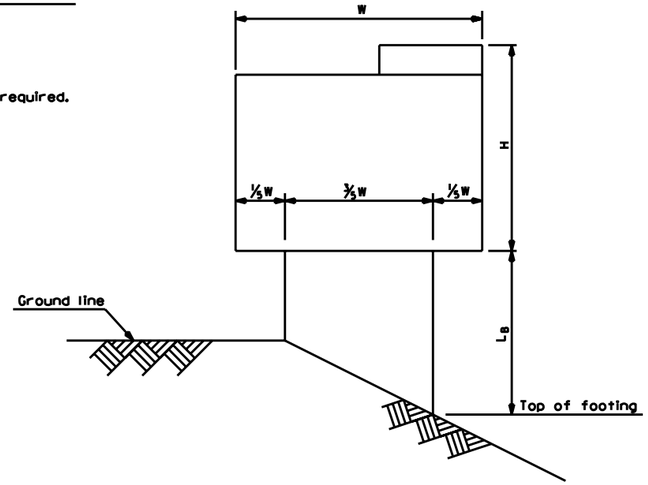
Post Selection Example

For a sign where :
W = 14'-0"
H = 10'-0"
L_B = 8'-0"
Two W6x15, A36 steel posts are required.



Sign on Three Posts

Sketch B



Sign on Two Posts

Sketch A

Website Copy

REVISIONS

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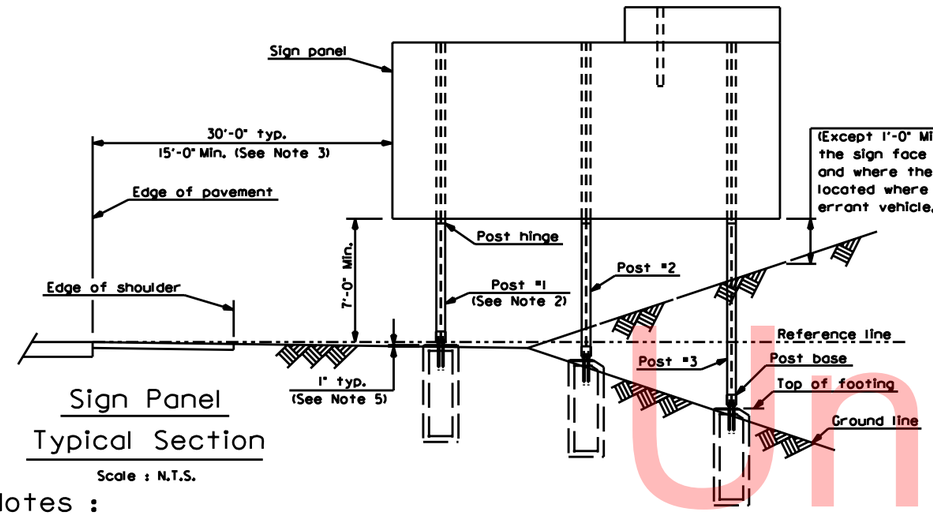
CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			6	8

Post-Mounted Signs and Footing Details

General Notes for Bracket Number Selection Table

1. For each post, determine values of "L_T" and "H" as indicated in sketch.
   "H" = Maximum height of sign in feet.
   "L_T" = Distance between the top of footing and the top of sign in feet for each post.
2. Enter Table with "H" and "L_T" to select the required bracket for that post.
3. For sizes of "H" and "L_T" between those values on the table, use the next highest value.



Sign Panel Typical Section

Scale : N.T.S.

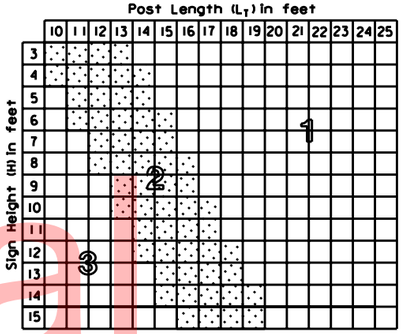
Footing Selection Table

Post Size	* L_1 Feet	Depth K_1 Feet	Reinf. Steel F_1
W6	2.0	5.50	7-#4
W8	2.5	6.00	7-#4
W10	3.0	6.75	8-#4
W12		7.50	9-#4
W14		8.00	9-#4

* Diameter if circular or min. side if square or rectangular.

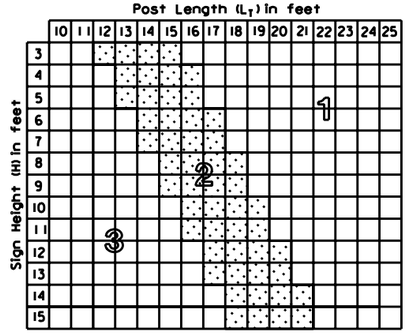
W6 Post

Post Length (L_T) in feet



W8 Post

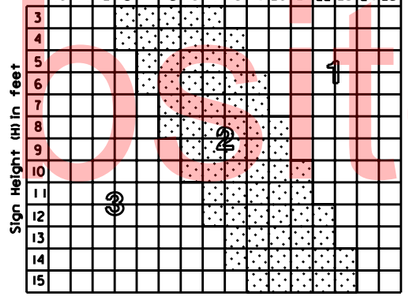
Post Length (L_T) in feet



B-525 Bracket Tables

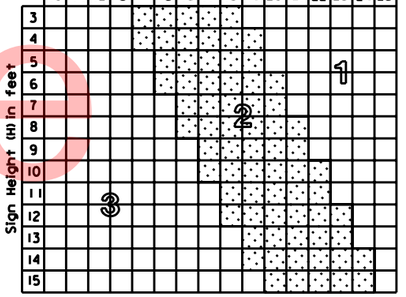
W10 Post

Post Length (L_T) in feet



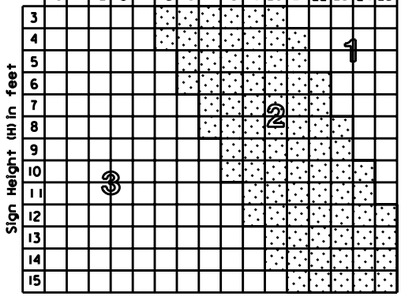
W12 Post

Post Length (L_T) in feet



W14 Post

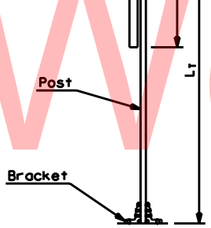
Post Length (L_T) in feet



B-650 Bracket Tables

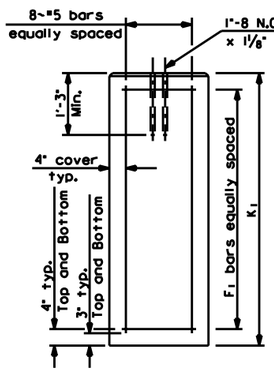
Notes :

1. Materials and workmanship in accordance with Delaware Department of Transportation Standard Specifications, unless noted otherwise.
2. Post "1" is always adjacent to roadway whether sign is located on left or right.
3. At locations with unmountable curb, guardrail or barrier, place the near edge of the sign at least 2'-0" behind the curb face, guardrail or barrier. At locations with guardrail or barrier, it is desirable to place post "1" beyond the deflection distance of the guardrail or barrier. Prior to fabrication, determine actual lateral placement in the field with the approval of the Enginner.
4. Loacate signs to avoid placing support in drainage ditches.
5. Mount all sign panels above post hinges.
6. For selection of posts, refer to Post Selection Tables on sheet No. 5.
7. For post base and hinge details, refer to sheet No. 7.
8. For selection of footing size and reinforcement, refer to Footing Selection Table on this sheet.
9. For detail of sign panels and attachment, see sheet No. 2, 3 and 4.

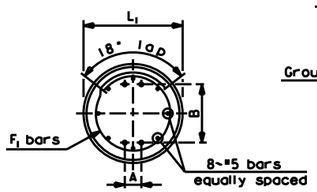


Sign Elevation

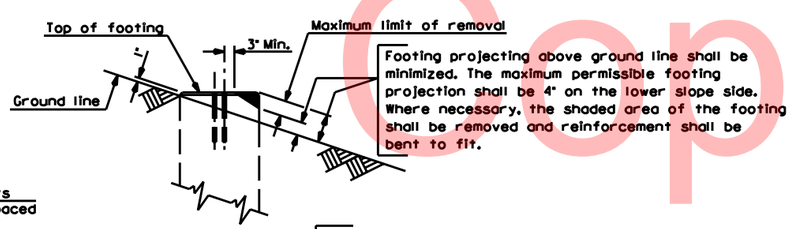
Scale : N.T.S.

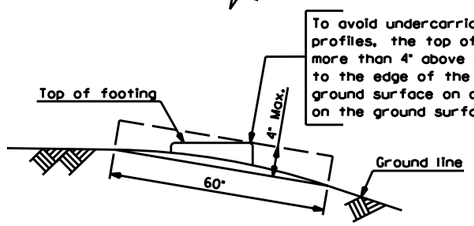


Side View



Plan View

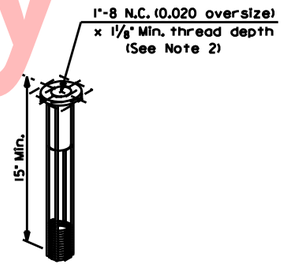




Footing Details

Scale : N.T.S.

Bracket Number Selection Tables



Anchor

Scale : N.T.S.

Notes :

1. Enter Footing Selection Table with required post size and find required footing values as shown in Details.
2. The anchor shall be 304 stainless steel with 1053 steel rod and coil.
3. Form the top one foot of the footing.
4. Use Class B cement concrete in all footings.
5. Exact dimensions "A" and "B" should be obtained from the manufacturer or measured from the assembled brackets prior to placement of anchores. Approximate dimensions are as follows :
   "A" (Lateral spacing of anchors)
   3" for B-525 used on W6 and W8 posts
   4" for B-650 used on W10, W12 and W14 posts.
   "B" (Longitudinal spacing of anchors)
   Bracket "1" - Depth of post selection plus 7 5/16".
   Bracket "2" - Depth of post selection plus 8 1/16".
   Bracket "3" - Depth of post selection plus 8 1/8".
6. To insure proper spacing and alignment of anchors, it is recommended that all anchors be held in place by a rigid machined template while the concrete is placed and cured.
7. Transpo Industries or approved equal.

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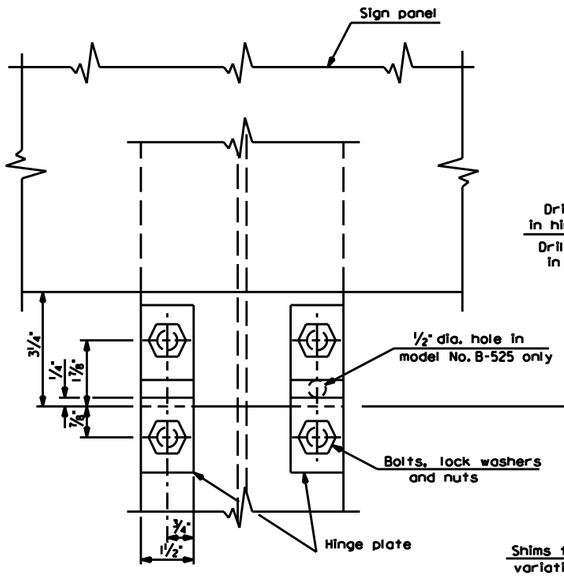
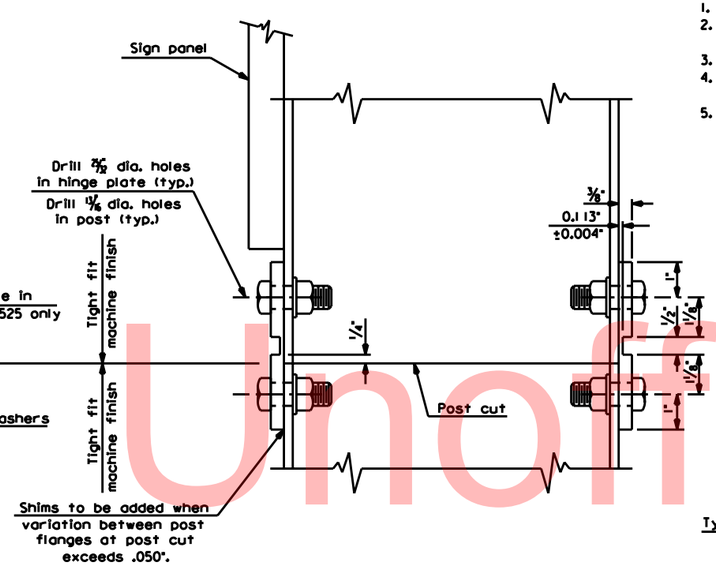
CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302			7	8

Breakaway Details

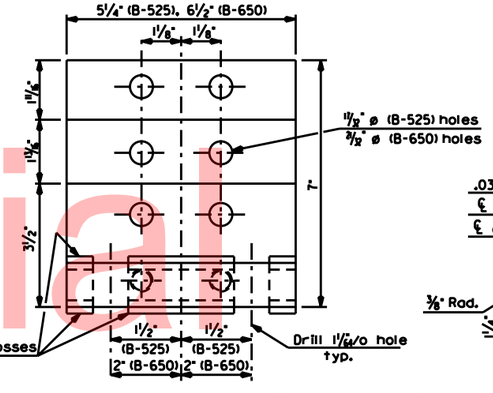
Notes :
1. The bracket number is stamped on the bracket.
2. Bolt the brackets to post, then place post and connected bracket to breakaway coupling.
3. For footing and anchor details, see sheet No. 6
4. All bolts to be tightened in accordance with the manufacturer's specifications.
5. Transpo Industries or approved equal.

Bracket No.	D (inches)
1	0.100
2	0.150
3	0.200



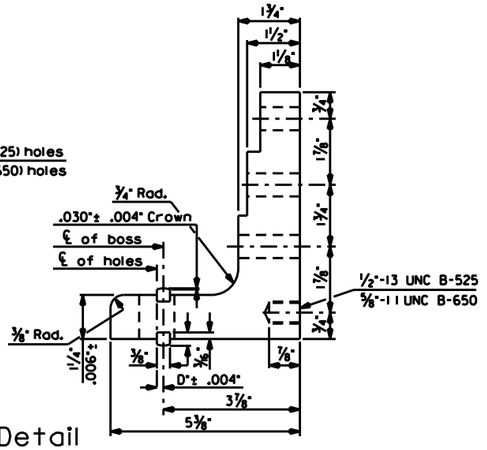


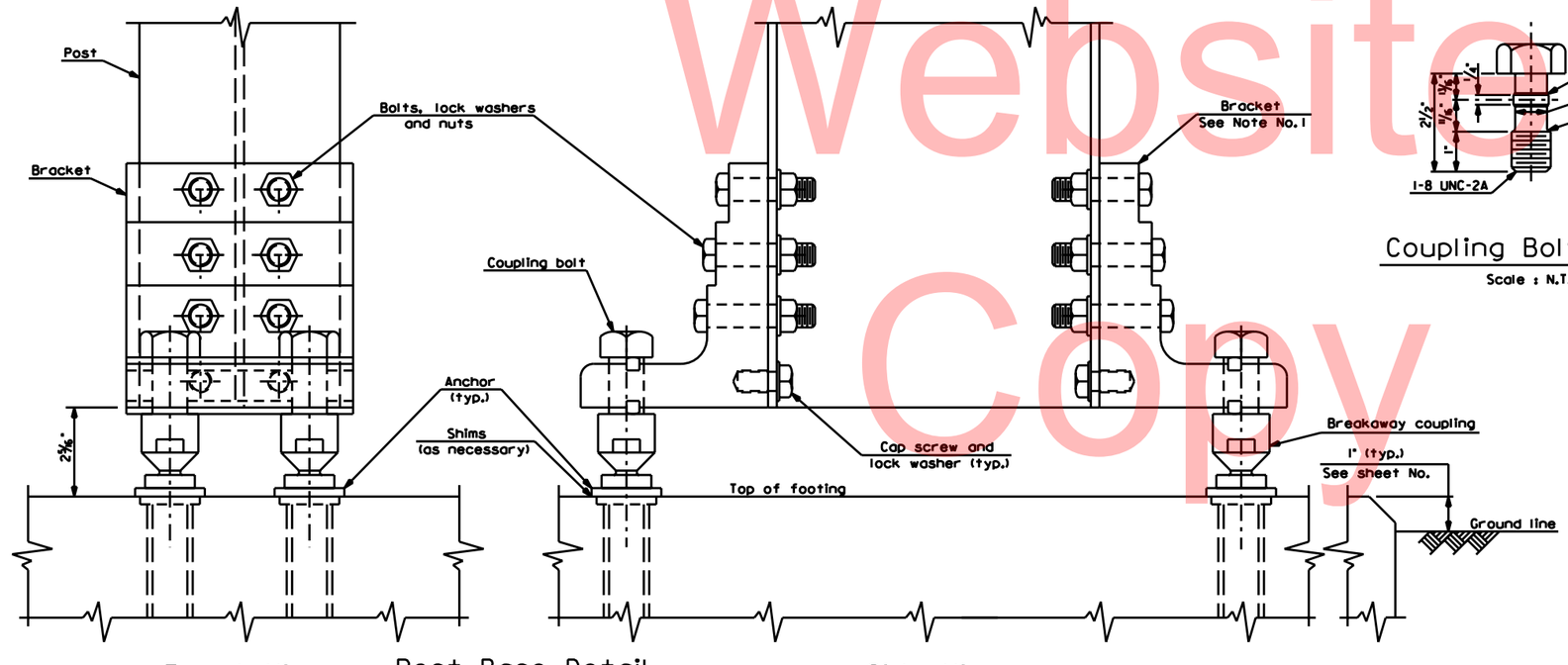
Post Hinge Detail



Bracket Detail

Scale : ½" = 1'-0"





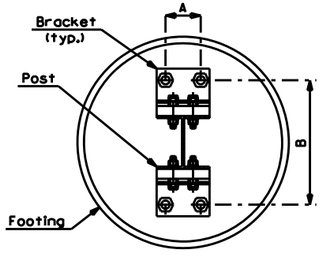
Front View | Post Base Detail | Side View

Breakaway Assemblies

Scale : ½" = 1'-0"

Coupling Bolt Detail

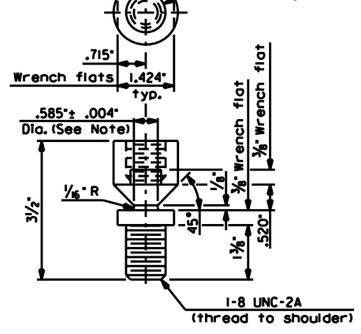
Scale : N.T.S.



Plan View

Scale : N.T.S.

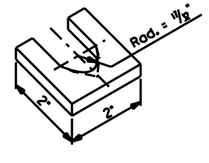
Note : For dimensions A and B, see sheet No.



Type B - Breakaway Coupling Detail

Scale : N.T.S.

Note : Do not place torque across neck portion of coupling.



Shim Detail

Scale : N.T.S.

Note : 14 or 18 gage galvanized steel sheet

REVISIONS

DESIGN — CHKD.

PREL. TRACING

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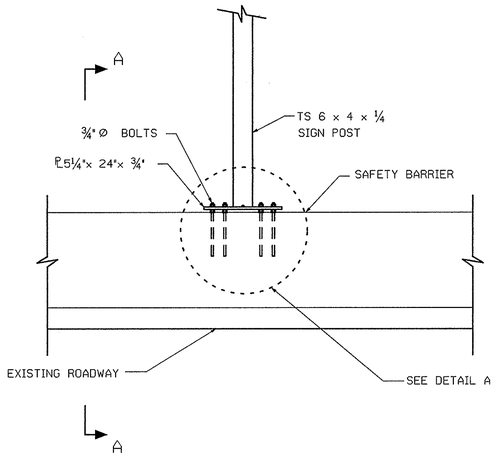
CONTRACT	COUNTY	F.A.P. NO.	SHEET NO.	TOTAL SHTS.
T201408302	Statewide		8	8

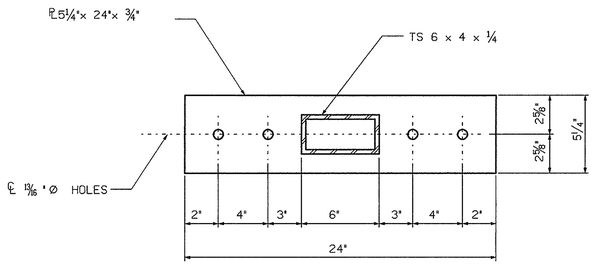
GUIDE SIGN INSTALLATION
CONTRACT - DETAILS

REVISIONS



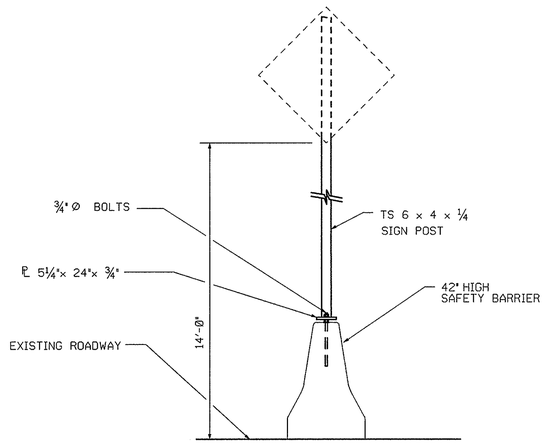
ELEVATION AT BARRIER

NOT TO SCALE



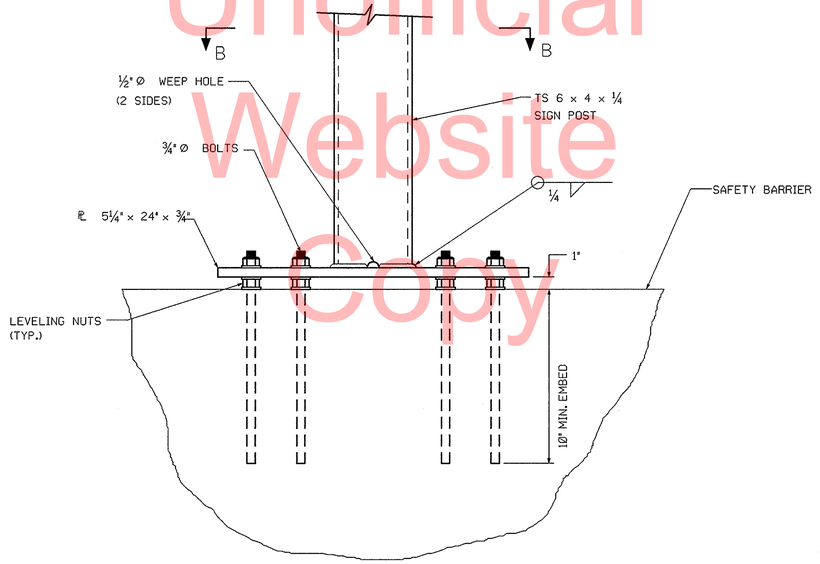
SECTION B-B

NOT TO SCALE



SECTION A-A

NOT TO SCALE



DETAIL A

NOT TO SCALE

P.C.C. SAFETY BARRIER SIGN CONNECTION

NOT TO SCALE

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GENERAL NOTES:

1. SPECIFICATIONS:

   DELAWARE DEPARTMENT OF TRANSPORTATION - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AUGUST 2001, INCLUDING ALL SUPPLEMENTS.

   A.A.S.H.T.O. - STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINARE AND TRAFFIC SIGNALS - DATED 2000, USING A DESIGN WIND SPEED OF 105 M.P.H. AND ICE 3.0 PSF.

   AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE SPECIFICATIONS, AASHTO/AWS D1.5-2002 ONLY E70XX10W LOW HYDROGEN ELECTRODES ARE TO BE USED.

   A.I.S.C. - MANUAL OF STEEL CONSTRUCTION 9TH. EDITION.

2. MATERIALS:

   ALL PREFABRICATED SQUARE TUBING SHALL CONFORM TO ASTM A500 GRADE C WITH Fy MINIMUM - 50 KSI.

   ALL MISCELLANEOUS PLATE MATERIAL FOR BASE PLATES SHALL CONFORM TO ASTM A709 GRADE 50 WITH Fy MINIMUM - 50 KSI.

   ANCHOR BOLTS SHALL CONFORM TO ASTM A709 GRADE 50 WITH 50 KSI MINIMUM YIELD STRENGTH AND BE HOT - DIPPED GALVANIZED. WELDING TO HIGH STRENGTH ANCHOR BOLTS WILL NOT BE PERMITTED. (SEE SPECIAL PROVISIONS)

3. WELDING SHALL BE DONE IN THE SHOP BEFORE GALVANIZING. ALL WELDING AND OXYGEN CUTTING SHALL BE IN ACCORDANCE WITH A.W.S. STRUCTURAL WELDING CODE ALL WELDING SHALL BE INSPECTED AT CONTRACTOR'S EXPENSE.

4. ALL STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH A.A.S.H.T.O. M III (ASTM A-123).

5. CONTRACTOR SHALL SUBMIT FOR APPROVAL, AN ADHESIVE ANCHOR BOLT SYSTEM CAPABLE OF PROVIDING THE FOLLOWING UNFACTORED LOAD CAPACITY SIMULTANEOUSLY:

   TENSION = 4 kips/BOLT MIN.

   SHEAR = 0.7 kips/BOLT MIN.
   MIN. NUMBER OF BOLTS, DIAMETER AND EMBEDMENT DEPTHS SHOWN ON THE PLAN SHALL BE MAINTAINED.

CHKD. _____ DESIGN _____ PREL. TRACING _____