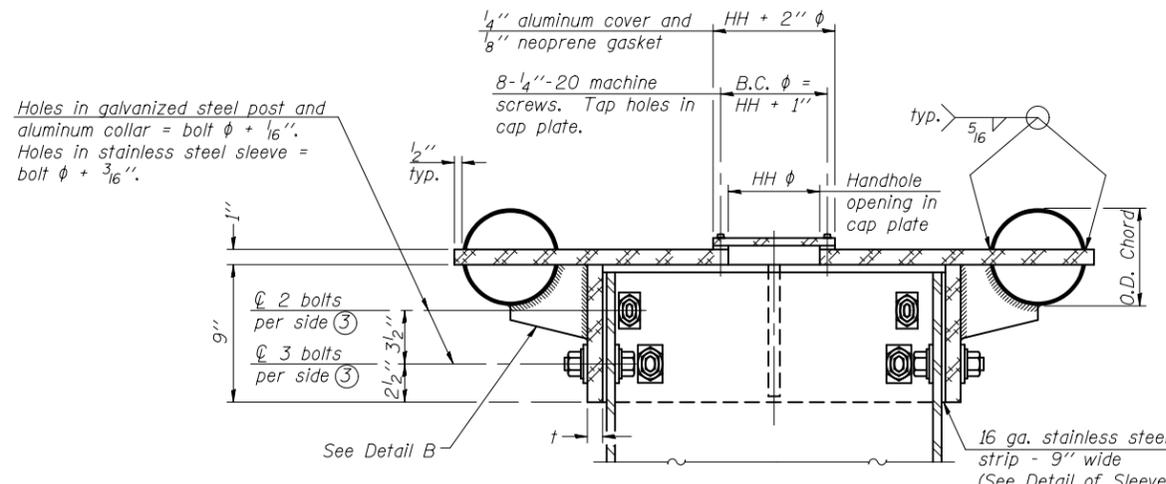


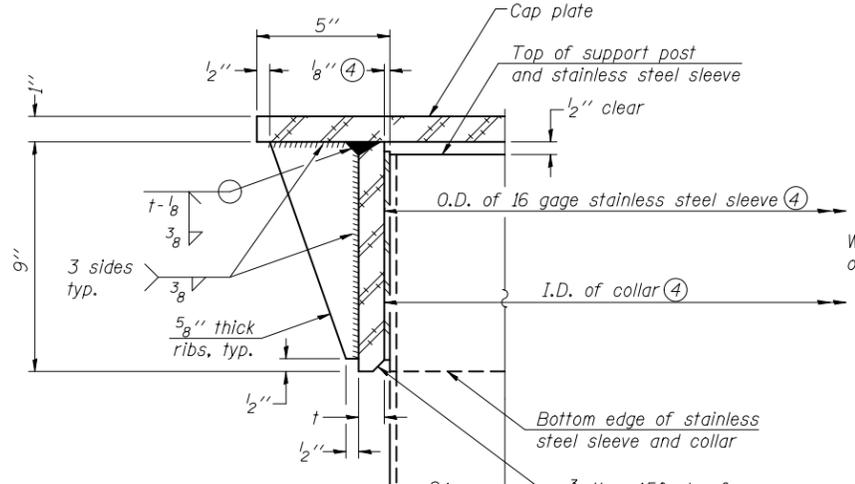
CELL / MODEL NAME	DESCRIPTION	DATE
OSC-A-1	General plan and elevation	08/21/2013
OSC-A-2	Truss details	06/01/2012
OSC-A-3	Juncture details	06/01/2012
OSC-A-4	Type I-C-A truss support post	06/01/2012
OSC-A-5	Type II-C-A & III-C-A truss support post	06/01/2012
OSC-A-6	Aluminum walkway details	06/01/2012
OSC-A-6S	Alternate steel walkway details	06/01/2012
OSC-A-7	Walkway details	06/01/2012
OSC-A-7S	Alternate walkway details	06/01/2012
OSC-A-8	Handrail details	06/01/2012
OSC-A-9	Drilled shaft foundations details	08/21/2013
OSC-A-D	Damping Device	06/01/2012



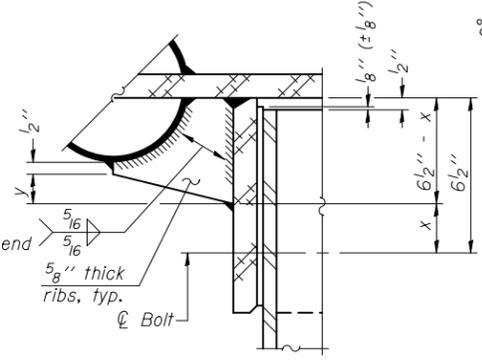
④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (+1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

SECTION B-B

Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

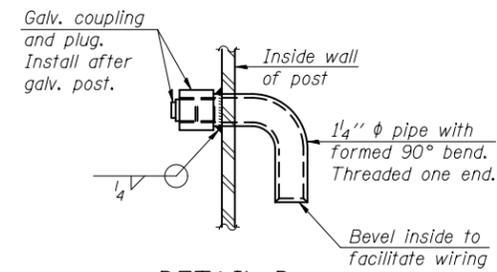


DETAIL A
(Two locations)

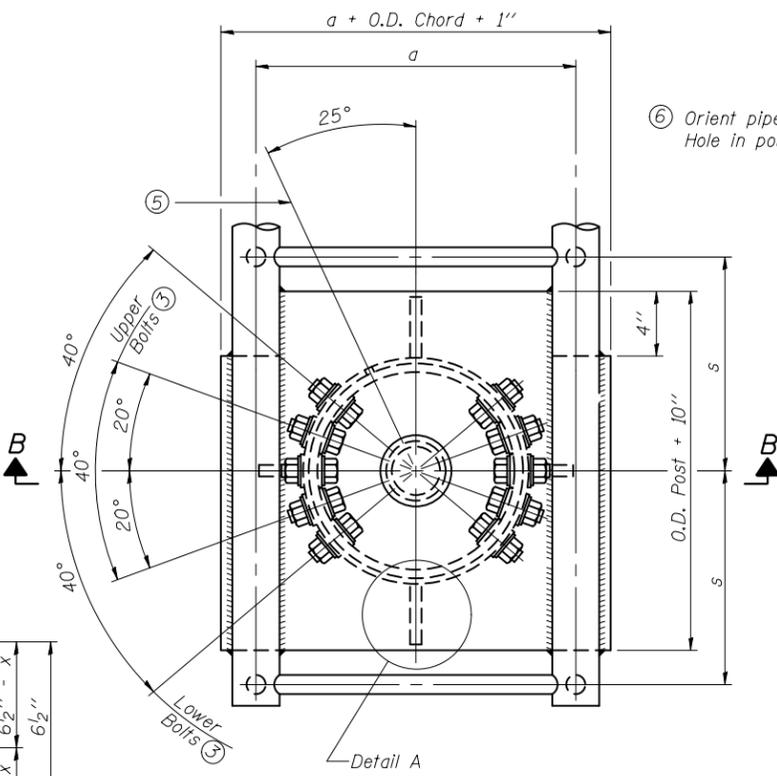


DETAIL B

Two locations (For details not shown, see Detail C)

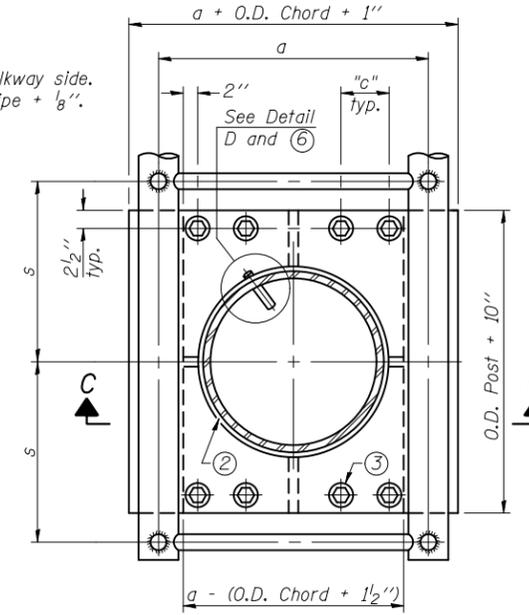


DETAIL D



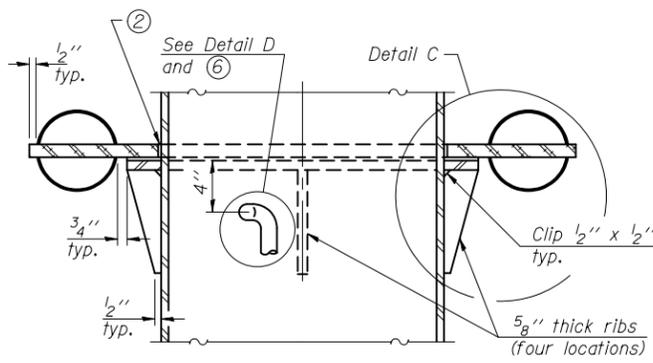
PLAN VIEW - TOP OF COLUMN

⑤ Optional full penetration weld in collar. (Two locations maximum....(180° apart)....X-ray or UT 100%)

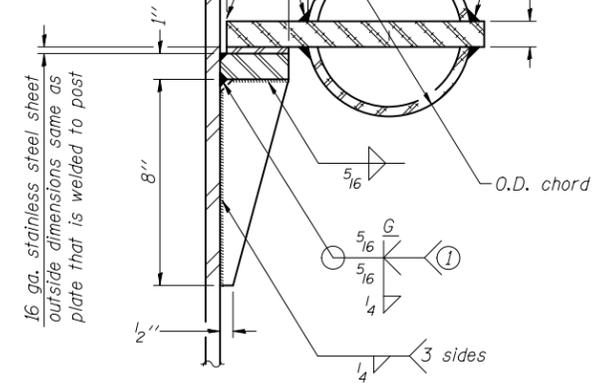


SECTION THRU POST ABOVE LOWER CHORDS

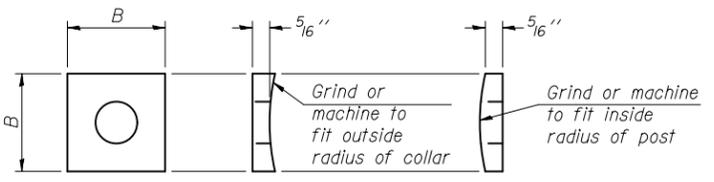
Hole in aluminum plate (and 16 ga. stnl. stl. sheet) to be O.D. post + 1/2"



SECTION C-C



DETAIL C



CONTOURED WASHERS

Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1 1/2" long at 6" cts. along top edge and at 1/4" opening.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" phi (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" phi (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" phi (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" phi (171#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.
- ③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

OSC-A-3

6-1-12

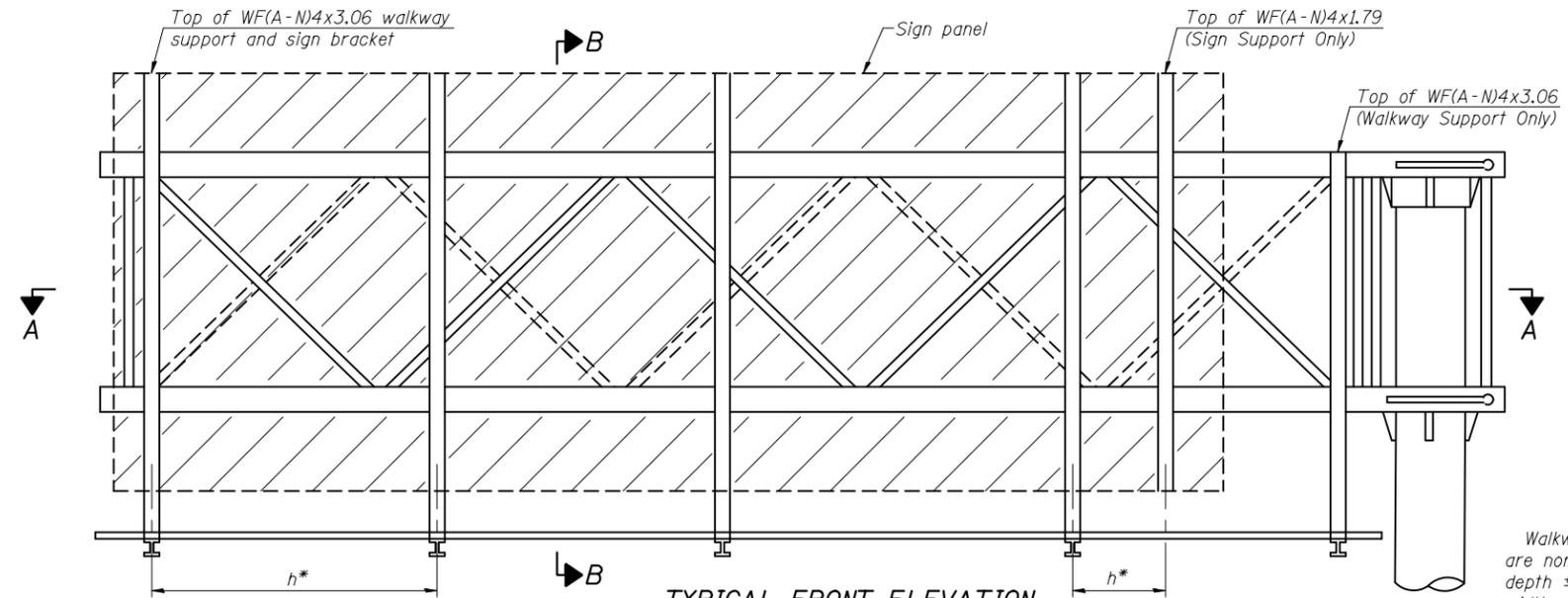
FILE NAME =	USER NAME =	DESIGNED -	REVISD
		CHECKED -	REVISD
		DRAWN -	REVISD
		CHECKED -	REVISD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

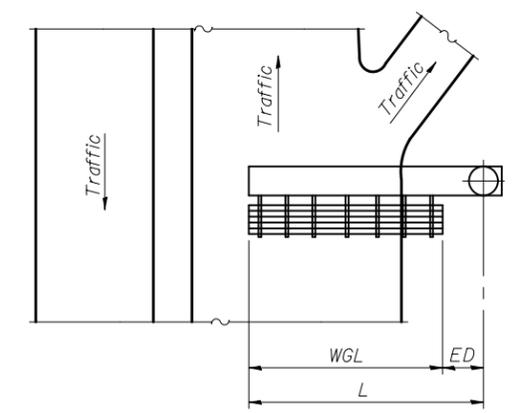
SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

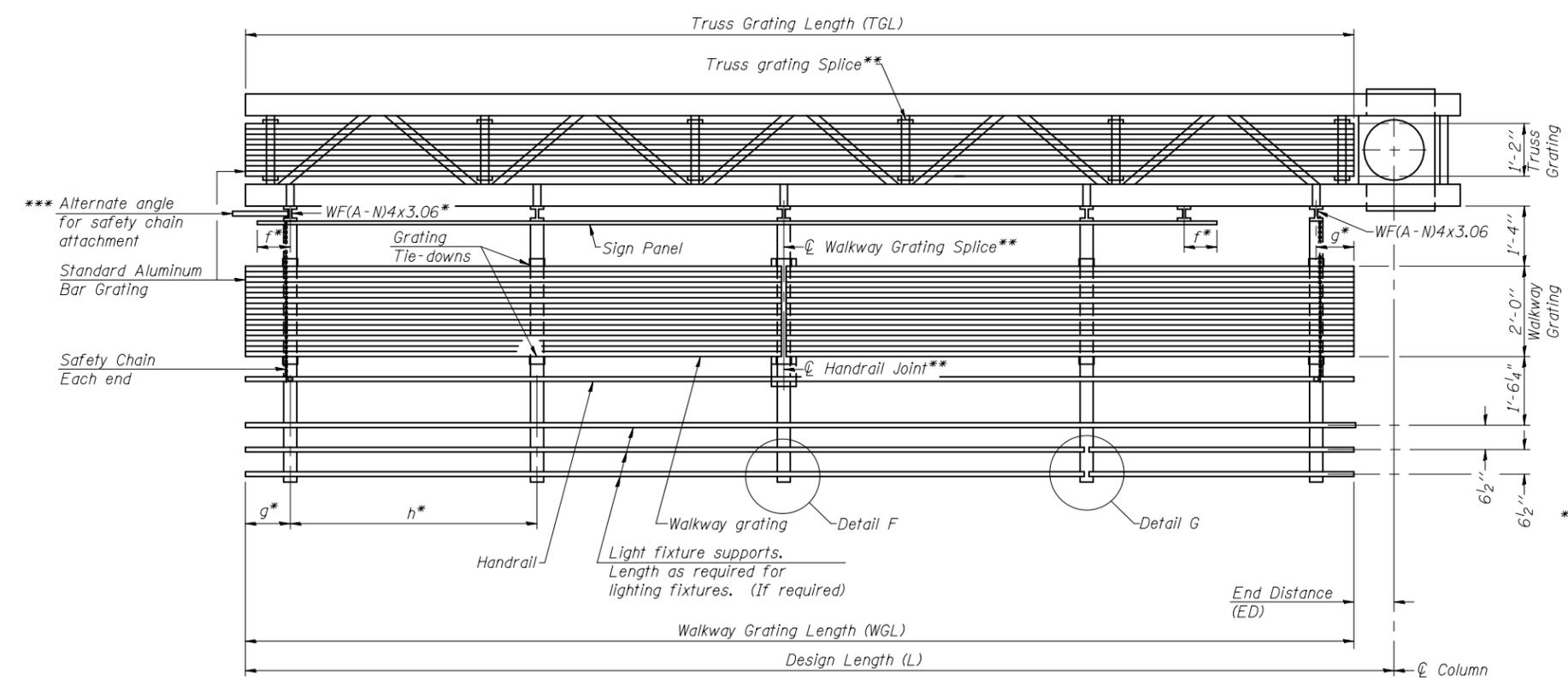


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±½") based on available standard widths.



PLAN WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



SECTION A-A

Truss grating to facilitate inspection shall run full length of cantilevers. Cost of truss grating is included in Overhead Sign Structure Cantilever.

Handrail and walkway grating shall span a minimum of three brackets between splices.
** Use and location of handrail joints or grating splices are optional, based on lengths needed and material availability.

$$TGL = L - \left(\frac{\text{Post O.D.}}{2} + 6'' \right)$$

Structure Number	Station	WGL	ED	TGL

Notes:
* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to ϕ of nearest bracket)
h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.

For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

OSC-A-6

6-1-12

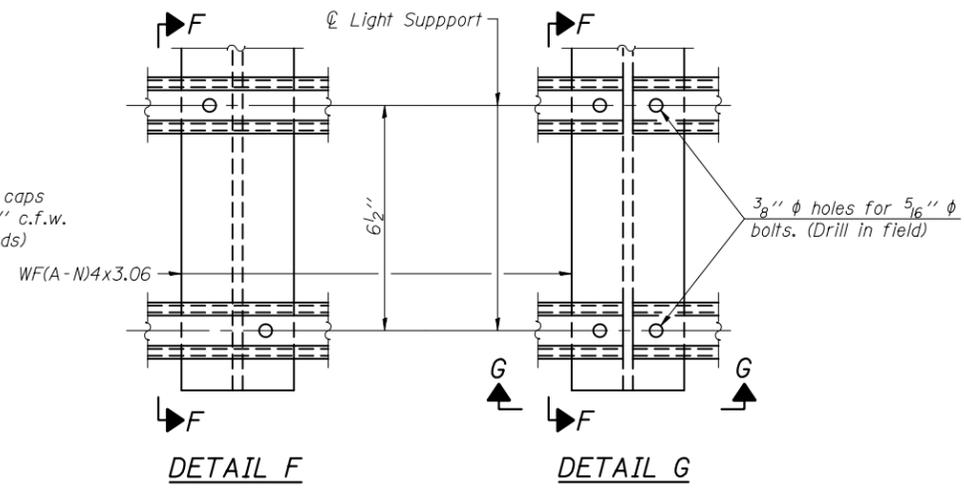
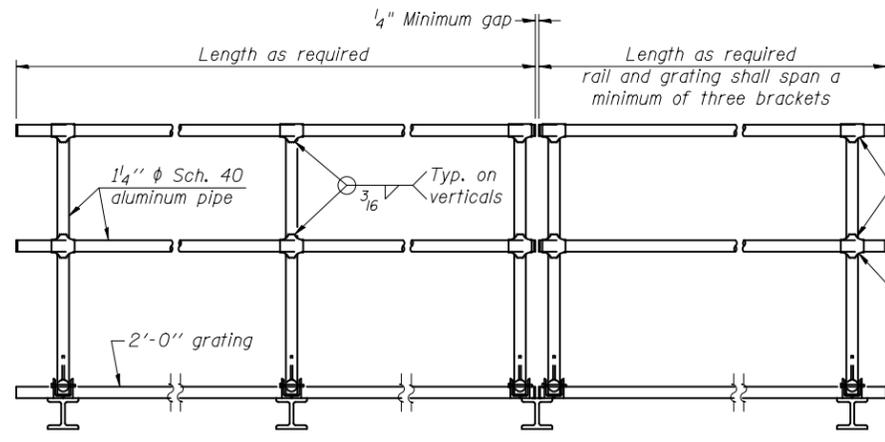
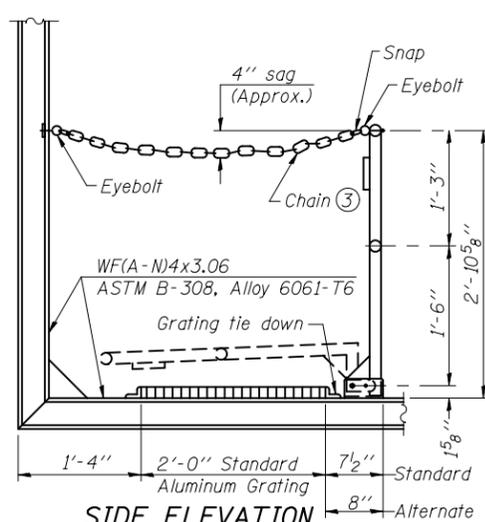
FILE NAME =	USER NAME =	DESIGNED -	REVISOR
		CHECKED -	REVISION
		DRAWN -	REVISION
		CHECKED -	REVISION

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER SIGN STRUCTURES - ALUMINUM WALKWAY
DETAILS - ALUMINUM TRUSS & STEEL POST**

SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



SIDE ELEVATION
(Showing Safety Chain W/O Sign)

FRONT ELEVATION

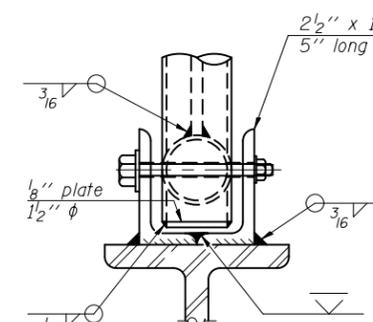
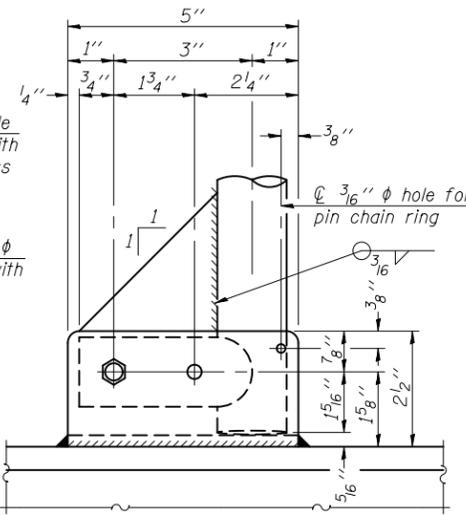
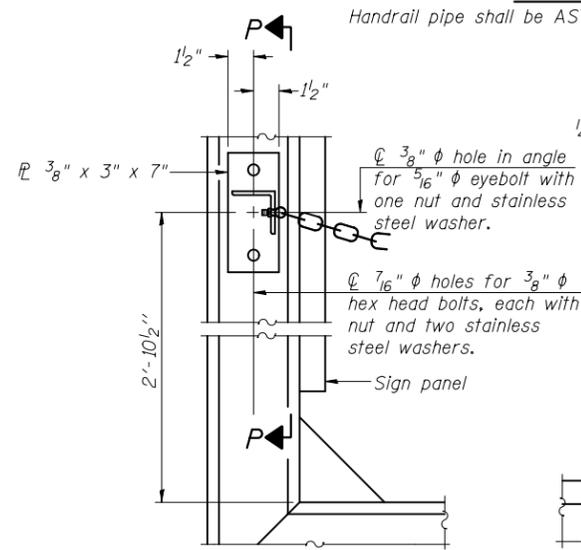
DETAIL F

DETAIL G

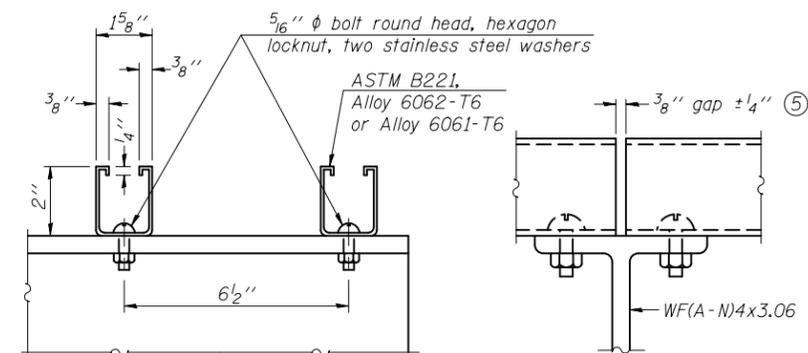
HANDRAIL DETAILS

Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)
Fittings-ASTM B26, Alloy 356-T7 or 1/2" aluminum pipe
② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 7/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)



ELEVATION AT HANDRAIL JOINT ④
Details not shown same as "FRONT ELEVATION"



SECTION F-F
SECTION G-G
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

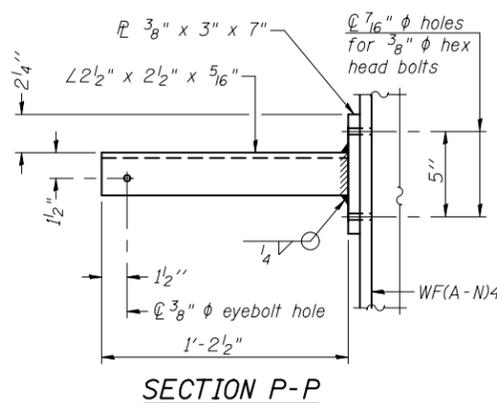
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

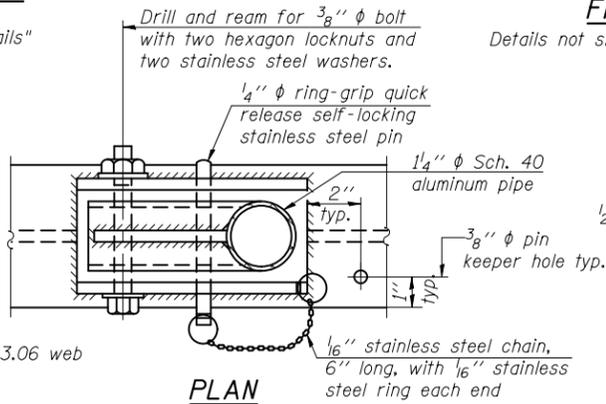
SIDE ELEVATION

FRONT ELEVATION

Details not shown same as "ELEVATION" at right.



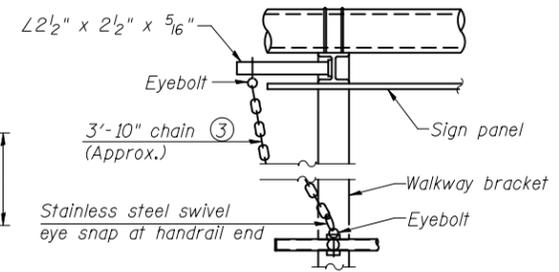
SECTION P-P



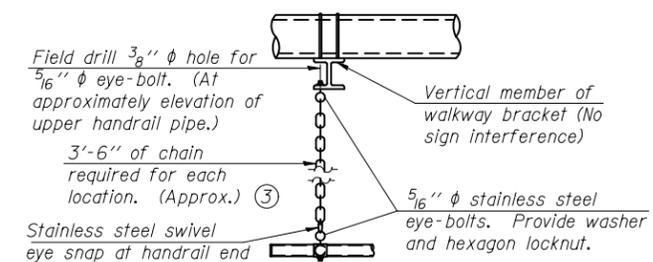
PLAN
DETAIL E HANDRAIL HINGE

FRONT ELEVATION

Details not shown same as "ELEVATION" at right.



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"

OSC-A-8

6-1-12

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -

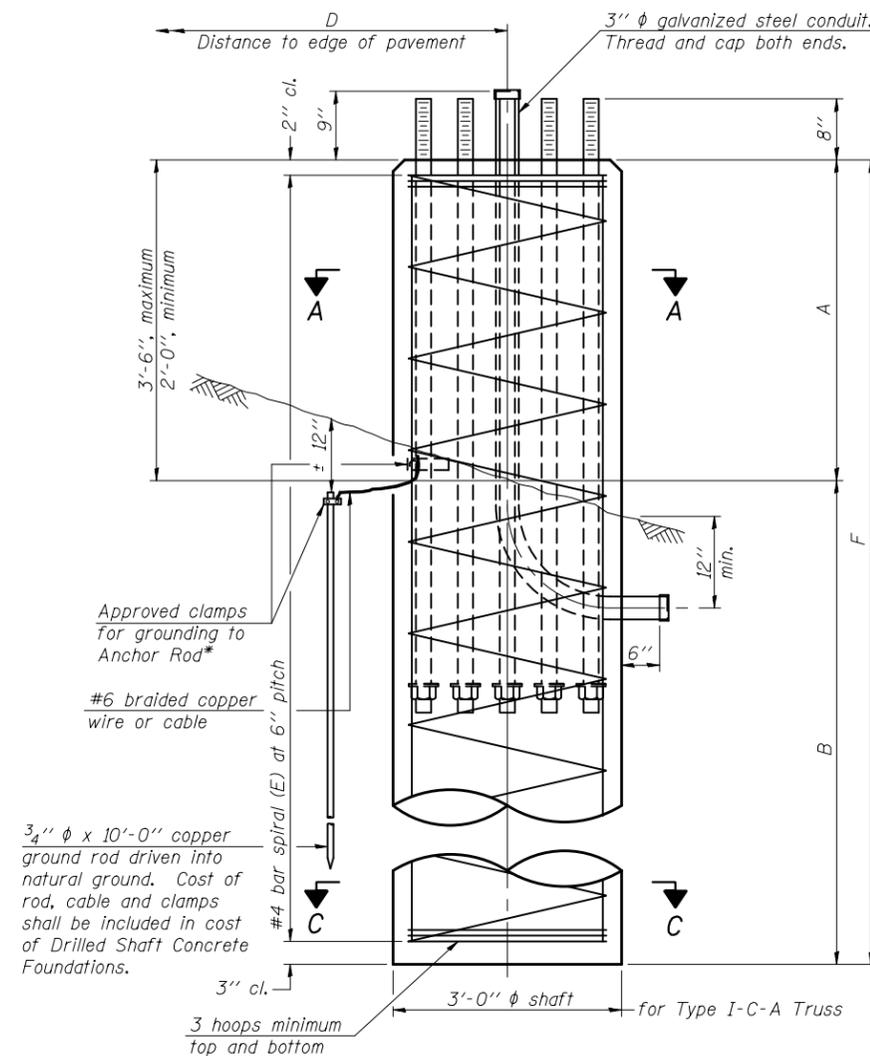
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST

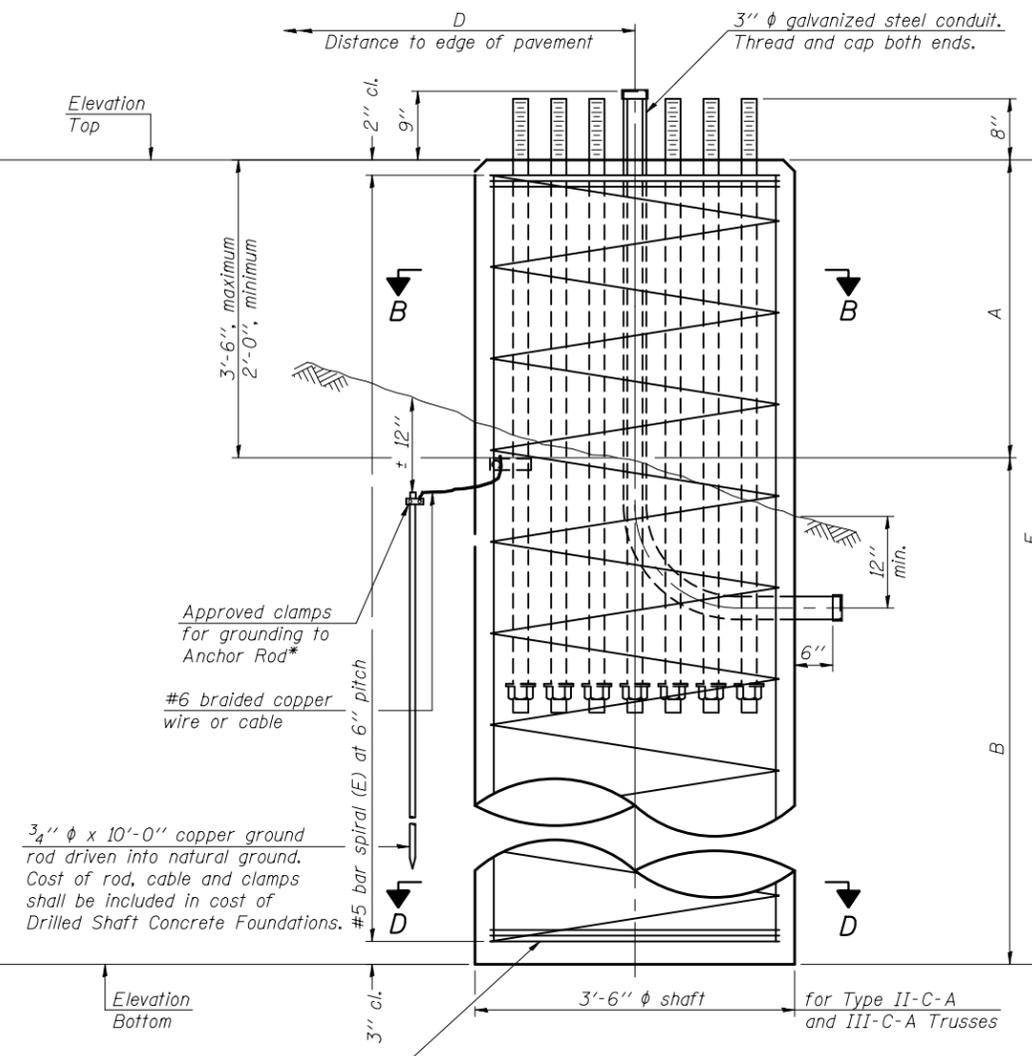
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				CONTRACT NO.
				ILLINOIS FED. AID PROJECT

SHEET NO. OF SHEETS

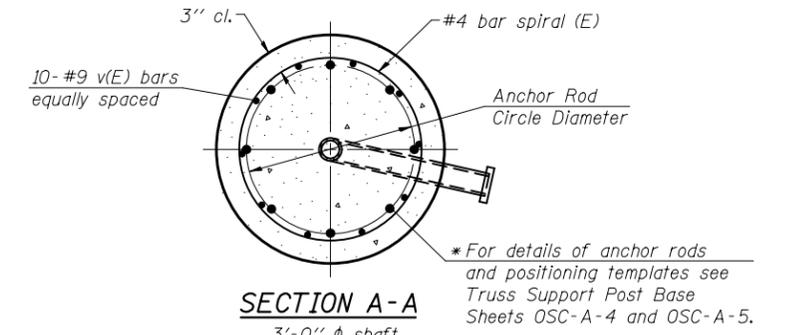
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



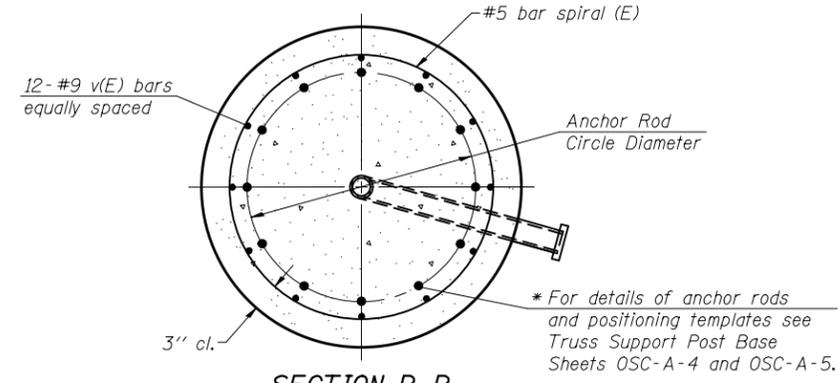
ELEVATION



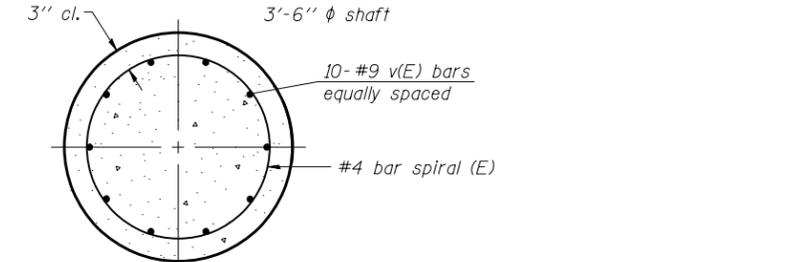
ELEVATION



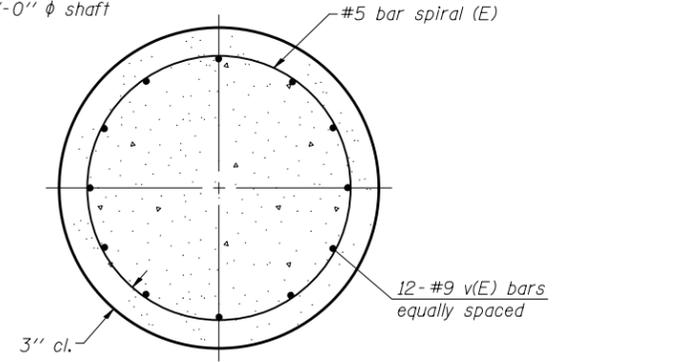
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
 The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards

OSC-A-9

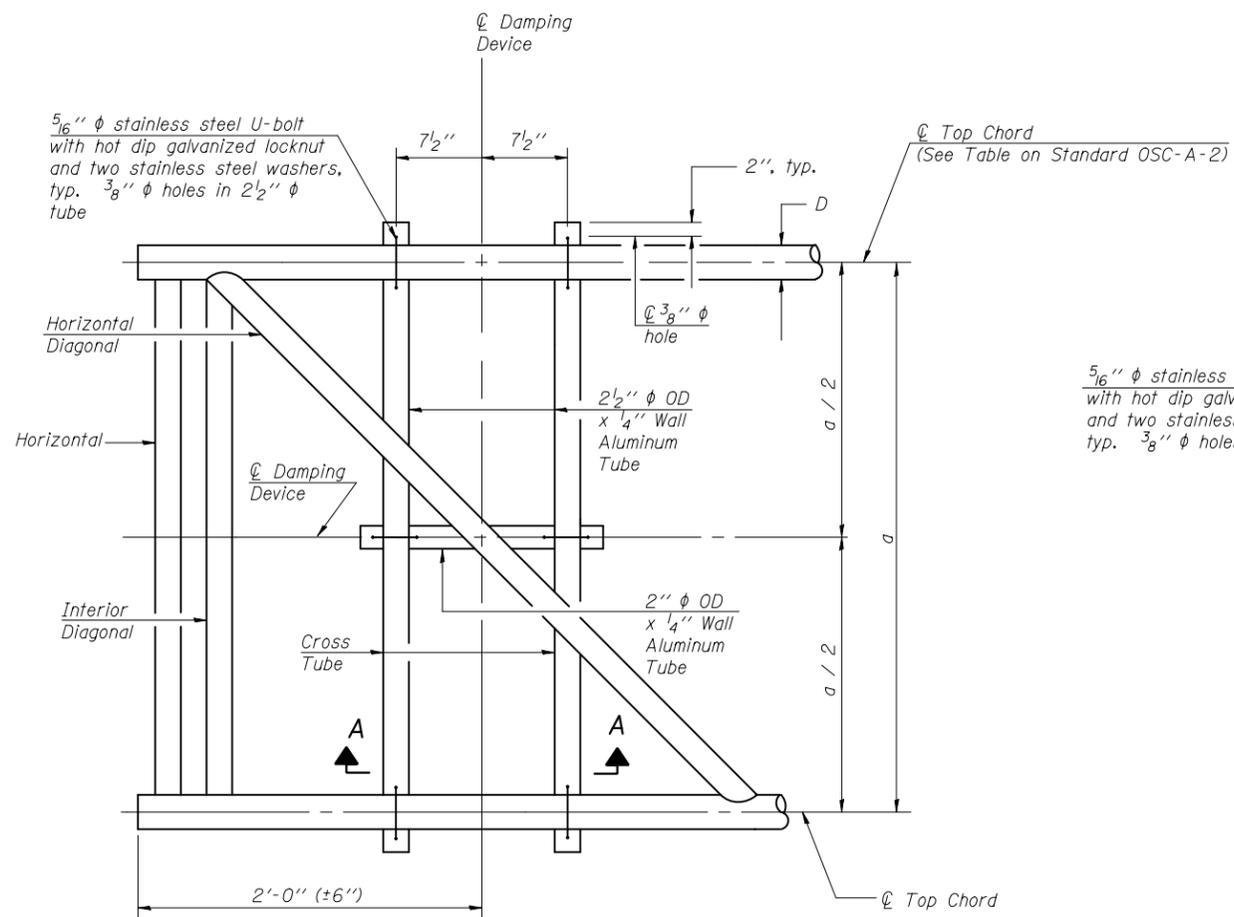
8-21-13

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

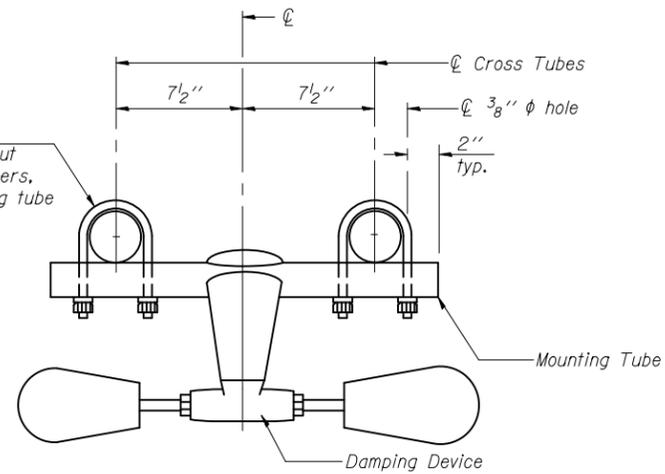
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST

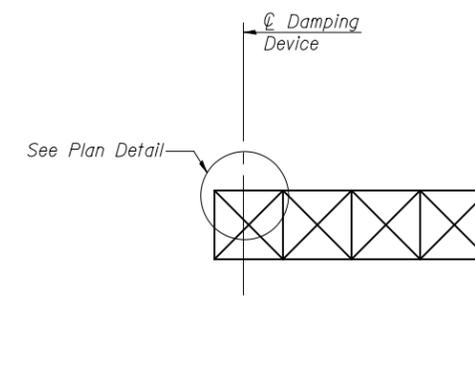
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN DETAIL



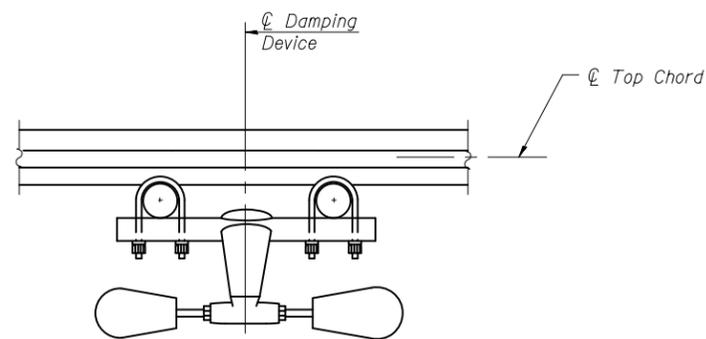
TRUSS DAMPING DEVICE CONNECTION DETAIL



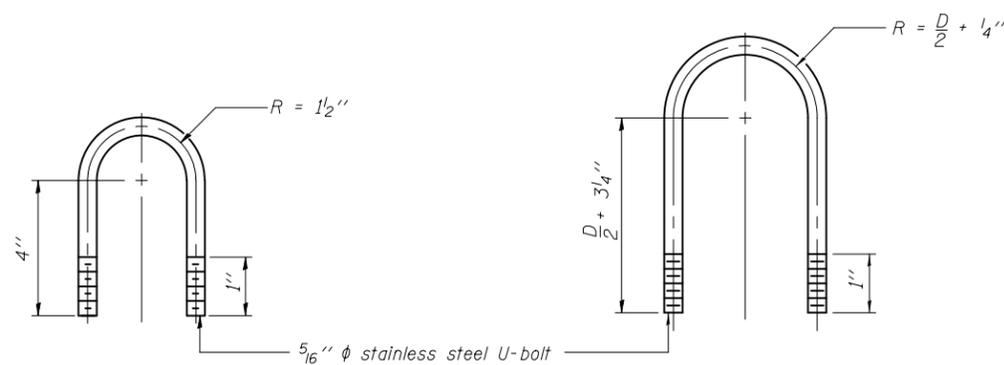
ELEVATION
Aluminum Cantilever Sign Structure

GENERAL NOTES

- Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
- Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)

TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical)

OSC-A-D

6-1-12

FILE NAME =	USER NAME =	DESIGNED -	REVISED
		CHECKED -	REVISED
		DRAWN -	REVISED
		CHECKED -	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER SIGN STRUCTURE
DAMPING DEVICE**

SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				