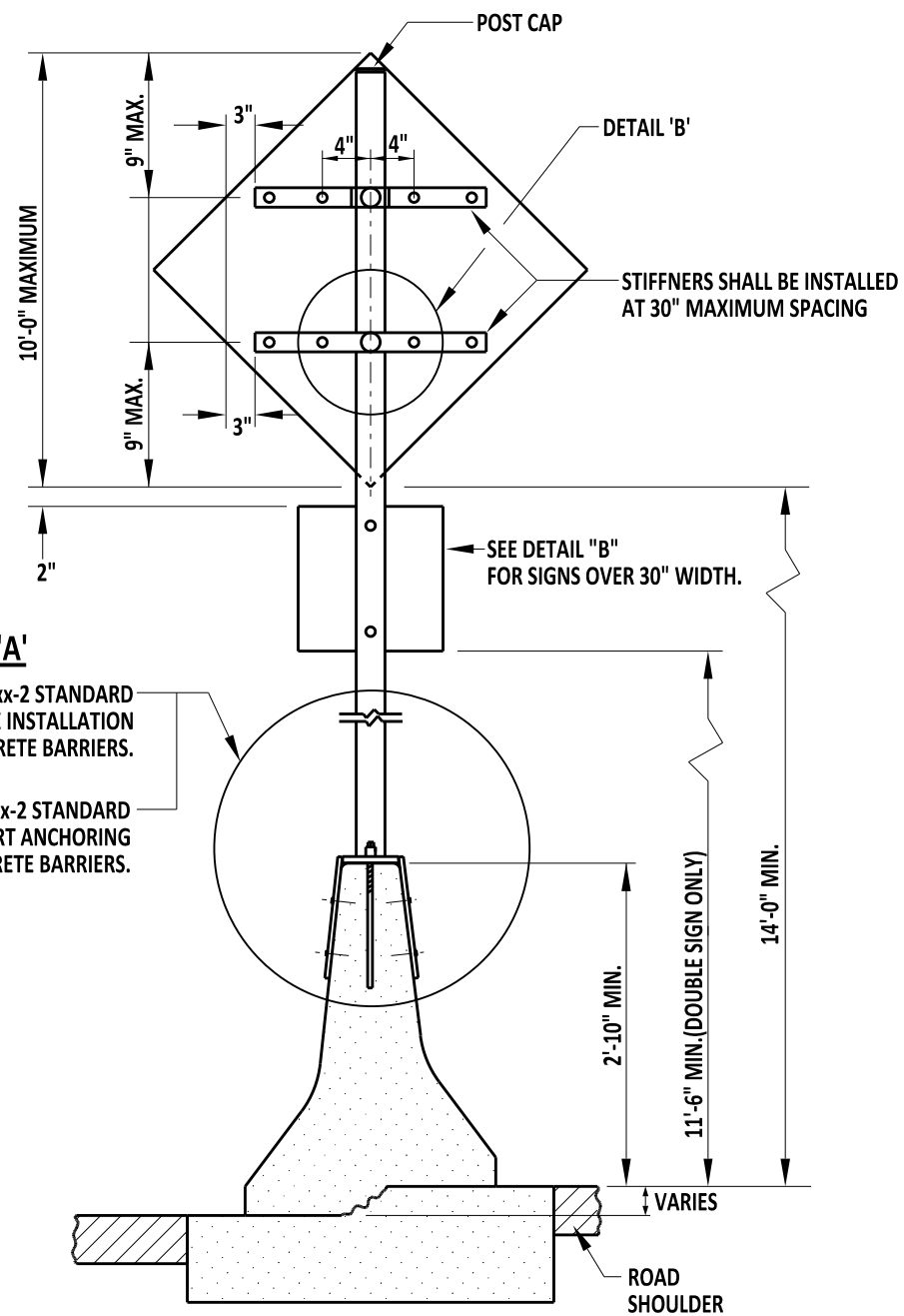
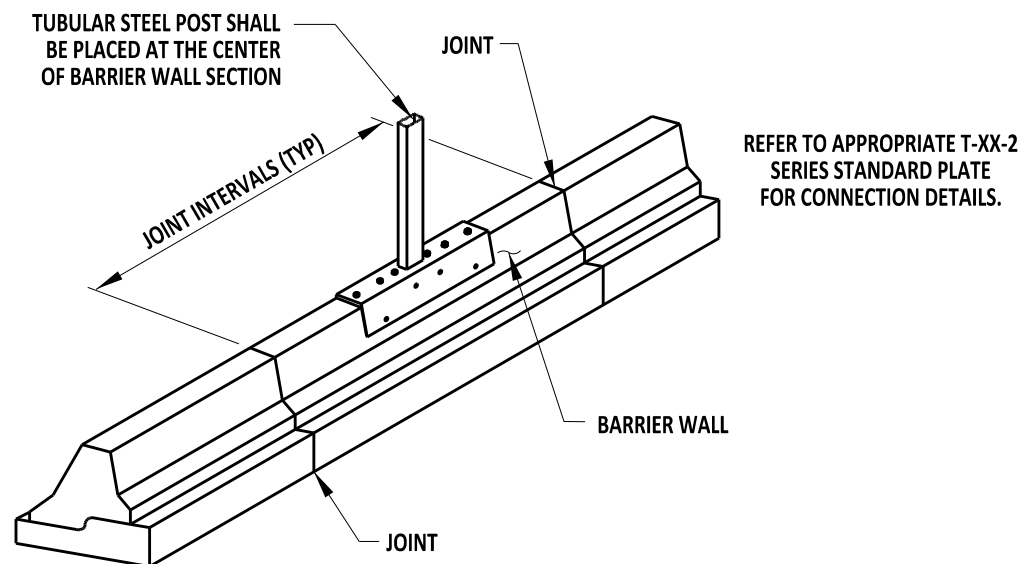
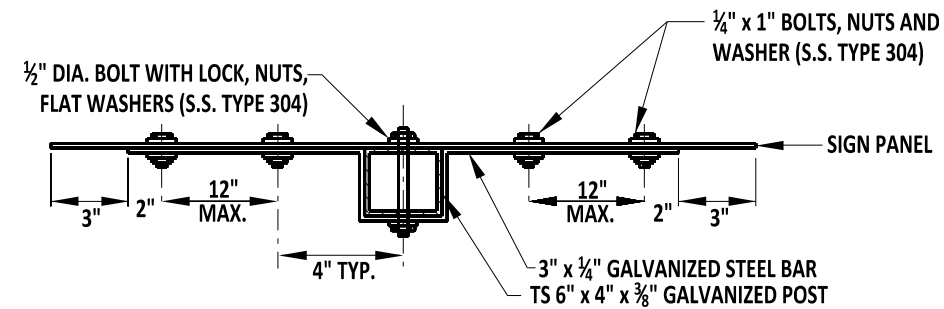


CONCRETE BARRIER MOUNTED SIGN
MAXIMUM SIGN AREA - 40 SQ. FT.



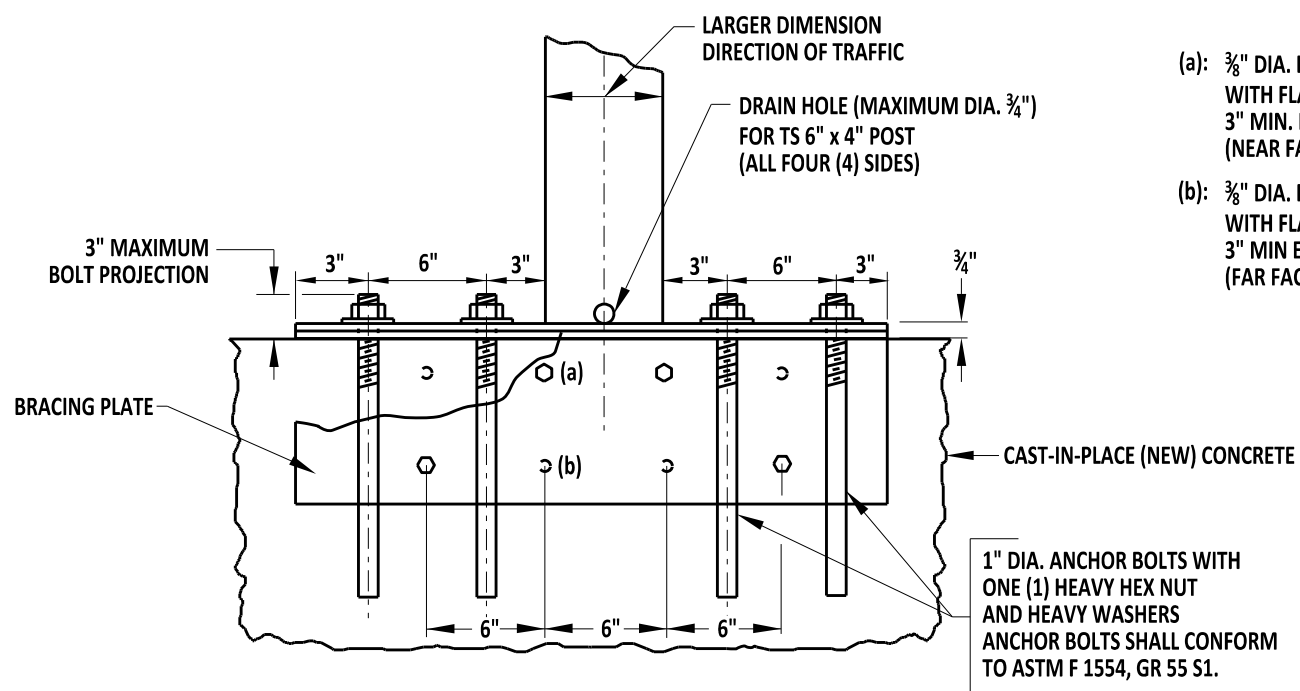
DETAIL 'B' - TOP VIEW
TUBULAR STEEL POST



NOTES:

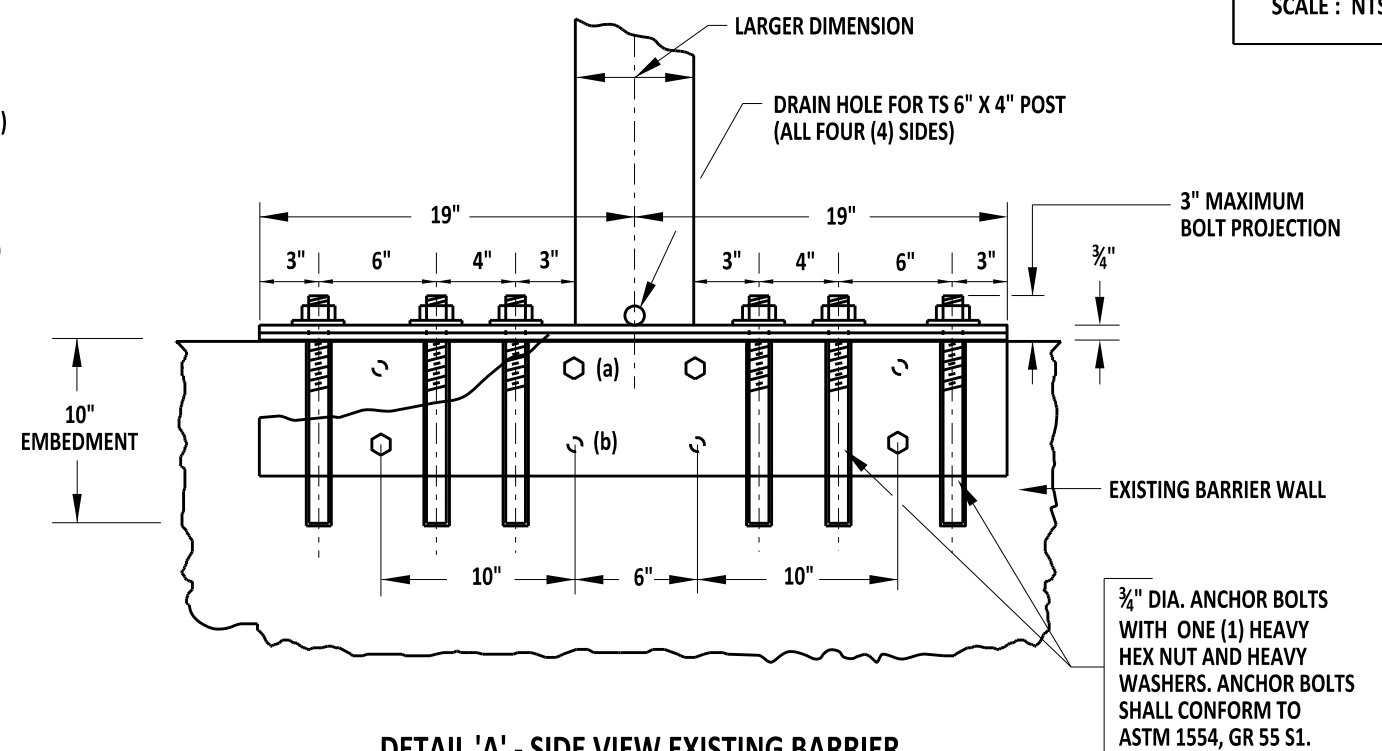
1. ANCHOR BOLTS SHALL BE ASTM F 1554, GR 55 S1 GALVANIZED. NUTS SHALL BE ASTM A194 GRADE OR 2H.
2. TUBULAR STEEL POST TS 6" X 4" X 3/8" SHALL BE A501 UNLESS OTHERWISE NOTED.
3. REFER TO APPROPRIATE T-XX-2 STANDARD PLATES FOR ALTERNATIVE SIGN ATTACHMENT TO STEEL TUBE POSTS OR W6X12 POSTS.
4. ALL STRUCTURAL STEEL AND HARDWARE SHALL BE GALVANIZED IN CONFORMANCE WITH ASTM A123 AND A153, RESPECTIVELY.
5. ALL PLATES AND W6X12 POST SHALL CONFORM TO ASTM A706, GRADE 36.
6. CONCRETE BARRIER MOUNTED SIGN MAXIMUM SIGN AREA OF 40 SQ. FT.



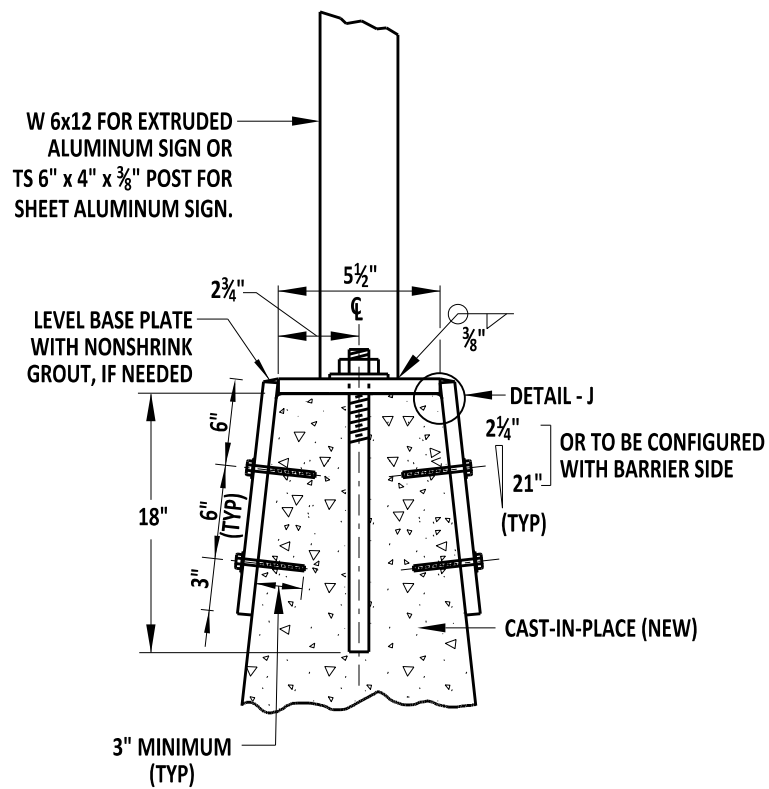


DETAIL 'A' - SIDE VIEW NEW BARRIER

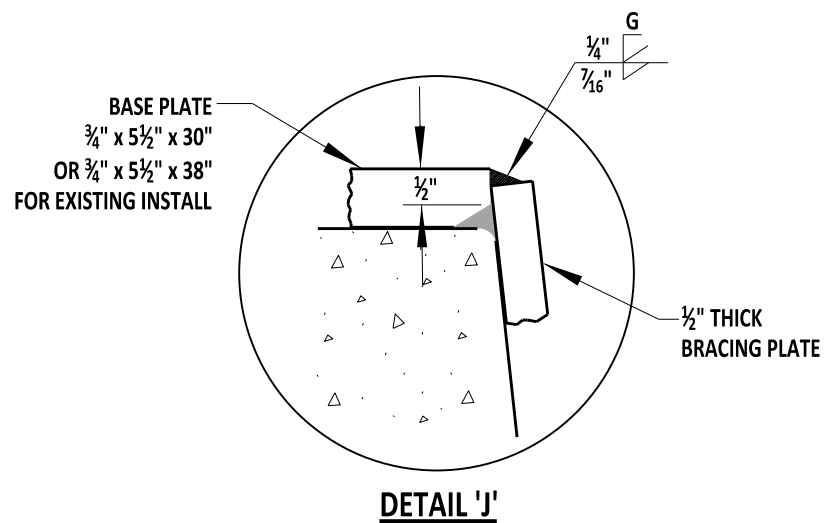
- (a): 3/8" DIA. EXPANSION BOLTS WITH FLAT WASHERS 3" MIN. EMBEDMENT (TYP.) (NEAR FACE)
- (b): 3/8" DIA. EXPANSION BOLTS WITH FLAT WASHERS 3" MIN EMBEDMENT (TYP.) (FAR FACE)



DETAIL 'A' - SIDE VIEW EXISTING BARRIER



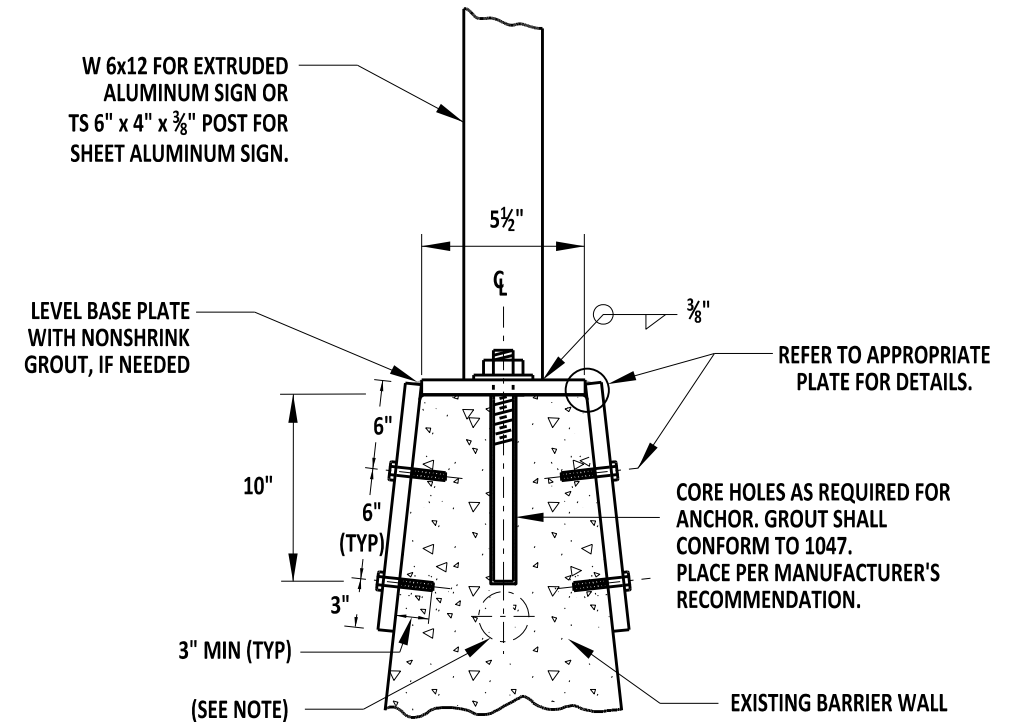
DETAIL 'A' NEW BARRIER



DETAIL 'J'

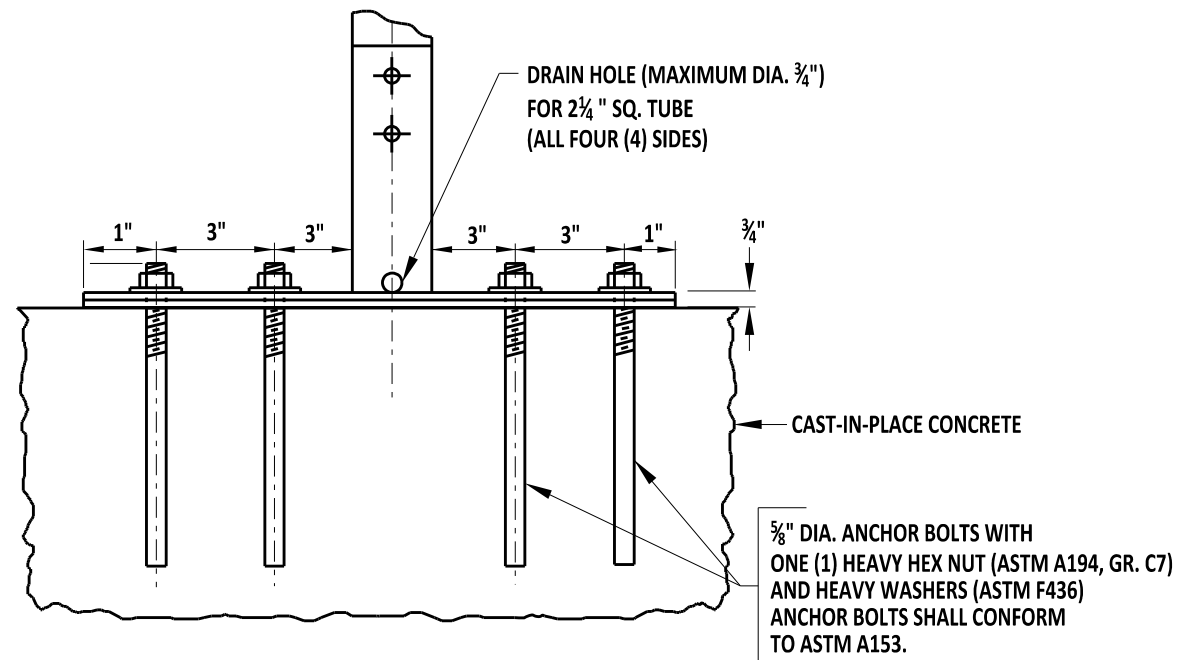
NOTES:

1. SLIP FORM SHALL NOT BE USED WITHIN 5'-0" EITHER SIDE OF THE POST.
2. REFER TO OTHER APPROPRIATE SERIES STANDARD FOR ATTACHMENT DETAIL.
3. THE CONTRACTOR SHALL VERIFY ANY EXISTING CONDUIT BEFORE DRILLING HOLES. IF THE CONDUIT IS WITHIN 10" FROM THE TOP OF THE BARRIER, THE ENGINEER SHALL BE CONTACTED FOR ALTERNATE DESIGN.



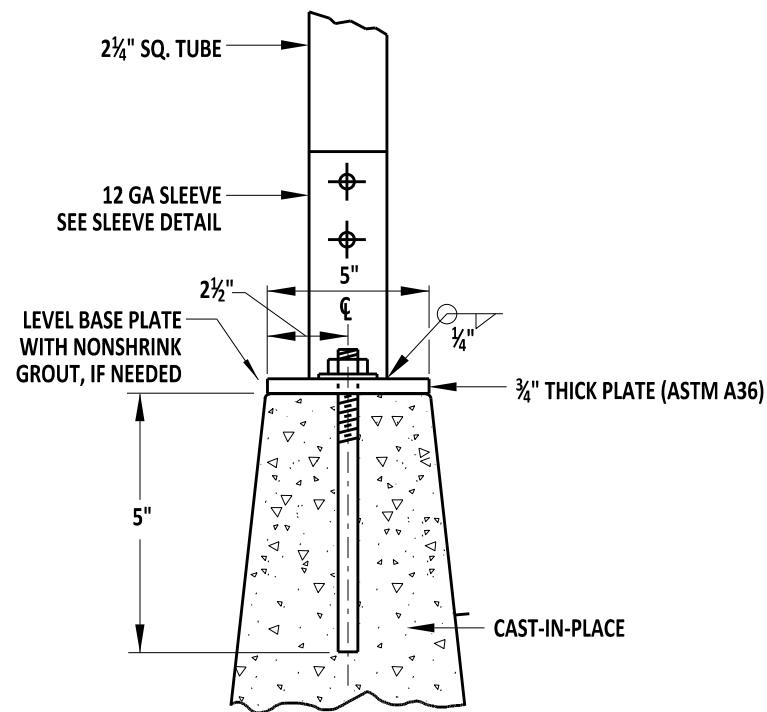
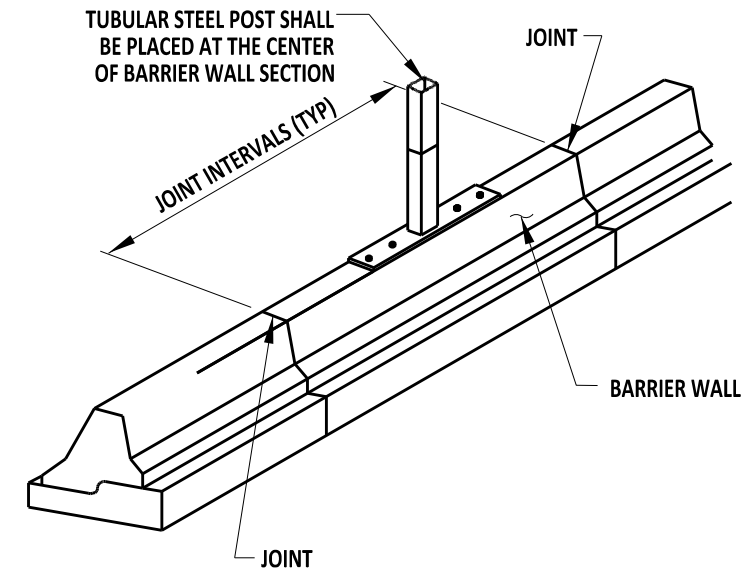
DETAIL 'A' EXISTING BARRIER



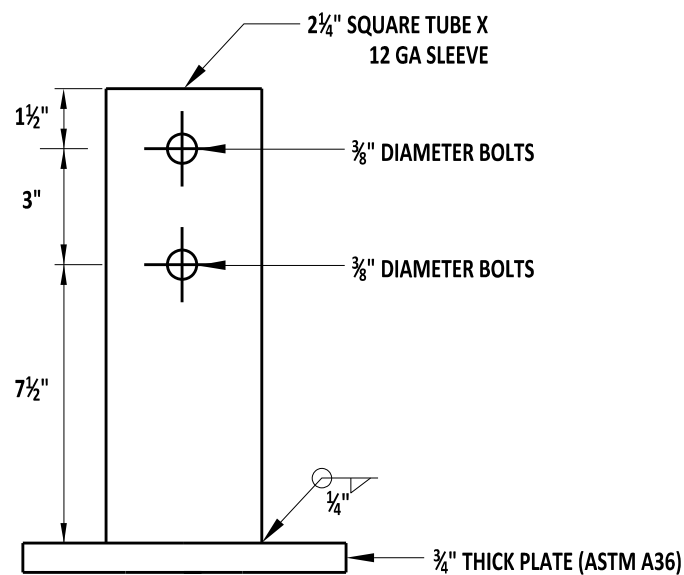


DETAIL 'A' - SIDE VIEW CONCRETE BARRIER

CONCRETE BARRIER MOUNTED SIGN



DETAIL 'A' CONCRETE BARRIER

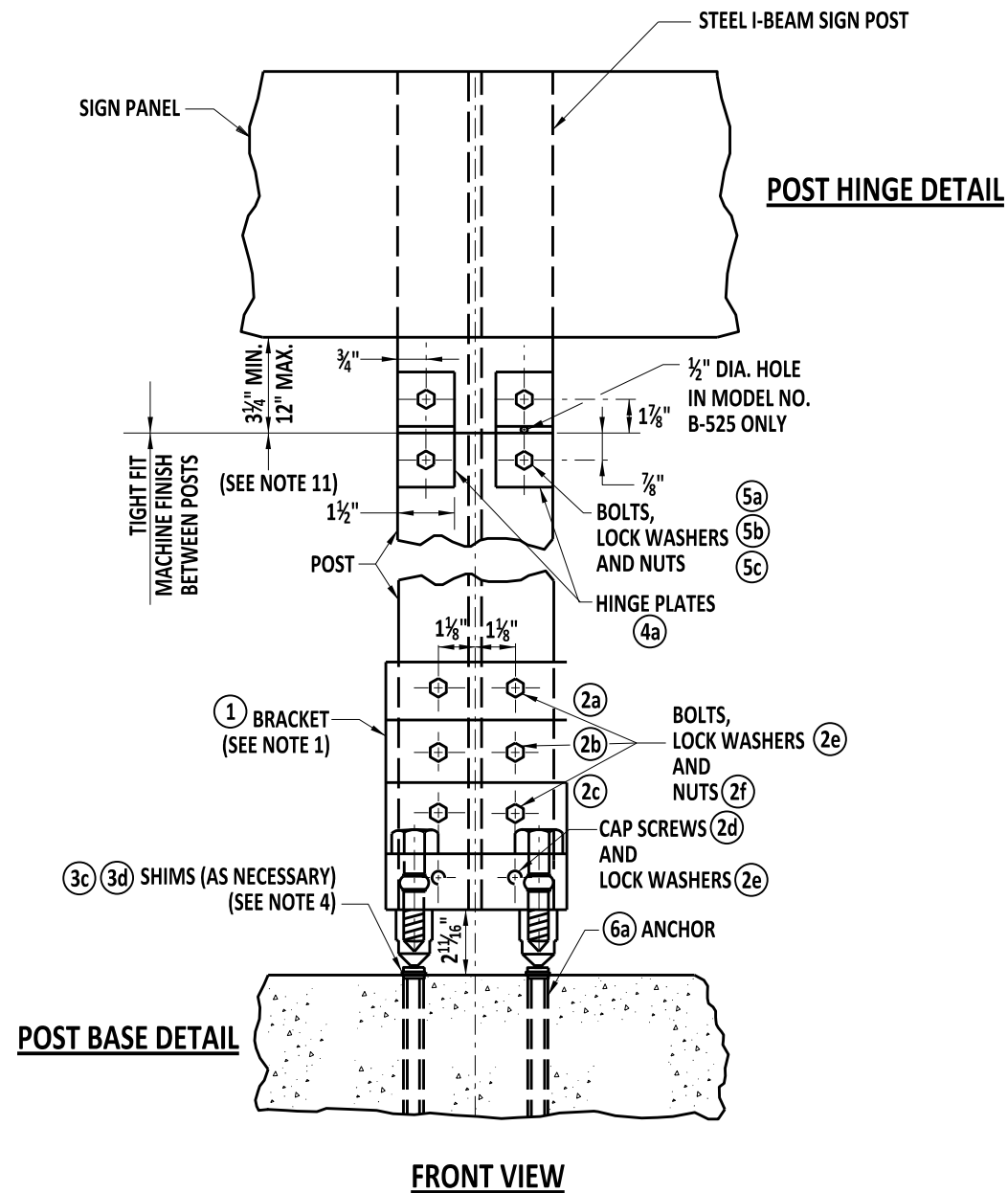


SLEEVE DETAIL

NOTES:

1. SLIP FORM SHALL NOT BE USED WITHIN 5'-0" EITHER SIDE OF THE POST.
2. REFER TO OTHER APPROPRIATE SERIES STANDARD FOR ATTACHMENT DETAIL.
3. THE CONTRACTOR SHALL VERIFY ANY EXISTING CONDUIT BEFORE DRILLING HOLES. IF THE CONDUIT IS WITHIN 10" FROM THE TOP OF THE BARRIER, THE ENGINEER SHALL BE CONTACTED FOR ALTERNATE DESIGN.

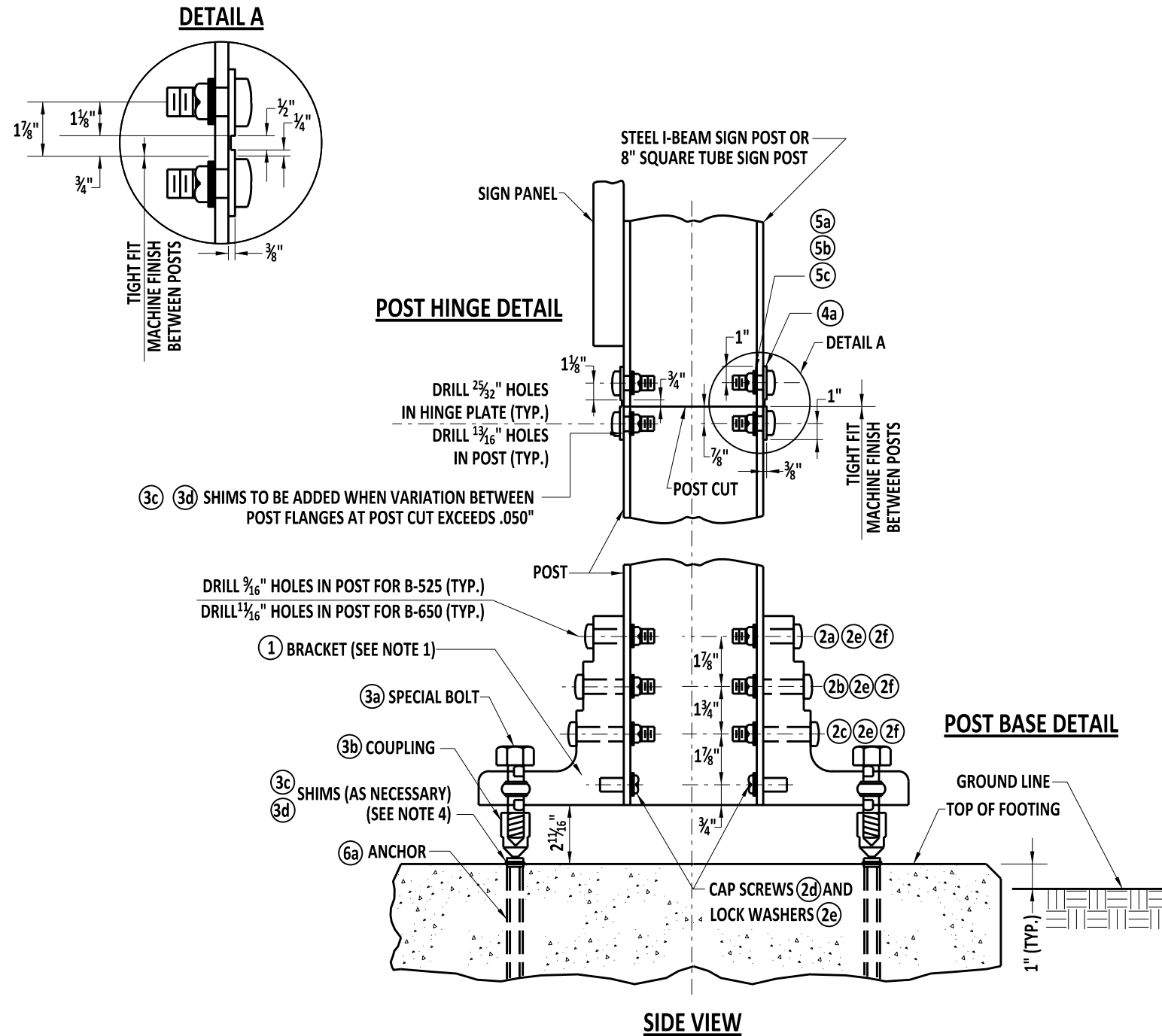




NOTES:

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. ALL BOLTS TO BE TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR HINGE PLATE, SHIM AND BRACKET DETAILS.
5. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR ANCHOR, BREAKAWAY COUPLING AND COUPLING BOLT DETAILS.
6. W6X9 SIGN POSTS SHALL NOT BE USED WITH BREAKAWAY BASE SUPPORT SYSTEM 'B'. FOR W6X9 SIGN POSTS, SEE BREAKAWAY BASE SUPPORT SYSTEM 'A' FOR HIGHWAY SIGNS.
7. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR ADJUSTMENTS TO CONCRETE FOUNDATIONS TO SUIT VARIOUS GROUND SLOPES.
8. DESIGNATION B-525 IS FOR 6" (LARGER THAN W6X9) AND 8" BEAM SIZES.
9. DESIGNATION B-650 IS FOR 10", 12", 14", 16" AND 18" BEAM SIZES.
10. (N) REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR MATERIAL PARTS.
11. HINGE PLATES SHALL NOT BE USED WITH SINGLE STEEL SUPPORT INSTALLATIONS FOR SIGNS.
12. FOR SUPPORTS W8X21 AND LARGER A 7'-0" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN I-BEAMS UTILIZING BREAKAWAY SUPPORT SYSTEM 'B' FOR HIGHWAY SIGNS. THE 7'-0" MINIMUM CLEAR DISTANCE SHALL BE MEASURED FROM INSIDE FLANGE EDGE TO INSIDE FLANGE EDGE. NOT BETWEEN CENTER OF I-BEAMS.

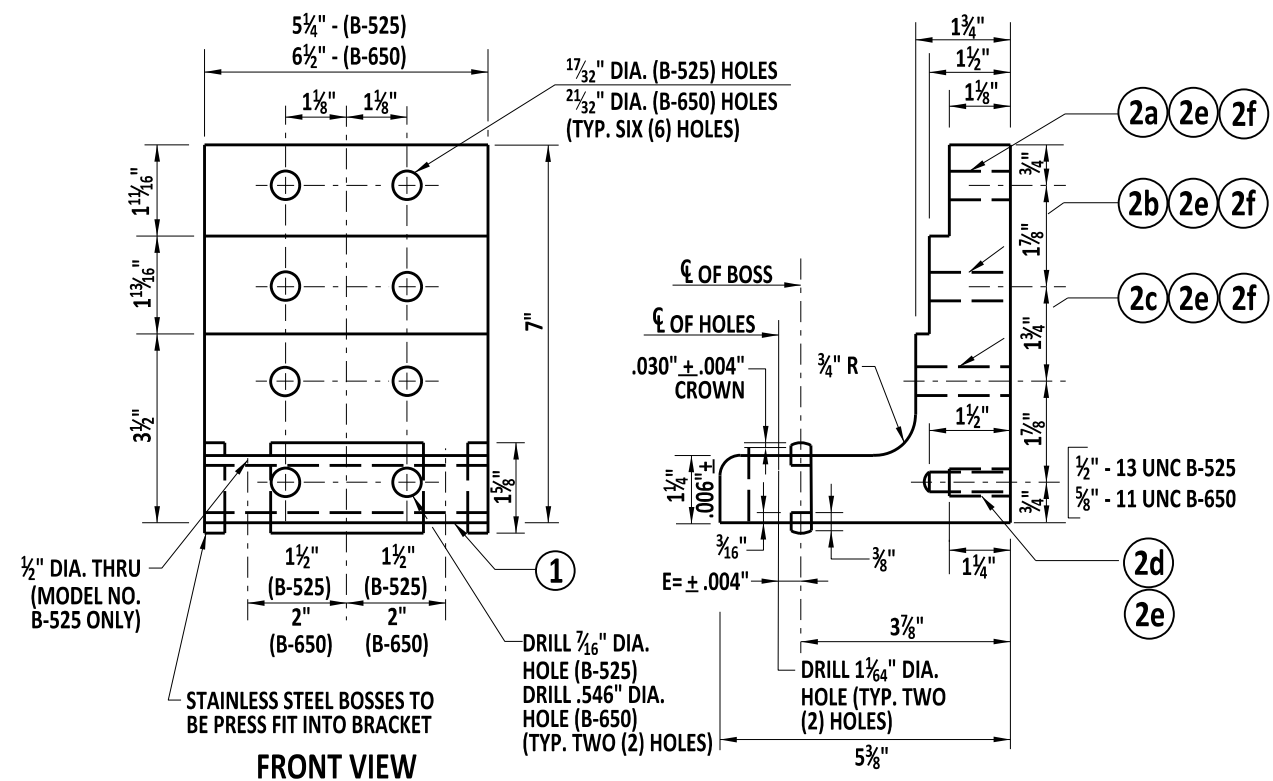
BREAKAWAY ASSEMBLIES



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. ALL BOLTS TO BE TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR HINGE PLATE, SHIM AND BRACKET DETAILS.
5. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR ANCHOR, BREAKAWAY COUPLING AND COUPLING BOLT DETAILS.
6. W6X9 SIGN POSTS SHALL NOT BE USED WITH BREAKAWAY BASE SUPPORT SYSTEM 'B'. FOR W6X9 SIGN POSTS, SEE BREAKAWAY BASE SUPPORT SYSTEM 'A' FOR HIGHWAY SIGNS.
7. REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR ADJUSTMENTS TO CONCRETE FOUNDATIONS TO SUIT VARIOUS GROUND SLOPES.
8. DESIGNATION B-525 IS FOR 6" (LARGER THAN W6X9) AND 8" BEAM SIZES.
9. DESIGNATION B-650 IS FOR 10", 12", 14", 16" AND 18" BEAM SIZES.
10. (N) REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR MATERIAL PARTS.
11. HINGE PLATES SHALL NOT BE USED WITH SINGLE STEEL SUPPORT INSTALLATIONS FOR SIGNS.
12. FOR SUPPORTS W8X21 AND LARGER A 7'-0" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN I-BEAMS UTILIZING BREAKAWAY SUPPORT SYSTEM 'B' FOR HIGHWAY SIGNS. THE 7'-0" MINIMUM CLEAR DISTANCE SHALL BE MEASURED FROM INSIDE FLANGE EDGE TO INSIDE FLANGE EDGE. NOT BETWEEN CENTER OF I-BEAMS.

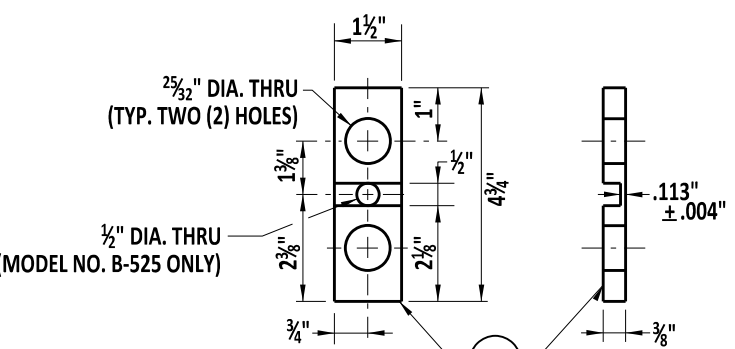




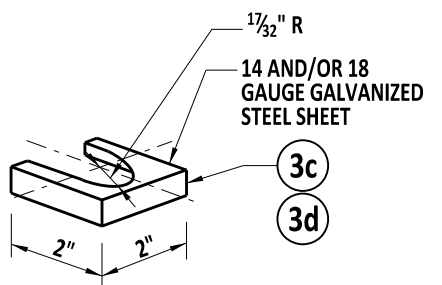
FRONT VIEW

BRACKET DETAIL

SIDE VIEW



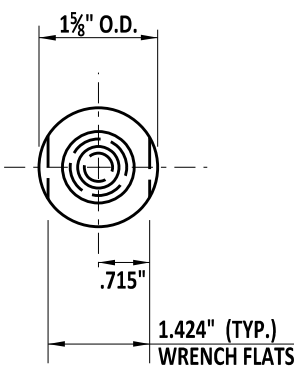
HINGE PLATE DETAIL



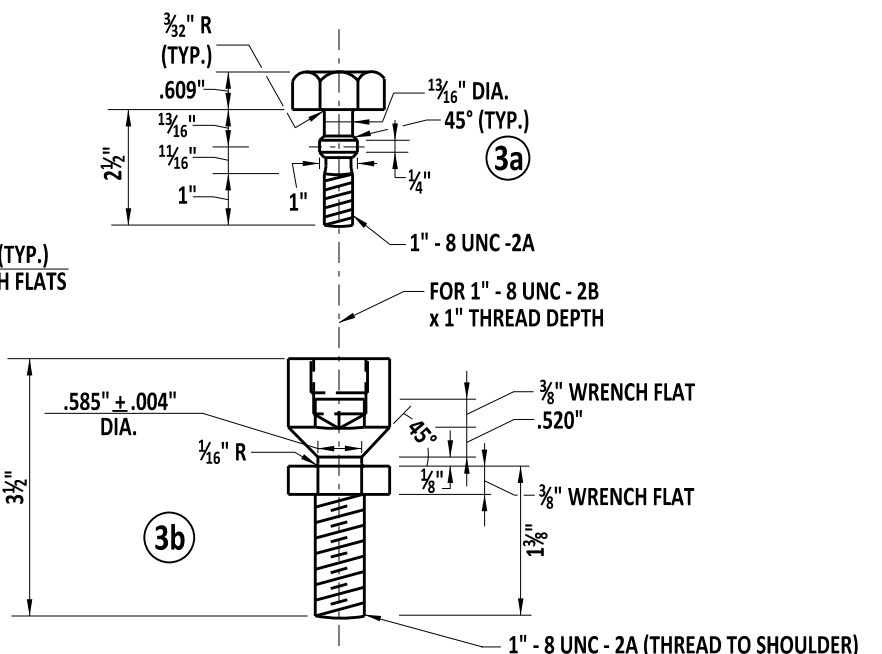
SHIM DETAIL

NOTES:

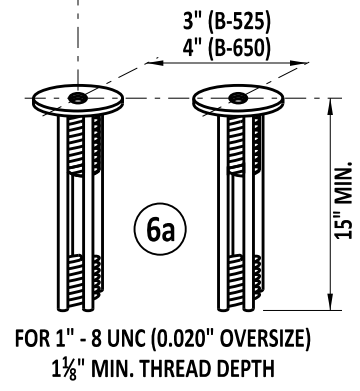
1. W6X9 SIGN POSTS SHALL NOT BE USED WITH BREAKAWAY BASE SUPPORT SYSTEM 'B'. FOR W6X9 SIGN POSTS, SEE BREAKAWAY BASE SUPPORT SYSTEM 'A' FOR HIGHWAY SIGNS.
2. DESIGNATION B-525 IS FOR 6" (LARGER THAN W6X9) AND 8" BEAM SIZES.
3. DESIGNATION B-650 IS FOR 10", 12", 14", 16" AND 18" BEAM SIZES.
4. (N) REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR MATERIAL PARTS.
5. HINGE PLATES SHALL NOT BE USED WITH SINGLE STEEL SUPPORT INSTALLATIONS FOR SIGNS.



COUPLING BOLT DETAIL



BREAKAWAY COUPLING BOLT DETAIL



ANCHOR

NOTES:

1. W6X9 SIGN POSTS SHALL NOT BE USED WITH BREAKAWAY BASE SUPPORT SYSTEM 'B'. FOR W6X9 SIGN POSTS, SEE BREAKAWAY BASE SUPPORT SYSTEM 'A' FOR HIGHWAY SIGNS.
2. DESIGNATION B-525 IS FOR 6" (LARGER THAN W6X9) AND 8" BEAM SIZES.
3. DESIGNATION B-650 IS FOR 10", 12", 14", 16" AND 18" BEAM SIZES.
4. (N) REFER TO OTHER BREAKAWAY BASE SUPPORT SYSTEM FOR HIGHWAY SIGNS STANDARD PLATES FOR MATERIAL PARTS.
5. DO NOT PLACE TORQUE WRENCH ACROSS NECK OF COUPLING.
6. HINGE PLATES SHALL NOT BE USED WITH SINGLE STEEL SUPPORT INSTALLATIONS FOR SIGNS.

MATERIAL LIST FOR 6" AND 8" STEEL I-BEAM SIGN POSTS

SCALE : NTS

ITEM	DESCRIPTION	SIZE / SPECIFICATIONS	QTY. / POST
①	6061-T6 ALUMINUM (SEE BRACKET SELECTION TABLE FOR - NUMBER)		2
②	BRACKET HARDWARE ASSEMBLY, TYPE B525, INCLUDES:		1
②a	BOLT	½" - 13 UNC x 2½" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②b	BOLT	½" - 13 UNC x 2¾" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②c	BOLT	½" - 13 UNC x 3" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②d	CAP SCREW	½" - 13 UNC x 1¾" HEX HEAD, ASTM A307, GALV. ASTM A153	4
②e	LOCK WASHER	½", ANSI B18-21-1, GALV. ASTM A153	16
②f	NUT	½" - 13 UNC, HEAVY HEX, ASTM A563 GR. DH, GALV. ASTM A153	12
③	COUPLING & SPECIAL BOLT ASSEMBLY, TYPE B, INCLUDES:		1
③a	SPECIAL BOLT	1" - 8 UNC, ASTM A449, GALV. ASTM A153/B695	4
③b	COUPLING	1" - 8 UNC, LP., AMS 6378D*, GALV. ASTM A153, POLYESTER COAT	4
③c	SHIM	1" HORSESHOE, 14 GAUGE, GALV. STEEL SHEET	2
③d	SHIM	1" HORSESHOE, 18 GAUGE, GALV. STEEL SHEET	2
④	HINGE ASSEMBLY, TYPE B525, INCLUDES:		1
④a	HINGE PLATE	TYPE B525, AISI 4130 STEEL, GALV. ASTM A123	4
⑤	HINGE HARDWARE ASSEMBLY, TYPE B, INCLUDES:		1
⑤a	BOLT	HINGE, ¾" - 10 UNC x 2¼" HEX HEAD, ASTM A325, GALV. ASTM A153	8
⑤b	LOCK WASHER	¾", ANSI B18-21-1, GALV. ASTM A153	8
⑤c	NUT	¾" - 10 UNC, HEAVY HEX, ASTM A563, GR, DH, GALV. ASTM A153	8
⑥	ANCHOR ASSEMBLY, TYPE B, INCLUDES:		1
⑥a	ANCHOR	1"-8 UNC, 304 STAINLESS STEEL FERRULE, AISI 1045 ROD, AISI 1008 COIL	4

MATERIAL LIST FOR 10", 12", 14", 16" AND 21" STEEL I-BEAM SIGN POSTS

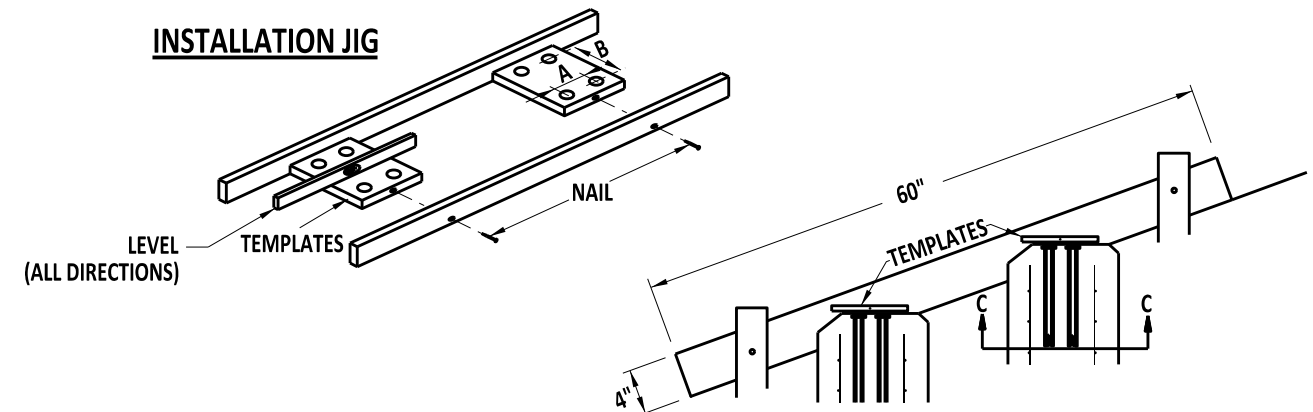
ITEM	DESCRIPTION	SIZE / SPECIFICATIONS	QTY. / POST
①	BRACKET, TYPE B650	6061-T6 ALUMINUM (SEE BRACKET SELECTION TABLE FOR -NUMBER)	2
②	BRACKET HARDWARE ASSEMBLY, TYPE B650, INCLUDES:		1
②a	BOLT	⅝" - 11 UNC x 2¾" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②b	BOLT	⅝" - 11 UNC x 3" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②c	BOLT	⅝" - 11 UNC x 3¼" HEX HEAD, ASTM A325, GALV. ASTM A153	4
②d	CAP SCREW	⅝" - 11 UNC x 1¾" HEX HEAD, ASTM A307, GALV. ASTM A153	4
②e	LOCK WASHER	⅝", ANSI B18-21-1, GALV. ASTM A153	16
②f	NUT	⅝" - 11 UNC, HEAVY HEX, ASTM A563 GR. DH, GALV. ASTM A153	12
③	COUPLING & SPECIAL BOLT ASSEMBLY, TYPE B, INCLUDES:		1
③a	SPECIAL BOLT	1" - 8 UNC, ASTM A449, GALV. ASTM A153/B695	4
③b	COUPLING	1" - 8 UNC, LP., AMS 6378D*, GALV. ASTM A153, POLYESTER COAT	4
③c	SHIM	1" HORSESHOE, 14 GAUGE, GALV. STEEL SHEET	2
③d	SHIM	1" HORSESHOE, 18 GAUGE, GALV. STEEL SHEET	2
④	HINGE ASSEMBLY, TYPE B650, INCLUDES:		1
④a	HINGE PLATE	TYPE B650, AISI 4130 STEEL, GALV. ASTM A123	4
⑤	HINGE HARDWARE ASSEMBLY, TYPE B, INCLUDES:		1
⑤a	BOLT	HINGE, ¾" - 10 UNC x 2¼" HEX HEAD, ASTM A325, GALV. ASTM A153	8
⑤b	LOCK WASHER	¾", ANSI B18-21-1, GALV. ASTM A153	8
⑤c	NUT	¾" - 10 UNC, HEAVY HEX, ASTM A563, GR, DH, GALV. ASTM A153	8
⑥	ANCHOR ASSEMBLY, TYPE B, INCLUDES:		1
⑥a	ANCHOR	1"-8 UNC, 304 STAINLESS STEEL FERRULE, AISI 1045 ROD, AISI 1008 COIL	4

* WITH EXCEPTIONS TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES.

CONSTRUCTION NOTES

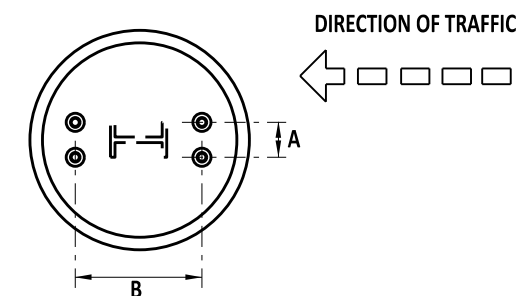
WRENCH SIZES REQUIRED: ⅜", 7/8", 1½", 1¾", 1⅞" AND 1⅝"

INSTALLATION JIG



ANCHOR AND COUPLING ASSEMBLY

PLAN VIEW OF FOOTING SECTION C-C



A = LATERAL SPACING FOR ANCHORS

3" FOR B-525 USED ON 6" (LARGER THAN W6X9) AND 8" WIDE FLANGE POSTS.
4" FOR B-650 USED ON 10", 12", 14", 16" AND 18" WIDE FLANGE POSTS.

B = LONGITUDINAL SPACING FOR ANCHORS

BRACKET 1 - DEPTH OF POST SECTION PLUS 7 15/16 INCHES
BRACKET 2 - DEPTH OF POST SECTION PLUS 8 1/16 INCHES
BRACKET 3 - DEPTH OF POST SECTION PLUS 8 1/8 INCHES

BRACKET ASSEMBLY

ATTACH BRACKETS TO POST WITH BOLTS PROVIDED. SQUARE AND TIGHTEN. (ITEMS ① ②a ②b ②c ②d ②e AND ②f)

NOTES:

- REFER TO GALVANIZED STEEL BEAM SIGN POSTS FOUNDATION DETAILS STANDARD PLATE FOR ADJUSTMENTS TO CONCRETE FOUNDATIONS NECESSITATED BY VARIOUS GROUND SLOPES.
- ANCHOR AND COUPLING ASSEMBLY TO BE ASSEMBLED PER (OR IN ACCORDANCE WITH) MANUFACTURER'S RECOMMENDATIONS.



DELAWARE
DEPARTMENT OF TRANSPORTATION

BREAKAWAY BASE SUPPORT SYSTEM - TYPE 'B'

SHT. 4 OF 7

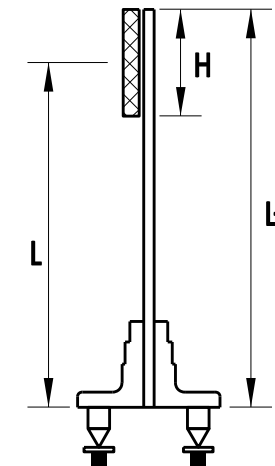
HINGE ASSEMBLY

1. BUTT UPPER AND LOWER POSTS TOGETHER ON FLAT SURFACE.
2. PLACE HINGE PLATES (4a) ON OUTER FLANGES AND SNUGLY SECURE WITH 3/4" - UNC BOLTS (5a) (5b) AND (5c). DO NOT TIGHTEN.
3. MAKE SURE UPPER AND LOWER POSTS ARE IN ALIGNMENT. THEN TIGHTEN ALL NUTS TO PROOF LOAD - ONE HALF OF A TURN BEYOND SNUG.

GENERAL NOTES:

1. INSTALLATION MUST MEET AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".
2. ALL HARDWARE SHALL BE HOT DIP GALVANIZED PER A153.
3. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING, SHALL BE INSTALLED WITH LOCKWASHERS OR LOCKNUTS AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTENERS SHOULD BE MADE AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES.
4. SQUARE AND LEVEL INDIVIDUAL COMPONENTS TO MINIMIZE NEED FOR SHIMMING.
5. NO MORE THAN TWO SHIMS SHALL BE USED UNDERNEATH ANY ONE COUPLING. NO MORE THAN THREE SHIMS SHALL BE USED UNDERNEATH ANY TWO COUPLINGS.
6. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER A123 FABRICATION.
7. ALL BRACKETS SHALL BE PERMANENTLY LABELED WITH THE APPROPRIATE BRACKET TYPE AND BRACKET SELECTION NUMBER.
8. SELECT CORRECT BRACKET NUMBER FROM BRACKET SELECTION TABLE USING THE PROPER 'L' VALUE AS SHOWN IN THE FIGURE BELOW.

$$L = L_T - H/2$$



I-BEAM BRACKET SELECTION TABLE						
POST WIDTH (IN.)	BRACKET 1		BRACKET 2		BRACKET 3	
	MIN. L (FT.)	MAX. L (FT.)	MIN. L (FT.)	MAX. L (FT.)	MIN. L (FT.)	MAX. L (FT.)
6	12	29	9	12	0	9
8	14	29	10	14	0	10
10	16	29	11	16	0	11
12	18	29	13	18	0	13
14	19	29	14	19	0	14
16	21	29	15	21	0	15
18	23	29	16	23	0	16
21	25	29	18	25	0	18

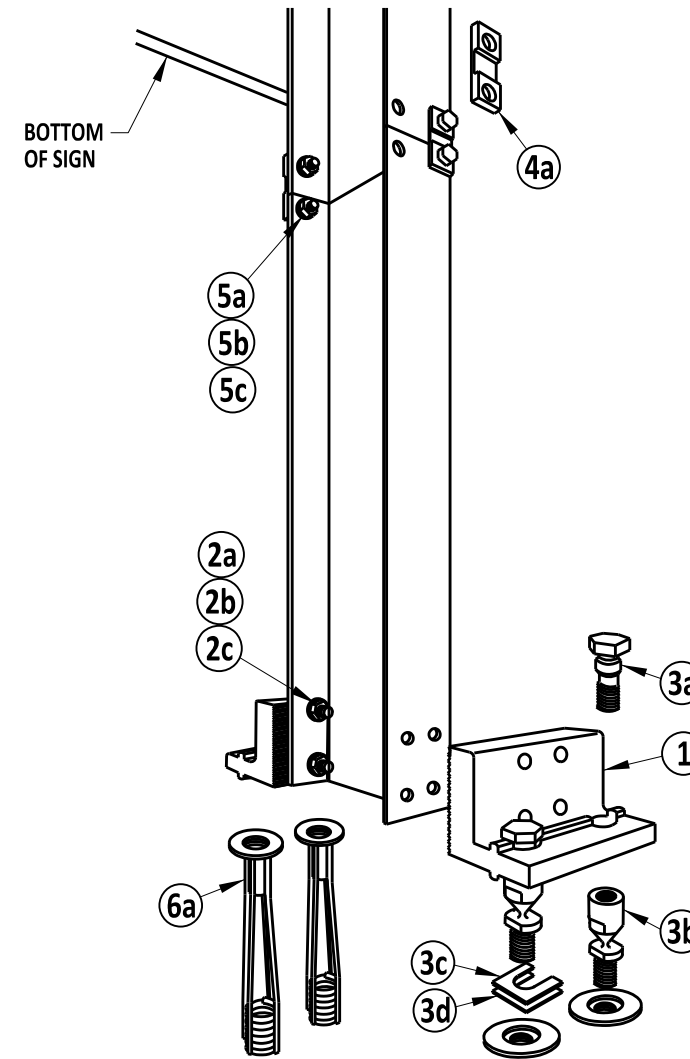


MATERIAL LIST FOR 6X9 STEEL W-BEAM SIG POSTS (A16)

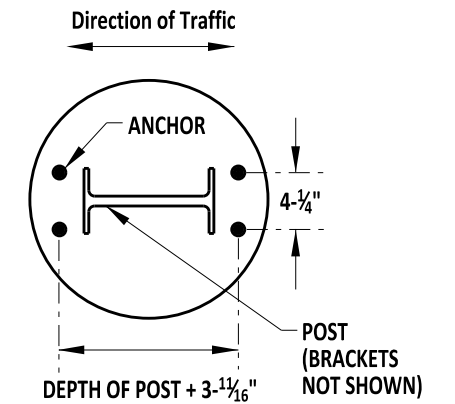
ITEM	DESCRIPTION	SIZE / SPECIFICATIONS	QTY. / POST
①	BRACKET, TYPE A16 6061-T6 ALUMINUM		2
②	BRACKET HARDWARE ASSEMBLY, TYPE A16, INCLUDES:		1
②a	BOLT	½" - 13 UNC x 2¼" HEX HEAD, ASTM A325, GALV. ASTM A153	8
②b	LOCKWASHER	½", ANSI B18-21-1, GALV. ASTM A153	8
②c	NUT	½" - 13 UNC, HEAVY HEX, ASTM A563 GR, DH, GALV, ASTM A153	8
③	COUPLING & SPECIAL BOLT ASSEMBLY, TYPE B, INCLUDES:		1
③a	SPECIAL BOLT	⅝" - 11 UNC, ASTM A449, GALV. ASTM A153/B695	4
③b	COUPLING	⅝" - 11 UNC, LP., AMS 6378D, GALV. ASTM A153, POLYESTER COAT	4
③c	SHIM	⅝" HORSESHOE, 14 GAUGE, GALV. STEEL SHEET	2
③d	SHIM	⅝" HORSESHOE, 18 GAUGE, GALV. STEEL SHEET	2
④	HINGE ASSEMBLY, TYPE A, INCLUDES:		1
④a	HINGE PLATE	TYPE A, AISI 4130 STEEL, GALV. ASTM A123	4
⑤	HINGE HARDWARE ASSEMBLY, TYPE A, INCLUDES:		1
⑤a	BOLT	½" - 13 UNC x 1½" HEX HEAD, ASTM A325, GALV. ASTM A153	8
⑤b	LOCKWASHER	½", ANSI B18-21-1, GALV. ASTM A153	8
⑤c	NUT	½" - 13 UNC, HEAVY HEX, ASTM A563, GR, DH, GALV. ASTM A153	8
⑥	ANCHOR ASSEMBLY, TYPE A, INCLUDES:		1
⑥a	ANCHOR	⅝" - 11 UNC, 304 STAINLESS STEEL FERRULE, AISI 1045 ROD, AISI 1008 COIL	4

NOTES:

- TYPE A16 SYSTEM SHALL MEET ALL REQUIREMENTS OF "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
- A16 IS DESIGNED TO FIT W6X9 WIDE-FLANGE STEEL W-BEAM SIGN POSTS.
- ALL HARDWARE ITEMS ARE AMERICAN STANDARD SIZES, GALVANIZED IN ACCORDANCE WITH ASTM A153 (HOT DIPPED) OR ASTM B695 (MECHANICALLY APPLIED).
- FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING, ARE INSTALLED WITH LOCKWASHERS, AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTENERS SHOULD BE SECURED AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES, UNLESS NOTED OTHERWISE.
- SQUARE-UP AND LEVEL INDIVIDUAL COMPONENTS, PARTICULARLY ANCHORS TO MINIMIZE THE NEED FOR SHIMMING BETWEEN THE COUPLINGS AND ANCHORS.
- NO MORE THAN TWO SHIMS SHALL BE PLACED UNDER ANY ONE COUPLING. NO MORE THAN THREE SHIMS UNDERNEATH ANY PAIR OF COUPLINGS.



PLAN VIEW OF TYPICAL FOUNDATION



INSTALLATION INSTRUCTIONS

ANCHOR ASSEMBLY:

NOTE: PRECISE POSITIONING OF THE ANCHORS IS CRITICAL TO PROPER ASSEMBLY OF THE SYSTEM. IT IS RECOMMENDED THAT ACTUAL POSTS BE USED TO LOCATE THE CORRECT POSITION OF THE ANCHORS.

1. FABRICATE A FLAT, RIGID TEMPLATE WITH FOUR $\frac{5}{8}$ " DIAMETER HOLES LOCATED TO MATCH SPECIFIED ANCHOR PATTERN OF THE BRACKETS ATTACHED TO THE SIGN POST.
2. ATTACH FOUR (4) TYPE A FEMALE ANCHORS TO THE TEMPLATE USING FOUR (4) $\frac{5}{8}$ " DIAMETER BOLTS. ENSURE THAT EACH ANCHOR WASHER IS SNUG AGAINST THE BOTTOM OF THE TEMPLATE.
3. LOWER ANCHOR ASSEMBLY INTO FRESH CONCRETE FOUNDATION AND VIBRATE INTO POSITION SUCH THAT THE TOPS OF THE ANCHOR WASHERS ARE FLUSH WITH THE FINISHED TOP SURFACE OF THE FOUNDATION. SUPPORT THE TEMPLATE SUCH THAT ALL ANCHORS ARE LEVEL AND IN THEIR PROPER LOCATIONS.
4. ALL CONCRETE TO CURE AND THEN REMOVE THE BOLTS AND TEMPLATE FROM THE TOP OF THE FOUNDATION.

HINGE ASSEMBLY

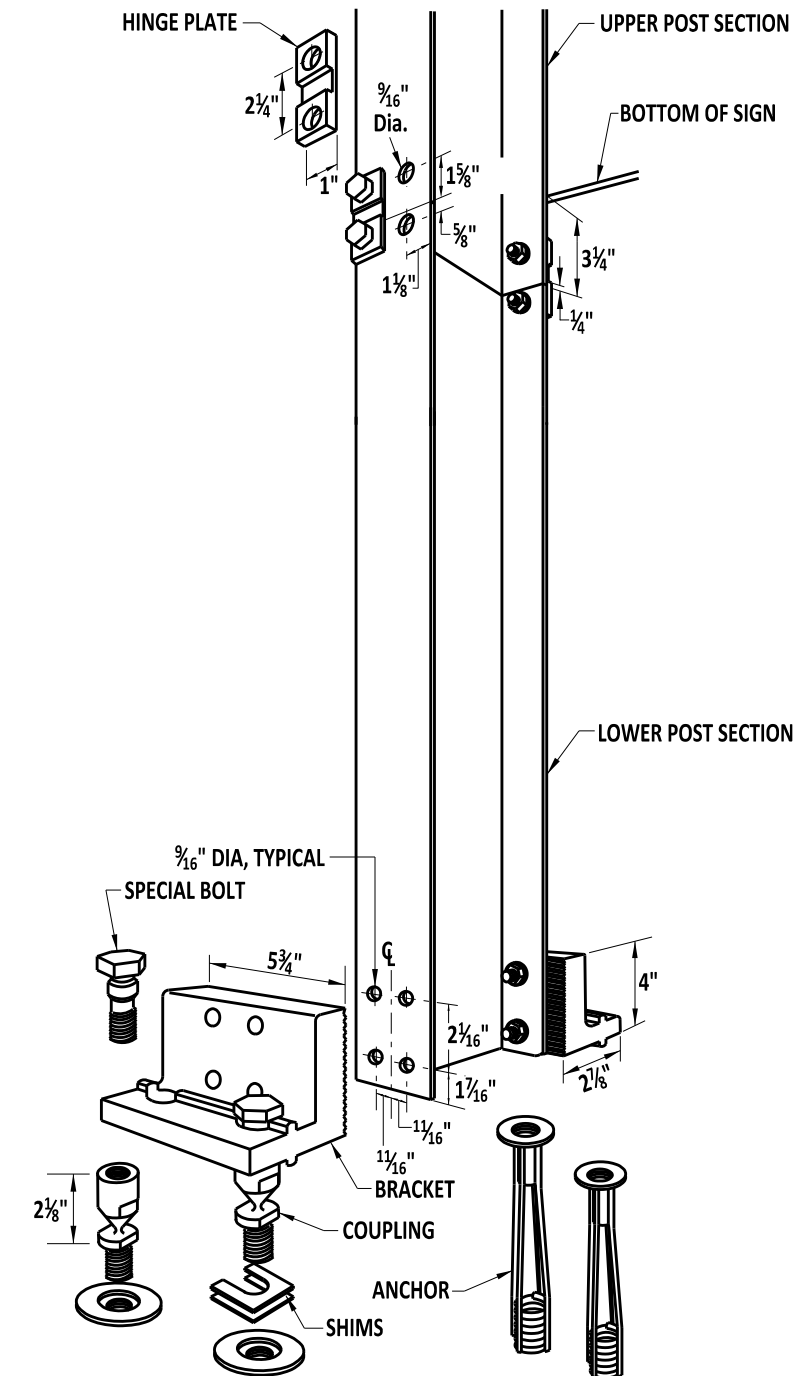
1. BUTT UPPER AND LOWER POST SECTIONS TOGETHER ON A FLAT SURFACE.
2. DRILL EIGHT (8) $\frac{9}{16}$ " DIAMETER HOLES IN THE FLANGES OF THE POST SECTIONS AS SHOWN.
3. PLACE HINGE PLATES ON OUTER SURFACE OF THE POST FLANGES AND SECURE WITH BOLTS, LOCK WASHERS AND NUTS. ENSURE THAT UPPER AND LOWER POST SECTIONS ARE IN ALIGNMENT AND THEN TIGHTEN ALL NUTS $\frac{1}{2}$ " TURN BEYOND SNUG.

BRACKET ASSEMBLY:

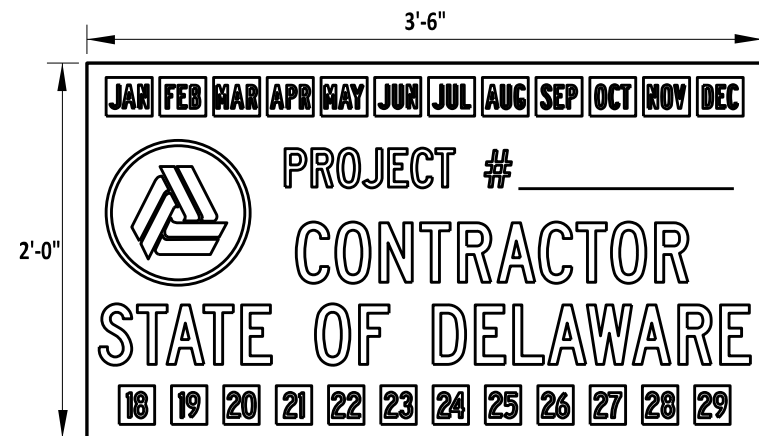
1. DRILL EIGHT (8) $\frac{9}{16}$ " DIAMETER HOLES IN THE FLANGES OF THE LOWER POST SECTION AS SHOWN.
2. PLACE BRACKETS SQUARELY ON OUTER SURFACE OF THE POST FLANGES AND SECURE WITH BOLTS, LOCK WASHERS AND NUTS. THEN, TIGHTEN ALL $\frac{1}{2}$ TURN BEYOND SNUG.

COUPLING ASSEMBLY:

1. IF POST IS NOT PLUMB, INSERT SHIMS (14G AND /OR 18G) BETWEEN THE COUPLINGS AND ANCHORS, WHERE NEEDED.
2. USE LOWER WRENCH FLATS TO TIGHTEN COUPLINGS INTO ANCHORS AS TIGHT AS POSSIBLE USING A CONVENTIONAL WRENCH. DO NOT USE A PIPE WRENCH. COUPLINGS MUST BE SEATED SQUARELY.
3. TIGHTENING SPECIAL BOLTS WHILE HOLDING COUPLINGS BY THE UPPER WRENCH FLATS WITH AN ADDITIONAL WRENCH TO PREVENT AN INDUCED TORQUE STRESS ACROSS THE NECKED PORTION OF THE COUPLING. ALL SPECIAL BOLTS SHALL ALSO BE TIGHTENED AS TIGHT AS POSSIBLE USING CONVENTIONAL WRENCHES.
4. THREAD FOUR (4) COUPLINGS INTO ANCHORS. DO NOT TIGHTEN.
5. SUSPEND POST ASSEMBLY OVER FOUNDATION, INSERT SPECIAL BOLTS THROUGH HOLES IN THE BRACKETS AND THREAD THEM SNUG INTO THE COUPLINGS.



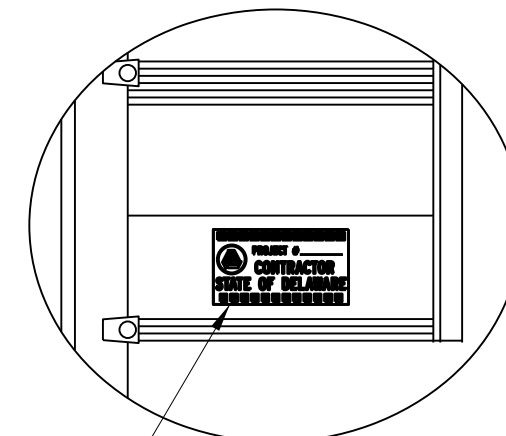
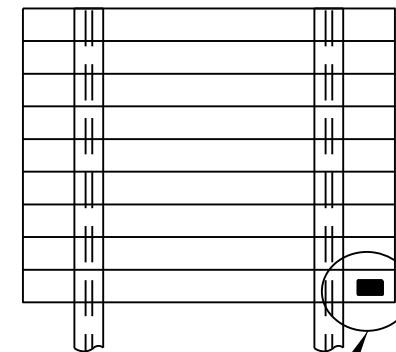
INSTALLATION DATE DECAL



NOTE:

1. FOR DECAL DESIGN DETAIL SEE DELAWARE STANDARD HIGHWAY SIGNS 2018 EDITION PAGE 140.

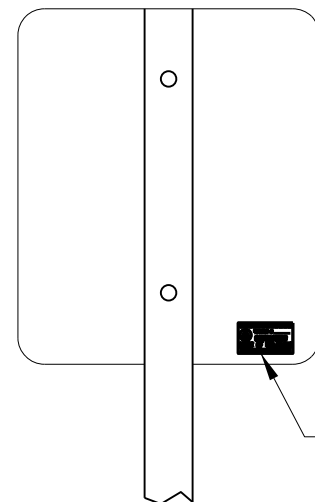
**EXTRUDED SIGN
REAR VIEW**



INSTALL DECAL TO FIRST EXTRUDED SIGN PANEL JUST BELOW CENTER STIFFNER RIB APPROXIMATELY 2 TO 3 INCHES FROM RIGHT EDGE OF SIGN PANEL

**DATE STICKER DECAL INSTALLATION
ON FLAT SHEET SIGNS**

INSTALL DECAL ON BOTTOM RIGHT CORNER OF SIGN AS SHOWN BELOW

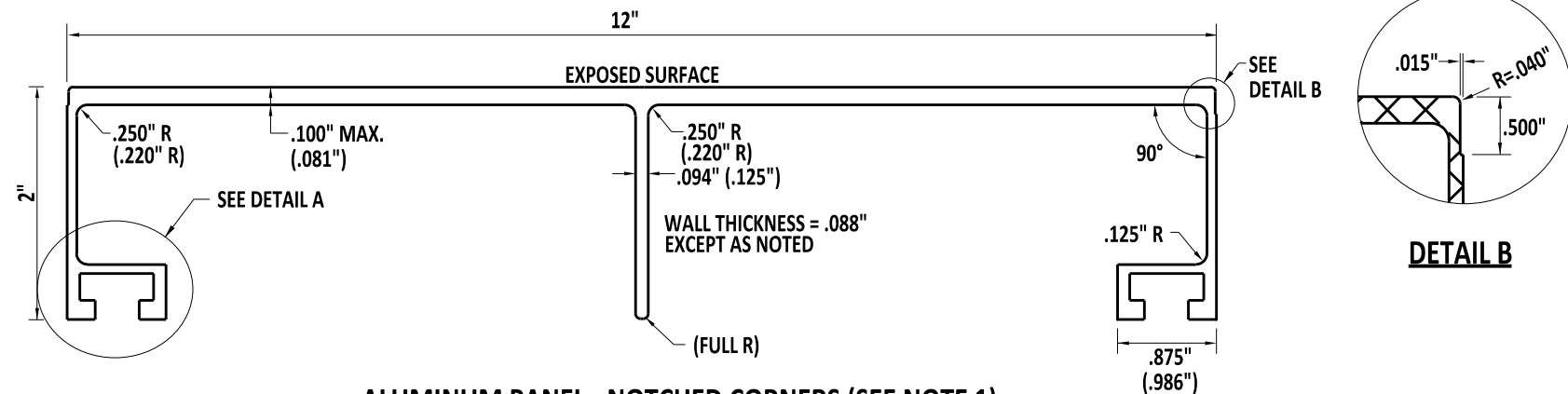


**FLAT SHEET SIGN
REAR VIEW**

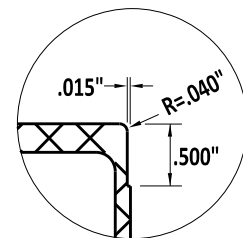
NOTES:

1. ALL DECALS SHALL BE MANUFACTURED USING THE OFFSET SILK SCREEN METHOD. NO INKJET, PHOTO PRINT, OR LARGE FORMAT TYPE PRINTING WILL BE ACCEPTED OF ANY KIND.
2. ALL BACKGROUND SHEETING SHALL BE WHITE - TYPE I, II OR IV RETRO-REFLECTIVE SIGN SHEETING APPROVED FOR USE ON DeIDOT HIGHWAY SIGNS.
3. THE PROPER HANDLING AND MANUFACTURING OF THESE MATERIALS SHALL MEET THE SHEETING MANUFACTURER'S SPECIFICATIONS.
4. ALL SILK SCREENING PROCESSES AND INKS SHALL MEET SHEETING MANUFACTURE'S APPROVAL AND BE APPLIED TO THE SHEETING FOLLOWING ALL SHEETING MANUFACTURE'S PROCEDURES.
5. DECALS, PRIOR TO INSTALLATION ON SIGNS, SHALL BE PROTECTED FROM EXPOSURE TO WEATHER, EXTREMES IN TEMPERATURE, AND ANY CONDITIONS THAT COULD DAMAGE THEM.
6. ALL DECALS SHALL BE INSTALLED ON A SIGN AS SHOWN IN THE ABOVE DETAILS.
7. AT THE TIME OF INSTALLATION THE AREA FOR WHICH THE STICKER IS TO BE APPLIED SHALL BE CLEAN AND FREE OF GREASE, DIRT, CONTAMINATES, ETC. ONLY ORDINARY WINDOW CLEANER, RUBBING ALCOHOL, DENATURED ALCOHOL, OR MILD SOAP AND WATER SHOULD BE USED TO CLEAN THE BACK OF SIGN. NO ACETONE, ZYLENE OR OTHER HARSH CHEMICALS SHALL BE USED TO CLEAN ANY PORTION OF ANY DeIDOT SIGN.
8. BE SURE THAT THE AREA IS COMPLETELY DRY PRIOR TO APPLICATION OF DECAL.
9. TO DOWNLOAD AN ELECTRONIC COPY OF THE DECAL FOR MANUFACTURING PURPOSES GO TO https://deldot.gov/Publications/manuals/de_mutcd/pdfs/DELAWARE-SIGN-BOOK-2018-EDITION.pdf A DOWNLOAD ICON IS LOCATED AT THE TOP RIGHT CORNER OF SHEET 140 ABOVE THE SHOWN DECAL. CLICK ON LINK AND DOWNLOAD THE DECAL ZIP FILE WHICH GIVES YOU ACCESS TO FOUR DIFFERENT FORMAT TYPES FOR USE.

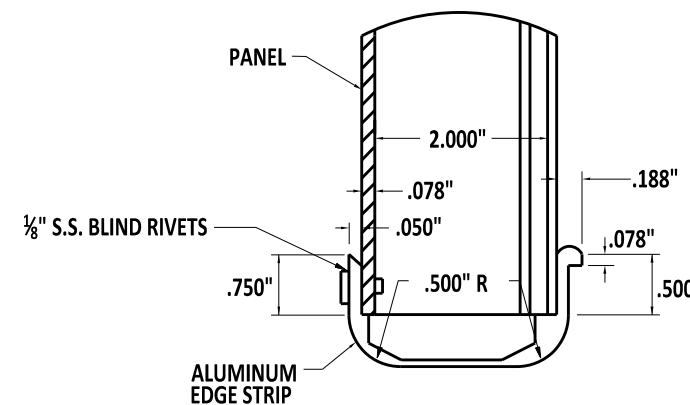




ALUMINUM PANEL - NOTCHED CORNERS (SEE NOTE 1)

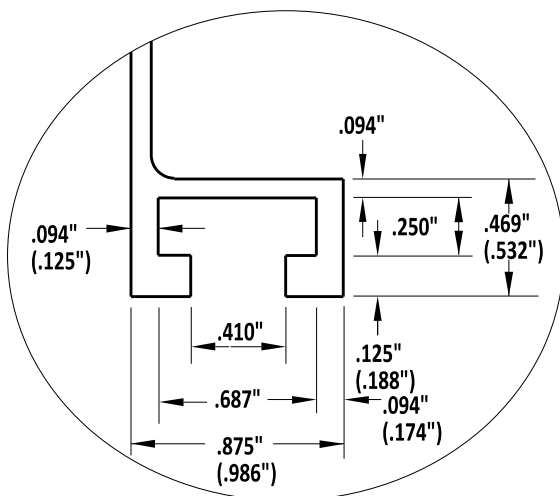


DETAIL B

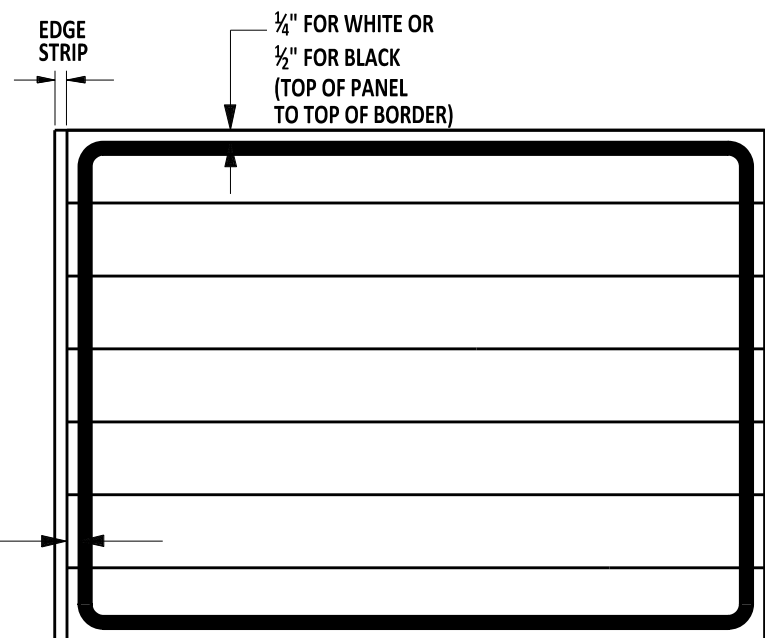


DETAIL OF EDGE STRIP

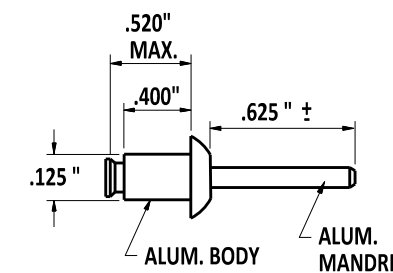
NOTE:
EDGE STRIP SHALL BE PLACED ON BOTH SIDES OF ALL EXTRUDED PANEL SIGNS.



DETAIL A



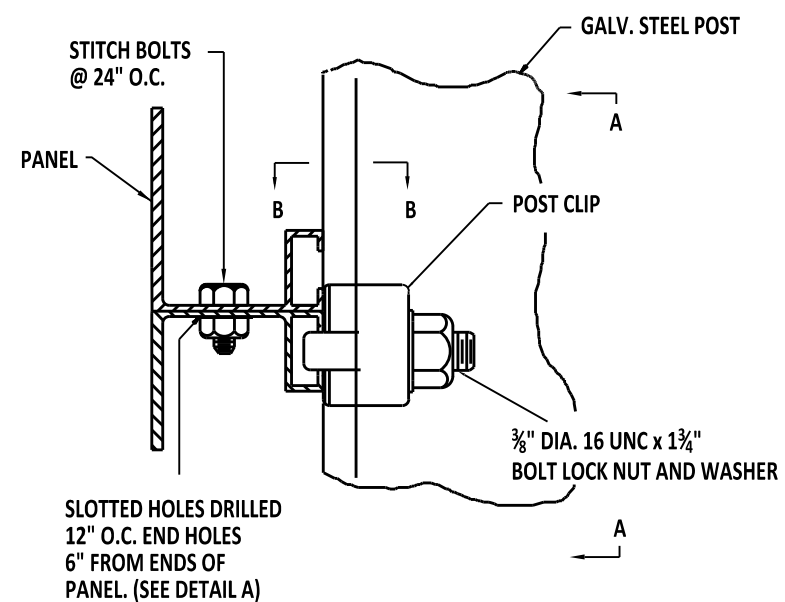
BORDER DETAIL



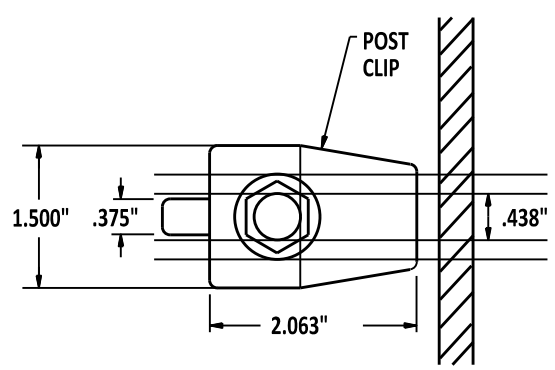
DETAIL OF A BLIND RIVET FOR CUTOUT LETTER (TYP.)

- NOTES:**
1. ALUMINUM PANELS SHALL HAVE NOTCHED CORNERS AS SHOWN. NO OTHER TYPE CORNERS ARE ACCEPTABLE.
 2. ALTERNATE DIMENSIONS INDICATED IN PARENTHESES ARE ACCEPTABLE.
 3. THE REFLECTIVE SHEETING APPLIED TO EXTRUDED PANELS SHALL EXTEND APPROX. 3/8" OVER EACH SIDE IN THE NARROW DIRECTION AND SHALL BE ADHERED TO THE PANEL.

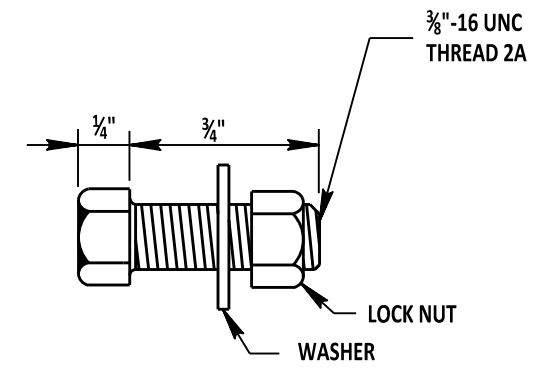




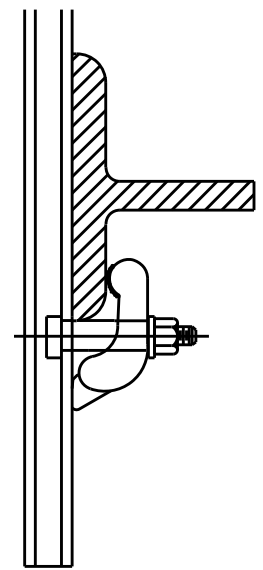
SIGN PANEL ASSEMBLY



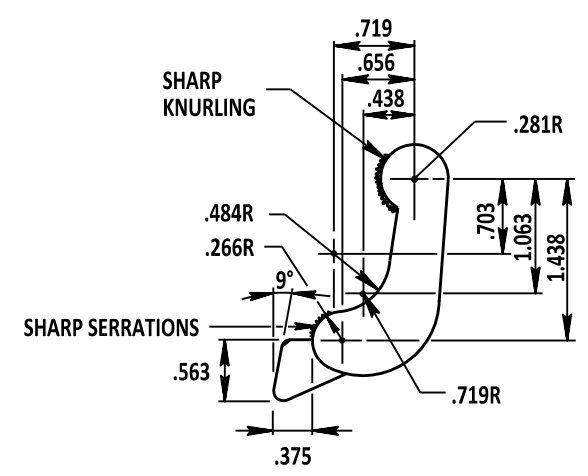
SECTION A-A



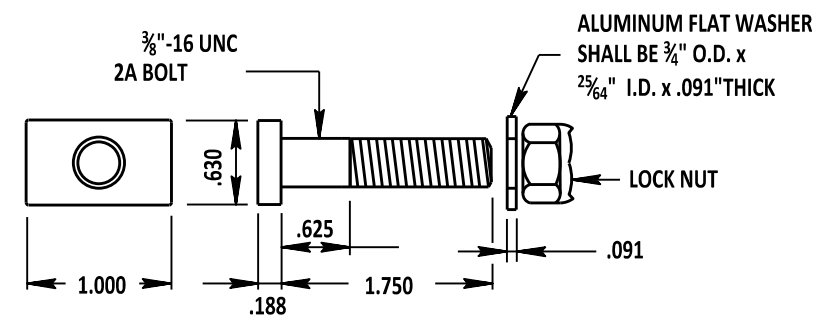
STITCH BOLT (TYP.)



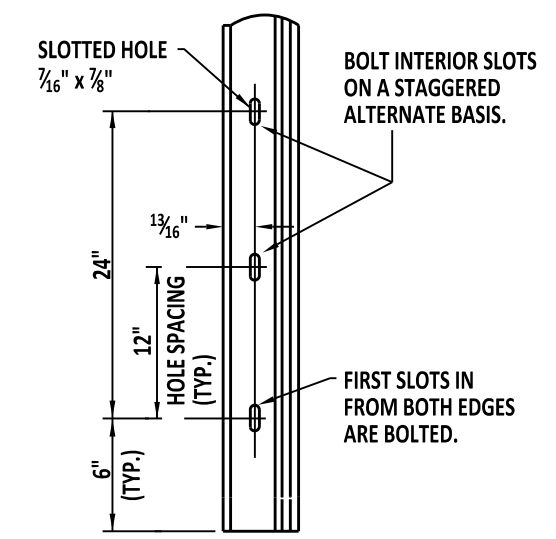
SECTION B-B



POST CLIP (TYP.)

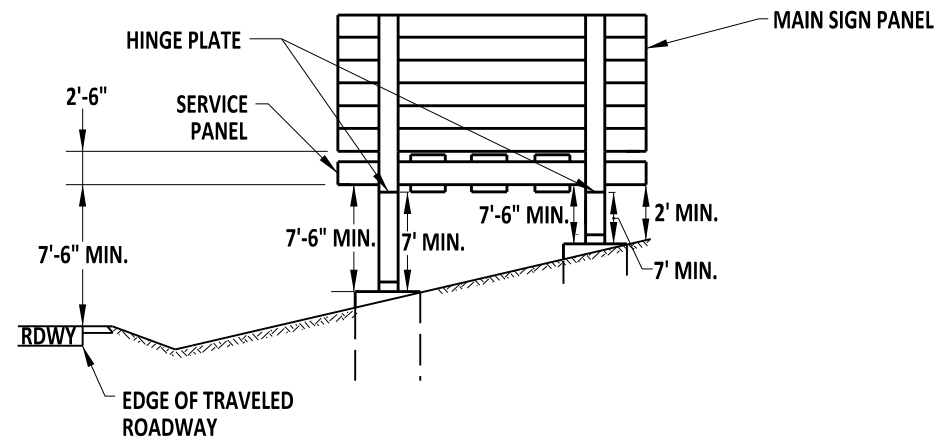


POST CLIP BOLT (TYP.)



DETAIL A

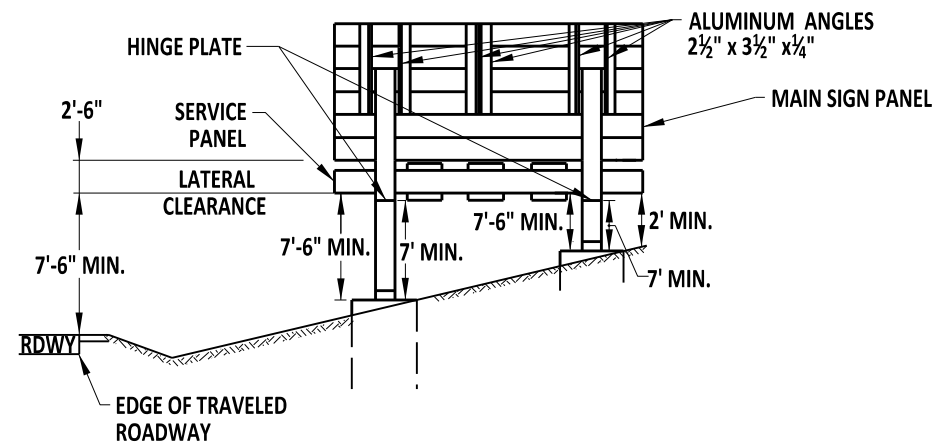
BOLTS	B211, ALLOY 2024-T4, 6262-T9 OR 6061-T6
FLAT WASHERS	B209, ALLOY 2024-T4
RIVETS	ALLOY 5052
NUTS	B211, ALLOY 2017-T4
POST CLIPS	B108, ALLOY 356-T6



NOTES: (ALL SCENARIOS)

1. MUST MAINTAIN 7'-0" MIN. FROM FOUNDATION TO HINGE PLATE ON BREAKAWAY SUPPORT.
2. MUST MAINTAIN 10'-0" FROM BOTTOM OF MAIN SIGN PANEL ABOVE EDGE OF TRAVELED LANE WHEN SERVICE PANEL IS PRESENT.
3. (1' X SIGN WIDTH) SERVICE PANEL ATTACHED TO "I" BEAMS WITH POST CLIPS (EIGHT (8) PER SERVICE PANEL)

SERVICE PANEL INSTALLATIONS TO NEW BREAKAWAY SUPPORTS



NOTES:

1. RAISE MAIN SIGN PANEL 2' MAX. TO OBTAIN THE PROPER CLEARANCE FROM ROADWAY.
2. SERVICE PANEL ATTACHED ABOVE HINGE PLATE WITH POSTCLIPS (EIGHT (8) PER SERVICE PANEL).
3. UNSUPPORTED MAIN SIGN PANEL TO BE STIFFENED USING ALUMINUM ANGLES 2 1/2 X 3 1/2 X 1/4.

SERVICE PANEL ATTACHMENTS TO EXISTING BREAKAWAY SUPPORTS



ONE POST SELECTION CHART (A36 STEEL)

80 MPH
10 YEAR RECURRENCE

SCALE : NTS

W FEET	L-MAX FEET	HEIGHT 'H' IN FEET															
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
3	6	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W6X16	W8X18	W8X21	W8X21	W8X21	W8X21	
	8	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W6X16	W8X18	W8X21	W8X21	W8X21	W10X26	
	10	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X15	W6X15	W6X16	W8X18	W8X21	W8X21	W10X26	W10X26	
	12	W6X9	W6X9	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X21	W8X21	N/A	N/A	N/A	N/A	N/A	
	14	W6X9	W6X12	W6X12	W6X15	W6X15	W6X16	W8X18	W8X21	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W6X9	W6X12	W6X15	W6X15	W6X16	W8X18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	W6X12	W6X15	W6X15	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4	6	W6X9	W6X9	W6X12	W6X12	W6X12	W6X15	W6X16	W8X18	W8X21	W8X21	W8X21	W10X26	W10X26	W14X30	W14X30	
	8	W6X9	W6X9	W6X12	W6X12	W6X15	W6X15	W6X16	W8X21	W8X21	W8X21	W10X26	W10X26	W14X30	W14X30	W18X35	
	10	W6X9	W6X9	W6X12	W6X15	W6X15	W6X16	W8X21	W8X21	W8X21	W10X26	W10X26	W14X30	N/A	N/A	N/A	
	12	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W6X12	W6X12	W6X15	W8X18	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W6X12	W6X15	W6X15	W8X18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	W6X12	W6X15	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5	6	W6X9	W6X12	W6X12	W6X15	W6X16	W8X18	W8X21	W10X26	W10X26	W10X26	W14X30	W18X35	W18X35	W18X40	W18X40	
	8	W6X9	W6X12	W6X15	W6X15	W6X16	W8X21	W8X21	W10X26	W10X26	W14X30	W18X35	W18X35	N/A	N/A	N/A	
	10	W6X9	W6X12	W6X15	W6X16	W8X18	W8X21	W10X26	W10X26	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W6X12	W6X15	W6X15	W6X16	W8X21	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W6X12	W6X15	W6X15	W8X21	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W6X15	W8X18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	W6X15	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6	6	W6X12	W6X15	W6X16	W6X16	W8X21	W10X26	W10X26	W14X30	W18X35	W18X40	W18X40	W18X40	N/A	N/A	N/A	
	8	W6X12	W6X15	W6X16	W8X21	W8X21	W10X26	W10X26	W14X30	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	
	10	W6X12	W6X15	W6X16	W8X21	W8X21	W10X26	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W6X12	W6X15	W8X18	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W6X15	W6X16	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W6X15	W8X18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	W6X15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

W FEET	L-MAX FEET	HEIGHT 'H' IN FEET															
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
7	6	W6X12	W6X16	W8X21	W8X21	W10X26	W14X30	W18X35	W18X40	W18X40	N/A	N/A	N/A	N/A	N/A	N/A	
	8	W6X12	W6X16	W8X21	W8X21	W10X26	W14X30	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10	W6X15	W6X16	W8X21	W10X26	W10X26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W6X15	W6X16	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W6X15	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
8	6	W6X15	W8X21	W10X26	W10X26	W14X30	W18X35	W18X40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	8	W6X15	W8X21	W10X26	W14X30	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10	W6X15	W8X21	W10X26	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W6X16	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W6X16	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
9	6	W6X16	W8X21	W10X26	W18X35	W18X40	W18X40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	8	W6X16	W8X21	W10X26	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10	W6X16	W10X26	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W6X16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10	6	W8X21	W10X26	W18X35	W18X40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	8	W8X21	W10X26	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	10	W8X21	W10X26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	12	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	14	W8X21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

THREE POST SELECTION CHART (A36 STEEL)

80 MPH
10 YEAR RECURRENCE

W FEET	L-MAX FEET	HEIGHT 'H' IN FEET															
		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
22	6	W6X9	W6X9	W6X9	W6X12	W6X15	W6X15	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	
	8	W6X9	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	
	10	W6X12	W6X15	W6X15	W6X15	W6X15	W8X18	W8X21	W10X22	W10X22	W10X26	W12X26	W14X30	W16X31	W18X35	N/A	
	12	W6X15	W6X15	W6X15	W8X18	W8X21	W8X21	W8X21	W10X22	W10X26	W12X26	W14X30	W18X35	W18X35	N/A	N/A	
	14	W6X15	W8X18	W8X21	W8X21	W8X21	W10X26	W10X26	W12X26	W14X30	W18X35	W18X40	N/A	N/A	N/A	N/A	
	16	W8X18	W8X21	W8X21	W10X26	W10X26	W10X26	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
24	6	W6X9	W6X9	W6X12	W6X12	W6X15	W6X16	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	
	8	W6X9	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	
	10	W6X12	W6X15	W6X15	W6X15	W8X18	W8X18	W8X21	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	N/A	
	12	W6X15	W6X15	W6X15	W8X18	W8X21	W8X21	W10X26	W10X26	W12X26	W14X30	W18X35	W18X35	N/A	N/A	N/A	
	14	W6X15	W8X18	W8X21	W8X21	W10X26	W10X26	W12X26	W14X30	W18X35	W18X40	N/A	N/A	N/A	N/A	N/A	
	16	W8X18	W8X21	W8X21	W10X26	W10X26	W14X30	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
26	6	W6X9	W6X9	W6X12	W6X15	W6X15	W8X18	W8X21	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	
	8	W6X12	W6X12	W6X15	W6X15	W6X15	W8X18	W8X21	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	N/A	N/A	
	10	W6X12	W6X15	W6X15	W6X15	W8X18	W8X21	W8X21	W10X22	W10X26	W12X26	W14X30	W18X35	N/A	N/A	N/A	
	12	W6X15	W6X15	W8X18	W8X21	W8X21	W10X26	W10X26	W12X26	W14X30	W18X35	W18X35	N/A	N/A	N/A	N/A	
	14	W6X15	W8X18	W8X21	W10X22	W10X26	W10X26	W14X30	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W8X18	W8X21	W10X26	W10X26	W14X30	W14X30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
28	6	W6X9	W6X9	W6X12	W6X15	W6X15	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	W18X35	N/A	N/A	
	8	W6X12	W6X12	W6X15	W6X15	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	W14X30	W16X31	N/A	N/A	N/A	
	10	W6X12	W6X15	W6X15	W8X18	W8X18	W8X21	W10X22	W10X26	W14X30	W18X35	W18X35	N/A	N/A	N/A	N/A	
	12	W6X15	W6X15	W8X18	W8X21	W8X21	W10X26	W10X26	W12X26	W18X35	W18X35	N/A	N/A	N/A	N/A	N/A	
	14	W6X15	W8X21	W8X21	W10X26	W10X26	W12X26	W14X30	W18X35	W18X40	N/A	N/A	N/A	N/A	N/A	N/A	
	16	W8X21	W8X21	W10X26	W10X26	W14X30	W18X35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

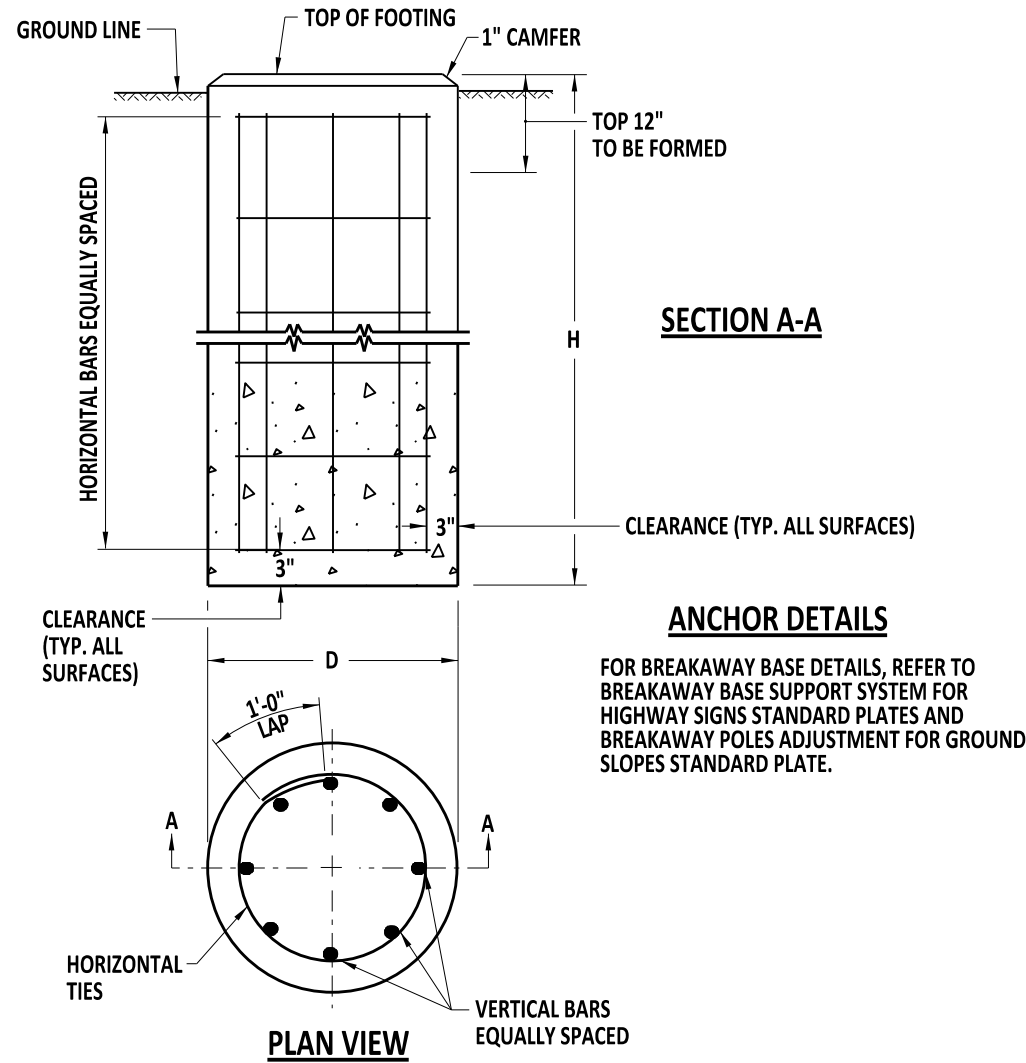
STEEL POST BREAKAWAY SYSTEM SELECTION CHART

SYSTEM TYPE	ASSOCIATED POST SIZE
A16	W6X9
B525	W6X12, W6X15, W8X18, W8X21
B650	I-BEAMS LARGER THAN W8X21

NOTES:

1. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS, 1st EDITION INCLUDING INTERIMS THROUGH 2021.
2. REFER TO T-xx (2021) GALVANIZED STEEL

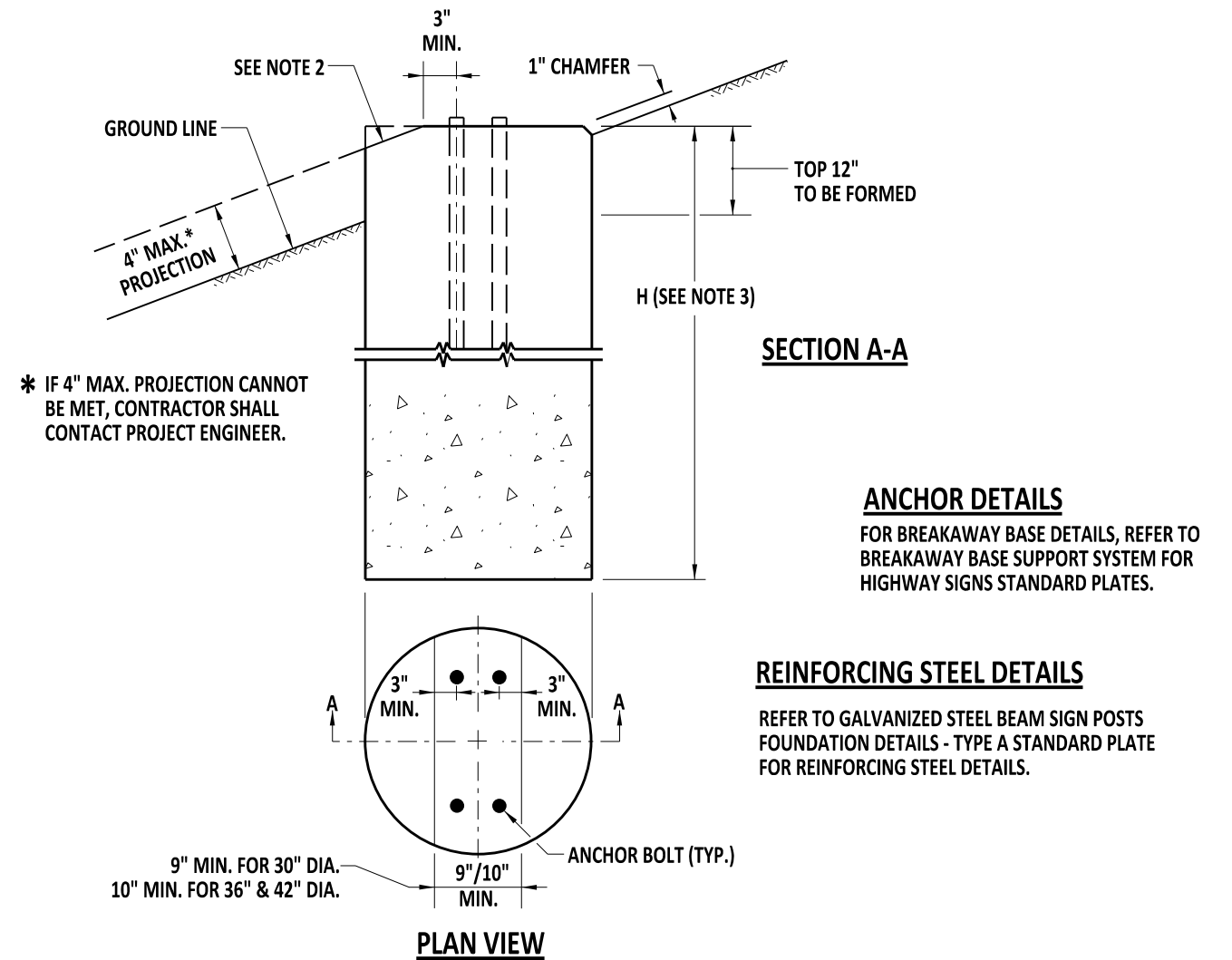
BREAKAWAY TYPE A SIGN POST FOUNDATIONS



FOUNDATION DATA TABLE

POST SIZE	D	H	VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT	CONCRETE REQ'D C.Y.
W6X9	30"	6'-0"	EIGHT (8)- NO.7	SEVEN (7)- NO.4	1.1
W6X12	30"	7'-6"	EIGHT (8)- NO.7	SEVEN (7)- NO.4	1.1
W6X15 OR W6X16	30"	7'-6"	EIGHT (8)- NO.7	SEVEN (7)- NO.4	1.2
W8X18	30"	7'-6"	EIGHT (8)- NO.9	EIGHT (8)- NO.4	1.4
W8X21	30"	8'-0"	EIGHT (8)- NO.9	NINE (9)- NO.4	1.5
W10X22	36"	8'-6"	EIGHT (8)- NO.10	NINE (9)- NO.4	2.3
W10X26	36"	9'-0"	EIGHT (8)- NO.10	TEN (10)- NO.4	2.4
W12X26	36"	10'-0"	EIGHT (8)- NO.10	ELEVEN (11)- NO.4	2.7
W14X30	36"	11'-0"	EIGHT (8)- NO.10	TWELVE (12)- NO.4	2.9
W16X31	36"	12'-0"	EIGHT (8)- NO.10	THIRTEEN (13)- NO.4	3.2
W18X35 OR W18X40	36"	13'-0"	EIGHT (8)- NO.10	FOURTEEN (14)- NO.4	3.5

BREAKAWAY TYPE B SIGN POST FOUNDATIONS

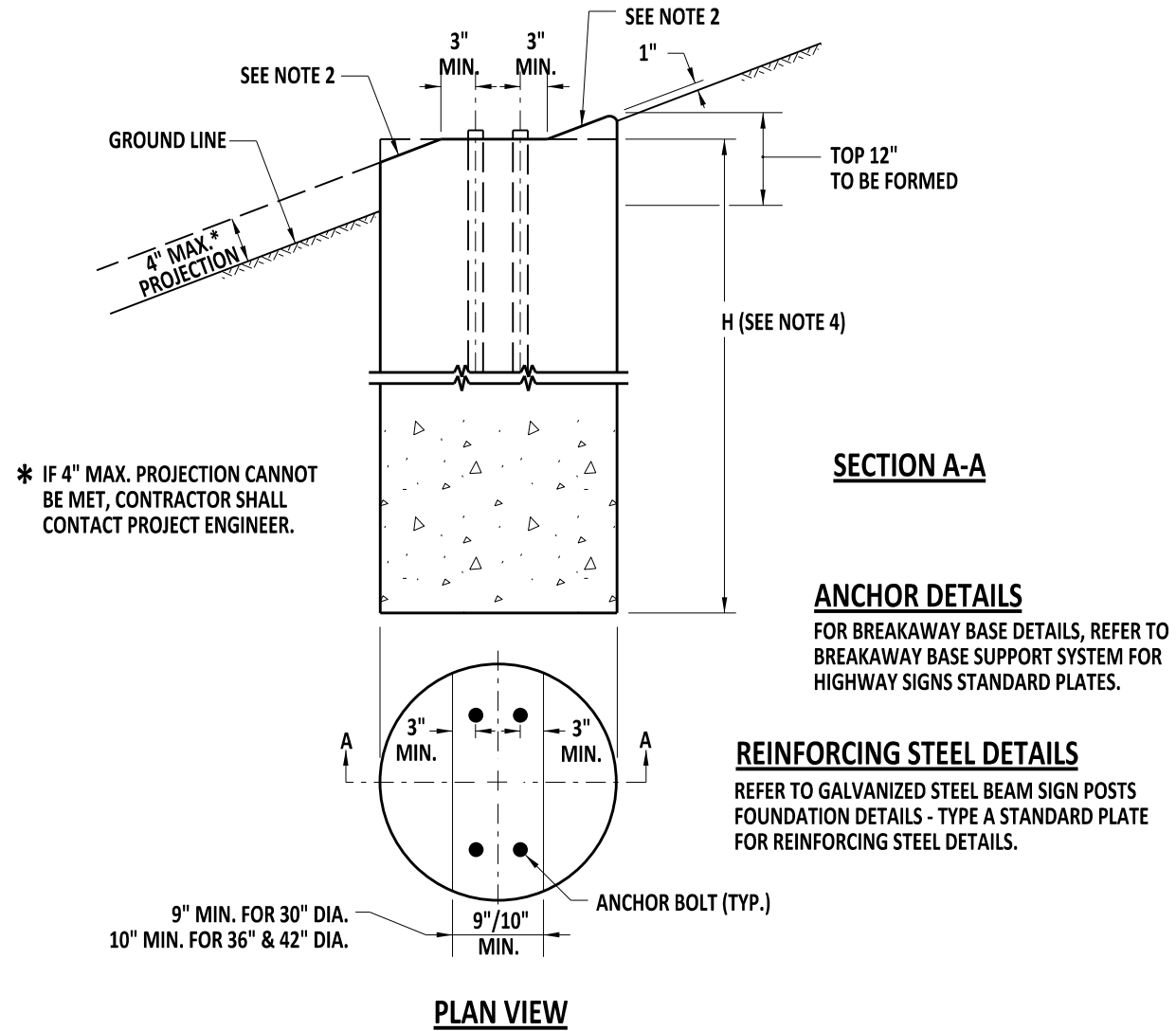


NOTES:

1. THIS FOUNDATION SHALL BE USED ONLY IN LOCATIONS MEETING SLOPE CRITERIA IN ACCORDANCE WITH THE STEEL BREAKAWAY SUPPORT FOUNDATION SELECTION TABLE ON SHEET.
2. SLOPED PORTIONS OF THE FOUNDATION SHALL MATCH THE FINISHED GROUND SLOPE.
3. REFER TO GALVANIZED STEEL BEAM SIGN POSTS FOUNDATION DETAILS - TYPE A FOR FOUNDATION DIMENSIONS AND REINFORCING STEEL DETAILS.



BREAKAWAY TYPE C SIGN POST FOUNDATIONS



STEEL BREAKAWAY SUPPORT FOUNDATION SELECTION MATRIX

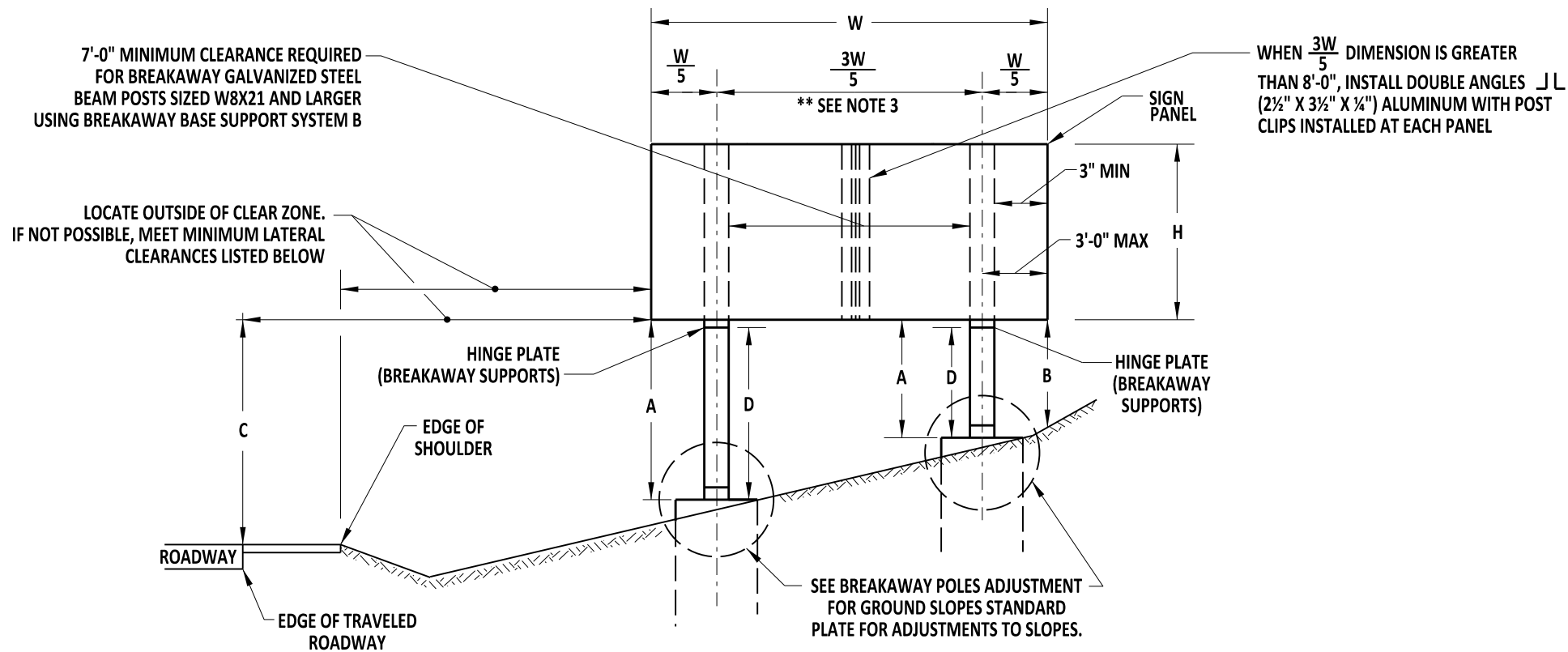
POST SIZE	FOUNDATION DIAMETER	ROADWAY CUT / FILL SLOPE										
		≥2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1	12:1	<13:1
W6X9	30"	***	C	C	C	C	B	B	B	A	A	A
W6X12	30"	***	C	C	C	C	B	B	B	A	A	A
W6X15	30"	***	C	C	C	C	B	B	B	A	A	A
W6X16	30"	***	C	C	C	C	B	B	B	A	A	A
W8X18	30"	***	C	C	C	C	B	B	B	A	A	A
W8X21	30"	***	C	C	C	C	B	B	B	A	A	A
W10X22	36"	***	***	C	C	C	C	B	B	B	A	A
W10X26	36"	***	***	C	C	C	C	B	B	B	A	A
W12X26	36"	***	***	C	C	C	C	B	B	B	A	A
W14X30	36"	***	***	C	C	C	C	B	B	B	A	A
W16X31	36"	***	***	C	C	C	C	B	B	B	A	A
W18X35 OR W18X40	36"	***	***	C	C	C	C	C	B	B	B	A

* IF A FOUNDATION EXCEEDS THE 4" AASHTO CRITERIA, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR APPROPRIATE GUIDANCE.

NOTES:

1. THIS FOUNDATION SHALL BE USED ONLY IN LOCATIONS MEETING SLOPE CRITERIA IN ACCORDANCE WITH THE STEEL BREAKAWAY SUPPORT FOUNDATION SELECTION TABLE .
2. SLOPED PORTIONS OF THE FOUNDATION SHALL MATCH THE FINISHED GROUND SLOPE.
3. ON FILL SLOPES GREATER THAN 6:1 BUT NO STEEPER THAN 3:1, FOUNDATIONS DESIRABLY SHOULD BE INSTALLED A MINIMUM OF 14 FT BEYOND THE HINGE POINT. THE HINGE POINT IS THE POINT OF SLOPE TRANSITION FROM THE SHOULDER SLOPE, OR A RELATIVELY FLAT RECOVERY AREA ADJACENT TO THE ROADWAY, TO A STEEPER FORESLOPE, (ALSO KNOWN AS THE FORESLOPE BREAK).
4. REFER TO GALVANIZED STEEL BEAM SIGN POSTS FOUNDATION DETAILS - TYPE A FOR FOUNDATION DIMENSIONS AND REINFORCING STEEL DETAILS.





VERTICAL CLEARANCE FOR SIGNS

- A. 7'-6" MINIMUM FOR BREAKAWAY SUPPORTS
 - B. 2'-0" MINIMUM
 - C. 7'-6" MINIMUM
 - D. 7'-0" MINIMUM FOR BREAKAWAY SUPPORTS MEASURED TO CENTERLINE OF HINGE PLATE.
- ALL MOUNTING HEIGHTS LESS THAN 7'-6" REQUIRE DeIDOT APPROVAL. THIS DIMENSION IS TO BE INCREASED ONLY WHEN REQUIRED TO MEET 'A' (MIN.) = 7'-6" FOR BREAKAWAY AND/OR 'B' (MIN.) = 2'-0". ALL DIMENSIONS ARE TO BOTTOM OF SIGN.

**PREFERRED SIGN LOCATION IS OUTSIDE OF THE CLEAR ZONE
IF THIS CONDITION CANNOT BE MET, THE SIGN SHOULD BE PLACED
AS FAR FROM THE ROADWAY AS POSSIBLE**

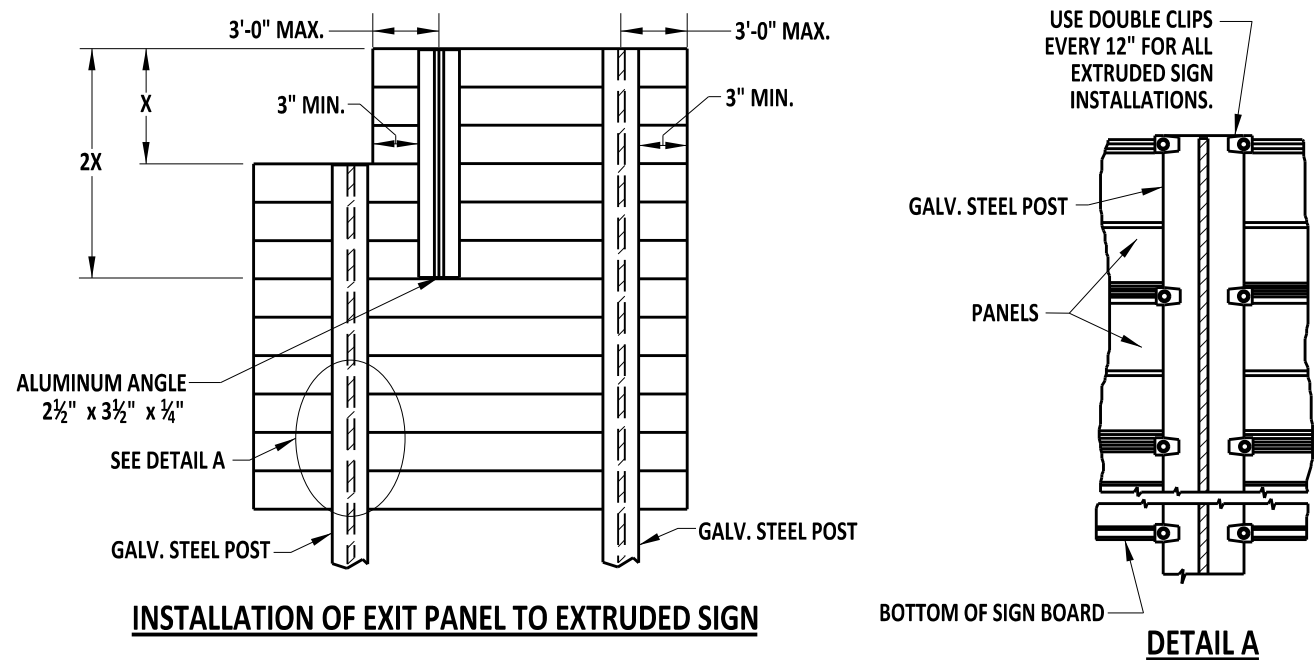
MINIMUM LATERAL CLEARANCES FOR SIGNS

- 1 = EDGE OF SIGN 6'-0" FROM FACE OF W-BEAM TRAFFIC BARRIER
- 2 = EDGE OF SIGN 6'-0" PREFERABLE MIN. (2'-0" ABSOLUTE MIN.) FROM FACE OF CURB
- 3 = EDGE OF SIGN 6'-0" FROM EDGE OF SHOULDER
- 4 = EDGE OF SIGN 6'-0" PREFERABLE MIN. (2'-0" ABSOLUTE MIN.) FROM EACH EDGE OF SHOULDER IN MEDIAN
- 5 = EDGE OF SIGN 6'-0" FROM EACH EDGE OF SHOULDER CENTERED IN GORE AREA

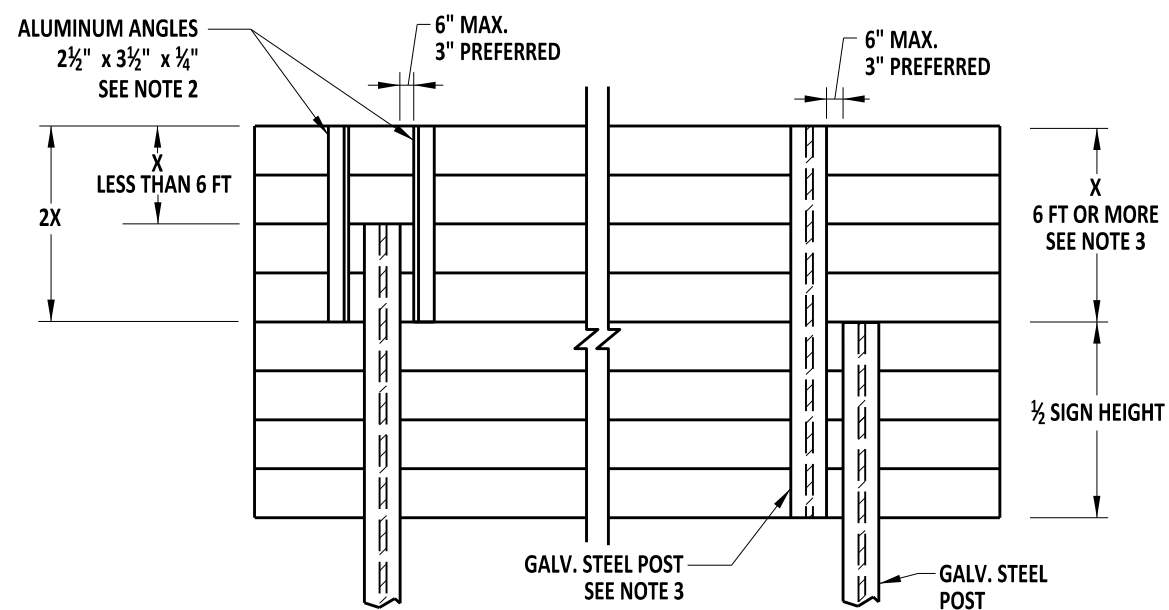
NOTES:

- 1. FOR THREE SUPPORTS, POSTS SHOULD BE SPACED $\frac{1}{6}, \frac{1}{3}, \frac{1}{3}, \frac{1}{6}$ X WIDTH OF SIGN, WITHIN MAXIMUM EDGE SPACING AS SHOWN.
- 2. ALL SUPPORTS SHALL BE BREAKAWAY.
- 3. REFER TO CONTRACT PLANS FOR POST SPACING.
- 4. AASHTO LRFD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS, 1st EDITION INCLUDING INTERIMS THROUGH 2021.
- 5. REFER TO T-xx (2021) BREAKAWAY STEEL SIGN SUPPORT CHARTS FOR ADDITIONAL INFORMATION.





INSTALLATION OF EXIT PANEL TO EXTRUDED SIGN



INSTALLATION OF ADDITIONAL EXTRUDED PANELS TO EXTRUDED SIGN

NOTES:

1. VERTICAL SUPPORTS ARE TO BE CONTINUOUS FOR THE ENTIRE HEIGHT OF THE SIGN, INCLUDING EXIT PANEL WHERE APPLICABLE.
2. MODIFICATIONS WHERE "X" IS LESS THAN 6 FT, NON-CONTINUOUS SUPPORTS WITH DOUBLE ALUMINUM ANGLES WILL BE PERMITTED. TOTAL LENGTH OF DOUBLE ANGLES SHALL BE 2X AS NOTED ABOVE. USE 3 1/2" X 3 1/2" X 3/8" ALUMINUM ANGLE FOR SIGN WIDTH ABOVE 18 FT.
3. MODIFICATIONS WHERE "X" IS 6 FT. OR MORE, NON-CONTINUOUS SUPPORTS WITH A BEAM INSTALLED FOR THE FULL HEIGHT OF THE SIGN WILL BE PERMITTED. SPLICED SECTIONS SHALL HAVE A W6X9 OR EQUAL SECTION ATTACHED TO FULL HEIGHT OF SIGN. FOR BREAKAWAY SIGN SUPPORTS, THE EXISTING SIGN SUPPORT SHALL BE REMOVED ABOVE THE BREAKAWAY HINGE AND REPLACED WITH A SIGN SUPPORT OF THE SAME SIZE, ATTACHED TO FULL HEIGHT OF SIGN.
4. ALL SUPPORTS (INCLUDING ANGLES) SHALL BE POST CLIPPED AT 12" INTERVALS.
5. FOR BREAKAWAY ROADSIDE SIGN DISPLAYING MULTIPLE SIGN PANELS, INCLUDING EXIT PANELS, STEEL SIGN SUPPORTS ARE TO BE CHOSEN FROM THE SELECTION CHARTS BASED ON THE COMBINED PANEL HEIGHTS AND THE MAXIMUM WIDTH OF THE PROPOSED PANEL.

