

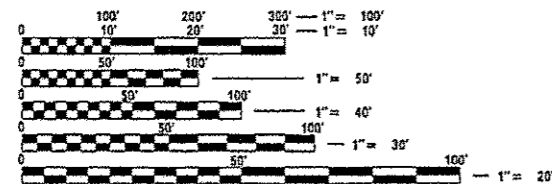
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR	DISTRICT 5	VARIOUS	30
ILLINOIS			CONTRACT NO. 46305

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES
3-5	SCHEDULE OF LOCATIONS
6-15	SIMPLE SPAN DETAIL SHEETS
16-21	CANTILEVER DETAIL SHEETS
22-25	SIGN PANEL DETAIL SHEETS
26-30	SOIL BORING LOGS

STANDARDS

- 630001-10
- 631011-09
- 701006-05
- 701101-04
- 701106-02
- 701201-04
- 701301-04
- 701400-07
- 701401-08
- 701406-08
- 701411-08
- 701446-05
- 701901-03
- 720021-02



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

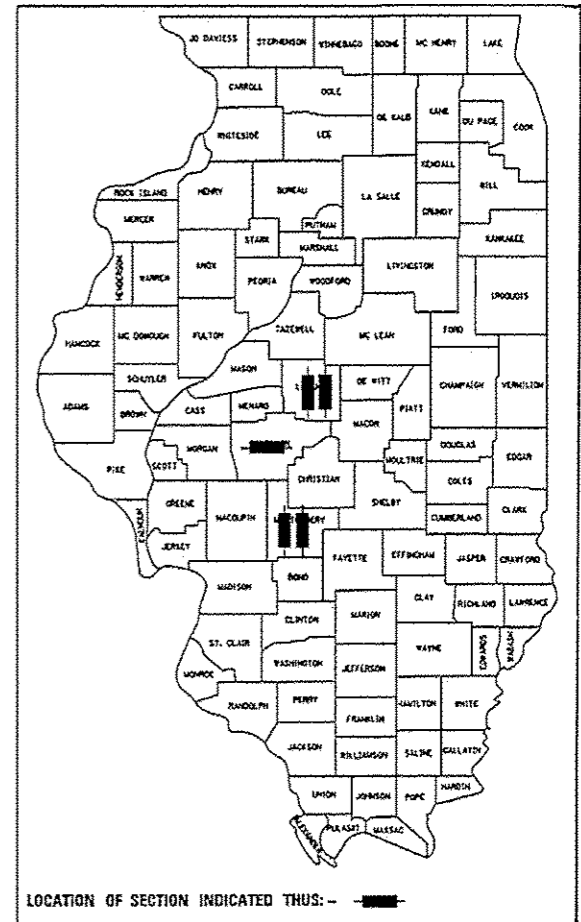
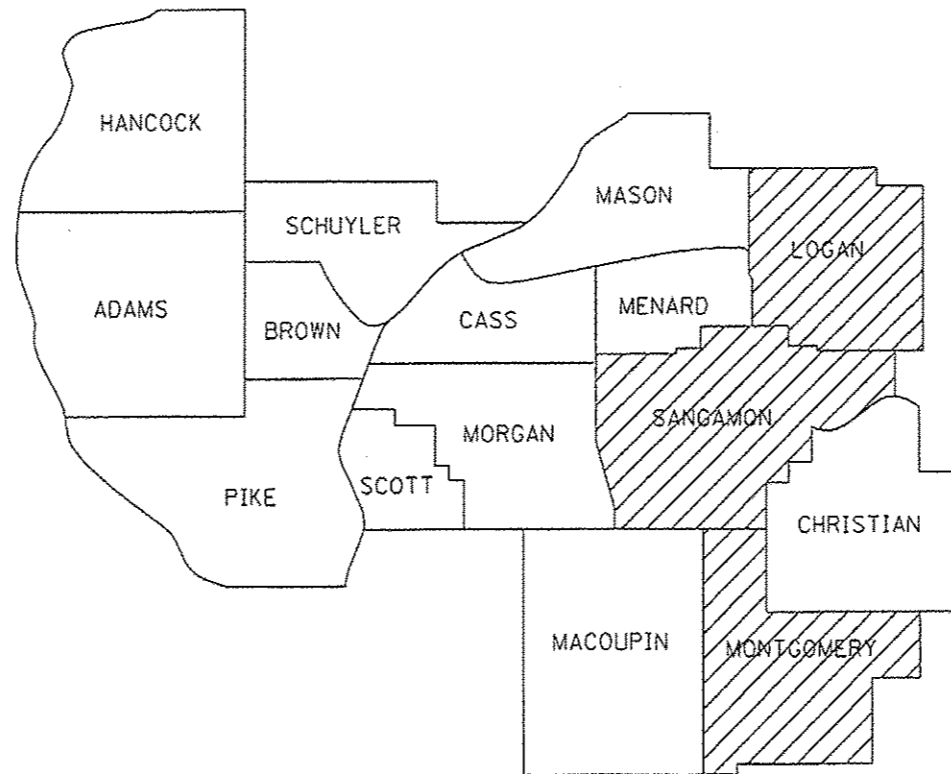
BRIDGE MAINTENANCE ENGINEER (ACTING) : BRANDON DUDLEY 217-785-9290
PROJECT MANAGER : DAVE COPENBARGER 217-785-5306

CONTRACT NO. 46305

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

VARIOUS ROUTES
D-6 OVD SIN STR REPL 14-41
VARIOUS COUNTIES
C-60-043-14



LOCATION OF SECTION INDICATED THUS: - [hatched box] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 9-29 2013
Brandon Munn Act. Engr of Ops.
~~DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER~~

Dec 6 2013
John D. Baranzelli P.E. Jr.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

Dec 6 2013
Omer Osman P.E. Jr.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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CONSTR. CODE

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	MINOR STRUCTURES	
				0040	URBAN
* X5164000	DRILLED SHAFT IN ROCK (SPECIAL)	CU YD	9.43	9.43	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	450	450	
* 63302000	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 2	EACH	5	5	
67100100	MOBILIZATION	L SUM	1	1	
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
72400330	REMOVE SIGN PANEL - TYPE 3	SQ FT	1254.5	1254.5	
73300100	OVERHEAD SIGN STRUCTURE - SPAN, TYPE I-A (4'-0" X 4'-6")	FOOT	96	96	
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	90	90	
73302210	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (36" X 7'-0")	FOOT	105	105	
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	68.03	68.03	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	2	2	
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	3	3	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	7	7	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	10	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	MINOR STRUCTURES	
				0040	URBAN
X0324181	DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	5	5	
* X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE I SPECIAL, TANGENT	EACH	3	3	
X6431110	REMOVE ATTENUATOR BASE	EACH	2	2	
X6431120	REMOVE IMPACT ATTENUATOR SAND MODULE	EACH	2	2	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
X7200095	FURNISH AND ERECT SIGN PANEL	SQ FT	1254.5	1254.5	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	

* SPECIALTY ITEM

Location No.:	1	State I.D. No.:	6S0841072105.9		
County:	SANGAMON	Route:	I-72	M.P.:	105.9
				Direction:	EB
Description of Work	Unit	Quantity			
REMOVE OVERHEAD SIGN STRUCTURE-SPAN	EACH	1.00			
OVERHEAD SIGN STRUCTURE-SPAN, TYPE III-A	FOOT	90.00			
REMOVE SIGN PANEL - TYPE 3	SQ FT	532.00			
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	22.50			
REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	2.00			
STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FT POSTS	FOOT	25.00			
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, (TANGENT)	EACH	1.00			
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEARSET SPLICE	EACH	1.00			
CONSTRUCTION LAYOUT	L SUM	0.20			
NIGHTTIME WORK ZONE LIGHTING	L SUM	0.20			
GUARDRAIL MARKERS, TYPE A	EACH	2.00			
FURNISH & ERECT SIGN PANEL	SQ FT	532.00			
DRILLED SHAFT IN ROCK (SPECIAL)	CU YD	9.43			
REMOVE AND REUSE HOSPITAL SIGN - INCIDENTAL	EACH	1.00			
This structure is being completely replaced.					
Elevations: DL 60 CHSLD SQUARE SE CONC. FOUNDATION FOR WB I-72					
IN MEDIAN OF I-72 1.95 MILES E OF STRUCTURE NAVD 88 = 558.578					

Location No.:	2	State I.D. No.:	6S0541055R124.7		
County:	LOGAN	Route:	I-55	M.P.:	124.7
				Direction:	NB
Description of Work	Unit	Quantity			
REMOVE OVERHEAD SIGN STRUCTURE-SPAN	EACH	1.00			
OVERHEAD SIGN STRUCTURE-SPAN, TYPE I-A	FOOT	96.00			
REMOVE SIGN PANEL - TYPE 3	SQ FT	441.00			
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	20.94			
REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	2.00			
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	FOOT	350.00			
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, (TANGENT)	EACH	2.00			
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2.00			
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	1.00			
CONSTRUCTION LAYOUT	L SUM	0.20			
NIGHTTIME WORK ZONE LIGHTING	L SUM	0.20			
GUARDRAIL MARKERS, TYPE A	EACH	2.00			
FURNISH & ERECT SIGN PANEL	SQ FT	441.00			
REMOVE ATTENUATOR BASE	EACH	2.00			
REMOVE ATTENUATOR SAND MODULE	EACH	2.00			
This structure is being completely replaced.					
Elevations: BM 054-009 CHSLD "X" NE BOLT OF NORTH LEG OF OVERHEAD SIGN IN CENTER					
OF I-55 MEDIAN 0.27 MILE SOUTH OF STRUCTURE # 054-0045 NAVD88 = 587.276					

Location No.:	3	State I.D. No.:	6C0681055R064.5				
County:	MONTGOMERY	Route:	I-55	M.P.:	64.5	Direction:	NB
Description of Work	Unit	Quantity					
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER	EACH	1.00					
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A	FOOT	35.00					
REMOVE SIGN PANEL - TYPE 3	SQ FT	74.75					
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	8.02					
REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	1.00					
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	FOOT	25.00					
FURNISH AND ERECT SIGN PANEL	SQ FT	74.75					
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.00					
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	1.00					
CONSTRUCTION LAYOUT	L SUM	0.20					
NIGHTTIME WORK ZONE LIGHTING	L SUM	0.20					
GUARDRAIL MARKERS, TYPE A	EACH	2.00					
This structure is being completely replaced.							
Elevations: BM 61 CHSLD "x" W BOLT OVERHEAD REST							
AREA SIGN +/- 1413+50 NAVD 88 = 638.593							

Location No.:	4	State I.D. No.:	6C0681055L065.5				
County:	MONTGOMERY	Route:	I-55	M.P.:	99.6	Direction:	SB
Description of Work	Unit	Quantity					
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER	EACH	1.00					
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A	FOOT	35.00					
REMOVE SIGN PANEL - TYPE 3	SQ FT	74.75					
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	8.02					
REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	1.00					
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	FOOT	25.00					
FURNISH AND ERECT SIGN PANEL	SQ FT	74.75					
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.00					
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	1.00					
CONSTRUCTION LAYOUT	L SUM	0.20					
NIGHTTIME WORK ZONE LIGHTING	L SUM	0.20					
GUARDRAIL MARKERS, TYPE A	EACH	2.00					
This structure is being completely replaced.							
Elevations: BM 54 CHSLD "x" E BOLT OVERHEAD REST							
AREA SIGN +/- 1370+00 NAVD 88 = 643.134							

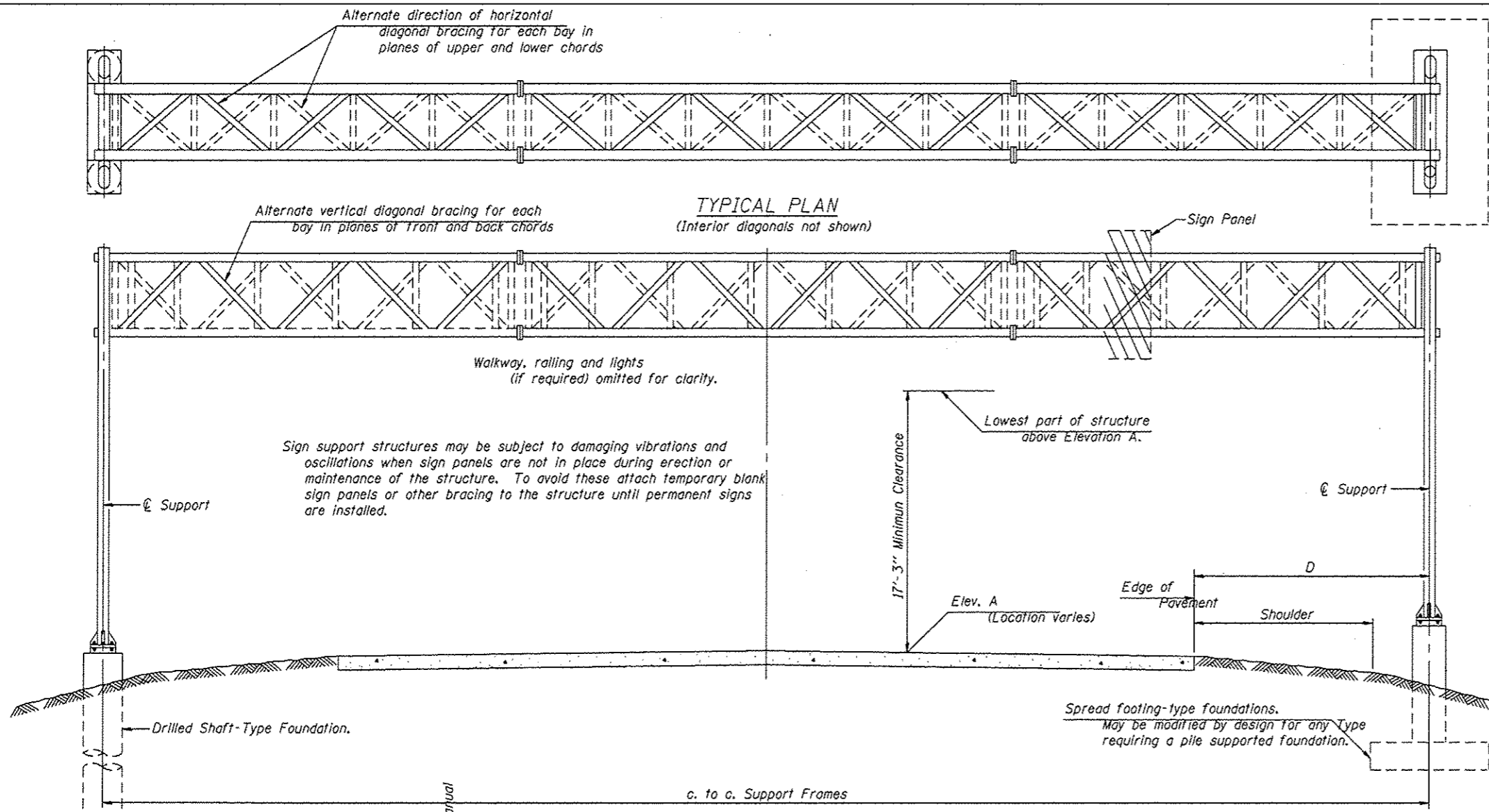
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

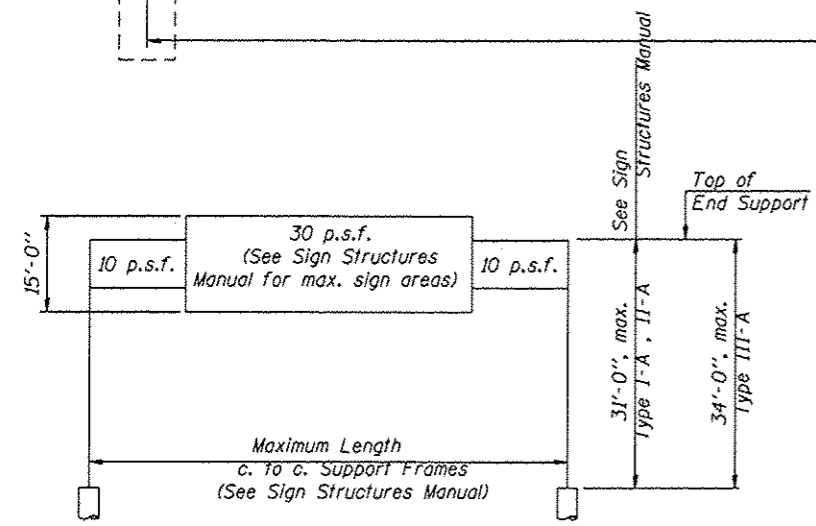
F.A. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAB	DISTRICT 6	VARIOUS	30	4
SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____			CONTRACT NO. 46305	
ILLINOIS FED. AID PROJECT				

Location No.:	5	State I.D. No.:	6C054I055L132.7		
County:	LOGAN	Route:	I-55	M.P.:	132.7
				Direction:	SB
Description of Work	Unit	Quantity			
REMOVE OVERHEAD SIGN STRUCTURE-CANTILEVER	EACH	1.00			
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A	FOOT	35.00			
REMOVE SIGN PANEL - TYPE 3	SQ FT	132.00			
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	8.55			
REMOVE CONCRETE FOUNDATION-OVERHEAD	EACH	1.00			
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	FOOT	25.00			
FURNISH AND ERECT SIGN PANEL	SQ FT	132.00			
REMOVE REERECT TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.00			
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	1.00			
CONSTRUCTION LAYOUT	L SUM	0.20			
NIGHTTIME WORK ZONE LIGHTING	L SUM	0.20			
GUARDRAIL MARKERS, TYPE A	EACH	2.00			
This structure is being completely replaced.					
Elevations: BM 54 CHSLD "x" E BOLT EXIT 133 BUS LOOP					
55 LINCOLN SIGN +/- 729+23 NAVD 88 = 599.791					



TYPICAL PLAN
(Interior diagonals not shown)

TYPICAL ELEVATION
(Looking at Face of Signs)**



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
6S0841072L105.9	150+00	III-A	90'-0"	559.60	34'-0"	17'-0"	532.0
6S0541055R124.7	285+00	I-A	96'-0"	588.476	32'-0"	14'-6"	441.0

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seal in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	96'-0"
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	-
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	90'-0"
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	-
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	43.45
DRILLED SHAFT CONCRETE FOUNDATIONS IN ROCK	Cu. Yds.	9.43

OS-A-1

6-1-12

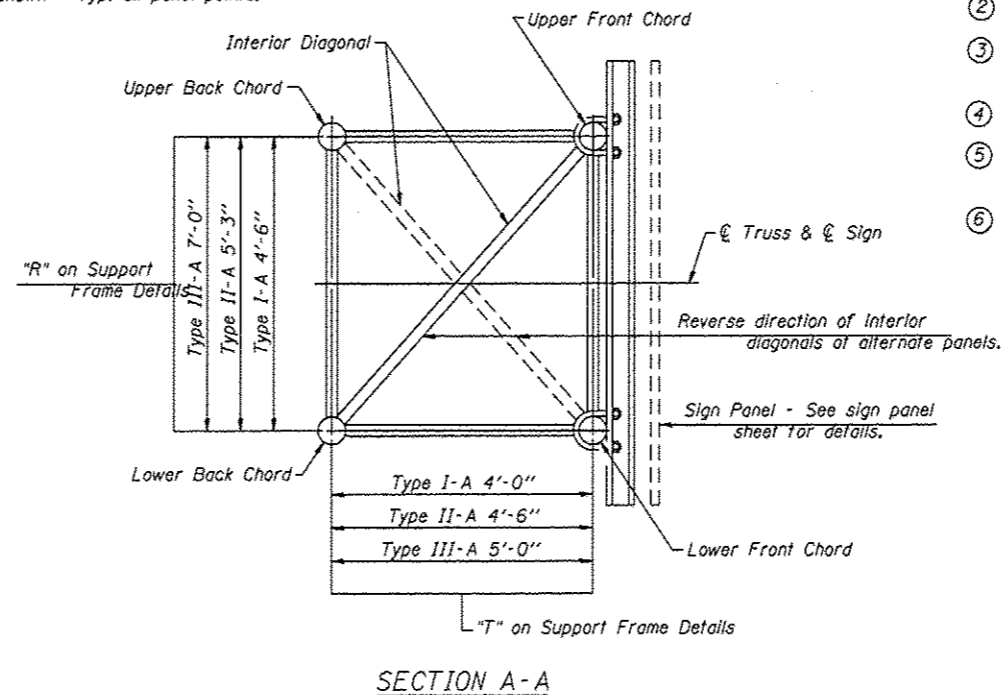
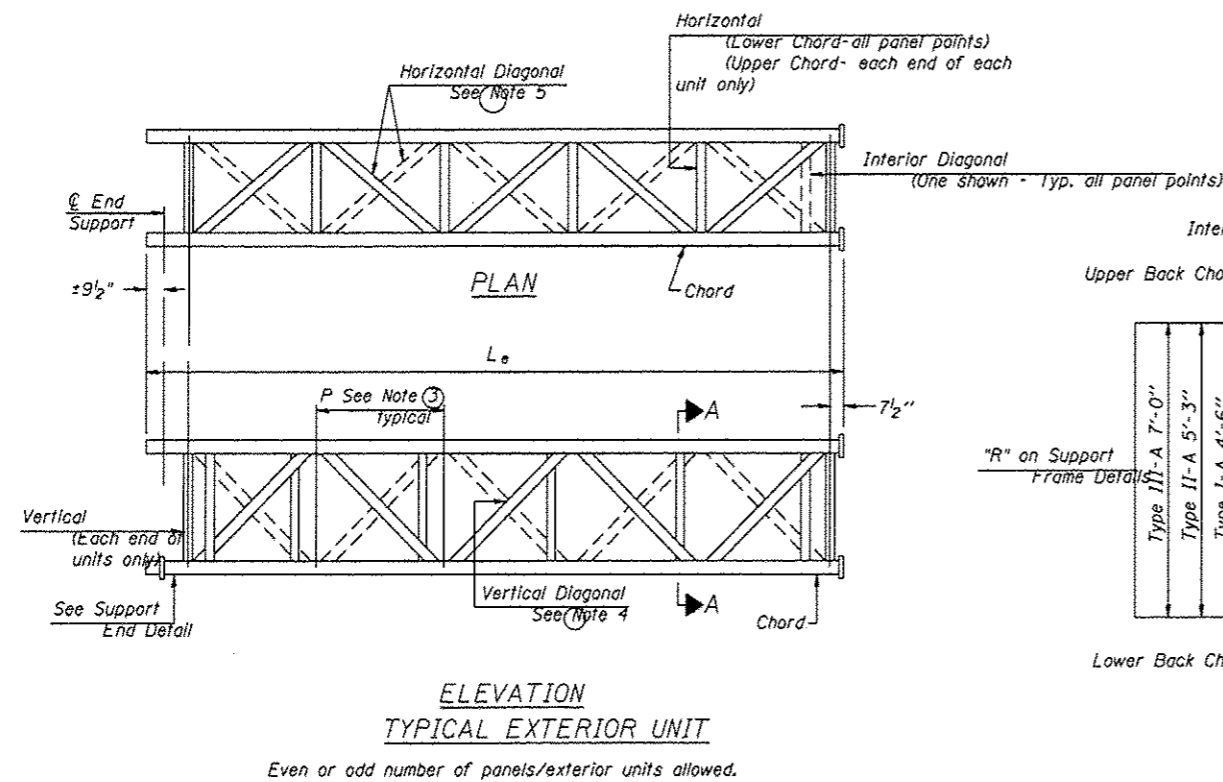
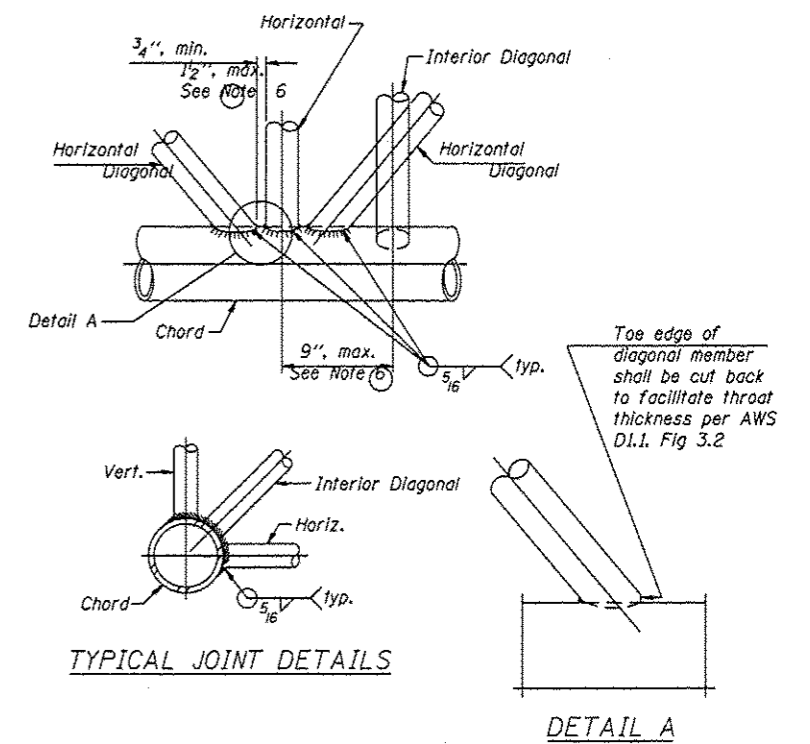
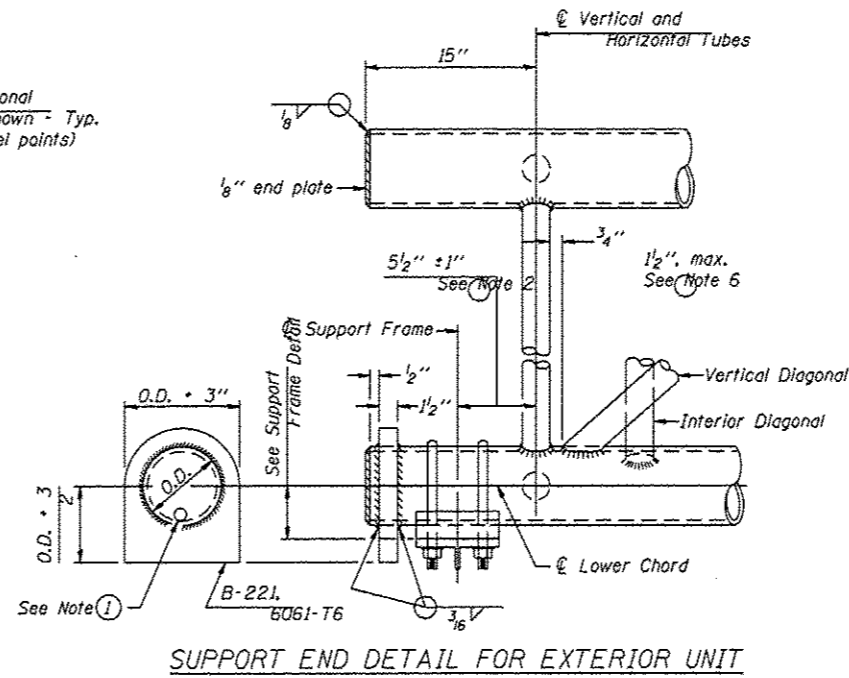
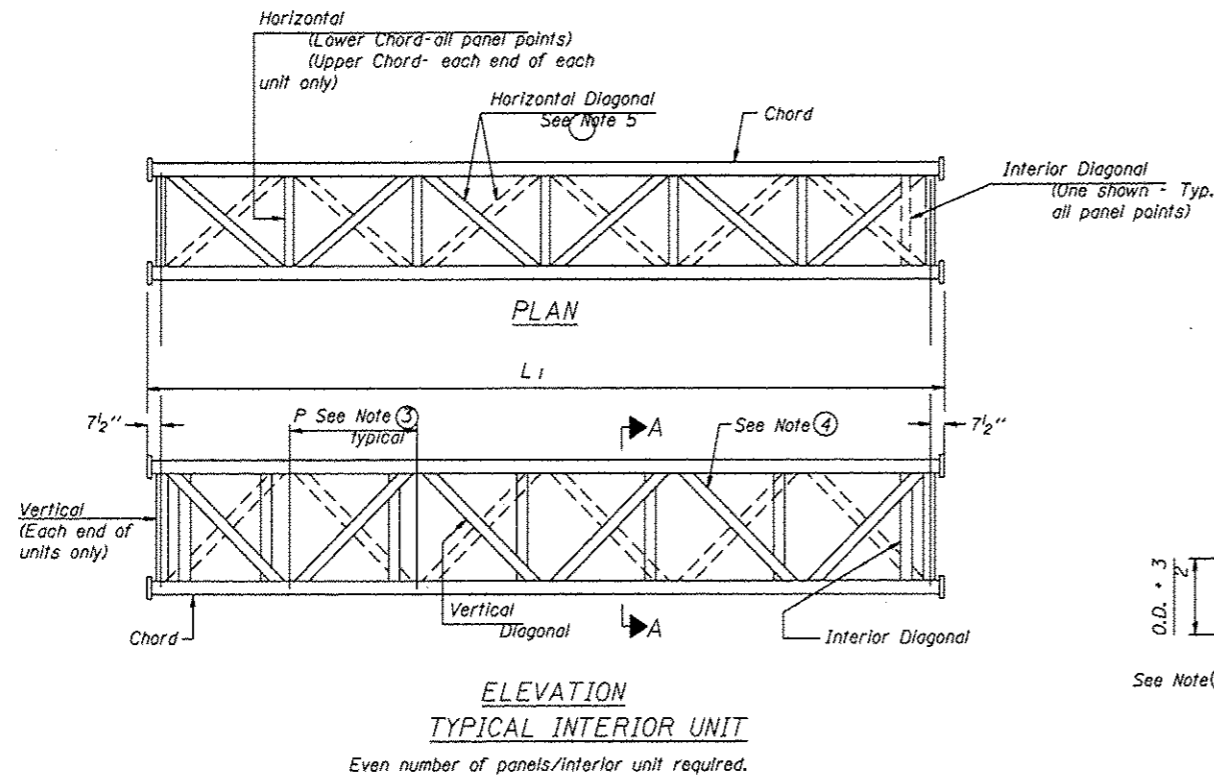
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PLOT DATE * Sep-04-2013 09:52:37AM	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS**

SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A. RTE. JAB	SECTION DISTRICT 6	COUNTY VARIABLE	TOTAL SHEETS NO. 30	SHEET NO. 6
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	



- Contractor may alternatively use standard aluminum drive-fit cap to close end. $\frac{1}{2}$ " ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ① $\frac{5}{2}$ " end dimension may vary by ± 1 " to provide uniform panel spacing (P).
 - ② Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
 - ③ Vertical Diagonals in front and back face shall alternate.
 - ④ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
 - ⑤ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a $\frac{3}{4}$ " minimum to $\frac{1}{2}$ " maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.
 - ⑥

OS-A-2

6-1-12

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P:\SIGN STRUCTURES\SignRepl.dgn		DRAWN -	REVISED -
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		DATE -	REVISED -

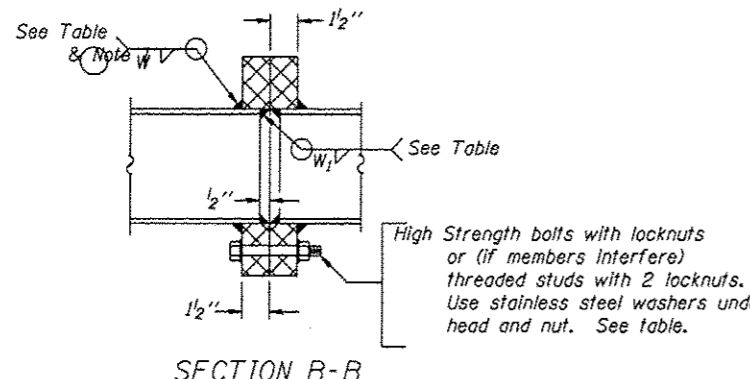
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

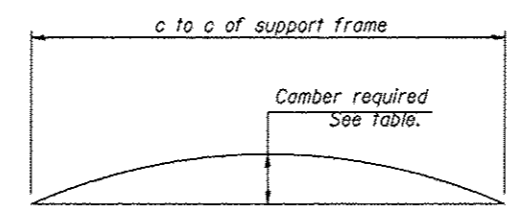
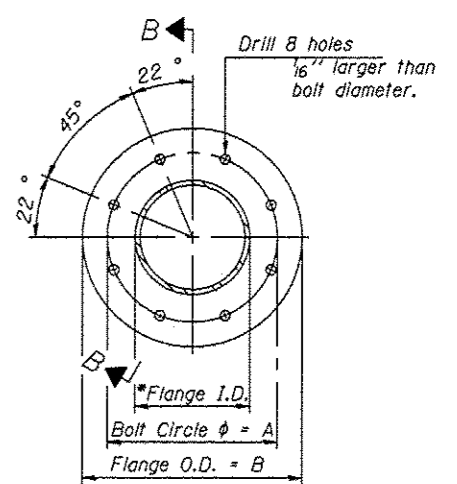
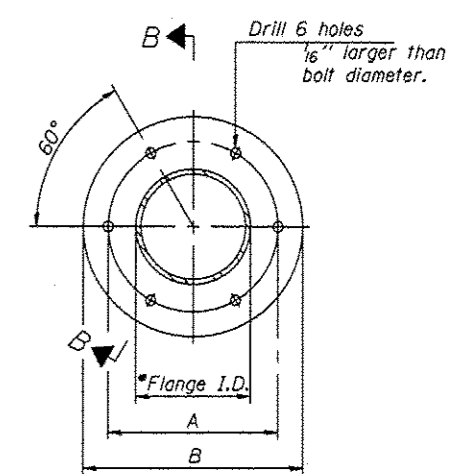
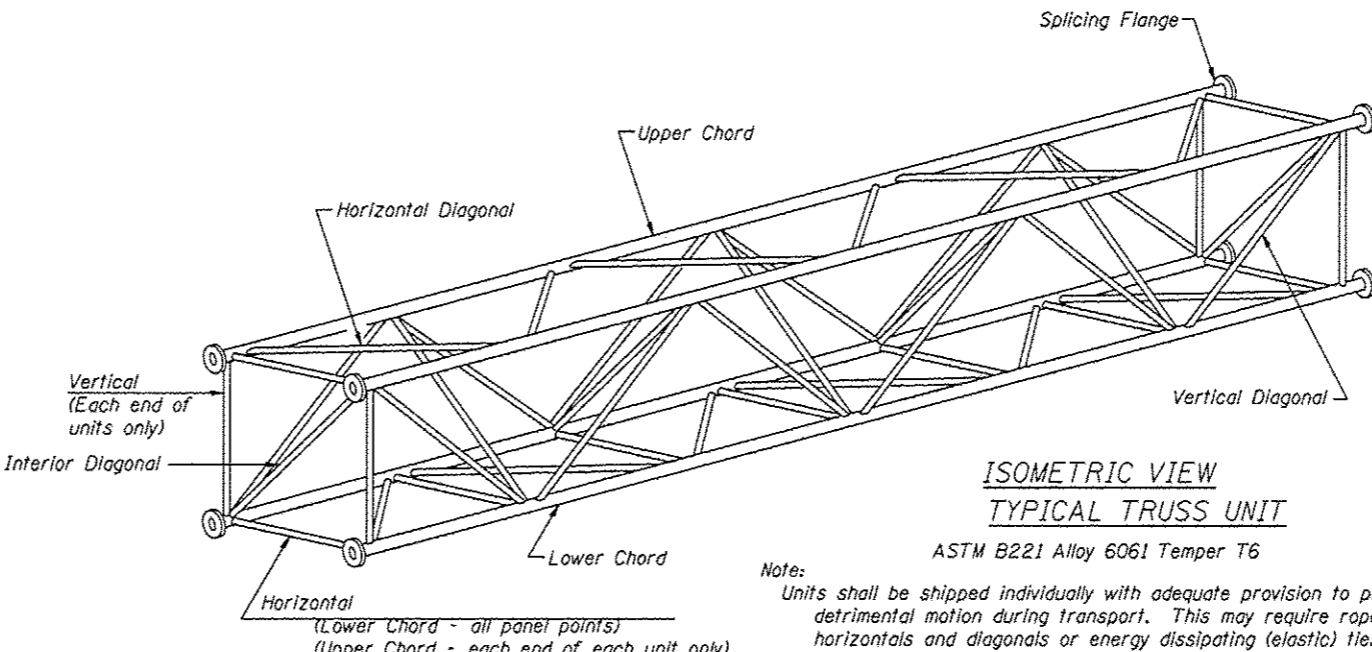
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
148	DISTRICT 6	VARIOUS	30	7
			CONTRACT NO. 46305	
ILLINOIS FED. AID PROJECT				

TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit			Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange							
			No. Panels per Unit	Unit Lgth.(L _u)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.		Wall	Bolts		Weld Sizes				
															No./Splice	Dia.	W	W ₁	A	B	
6S0841072L105.9	150+00	III-A	5	28'-11 1/2"	5'-5"	1	6	33'-9"	5'-5"	7"	5/16"	3 3/4"	5/16"	1.8"	6	1"	1/16"	3/16"	11 1/2"	15"	
6S0541055R124.7	285+00	I-A	7	34'-3"	4'-7 1/2"	1	6	29'-0"	4'-7 1/2"	5 1/2"	5/16"	2 1/2"	5/16"	3.1"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"	

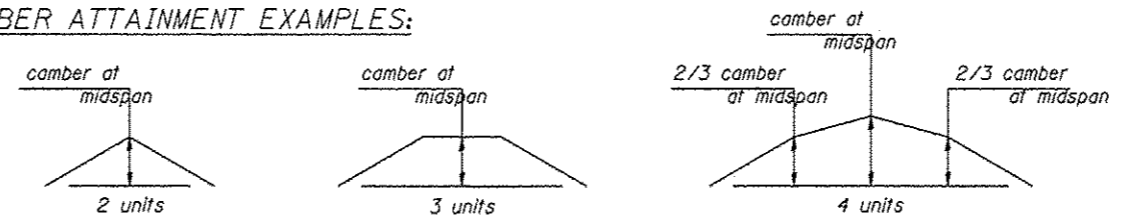


① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



CAMBER DIAGRAM
Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

CAMBER ATTAINMENT EXAMPLES:

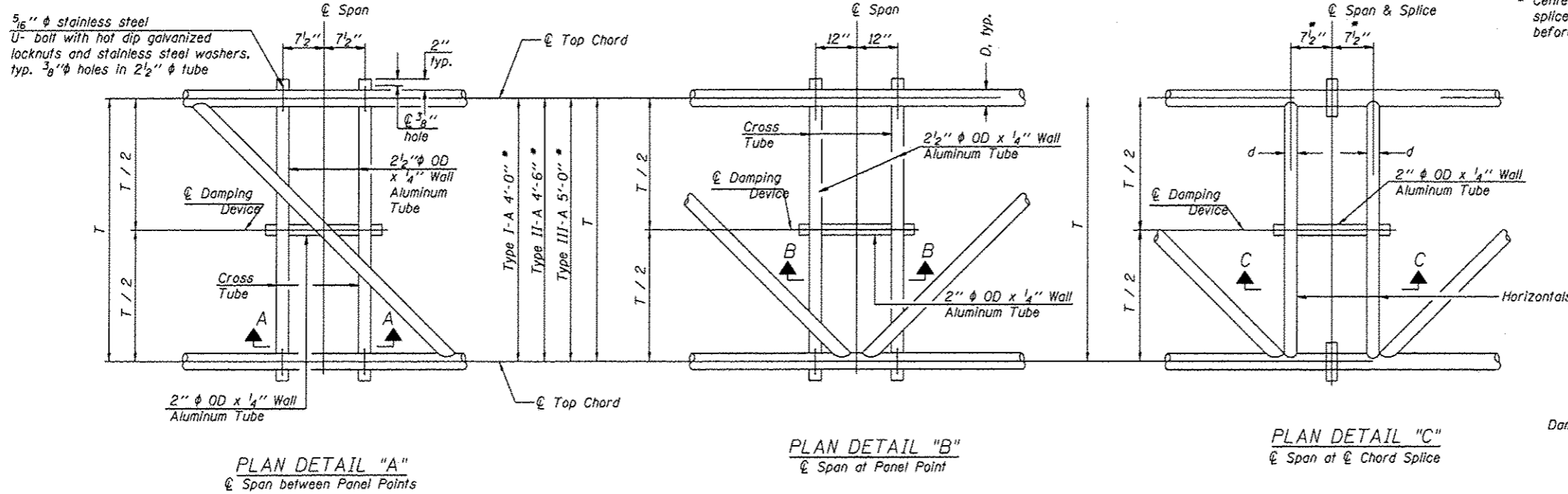


Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)

OS4-A-2

6-1-12

FILE NAME • P:\VISION STRUCTURES\SignRepl.dgn	USER NAME • posadoeds	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A		F.A. RTE. _____	SECTION _____	COUNTY _____	TOTAL SHEETS _____	SHEET NO. _____	
PLOT SCALE • 1/8" = 1'-0"	CHECKED - _____	REVISED - _____	REVISED - _____		SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	DISIBIGL 5	VABIGUS	30	8	
PLOT DATE • Aug-27-2013 11:54:28AM	DATE - _____	REVISED - _____	REVISED - _____		CONTRACT NO. 46305							
Default					ILLINOIS FED. AID PROJECT							

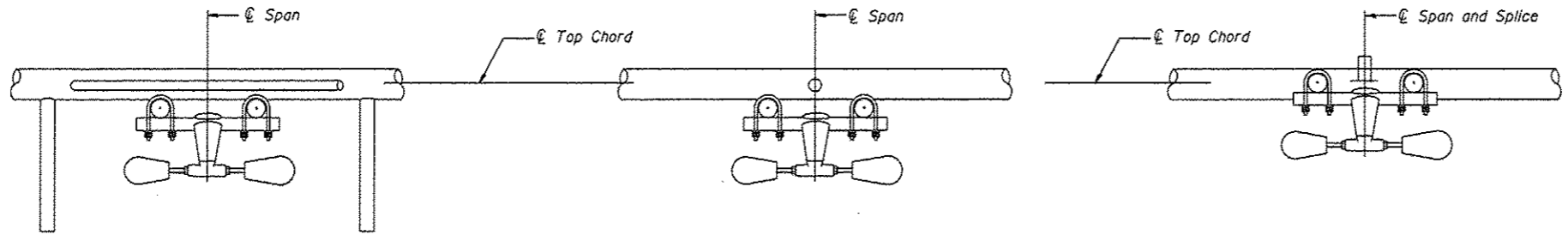


* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

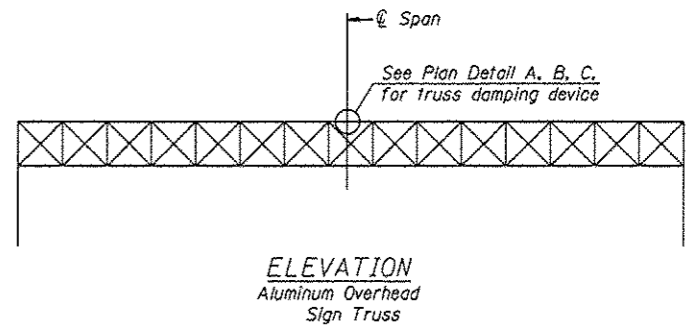
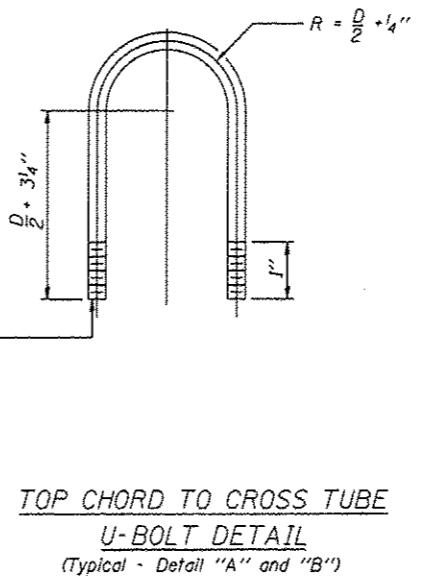
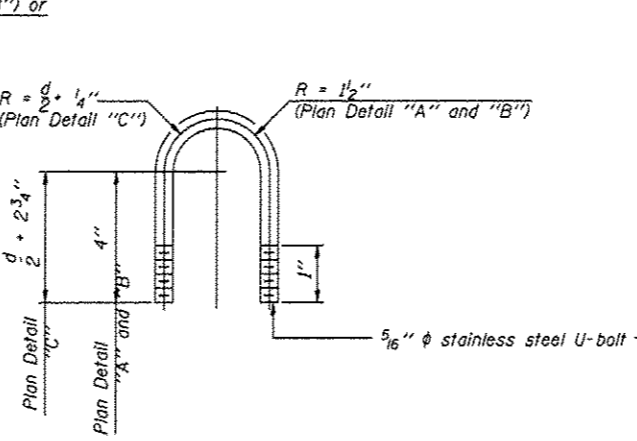
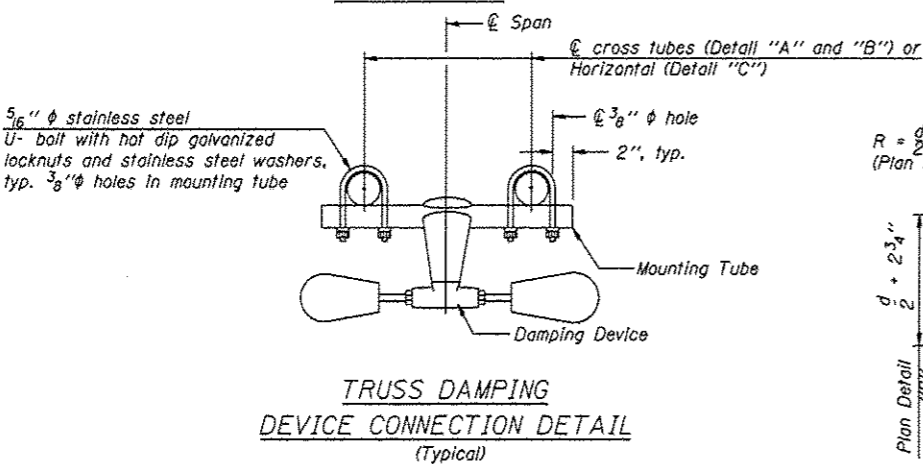
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 Temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

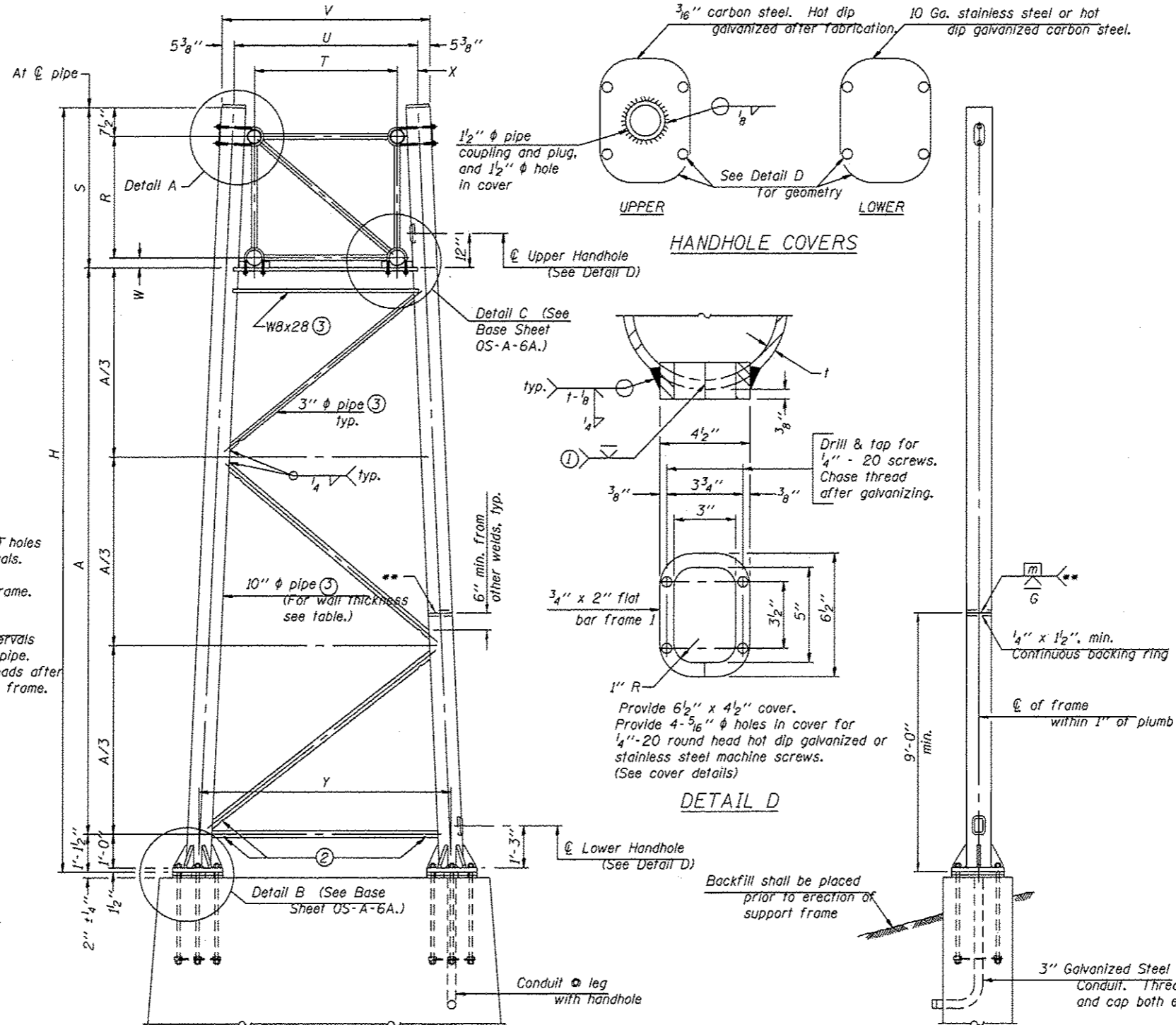
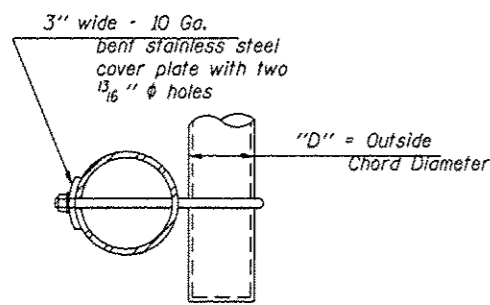
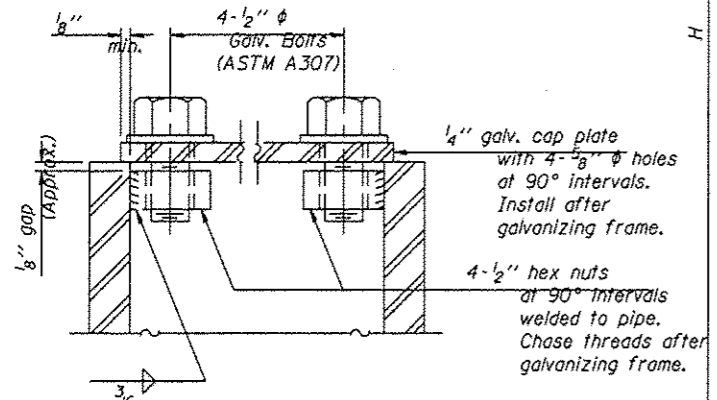
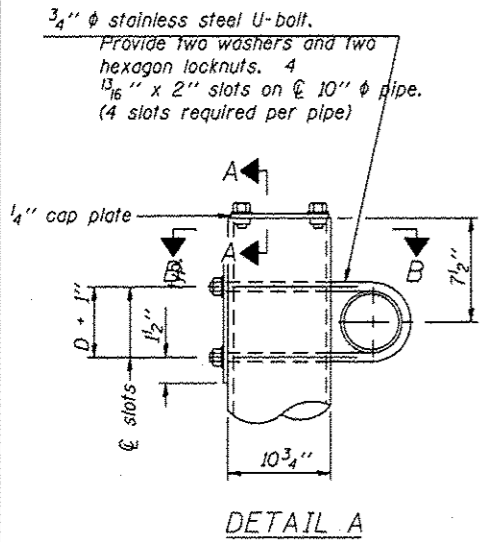
SECTION B-B

SECTION C-C



OS-A-D 6-1-12

FILE NAME * P:\ASIGN STRUCTURES\SignRepl.dgn	USER NAME * posedade	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURE DAMPING DEVICE				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	PLOT SCALE * 100.0002 ft / in.	DRAWN -	REVISED -		SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	Y&B	DISTRICT 6	VARIOUS	30	9	
	PLOT DATE * Aug-27-2013 11:54:37AM	CHECKED -	REVISED -						CONTRACT NO. 46305				
		DATE -	REVISED -						ILLINOIS FED. AID PROJECT				



- Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign
- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 in or less.
 - Galvanizing vent holes of adequate size shall be provided on underside of each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
 - Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
 - See General Notes for fasteners.
 - Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
 - "H" based on 15'-0" or actual sign height, whichever is greater.

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5 1/2"	4'-0"	5'-6"	6'-4 3/4"	4"	9"	8'-3"
II-A	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

10" ϕ PIPE TRUSS SUPPORT FRAME
 ** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H	A
		Left	Right				
6S0541055R124.7	285+00	X		I-A	0.279	27'-2"	20'-7"
			X	I-A	0.279	28'-11"	22'-4"

OS-A-6

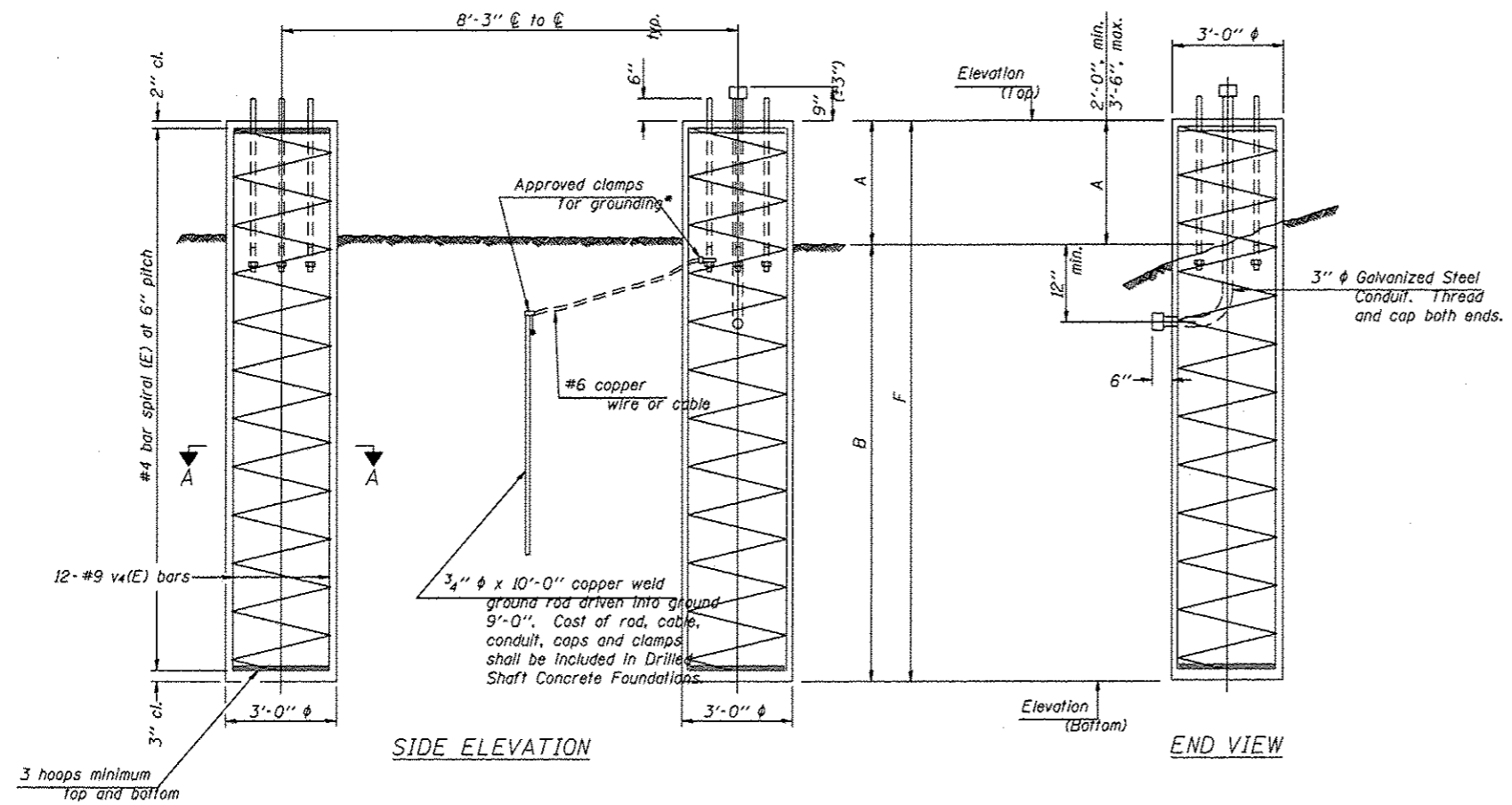
6-1-12

FILE NAME *	USER NAME * posedads	DESIGNED -	REVISED -
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PLOT SCALE * 100.0002 Ft / in.		CHECKED -	REVISED -
PLOT DATE * Sep-04-2013 09:53:32AM		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES			
SUPPORT FRAME FOR ALUMINUM TRUSS			
SCALE: _____	SHEET _____	OF _____	SHEETS
STA. _____	TO STA. _____		

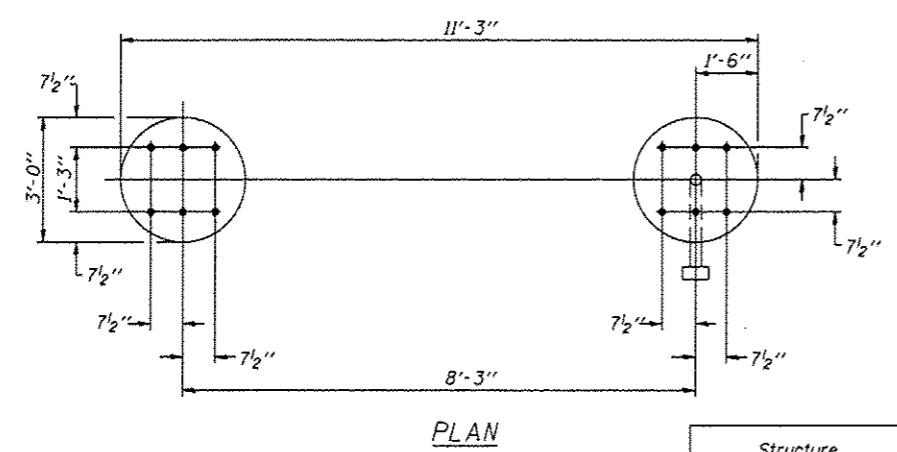
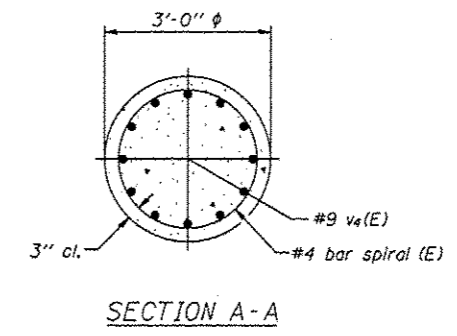
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
YAB	DISIBICT 6	YABIGUS	30	10
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	



BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations of the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown 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 Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



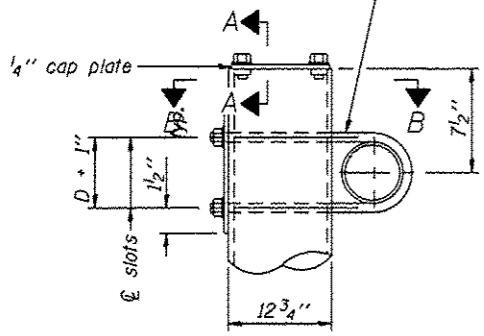
For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

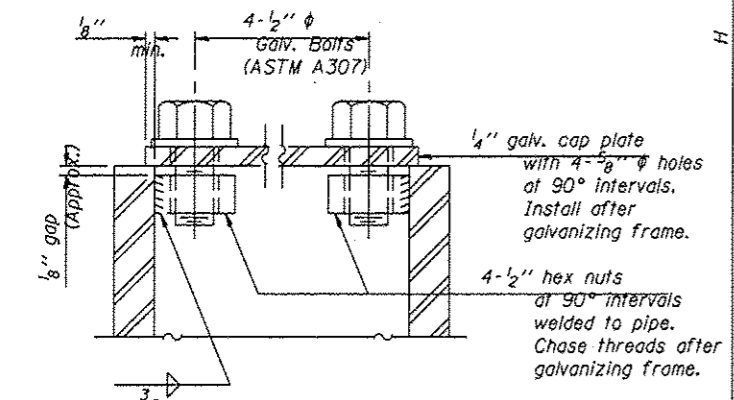
**DETAILS FOR 10" φ SUPPORT FRAME
 TYPE I-A or II-A TRUSS**

Structure Number	Station	Left Foundation					Right Foundation					DRILL. SHAFT Concrete FOUND. (Cu. Yds.)	DRILL. SHAFT IN ROCK (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F		
6S0541055R124.7	285+00	590.016	570.016	3'-6"	16'-6"	20'-0"	588.376	568.376	3'-6"	16'-6"	20'-0"	20.94	-

3/4" φ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. 4 13/16" x 2" slots on 12" φ pipe. (4 slots required per pipe)

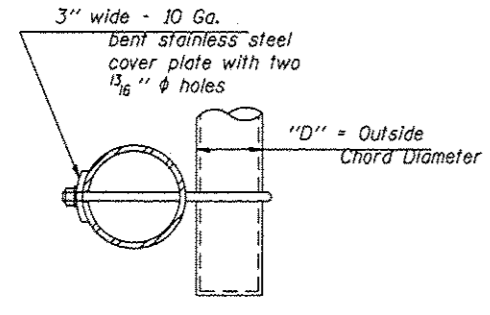


DETAIL A

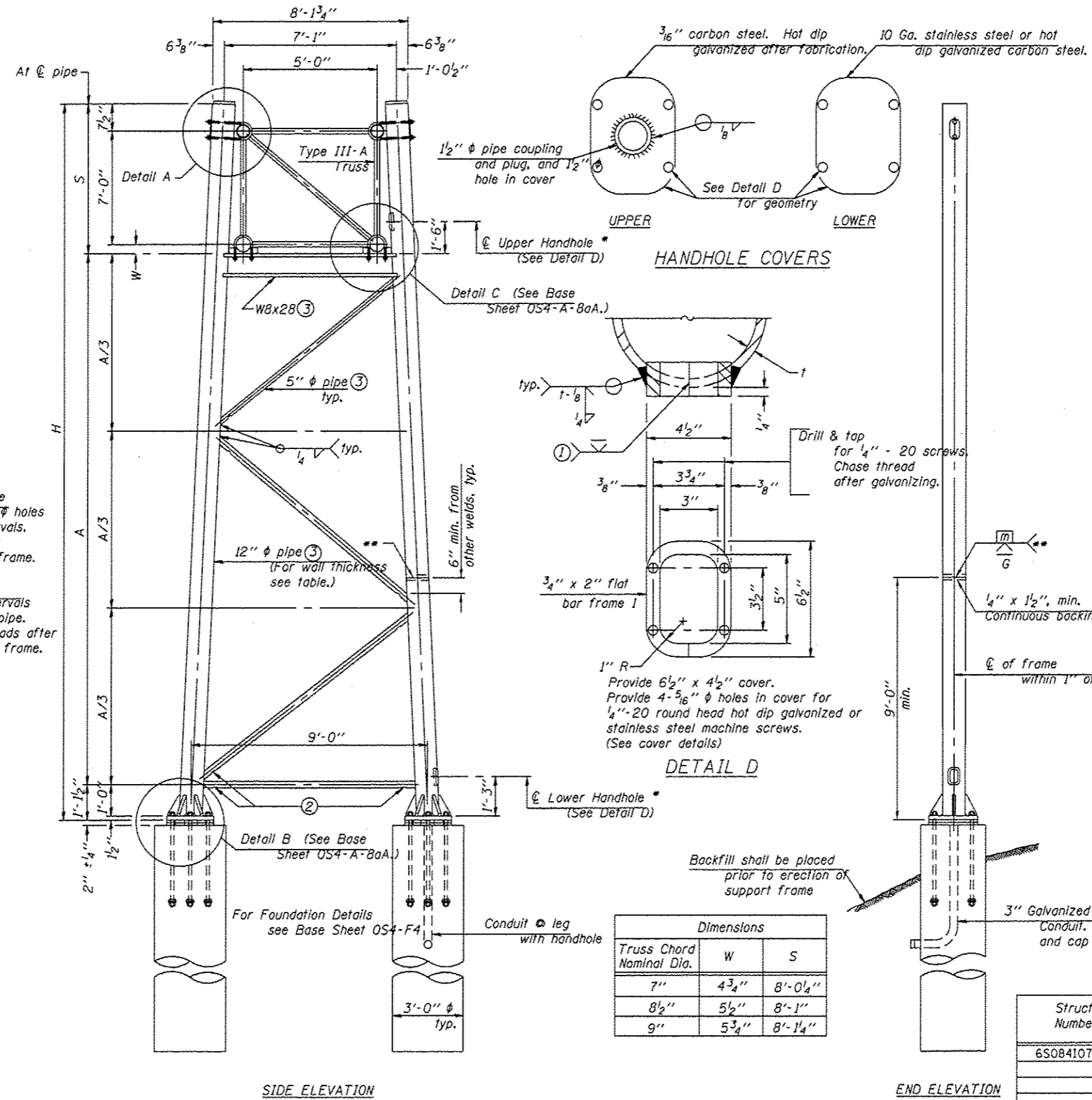


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION

END ELEVATION

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS

(12" φ Pipe-Type III-A Truss)

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 in or less.
 - ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
 - ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
 - ④ See General Notes for fasteners.
 - ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
 - ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.
- * For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H ⑥	A
		Left	Right			
6S0841072L105.9	150+00	X		0.33	31'-1"	21'-11"
			X	0.33	31'-1"	21'-11"

OS4-A-8a

6-1-12

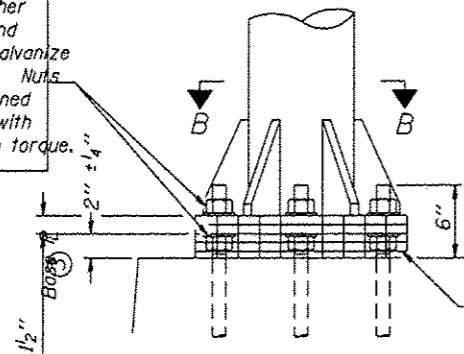
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PLOT DATE * Sep-04-2013 09:54:16AM	DATE -	REVISED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES - SUPPORT FRAME
FOR TYPE III-A ALUMINUM TRUSS

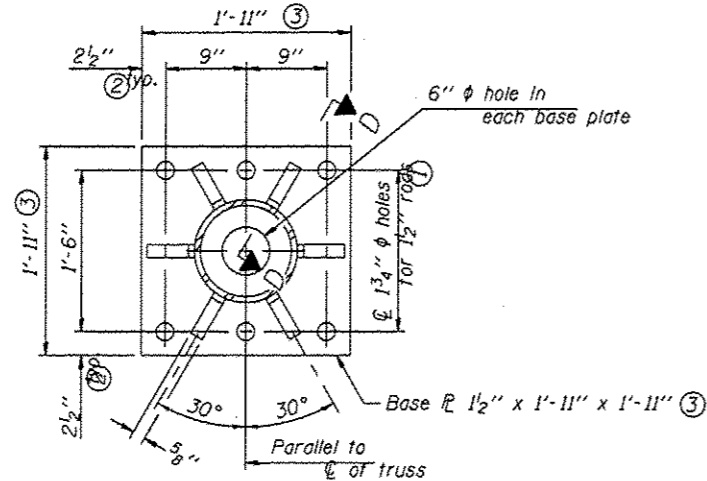
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
X48	DISTRICT 6	YABIGUS	30	13
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	

Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.

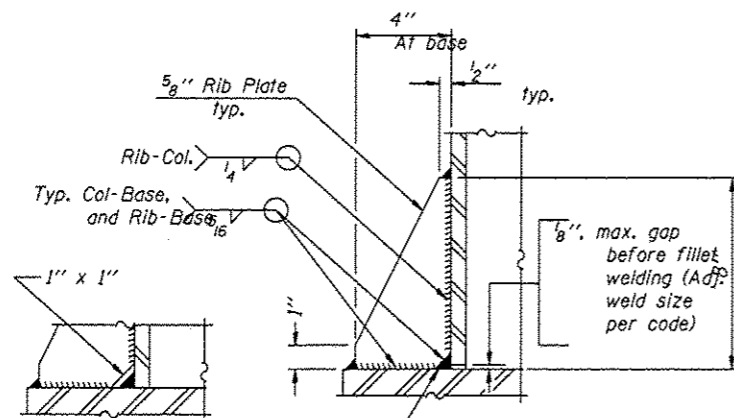


DETAIL B
Ribs shall be cut to fit slope of pipe.

Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.

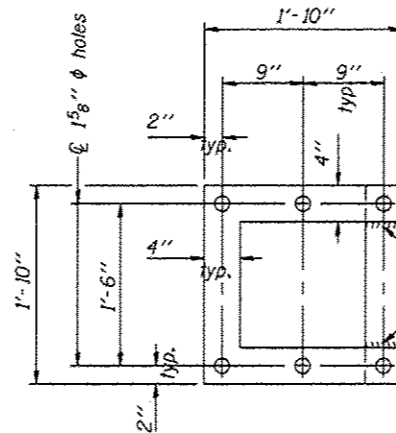


SECTION B-B



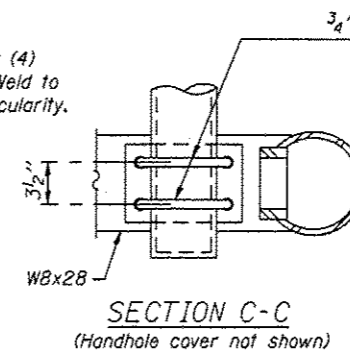
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

SECTION D-D

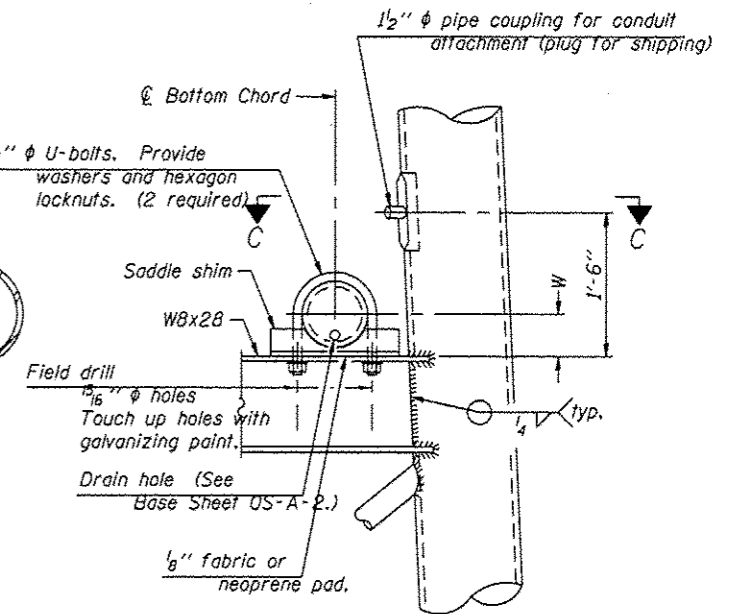


POSITIONING PLATE(S)

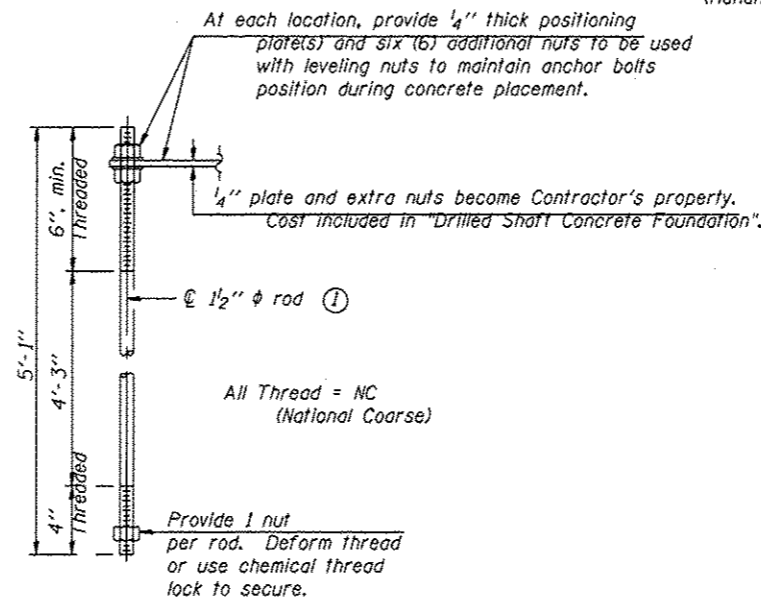
Optionally may use four (4) separate bars. Weld to maintain perpendicularity.



SECTION C-C
(Handhole cover not shown)



DETAIL C



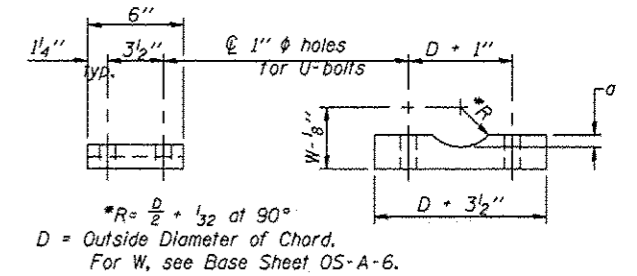
ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS
12" φ PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

- ① 1 3/4" φ rod, 2" φ holes
- ② 2 3/4" edge distance
- ③ Base PL 1 5/8" x 1'-11 1/2" x 1'-11 1/2"

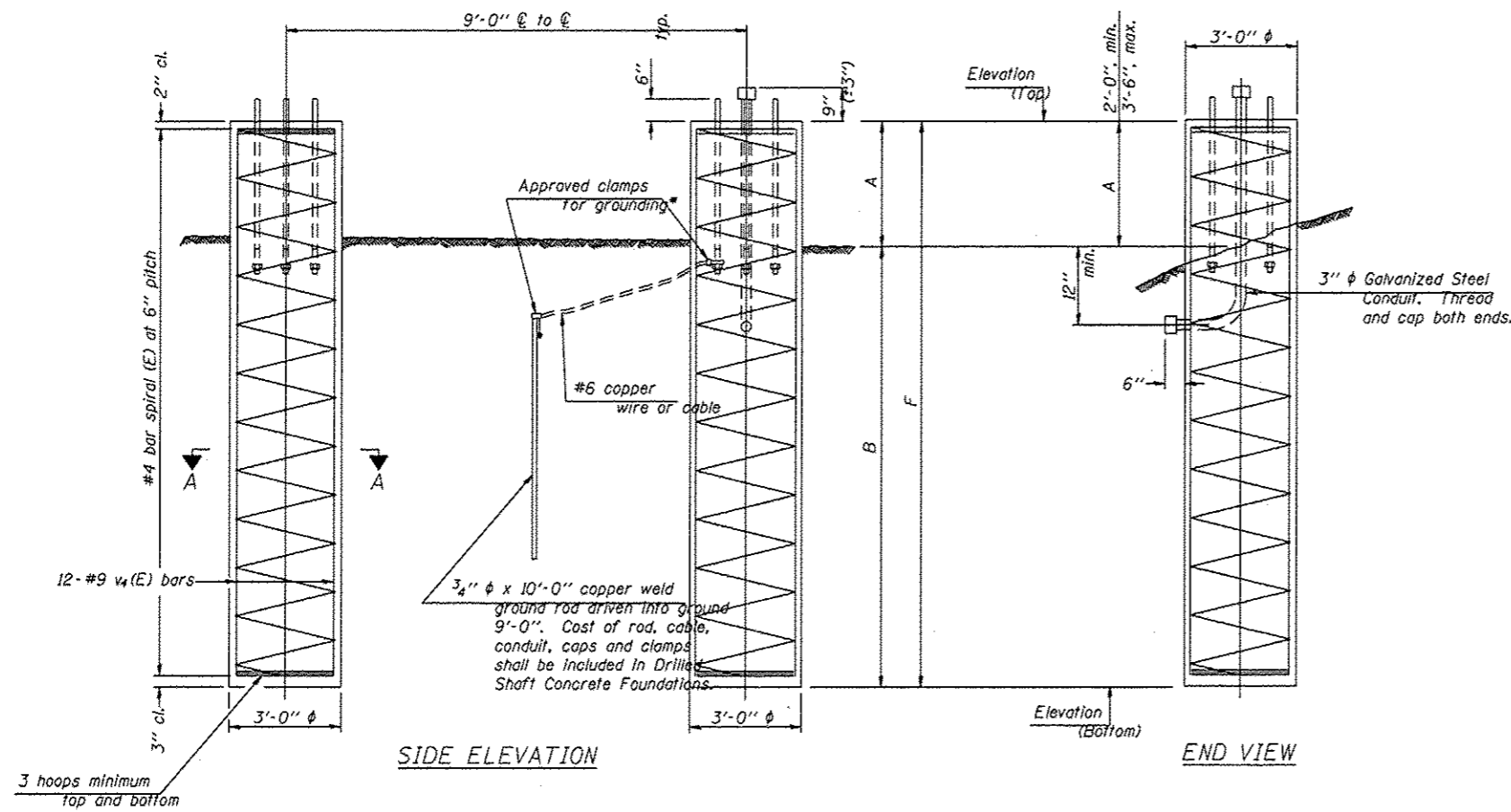


SADDLE SHIM DETAIL
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

OS4-A-8aA

6-1-12



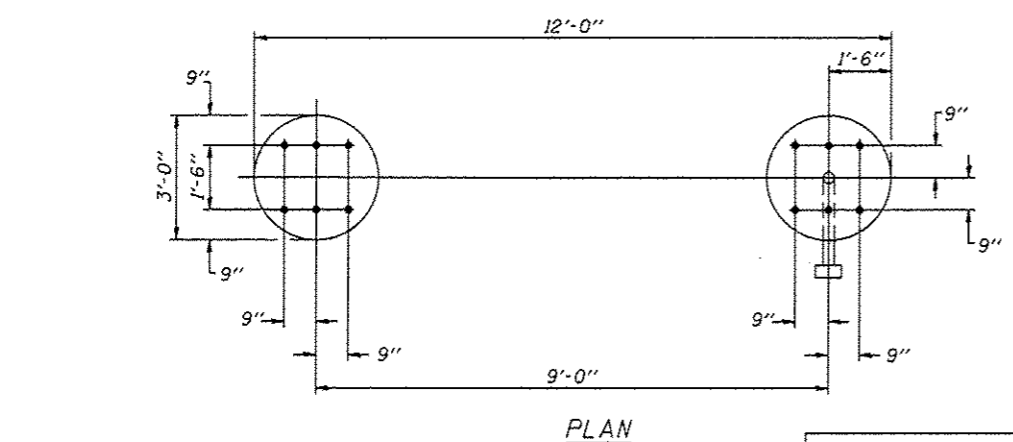
SIDE ELEVATION

END VIEW

BAR LIST - EACH FOUNDATION

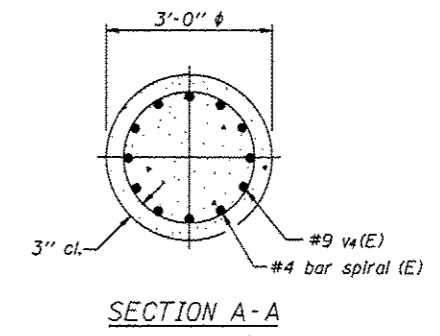
Bar	Number	Size	Length	Shape
#4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) 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 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 Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



PLAN

For anchor rod size and placement, see Support Frame Detail Sheet.
 • Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.



SECTION A-A

DETAILS FOR 12" Ø SUPPORT FRAME
TYPE III-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					DRILL SHAFT Concrete FOUND. (Cu. Yds.)	DRILL SHAFT IN ROCK (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F		
6S0841072L105.9	150+00	559.53	538.03	3'-6"	18'-0"	21'-6"	559.53	538.03	3'-6"	18'-0"	21'-6"	22.50	9.43

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

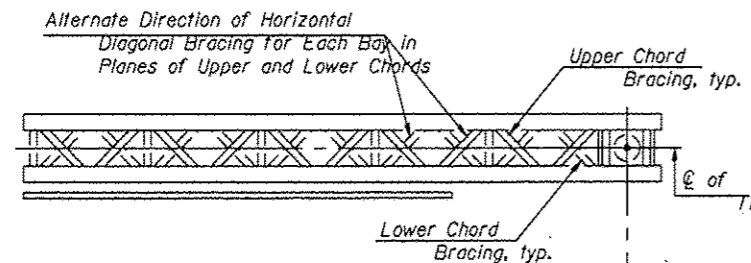
GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

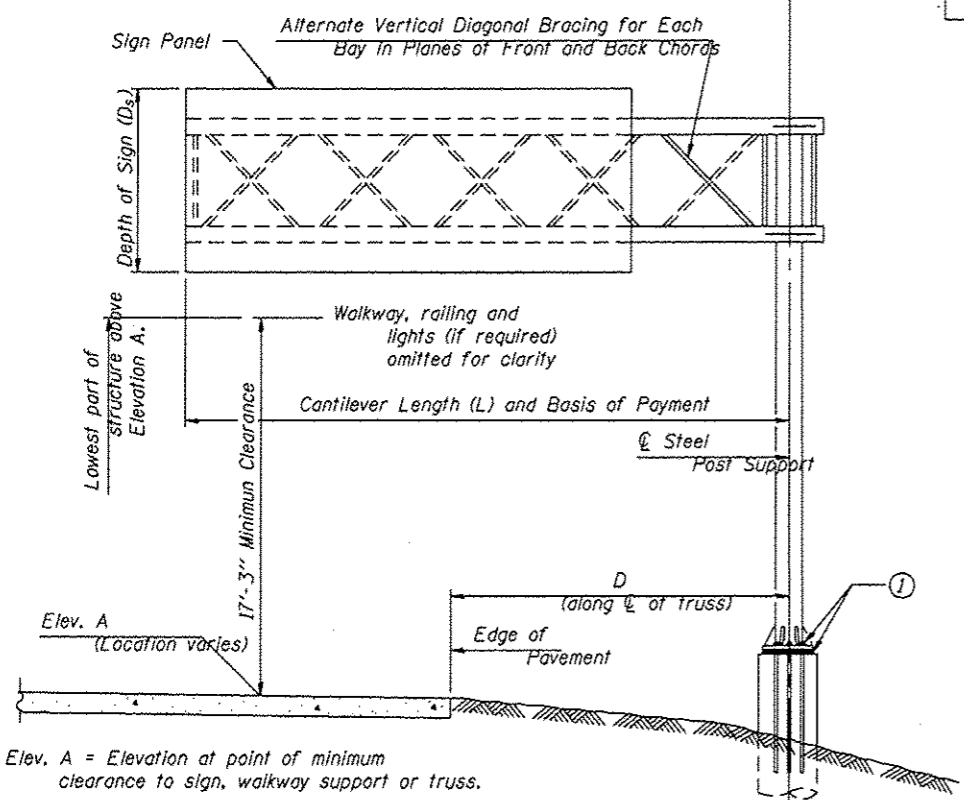
FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.



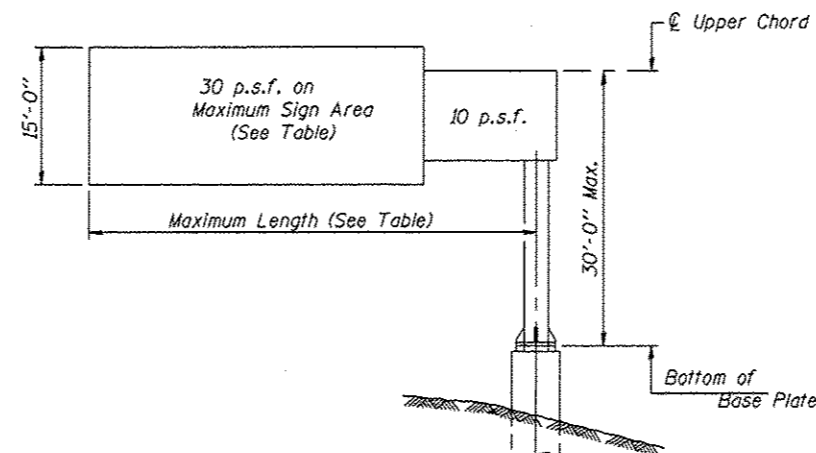
TYPICAL PLAN
(Walkway not shown)

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s	Total Sign Area
6C0681055L065.5	1370+00	III-C-A	35'-0"	643.02	20'-0"	15'-0"	74.8
6C0681055R064.5	1413+50	III-C-A	35'-0"	638.74	20'-0"	15'-0"	74.8
6C0541055L132.7	729+00	III-C-A	35'-0"	600.68	21'-0"	15'-0"	132.0

Truss Type	Maximum Sign Area	Maximum Length
I-C-A	170 Sq. Ft.	25 Ft.
II-C-A	340 Sq. Ft.	30 Ft.
III-C-A	400 Sq. Ft.	40 Ft.



TYPICAL ELEVATION
Looking in Direction of Traffic



DESIGN WIND LOADING DIAGRAM
Parameters shown are basis for I.D.O.T. Standards. Installations not within dimensional limits shown require special analysis for all components.

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Note:
Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

① After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

▪ If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot	-
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE II-C-A	Foot	-
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot	105.00
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	24.59

OSC-A-1

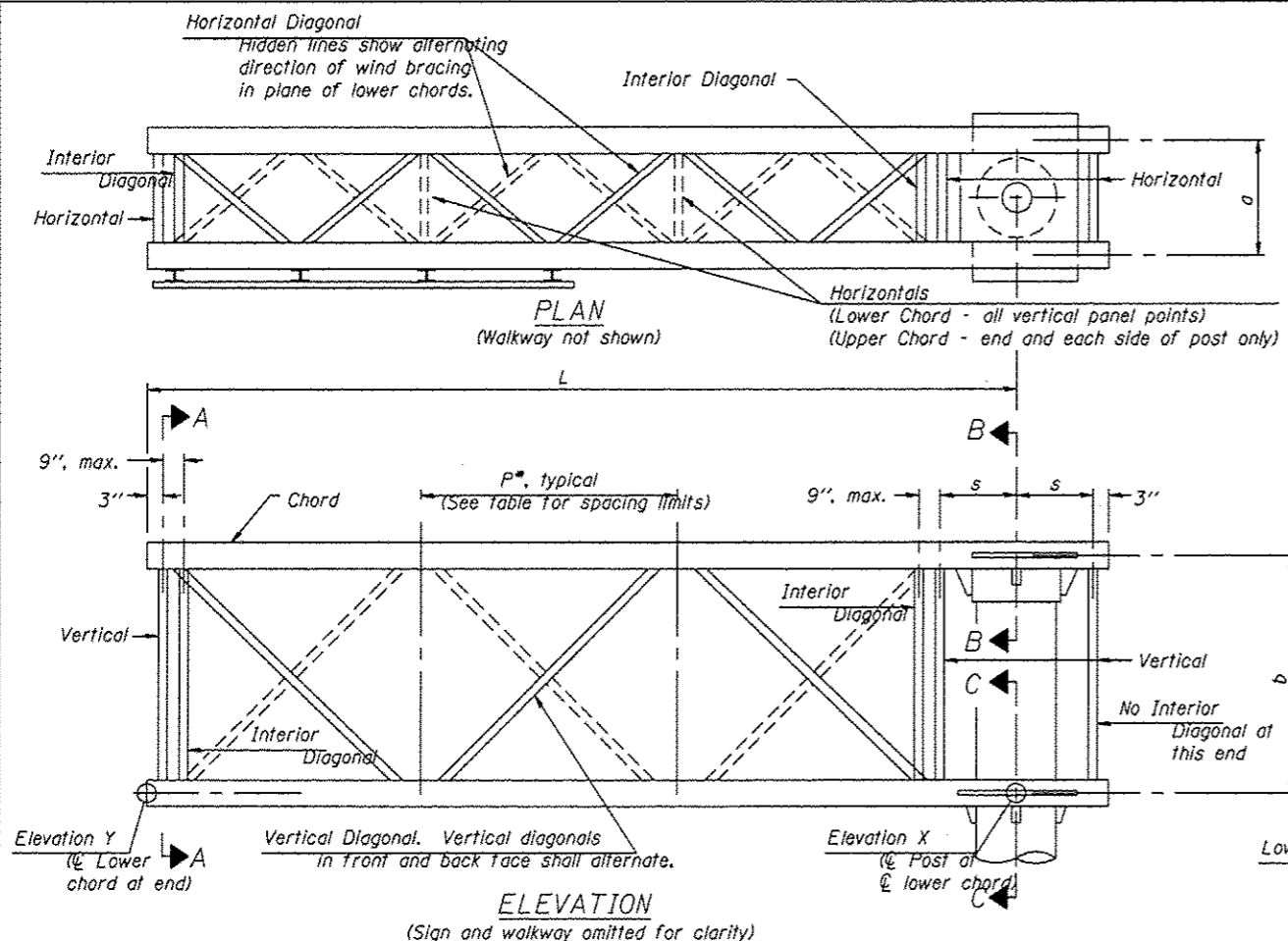
6-1-12

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Default	STRUCTURES\SignRepl.dgn	CHECKED - DATE -	REVISED - REVISED -
	PLOT SCALE * 1/8" = 1'-0"		
	PLOT DATE * Sep-24-2013 09:55:01AM		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
YAB	DISTRICT 6	VARIOUS	30	16
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	



TYPICAL TRUSS UNIT

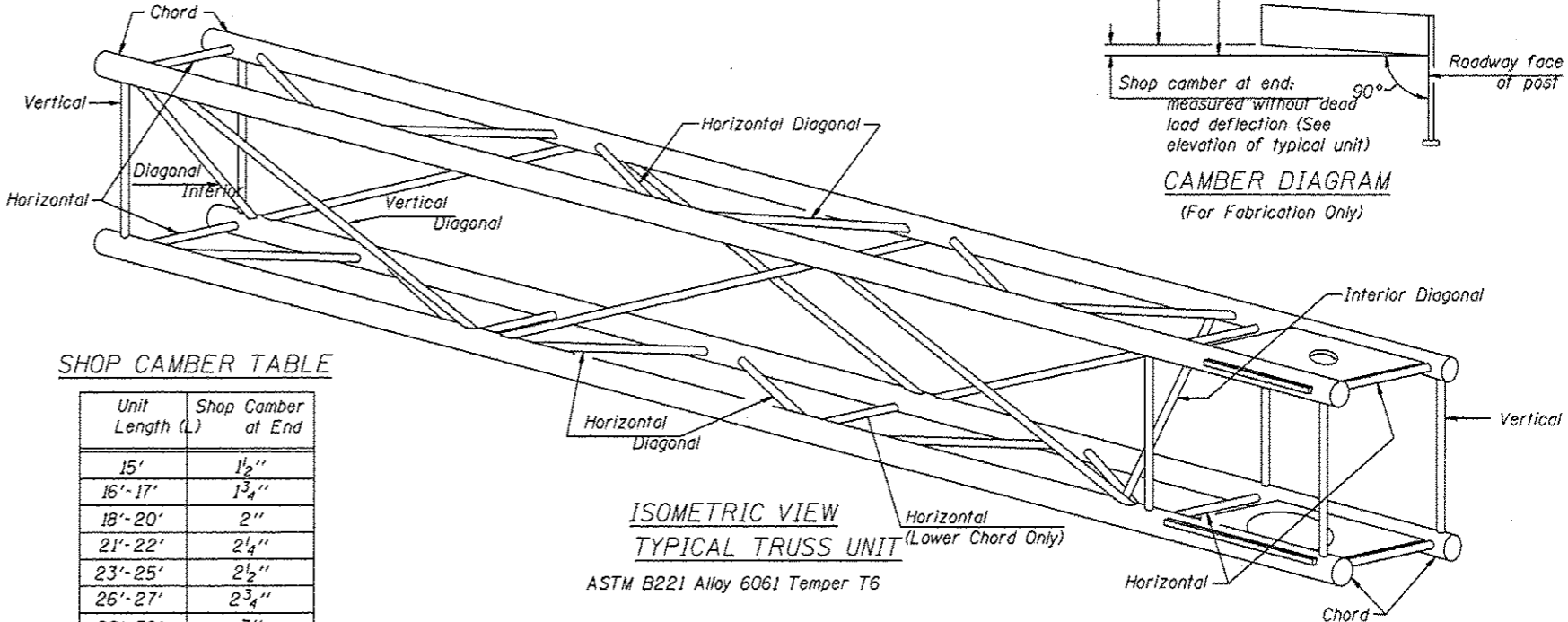
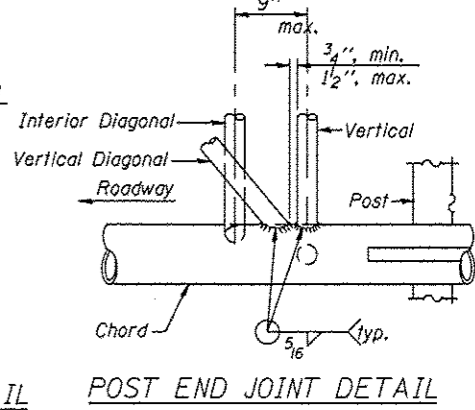
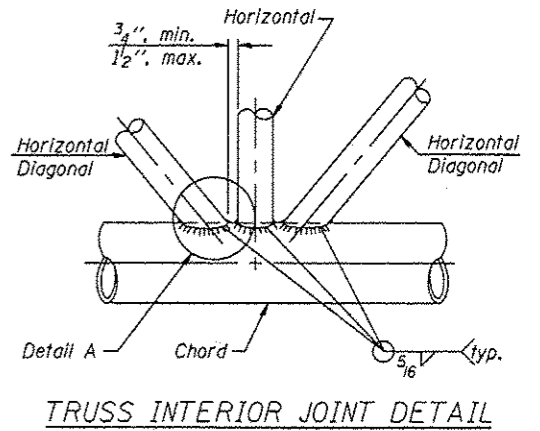
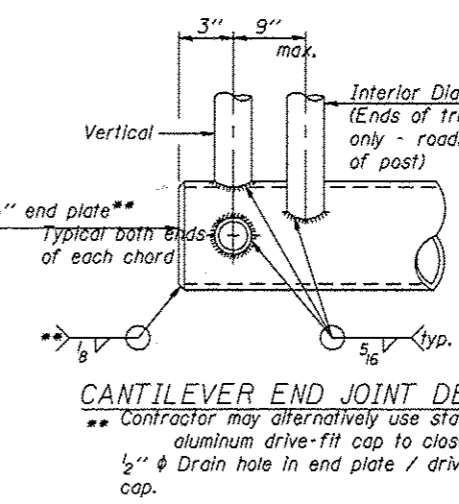
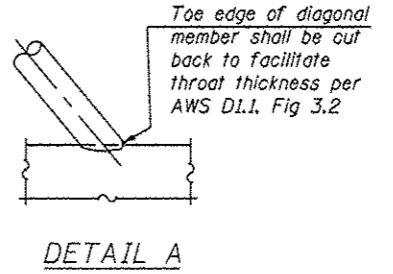
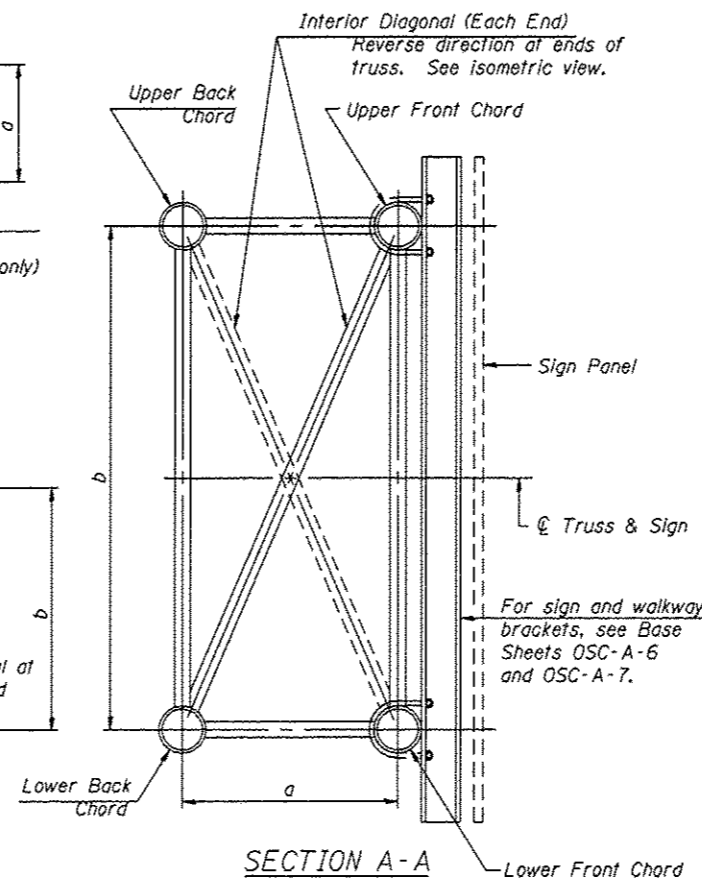
Note: For Section B-B and Section C-C, see Base Sheet OSC-A-3.
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	3/8"	3 1/2"	3/8"

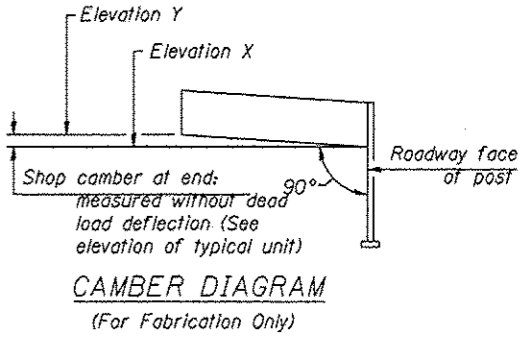
*P = $\frac{L - s - 3"}{\# \text{ Panels}}$

Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
6C0681055L065.5	1370+00	III-C-A	35'-0"	6	5'-6"
6C0681055R064.5	1413+50	III-C-A	35'-0"	6	5'-6"
6C0541055L132.7	729+00	III-C-A	35'-0"	6	5'-6"



SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



OSC-A-2 6-1-12

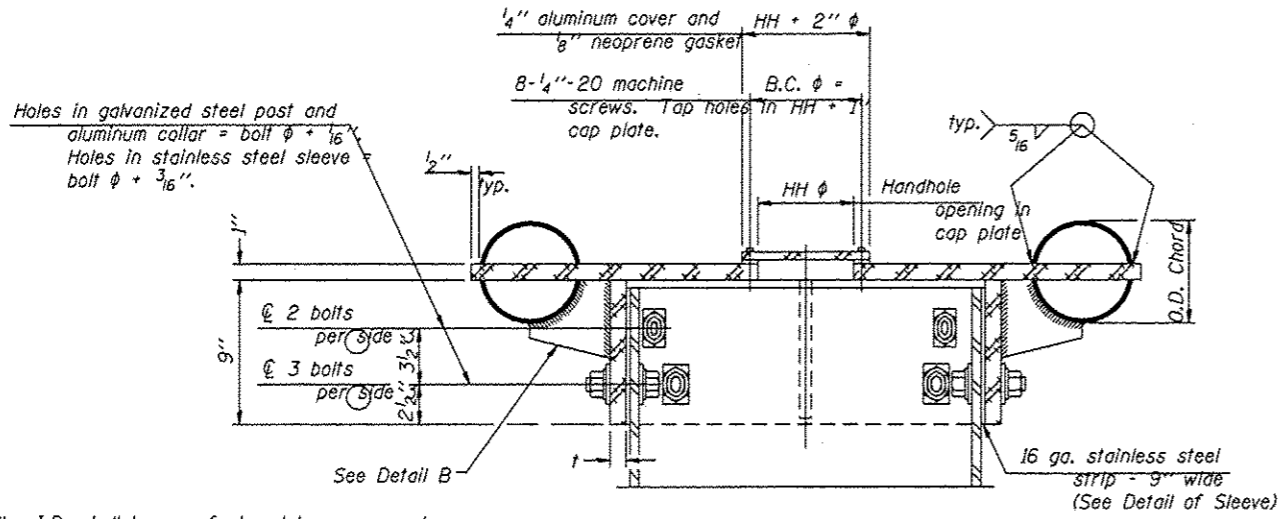
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		CHECKED	REVISED
		DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

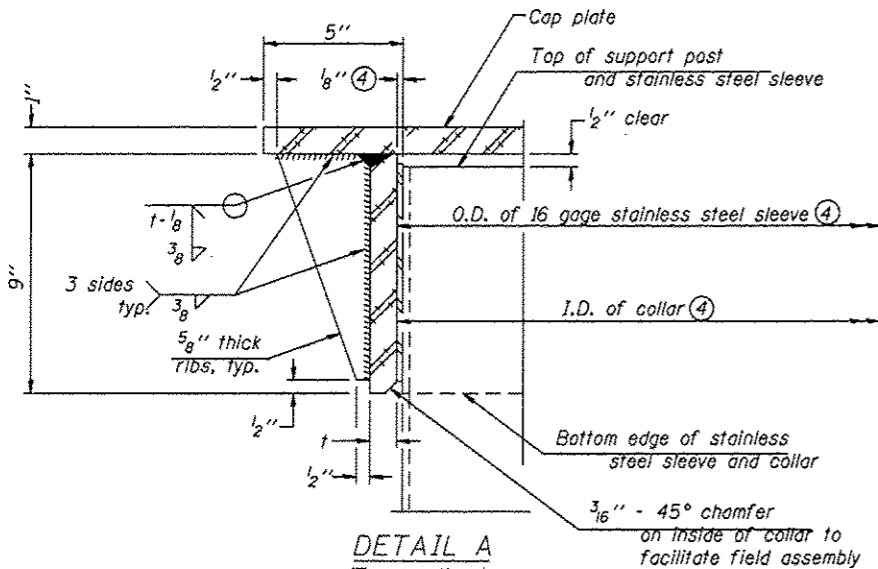
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
YAB	DISTRICT 6	VARIOUS	30 - 17
			CONTRACT NO. 46305

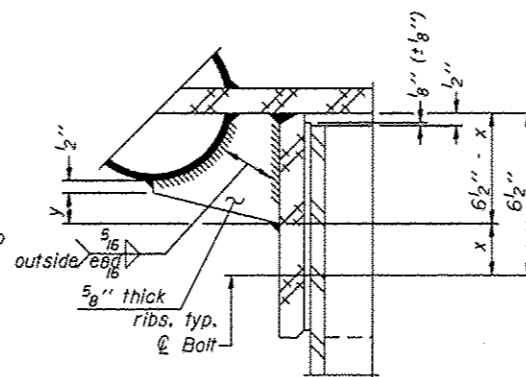


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (+/- 1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

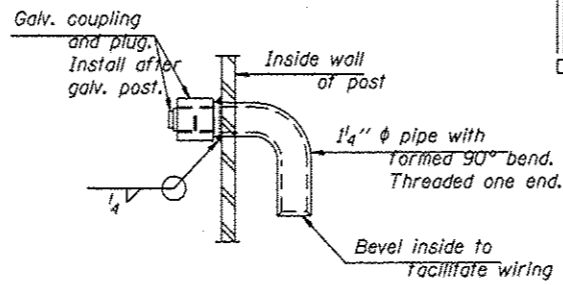
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



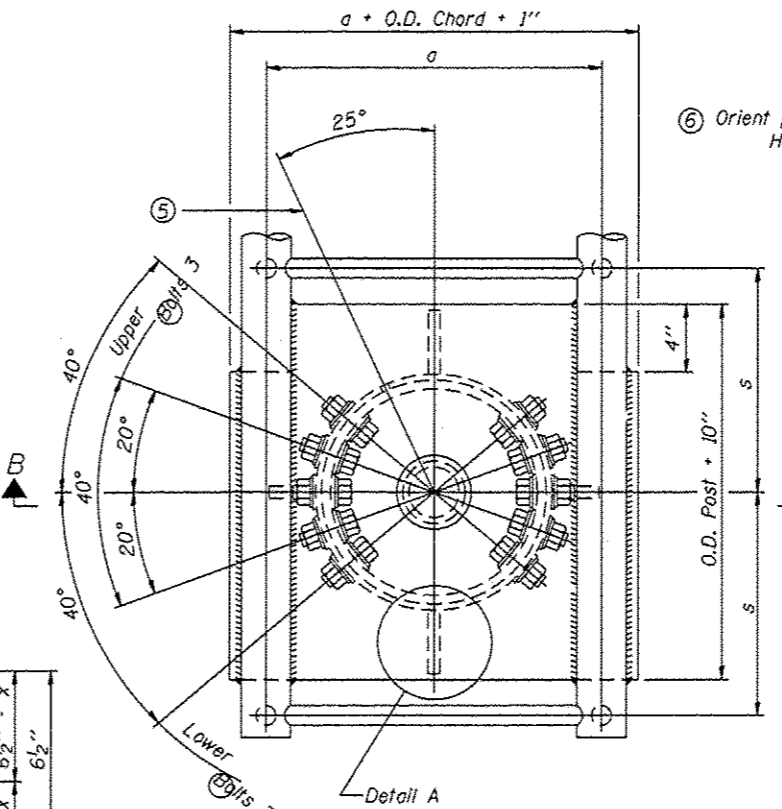
DETAIL A
(Two locations)



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

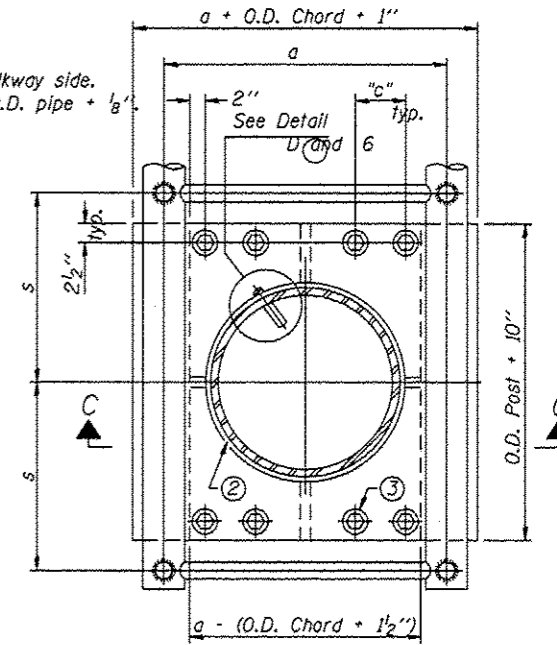


DETAIL D

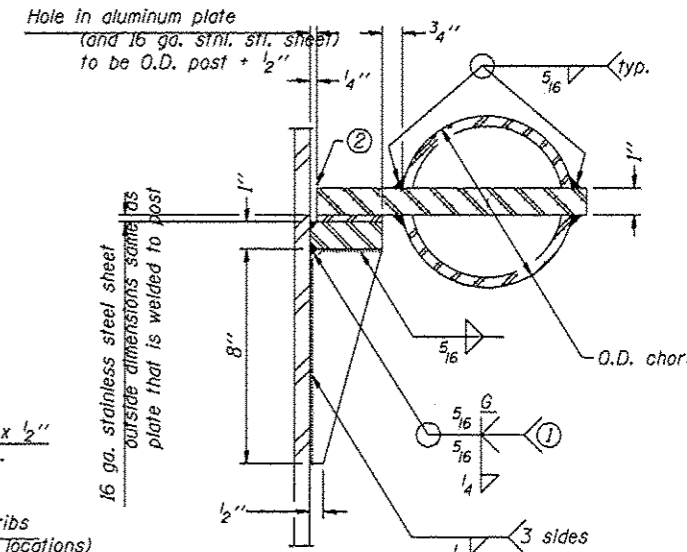


PLAN VIEW - TOP OF COLUMN

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



SECTION THRU POST ABOVE LOWER CHORDS



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 1/2" long at 6" o.s. 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

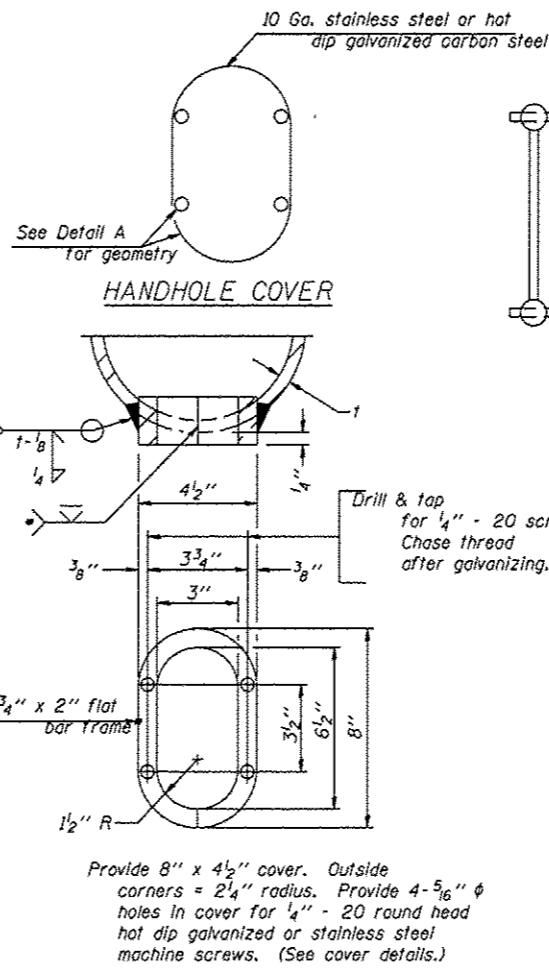
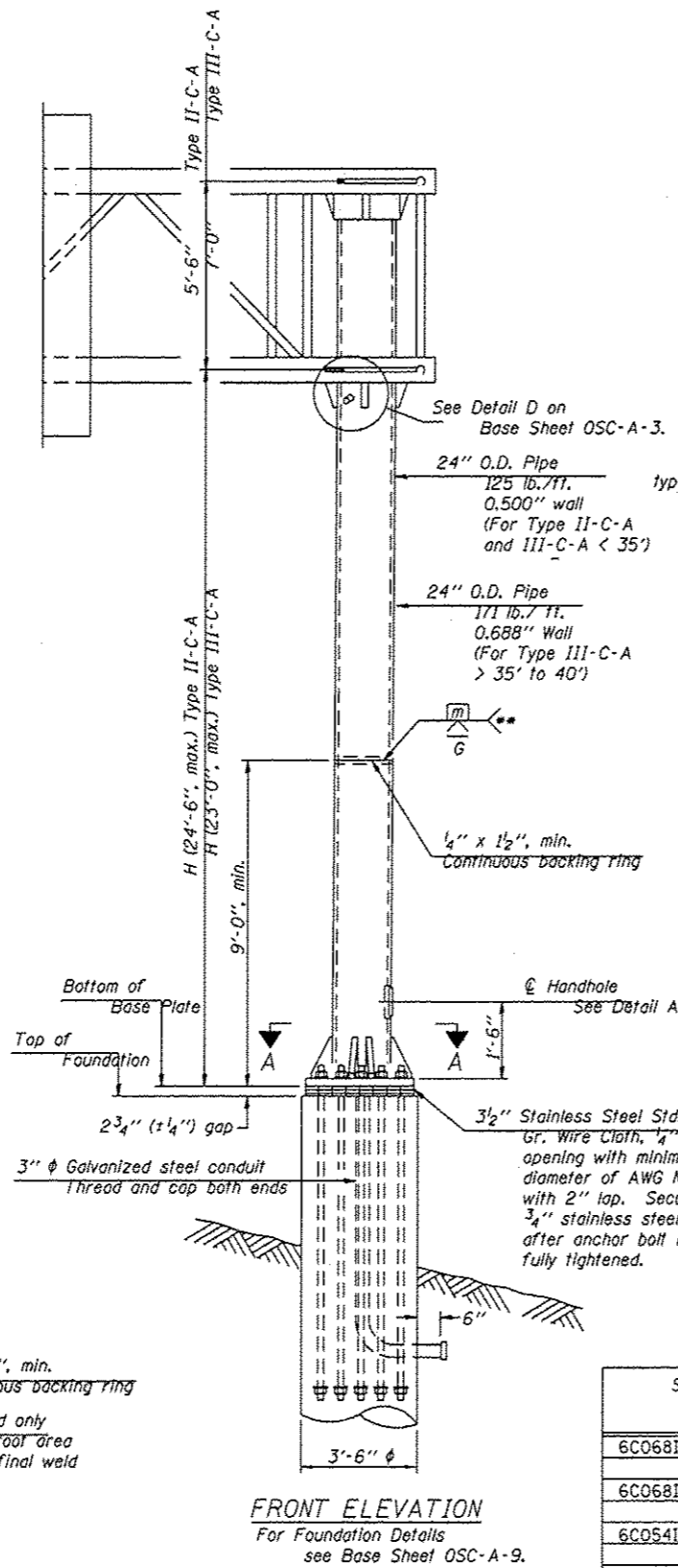
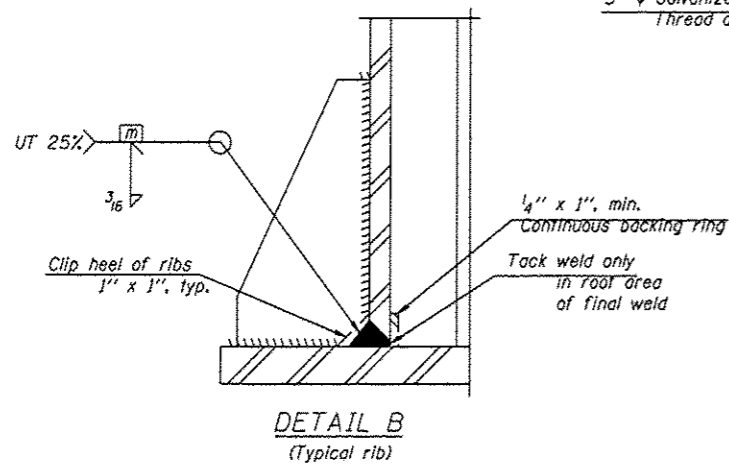
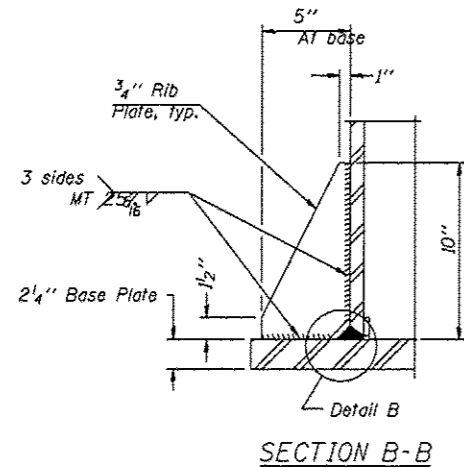
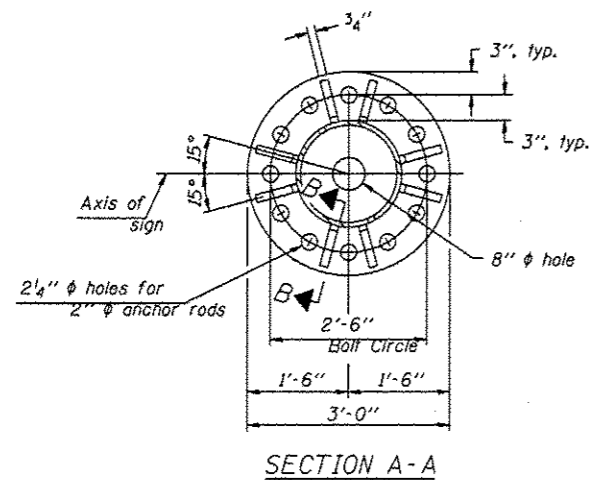
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Default		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES -- JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	DISTRICT 6	VARIOUS	30	18
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	



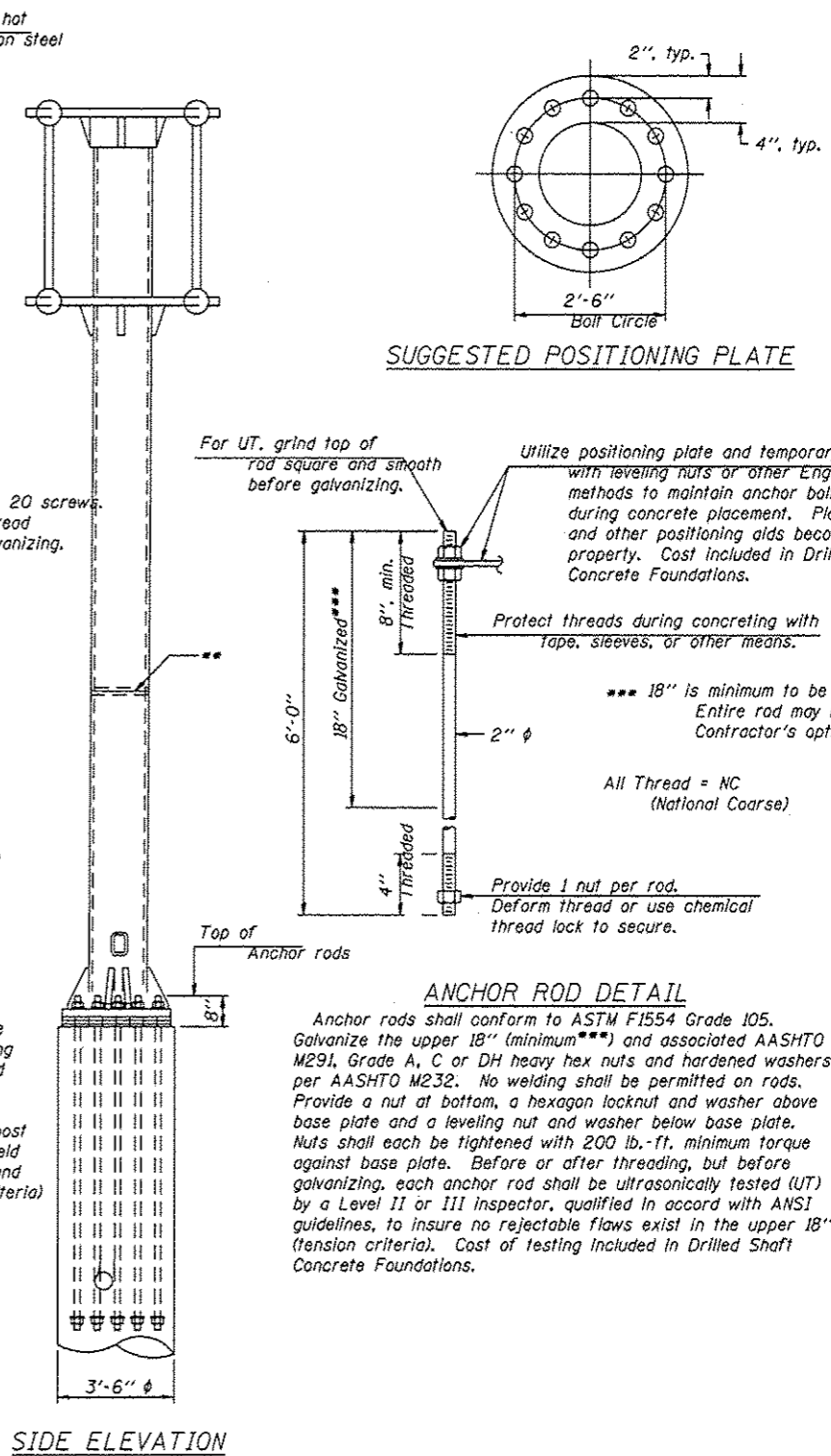
DETAIL A

Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μ m or less.

Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
6C0681055L065.5	1370+00	21'-7"
6C0681055R064.5	1413+50	21'-8"
6C0541055L132.7	729+00	22'-2 1/8"

Note: "H" based on 15'-0" or actual sign height, whichever is greater.



ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III Inspector, qualified in accord with ANSI guidelines, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

OSC-A-5 6-1-12

FILE NAME * P:\SIGN STRUCTURES\SIGNREP1.dgn	USER NAME * posadasda	DESIGNED - DRAWN -	REVISED - REVISED -
PLOT SCALE * 100.0002 Ft / in	CHECKED -	REVISED -	REVISED -
PLOT DATE * Aug-27-2013 11:57:31AM	DATE -	REVISED -	REVISED -

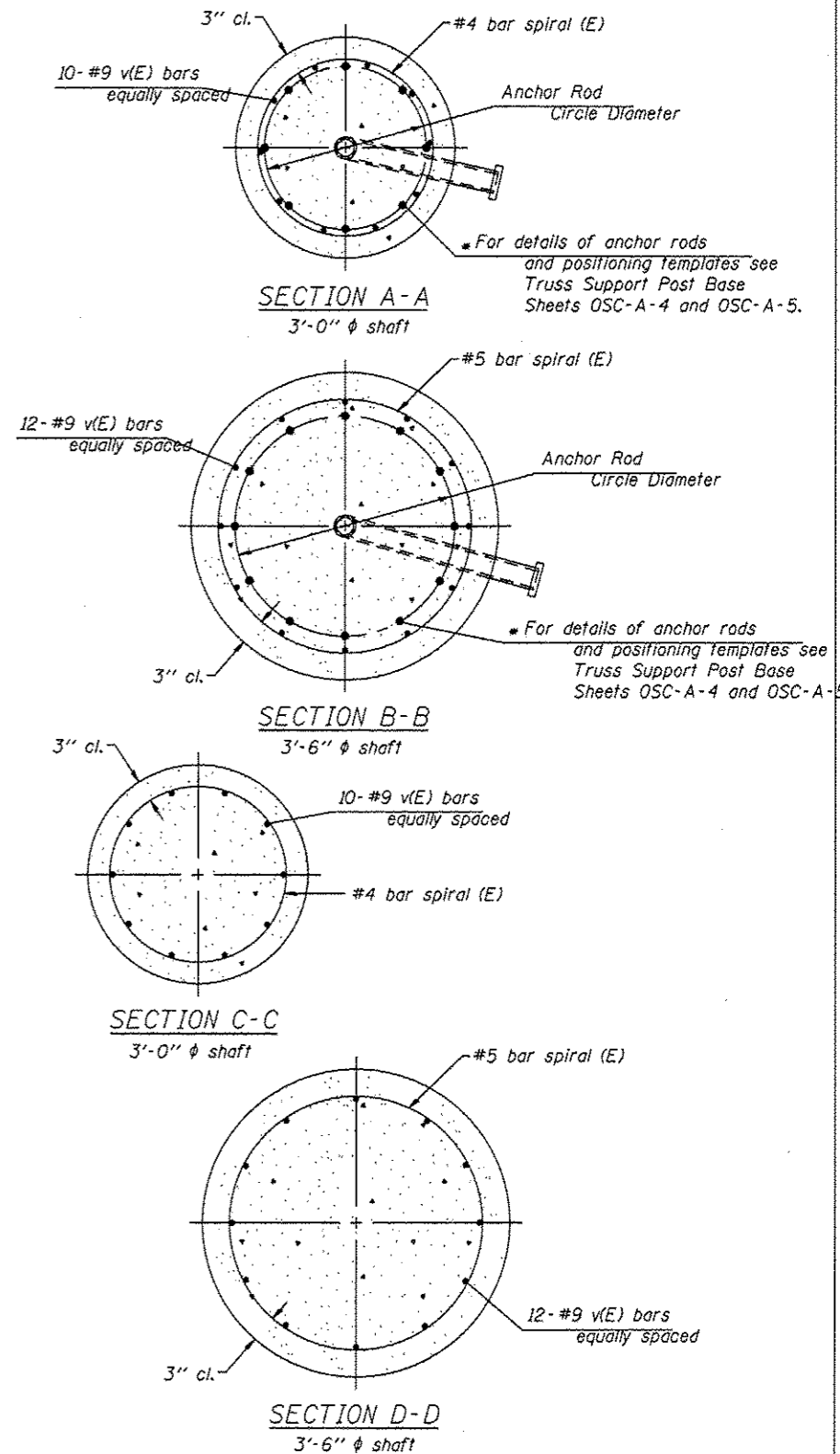
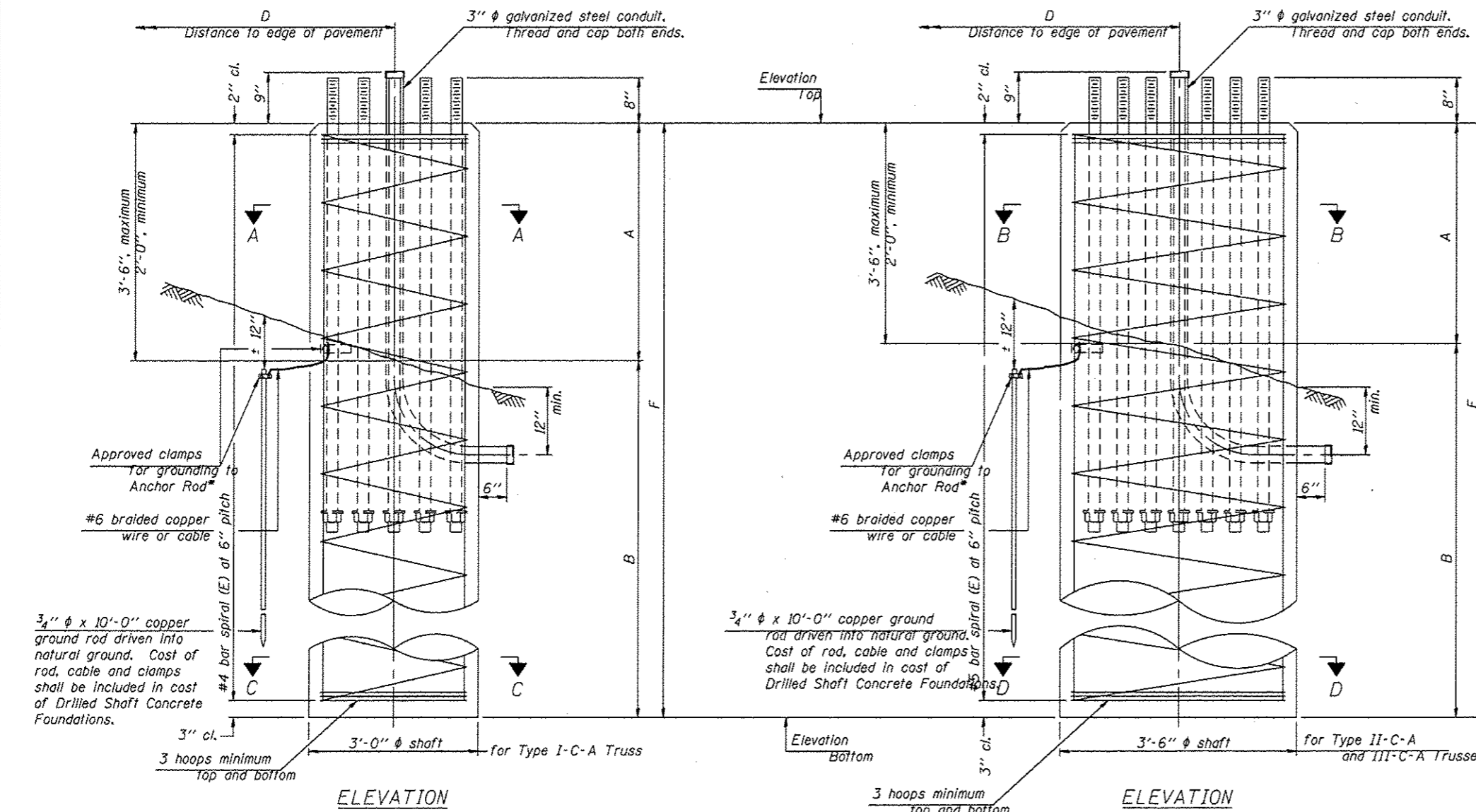
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TYPE II-C-A & III-C-A
TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE. JAB	SECTION DISTRICT 6	COUNTY VARIABLES	TOTAL SHEETS 30	SHEET NO. 19
CONTRACT NO. 46305				ILLINOIS FED. AID PROJECT

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



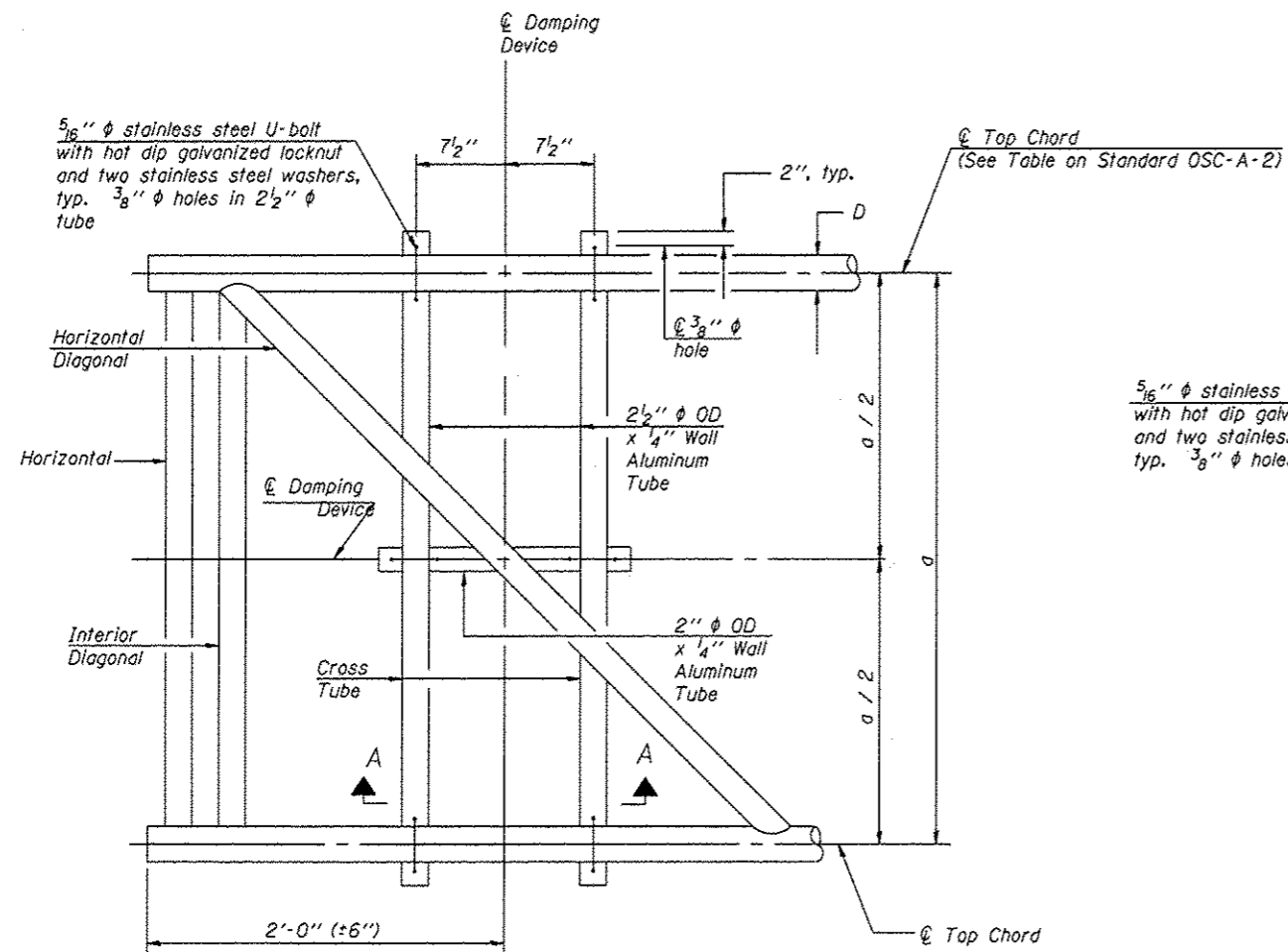
NOTES:
 The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, 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 Bridge Seat 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

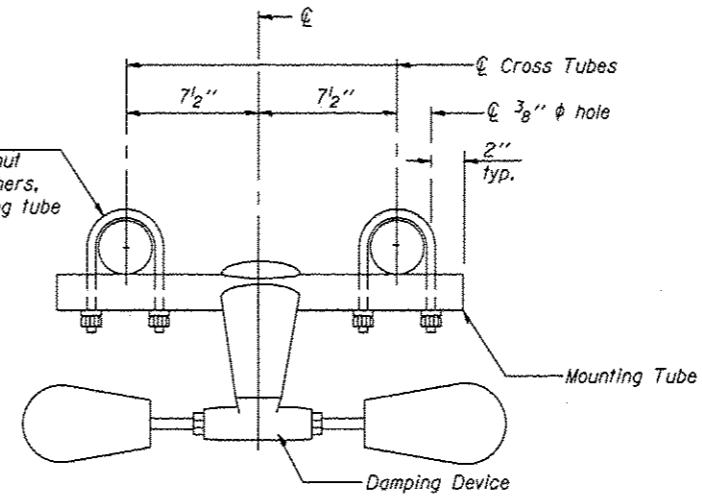
Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Q_u	A	B	F	Class DS Concrete Cubic Yards
6C0681055L065.5	1370+00	III-C-A	3'-6"	643.75	621.25		3'-6"	19'-0"	22'-6"	8.02
6C0681055R064.5	1413+50	III-C-A	3'-6"	639.36	616.86		3'-6"	19'-0"	22'-6"	8.02
6C0541055L132.7	729+00	III-C-A	3'-6"	600.71	576.71		3'-6"	20'-6"	24'-0"	8.55

OSC-A-9

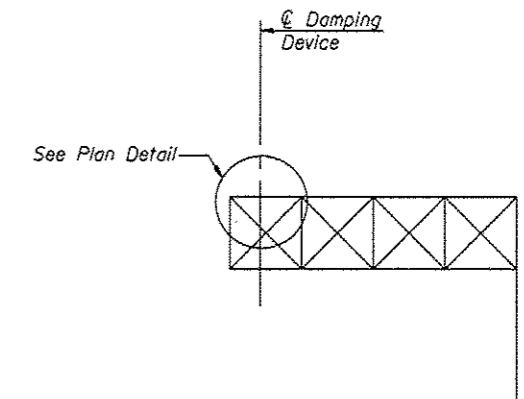
6-1-12



PLAN DETAIL

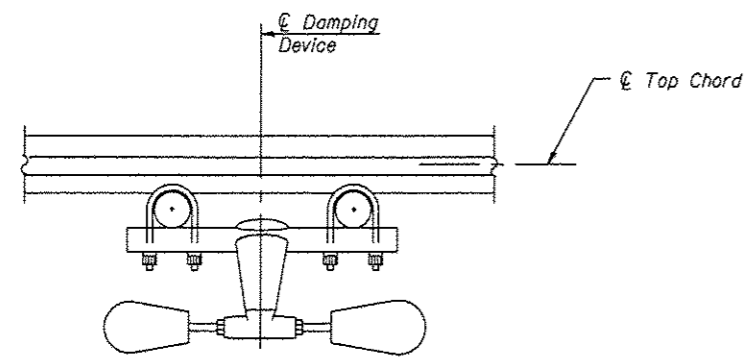


TRUSS DAMPING DEVICE CONNECTION DETAIL

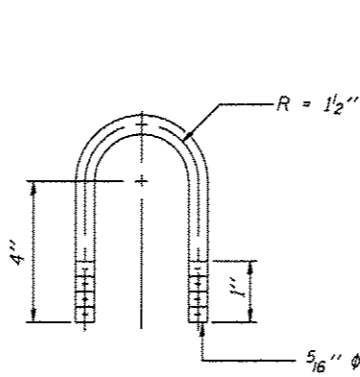


ELEVATION
Aluminum Cantilever Sign Structure

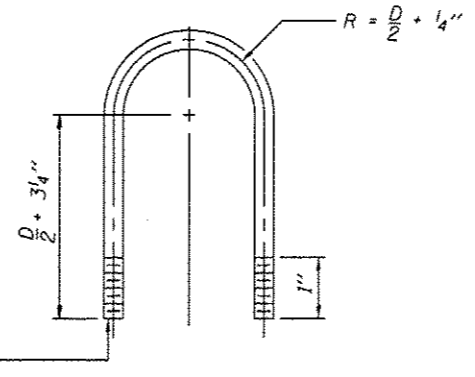
GENERAL NOTES
 Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)
 Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



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 * P:\SIGN STRUCTURES\SignRepl.dgn	USER NAME * posedaada	DESIGNED - _____	REVISED - _____
Default	PLOT SCALE * 100.0002 % / in.	DRAWN - _____	REVISED - _____
	PLOT DATE * Aug-27-2013 11:57:157AM	CHECKED - _____	REVISED - _____
		DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE			
DAMPING DEVICE			
SCALE: _____	SHEET _____	OF _____	SHEETS
STA. _____	TO STA. _____		

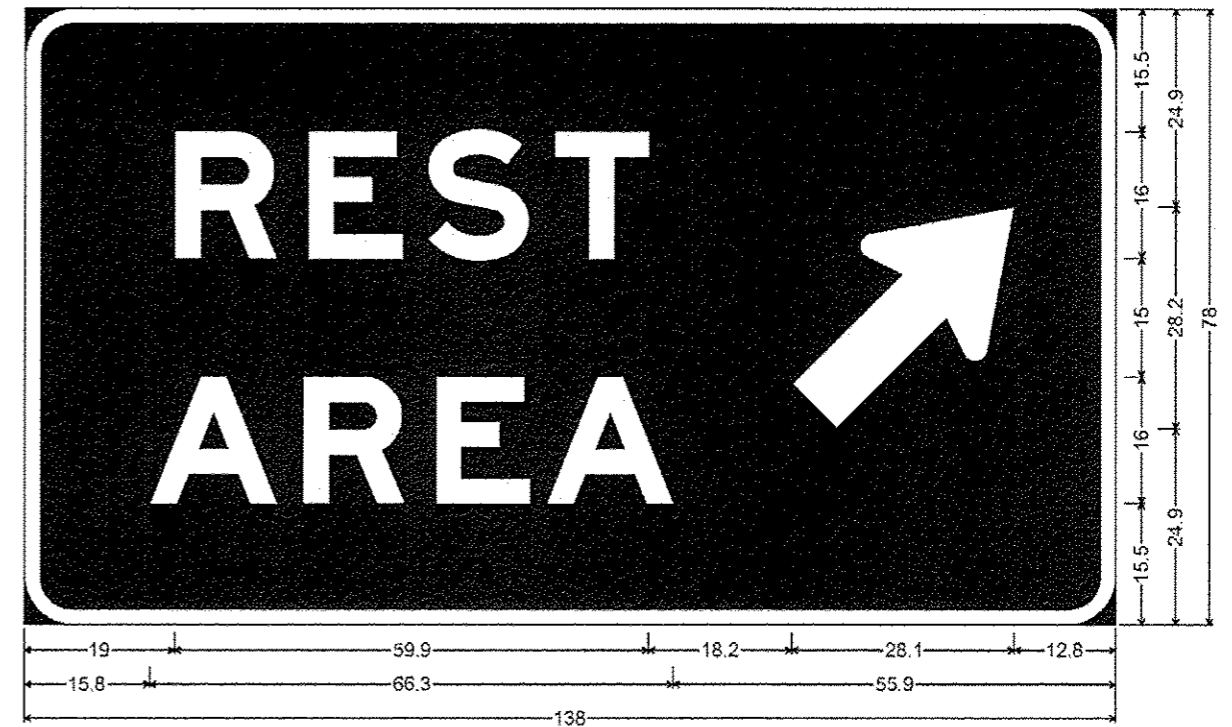
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V&B	DISIBICT_6	YABIGUS	30	21
CONTRACT NO. 46305			ILLINOIS FED. AID PROJECT	

SN: 6C068I055L065.5

SN: 6C068I055R64.5



6.0" Radius, 2.0" Border, White on Blue;
 "REST" E Mod; "AREA" E Mod; Standard Arrow Custom 35.8" X 21.6" 45°;

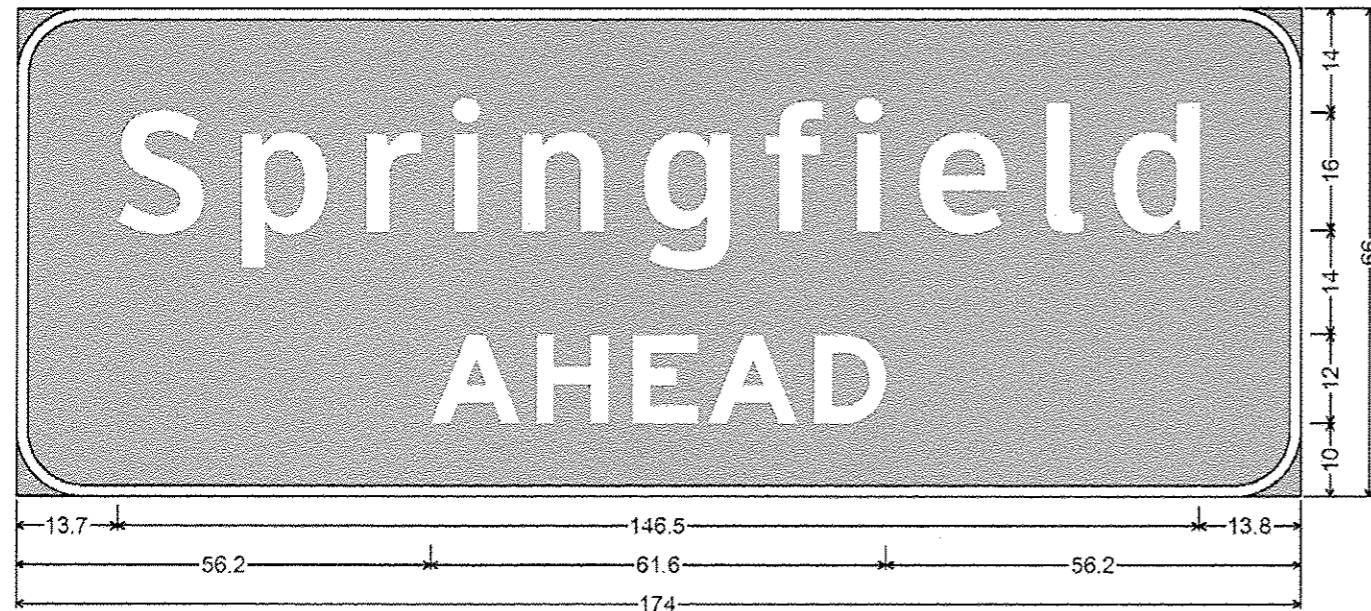


6.0" Radius, 2.0" Border, White on Blue;
 "REST" E Mod; "AREA" E Mod; Standard Arrow Custom 35.8" X 21.6" 45°;

FILE NAME * P:\SIGN STRUCTURES\SignRepl.dgn Default	USER NAME * posadada	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN PLAN DETAILS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE * 100.0002 ft / in.	DRAWN - _____	REVISED - _____		VAR	DISTRICT 6	VARIOUS	30	22				
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	DATE - _____	REVISED - _____	CONTRACT NO. 46305										

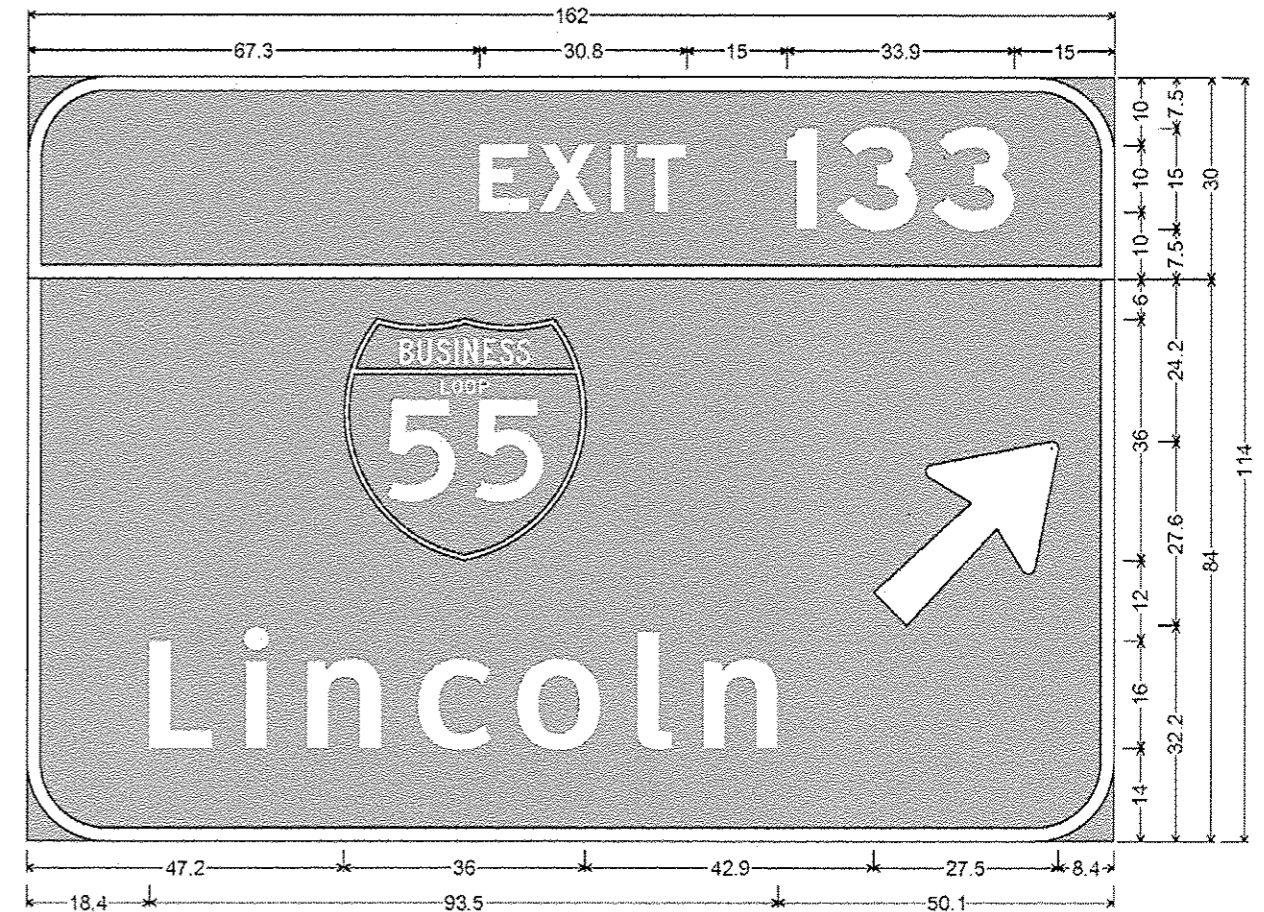
SN: 6S084I072L105.9

SN: 6C054I055L132.7



9.0" Radius, 1.5" Border, White on Green;
 "Springfield" ClearviewHwy-5-W; "AHEAD" E Mod 2K;
 Table of letter and object lefts.

S	p	r	i	n	g	f	i	e	l	d
13.7	30.3	47.3	59.0	68.5	85.0	101.4	113.4	122.3	139.4	148.6
A	H	E	A	D						
56.2	70.5	83.6	93.8	108.1						



12.0" Radius, 2.0" Border, White on Green;
 "EXIT 133" E Mod 2K;
 12.0" Radius, 2.0" Border, White on Green;
 "Lincoln" ClearviewHwy-5-W; Arrow 160 - 35.0" 45";
 Table of letter and object lefts.


E	X	I	T	I	3	3
67.3	76.1	86.9	90.7	113.1	120.5	134.9
47.2	126.1					
L	i	n	c	a	l	n
18.4	32.3	41.8	58.3	73.2	91.0	100.8

SOIL BORING

SN: 6C068I055R056.3

SN: 6C068I055R064.5

411
 Page 1 of 1
 Date 8-1-2012



SOIL BORING LOG


ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS
 SECTION D6 Overhead Sign Replace LOCATION North of Litchfield
 COUNTY Montgomery STRUCTURE NO. 6C068I055R056.3 (Exist) (Prop.)
 BORING NO. 6C068I055R056.3 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

SOIL DESCRIPTION					SOIL DESCRIPTION				
(ft.)	(ft.)	(ft.)	(ft.)	(%)	(ft.)	(ft.)	(ft.)	(ft.)	(%)
Station Sta. 1853+47.8					Surface Water Elev. n/a (ft.)				
Offset 126.2 Lt					Groundwater Elev. 12 (ft.)				
Ground Surface Elev. 667.66 (ft.)					First Encounter Upon Completion 25 (ft.)				
					After 72 Hrs. 3.5 (ft.)				
Topsoil (0%)					Gray, Dry, Clay Loam/Loam, Sandy, Silty, Trace Gravel				
656.91					17.5 7				
Yellow Brown, Moist, Clay, Silty					17 7.70 S 7.8				
2.5					21				
Light Gray mottled Yellow Brown, Silty, Trace Sand, (Glacial Till)					Sandy, Silty, Trace Gravel				
2					20 11				
3 1.76 22.1					21 10.83 S 7.1				
3 P					34				
Silty, Trace Sand, Black Oxidation					Sandy, Silty, with Gravel and Seam of Sandy Loam, Dry, Silty, with Gravel				
6					22.5 16				
1					24 4.5+ P 7.8				
2 0.04 B 25.6					68				
3					633.16				
With Sand					Gray, Dry, Clay Loam, Sandy, Silty, with Gravel				
7.5 1					25 8				
2 1.31 B 22.3					20 5.89 S 7.0				
3					30				
Sandy, with Seam of Clay Loam, Sandy, Silty					Gray mottled Greenish Gray, Moist, Clay, Silty, with Sand, Trace Gravel				
10 1					27.5 5				
2 1.30 B 18.8					5 3.66 B 15.8				
2					6				
Yellow Brown mottled Light Gray, Sandy, Silty, with Gravel					Sandy, Silty, Trace Gravel				
12.5 3					30 4				
7					8 4.21 B 15.3				
12					12				
643.16					End of Boring @ 31 Ft.				
Yellow Brown/Brown mottled Light Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel, with Sand Seam									
15 6					32.5				
19 0.07 S 8.8									
25									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

885 137 (8/05)

413
 Page 1 of 1
 Date 8-30-2012



SOIL BORING LOG

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS
 SECTION D6 Overhead Sign Replace LOCATION Coalfield Rest Area in N.B. I-55
 COUNTY Montgomery STRUCTURE NO. 6C068I055R064.5 (Exist) (Prop.)
 BORING NO. 6C068I055R064.5 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

SOIL DESCRIPTION					SOIL DESCRIPTION				
(ft.)	(ft.)	(ft.)	(ft.)	(%)	(ft.)	(ft.)	(ft.)	(ft.)	(%)
Station Sta. 1413+60.8					Surface Water Elev. n/a (ft.)				
Offset 118.2 Lt					Groundwater Elev. Dry (ft.)				
Ground Surface Elev. 634.66 (ft.)					First Encounter Upon Completion 24 (ft.)				
					After 24 Hrs. 5.5 (ft.)				
Topsoil (0%)					Mottled Gray, Sandy, Silty, Trace Gravel				
633.91					17.5 2				
Yellow Brown, Moist, Clay, Silty					5 3.46 B 17.5				
2.5					7				
Light Gray mottled Light Gray, Sandy, Silty, Trace Gravel					Light Brown mottled Light Gray, Sandy, Silty, Trace Gravel				
20 4					20 4				
6 2.39 B 13.4					8				
3 1.41 B 26.4					6 3				
Reddish Brown mottled Light Gray, Silty, Trace Sand, (Glacial Till)					Reddish Brown mottled Light Gray, Silty, Trace Sand, Black Oxidation Nodules				
2					2 1.34 B 28.6				
6 3					3				
1					22.5 1				
2 1.34 B 28.6					4 3.04 B 16.6				
3					5				
Reddish Brown/Yellow Brown mottled Light Gray, Silty, with Sand, Reddish Brown Oxidation Seams					Mottled Brown, Sandy, Silty, with Seam of Clay Loam, Sandy, Silty				
7.5 1					25 2				
2 1.71 B 26.7					5 2.44 B 16.6				
3					6				
Light Gray mottled Yellow Brown, Sandy, Silty, Trace Gravel, with Seam of Wet, Sandy Clay, Silty					Gray, Sandy, Silty, Trace Gravel				
10 1					607.16 27.5 2				
1 0.59 B 21.8					5 3.51 B 18.0				
2					7				
Brown, Moist, Clay Loam, Sandy, Silty, Trace Gravel					Light Gray, Moist, Loam, Sandy, Silty, with Gravel				
622.66					12.5 4				
8 2.43 S 9.5					805.16				
9					804.66 30 8				
Gray, Dry/Moist, Sand, Clayey					Gray, Moist, Sandy Loam, Silty, Trace Gravel				
11 3.0 P 7.1					11 3.0 P 7.1				
12					12				
620.16					End of Boring @ 31 Ft.				
Brown mottled Greenish Gray, Moist, Clay, Silty, with Sand, Trace Gravel									
16 4					32.6				
6 5.54 B 18.9									
7									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

885 137 (8/05)

SOIL BORING

SN: 6C068I055L065.5

SN: 6S054I055R124.7



SOIL BORING LOG

Page 1 of 1

Date 5-30-2012

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS
 SECTION D6 Overhead Sign Replace LOCATION Coalfield Rest Area in S.B. I-55
 COUNTY Montgomery STRUCTURE NO. 6C068I055R065.5 (Exist) (Prop.)

BORING NO. 6C068I055R065.5 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic
 Station Sta. 1370+00.0
 Offset 118.3 Rt
 Ground Surface Elev. 637.85 (ft.)

SOIL DESCRIPTION	(ft.)	(ft.)	#6"	(tsf)	(%)	SOIL DESCRIPTION	(ft.)	(ft.)	#6"	(tsf)	(%)
Topsoil (6")	637.35					Gray, Dry, Clay Loam, Sandy, Silty, Trace Gravel	629.85	17.5	9		
Light Brown, Moist, Clay, Silty								17	8.60	17.5	
								21	S		
	2.5					Gray, Moist, Silt	618.35	20	8		
Yellow Brown mottled Light Gray, Silty, Trace Sand, (Glacial Till)		2				Gray, Moist, Clay, Silty	617.35	9	5.88	13.4	
		2	1.25	26.4				13	B		
Silty, with Sand		5	3			Greenish Gray mottled Brown, Moist, Clay Loam, Sandy, Silty	615.85	22.5	3		
		2	0.5	28.8				7	6.07	16.0	
Sandy, Silty		3	P					10	B		
	7.5	2				Brown mottled Grayish Brown, Moist, Loam, Sandy, Silty, Trace Gravel, with Seam of Sand, Clayey	613.35	25	6		
Yellow Brown mottled Light Gray, Moist, Clay Loam, Trace Gravel	629.85		2	1.22	28.7			22	7.32	16.8	
			3	B				24	B		
Wet, Sandy, Silty, Trace Gravel		10	2			Light Brown mottled Gray/Brown/Light Gray, Moist, Loam, Sandy, Silty, with Gravel	610.85	27.5	3		
		5	0.0	21.6				12	10.06	19.6	
Brown/Yellow Brown mottled Gray, Moist/Dry, Sandy, Silty		12.5	10			Light Brown mottled Gray, Moist, Clay Loam, Sandy, Silty	609.85	17	10.06	B	19.6
		18	13.37	9.5		Yellow Brown/Brown mottled Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel		30	6		
		19	S					14	10.20	B	7.1
	623.35					End of Boring @ 31 Ft.	606.85	21	B		
Gray/Light Gray, Dry, Silty Loam, Sandy, Trace Gravel		15	8								
		16	4.5+	18.9				32.5			
		18	P								

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer).
 The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (8/05)



SOIL BORING LOG

Page 1 of 1

Date 6-1-2012

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS
 SECTION D6 Overhead Sign Replace LOCATION 1 Mile South of Exit 128 on I-55 N.B.
 COUNTY Logan STRUCTURE NO. 6S054I055R124.7 (Exist) (Prop.)

BORING NO. 6S054I055R124.7 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic
 Station Sta. 285+06.6
 Offset 83.4 Rt
 Ground Surface Elev. 586.87 (ft.)

SOIL DESCRIPTION	(ft.)	(ft.)	#6"	(tsf)	(%)	SOIL DESCRIPTION	(ft.)	(ft.)	#6"	(tsf)	(%)
Topsoil (6")	586.47					Medium Gray, Moist/Wet, Sandy, Silty, Trace Gravel	17.5	3			
Yellow Brown, Moist, Silt								6	6.32	10.5	
								12	B		
	2.5					Moist, Sandy, Silty, Trace Gravel		20	9		
Light Brown, Dry, (Loess)		8						18	8.82	9.1	
		7	4.5+	20.8				20	S		
Light Brown mottled Yellow Brown, Moist		5	7	P		Gray, Sandy, Silty, with Gravel		22.5	9		
		2	0.54	33.3				20	4.5+	8.6	
		2	B					22	P		
Brown, Trace Sand		7.5	1								
		3	1.90	42.1		Sandy, Silty, with Gravel		25	8		
		3	S					21	11.15	8.1	
Trace Sand		10	1					27	S		
		3	1.71	47.2		Gray, Dry, Clay Loam/Loam, Sandy, Silty, with Gravel	559.97	27.5	15		
		3	S					22	4.5+	8.3	
		28	P								
Trace Sand		12.5	1					30	12		
		2	0.57	28.0		Sandy, Silty, with Gravel		27	10.97	8.2	
Greenish Gray, Moist, Clay, Silty, Trace Sand (Glacial Till)	573.97		2	B				30	S		
						End of Boring @ 31 Ft.	555.97				
Sandy, Silty		15	1								
		2	0.90	18.6				32.5			
Greenish Gray, Moist, Clay Loam, Sandy, Silty, with Seam of Sandy Clay Loam, Wet	671.47		3	B							

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer).
 The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (8/05)

FILE NAME *	USER NAME * posedada	DESIGNED -	REVISED -
S:\Sign Truss Plan Details\46358\SIGN STRUCTURES\SignRepl.dgn		DRAWN -	REVISED -
Default		CHECKED -	REVISED -
		DATE -	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOG				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				VAR	DISTRICT 6	VARIOUS	30	27
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____				ILLINOIS FED. AID PROJECT CONTRACT NO. 46305				

SOIL BORING

SN: 6S084I072L105.9

SN: 6S084I072L105.9



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1
Date 5/22/12

ROUTE I-72 WBL DESCRIPTION Sign Truss over I-72 WBL LOGGED BY M. Tappan

SECTION LOCATION SW 1/4 SEC. 21 TWP. 16. RNG. 4. 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

DEPTH Feet	B Blow	U C S	M O I	Surface Water Elev.		Stream Bed Elev.		Groundwater Elev.:	
				ft	ft	ft	ft	ft	ft
0				NA	NA	NA	NA	NA	NA
2									
3	1.4								
5	B								
555.00									
4									
16	7.4								
37	S-10								
7									
35	1.0								
65	E								
6									
10									
67	1.0								
33	E								
72									
547.00									
2									
15									
22									
4									
26									
59									
543.00									
28									

Gray and Brown Moist SILTY CLAY


Brown and Gray Dry CLAY LOAM (Till)

Gray Dry CLAY LOAM (Till)
Sample Broke

Gray Dry Fissile Clayey SHALE

Borehole continued with rock coring.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1
Date 5/22/12

ROUTE I-72 WBL DESCRIPTION Sign Truss over I-72 WBL LOGGED BY M. Tappan

SECTION LOCATION SW 1/4 SEC. 21 TWP. 16. RNG. 4. 3 PM

COUNTY Sangamon DRILLING METHOD HSA HAMMER TYPE 140# Auto

DEPTH Feet	B Blow	U C S	M O I	Surface Water Elev.		Stream Bed Elev.		Groundwater Elev.:	
				ft	ft	ft	ft	ft	ft
0				NA	NA	NA	NA	NA	NA
7									
20	8.9								
42	S-9								
8									
27	7.9								
61	S-11								
3									
13	5.1								
17	S-12								
548.70									
3									
13									
16									
7									
27									
33									
7									
47									
47									
540.20									
20									

Gray Dry CLAY LOAM (Till)

Gray Dry Fissile Clayey SHALE

Borehole continued with rock coring.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated) Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

ROCK CORE

SN: 6S084I072L105.9

SN: 6S084I072L105.9

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 1 of 1
Date 5/22/12

ROUTE I-72 WBL DESCRIPTION Sign Truss over I-72 WBL LOGGED BY M. Tappan

SECTION LOCATION SW 1/4, SEC. 21, TWP. 18, RNG. 4, 3 PM

COUNTY Sangamon CORING METHOD Water

STRUCT. NO. 6S084I072L105.9 CORING BARREL TYPE & SIZE NQ2WL
Station
BORING NO. 1 N. Shoulder Core Diameter 2 in
Station 149+87 Top of Rock Elev. 543.00 ft
Offset 82.0 ft LT Begin Core Elev. 543.00 ft
Ground Surface Elev. 558.0 ft

DEPTH (ft)	CORRECTION (%)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
543.00	1	98	36		
					42.4
					6.2
538.00					
					71.3

Dark Gray Poorly Indurated Micaceous SHALE. Thinly Banded with Dark Gray Seams. Closed Joints 2" - 12"

Sta.'s and Elev.'s Provided by Dist. 6 Surveys

Color pictures of the cores Yes, On File
Cores will be stored for examination until 5 Years after Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 1 of 1
Date 5/22/12

ROUTE I-72 WBL DESCRIPTION Sign Truss over I-72 WBL LOGGED BY M. Tappan

SECTION LOCATION SW 1/4, SEC. 21, TWP. 18, RNG. 4, 3 PM

COUNTY Sangamon CORING METHOD Water

STRUCT. NO. 6S084I072L105.9 CORING BARREL TYPE & SIZE NQ2WL
Station
BORING NO. 2 Median Core Diameter 2 in
Station 150+19 Top of Rock Elev. 540.70 ft
Offset 7.0 ft LT Begin Core Elev. 540.20 ft
Ground Surface Elev. 555.7 ft

DEPTH (ft)	CORRECTION (%)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
540.20	1	100	78		
					41.3
535.20					
					71.3

Gray Moderately Indurated Calcareous SHALE. With Thinly Bedded Dark Gray Seams.

Sta.'s and Elev.'s Provided by Dist. 6 Surveys

Color pictures of the cores Yes, On File
Cores will be stored for examination until 5 Years after Construction
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
RQD is the ratio of the total length of sound core specimens >4" to total length of core run BBS, form 138 (Rev. 8-99)

FILE NAME *	USER NAME * posedads	DESIGNED -	REVISED -
S:\Sign Truss Plan Data\65350\SIGN STRUCTURES\SignRepl.dgn		DRAWN -	REVISED -
Default	PLOT SCALE * 100.0002 ft / in.	CHECKED -	REVISED -
	PLOT DATE * Sep-05-2013 07:14:31AM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____		YAB	DISTRICT 6	VARIOUS	30	29
					CONTRACT NO. 46305	
ILLINOIS FED. AID PROJECT						

SOIL BORING

SN: 6S054I055L132.7

112



SOIL BORING LOG

Page 1 of 1

Date 6-1-2012

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION North of Litchfield

COUNTY Montgomery STRUCTURE NO. 6C068I055R056.3 (Exist) X (Prop.)

BORING NO. 6C068I055R056.3 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 1853+47.8
 Offset 125.2 LI
 Ground Surface Elev. 657.66 (ft.)

SOIL DESCRIPTION	(ft.)	(ft.)	(ft.)	(ft.)	(%)	SOIL DESCRIPTION	(ft.)	(ft.)	(ft.)	(ft.)	(%)
Topsoil (9")	856.91					Gray, Dry, Clay Loam/Loam, Sandy, Silty, Trace Gravel	640.86	17.6	7		
Yellow Brown, Moist, Clay, Silty								17	7.70	7.6	
		2.5						21	S		
						Sandy, Silty, Trace Gravel		20	11		
Light Gray mottled Yellow Brown, Silty, Trace Sand, (Glacial Till)			2					21	10.63	7.1	
			3	1.75	22.1			34	S		
			3	P							
Silty, Trace Sand, Black Oxidation			1			Sandy, Silty, with Gravel and Seam of Sandy Loam, Dry, Silty, with Gravel		22.6	16		
			2	0.94	25.6			24	4.5+	7.8	
			3	B				68	P		
With Sand		7.5	1				633.16				
			2	1.31	22.3	Gray, Dry, Clay Loam, Sandy, Silty, with Gravel		25	8		
			3	B				20	5.88	7.0	
								30	S		
Sandy, with Seam of Clay Loam, Sandy, Silty		10	1				630.66				
			2	1.30	16.6	Gray mottled Greenish Gray, Moist, Clay, Silty, with Sand, Trace Gravel		27.8	5		
			2	B				5	3.68	15.8	
								8	B		
Yellow Brown mottled Light Gray, Sandy, Silty, with Gravel		12.5	3								
			7			Sandy, Silty, Trace Gravel	627.66	30	4		
			12		10.5	Gray mottled Greenish Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel	626.66	9	4.21	15.3	
								12	B		
		643.16				End of Boring @ 31 Ft.					
Yellow Brown/Brown mottled Light Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel, with Sand Seam			15	9							
			19	8.07	8.8			32.5			
			25	S							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
 The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (6/05)

FILE NAME *	USER NAME * posadeads	DESIGNED -	REVISED -
S:\Sign Truss Plan Details\46350\SIGN STRUCTURES\SignRepl.dgn		DRAWN -	REVISED -
PLOT SCALE * 100.0002 ft / in.		CHECKED -	REVISED -
PLOT DATE * Sep-05-2012 07:15:05AM		DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG		F.A. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		VAR DISTRICT 6	VARIOUS	30	30
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____		ILLINOIS FED. AID PROJECT CONTRACT NO. 46305			