1-18-13 LETTING ITEM 062

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

VARIOUS ROUTES
D-6 OVD SIN STR REPL 13-10
VARIOUS COUNTIES
C-60-010-13

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES
3-9	SCHEDULE OF LOCATIONS FOR DISTRICT 6
10-16	SIMPLE SPAN DETAIL SHEETS
17-22	CANTILEVER DETAIL SHEETS
24-28	SIGN PANEL DETAIL SHEETS
29-32	SOIL BORING LOGS

STANDARDS

630001-10
631011-08
701006-03
701101-02
701106-02
701201-04
701301-04
701400-05
701401-06
701406-06
701411-08
701446-03
701901-02
720021-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8/22 20 12
PASSED
Gustav Mueller
ENGINEER OF OPERATIONS
Dec 7 20 12
acting Dan D. Baranzelli, P.E./a
ENGINEER OF DESIGN AND ENVIRONMENT
APPROVED Dec 7 20 12
acting William R. Frey /a
DIRECTOR DIVISION OF HIGHWAYS

JOINT UTILITY LOCATING INFORMATION FOR
EXCAVATIONS PHONE: 800-892-0123

CONTRACT NO. 46226

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED -	REVISED -							
	PLOT SCALE =	DRAWN -	REVISED -		SHEET NO. __ OF __ SHEETS	VARIOUS	D-6 OVD SIN STR REPL 13-10	VARIOUS	32	1
	PLOT DATE =	CHECKED -	REVISED -					CONTRACT NO. 46226		
								ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Summary of Quantities

CODE NUMBER	PAY ITEM	UNIT	0021 100% STATE TOTAL QUANTITY	Various
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	434.00	434.00
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2.00	2.00
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, (SPECIAL) TANGENT	EACH	2.00	2.00
63302000	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 2	EACH	4.00	4.00
67100100	MOBILIZATION	LSUM	1.00	1.00
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1.00	1.00
72000300	SIGN PANEL - TYPE 3	SQ FT	1,549.50	1,549.50
72400330	REMOVE SIGN PANEL - TYPE 3	SQ FT	1,549.50	1,549.50
73300100	OVERHEAD SIGN STRUCTURE - SPAN, TYPE I-A (4'-0" X 4'-6")	FOOT	70.00	70.00
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	228.00	228.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	30.00	30.00
73302210	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (36" X 7'-0")	FOOT	70.00	70.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	93.01	93.01
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	3.00	3.00
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	3.00	3.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	9.00	9.00
78200410	GUARDRAIL MARKERS, TYPE A	EACH	14.00	14.00
X0324181	DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE	EACH	7.00	7.00
X7010216	TRAFFIC CONTROL & PROTECTION (SPECIAL)	LSUM	1.00	1.00
X7380015	REMOVE OVERHEAD SIGN STRUCTURE-TRUSS ONLY	FOOT	79.00	79.00
X7330099	OVERHEAD SIGN STRUCTURE-TRUSS ONLY	FOOT	79.00	79.00
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.00	1.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	1	State I.D. No.:	6S084S029R11.41				
County:	SANGAMON	Route:	I-55	M.P.:	11.41	Direction:	N.B.
Description of Work						Unit	Quantity
REMOVE OVERHEAD SIGN STRUCRTURE-SPAN						EACH	1.00
OVERHEAD SIGN STRUCTURE-SPAN, TYPE I-A						FOOT	70.00
REMOVE SIGN PANEL - TYPE 3						SQ FT	164.00
DRILLED SHAFT CONCRETE FOUNDATIONS						CU YD	17.80
REMOVE CONCRETE FOUNDATION-OVERHEAD						EACH	2.00
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE						EACH	1.00
CONSTRUCTION LAYOUT						L SUM	0.14
NIGHTIME WORK ZONE LIGHTING						L SUM	0.14
GUARDRAIL MARKERS, TYPE A						EACH	2.00
FURNISH & ERECT SIGN PANEL						SQ FT	164.00

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 25' SE OF EXISTING STRUCTURE

FILE NAME = #FILE1#	USER NAME = #USER#	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - ___	REVISED -
	PLOT DATE = #DATE#	DATE - ___	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF LOCATIONS

SCALE: ___ | SHEET NO. __ OF __ SHEETS | STA. ___ TO STA. ___

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-VAR	D:6_OVOSINSIRREPL12:23	VARIOUS	32	3
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	2	State I.D. No.:	6S001I172L000.8				
County:	ADAMS	Route:	FAP 408	M.P.:	0.8	Direction:	
Description of Work						Unit	Quantity
REMOVE OVERHEAD SIGN STRUCTURE TRUSS ONLY						FOOT	79.00
OVERHEAD SIGN STRUCTURE TRUSS ONLY						FOOT	79.00
REMOVE SIGN PANEL - TYPE 3						SQ FT	353.00
STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FT POSTS*						FOOT	165.00
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE						EACH	1.00
CONSTRUCTION LAYOUT						L SUM	0.16
NIGHTIME WORK ZONE LIGHTING						L SUM	0.16
GUARDRAIL MARKERS, TYPE A						EACH	2.00
FURNISH & ERECT SIGN PANEL						SQ FT	353.00
TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL						EACH	1.00
TRAFFIC BARRIER TERMINAL, TYPE 2						EACH	1.00

TRUSS AND SIGNS BEING REPLACED ONLY
NEW GUARD RAIL STEEL PLATE BEAM

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - ___	REVISED -
	PLOT DATE = $DATE$	DATE - _____	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF LOCATIONS

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	0-6.0VDSINSIRREEL12-23	VARIOUS	32	4
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.: 3	State I.D. No.:		6S001I172R014.6				
County: ADAMS	Route:	FAP 407	M.P.:	14.6	Direction:	N.B.	
Description of Work					Unit	Quantity	
REMOVE OVERHEAD SIGN STRUCRTURE-SPAN					EACH	1.00	
OVERHEAD SIGN STRUCTURE-SPAN, TYPE II-A					FOOT	114.00	
REMOVE SIGN PANEL - TYPE 3					SQ FT	317.50	
DRILLED SHAFT CONCRETE FOUNDATIONS					CU YD	25.13	
REMOVE CONCRETE FOUNDATION-OVERHEAD					EACH	2.00	
STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FT POSTS*					FOOT	185.00	
DISCONNECT SIGN LIGHTING AND REMOVE WIRING TO NEAREST SPLICE					EACH	1.00	
CONSTRUCTION LAYOUT					L SUM	0.14	
NIGHTIME WORK ZONE LIGHTING					L SUM	0.14	
GUARDRAIL MARKERS, TYPE A					EACH	2.00	
FURNISH & ERECT SIGN PANEL					SQ FT	317.50	
TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL					EACH	1.00	
TRAFFIC BARRIER TERMINAL, TYPE 2					EACH	1.00	

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 22' S OF EXISTING STRUCTURE
NEW GUARD RAIL STEEL PLATE BEAM

FILE NAME = #FILE1#	USER NAME = #USER#	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - ___	REVISED -
	PLOT DATE = #DATE#	DATE - _____	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF LOCATIONS

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
_V4B	D:6_OVDSINSIBBEEL12-23	VARIOUS	32	5
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	4	State I.D. No.:	6S054I055L126.2			
County:	LOGAN	Route:	I-55	M.P.:	126.2	Direction: S.B.
Description of Work					Unit	Quantity
REMOVE OVERHEAD SIGN STRUCRTURE-SPAN					EACH	1.00
OVERHEAD SIGN STRUCTURE-SPAN, TYPE II-A					FOOT	114.00
REMOVE SIGN PANEL - TYPE 3					SQ FT	343.50
DRILLED SHAFT CONCRETE FOUNDATIONS					CU YD	25.13
REMOVE CONCRETE FOUNDATION-OVERHEAD					EACH	2.00
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	0.14
NIGHTIME WORK ZONE LIGHTING					L SUM	0.14
GUARDRAIL MARKERS, TYPE A					EACH	2.00
FURNISH & ERECT SIGN PANEL					SQ FT	343.50

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 25′ N OF EXISTING STRUCTURE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	5	State I.D. No.:	6C068S016R01.19				
County:	MONTGOMERY	Route:	IL 16	M.P.:	1.19	Direction:	E.B
Description of Work						Unit	Quantity
REMOVE OVERHEAD SIGN STRUCRTURE-CANTILEVER						EACH	1.00
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A						FOOT	35.00
REMOVE SIGN PANEL - TYPE 3						SQ FT	90.00
DRILLED SHAFT CONCRETE FOUNDATIONS						CU YD	8.02
REMOVE CONCRETE FOUNDATION-OVERHEAD						EACH	1.00
STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FT POSTS*						FOOT	60.00
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	0.14
NIGHTIME WORK ZONE LIGHTING						L SUM	0.14
GUARDRAIL MARKERS, TYPE A						EACH	2.00
FURNISH & ERECT SIGN PANEL						SQ FT	90.00

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 15' E OF EXISTING STRUCTURE
ADD STEEL PLATE BEAM GUARD RAIL TO EXISTING

FILE NAME = @FILE@	USER NAME = @USER@	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = @SCALE@	CHECKED - ___	REVISED -
	PLOT DATE = @DATE@	DATE - ___	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF LOCATIONS

SCALE: ___ | SHEET NO. __ OF __ SHEETS | STA. ___ TO STA. ___

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	0:6.0YDSINSIBBEEL12:23	VARIOUS	32	7
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	6	State I.D. No.:	6C068S016L000.87				
County:	MONTGOMERY	Route:	IL 16	M.P.:	0.87	Direction:	W.B.
Description of Work						Unit	Quantity
REMOVE OVERHEAD SIGN STRUCRTURE-CANTILEVER						EACH	1.00
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE III-C-A						FOOT	35.00
REMOVE SIGN PANEL - TYPE 3						SQ FT	111.00
DRILLED SHAFT CONCRETE FOUNDATIONS						CU YD	8.02
REMOVE CONCRETE FOUNDATION-OVERHEAD						EACH	1.00
STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FT POSTS*						FOOT	24.00
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	0.14
NIGHTIME WORK ZONE LIGHTING						L SUM	0.14
GUARDRAIL MARKERS, TYPE A						EACH	2.00
FURNISH & ERECT SIGN PANEL						SQ FT	111.00

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 20' W OF EXISTING STRUCTURE
ADD STEAL PLATE BEAM GUARD RAIL TO EXISTING

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - ___	REVISED -
	PLOT DATE = $DATE$	DATE - _____	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF LOCATIONS

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V68	0:6_0X0SIWSIBBEEL12:23	VARIOUS	32	8
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Schedule of Quantities

Location No.:	7	State I.D. No.:	6C054I055R132.2				
County:	LOGAN	Route:	I-55	M.P.:	132.2	Direction:	N.B.
Description of Work						Unit	Quantity
REMOVE OVERHEAD SIGN STRUCRTURE-CANTILEVER						EACH	1.00
OVERHEAD SIGN STRUCTURE-CANTILEVER, TYPE II-C-A						FOOT	30.00
REMOVE SIGN PANEL - TYPE 3						SQ FT	170.50
DRILLED SHAFT CONCRETE FOUNDATIONS						CU YD	8.91
REMOVE CONCRETE FOUNDATION-OVERHEAD						EACH	1.00
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	0.14
NIGHTIME WORK ZONE LIGHTING						L SUM	0.14
GUARDRAIL MARKERS, TYPE A						EACH	2.00
FURNISH & ERECT SIGN PANEL						SQ FT	170.50

THIS STRUCTURE IS BEING COMPLETELY REPLACED
PROPOSED LOCATION 15' N OF EXISTING STRUCTURE

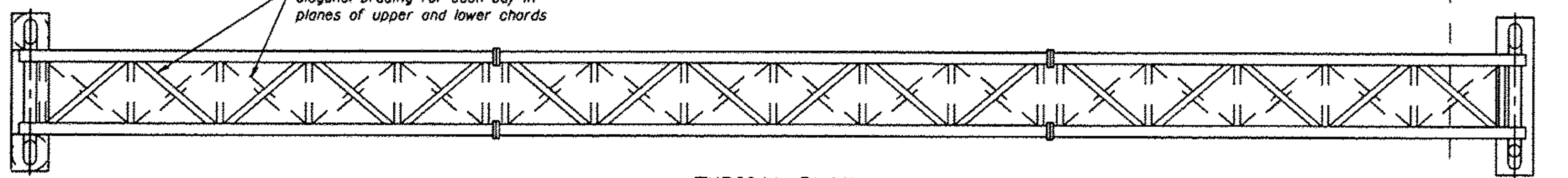
FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - ___	REVISED -
	PLOT DATE = *DATE*	DATE - _____	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

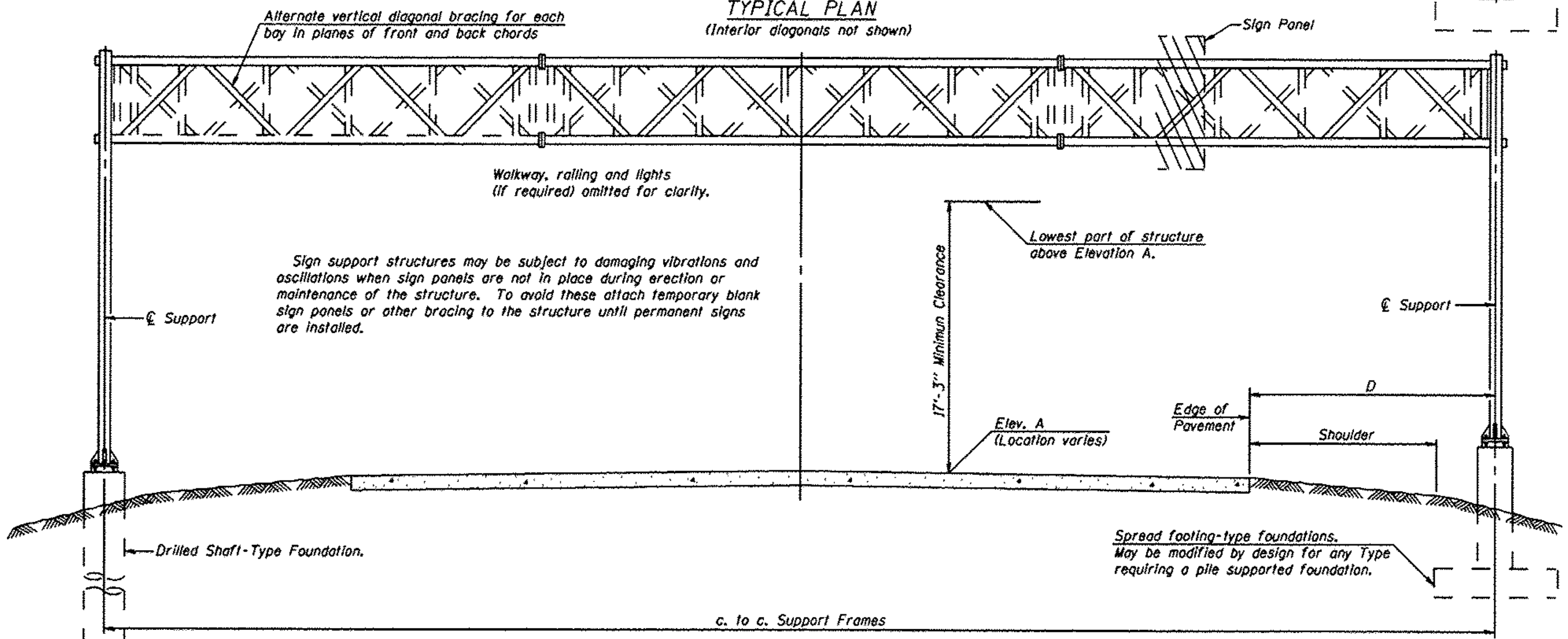
SCHEDULE OF LOCATIONS

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V48	D:6_DVDSIGNSI88EEL12:23	VARIOUS	32	9
		CONTRACT NO.46226		
	ILLINOIS FED. AID PROJECT			



TYPICAL PLAN
(Interior diagonals not shown)



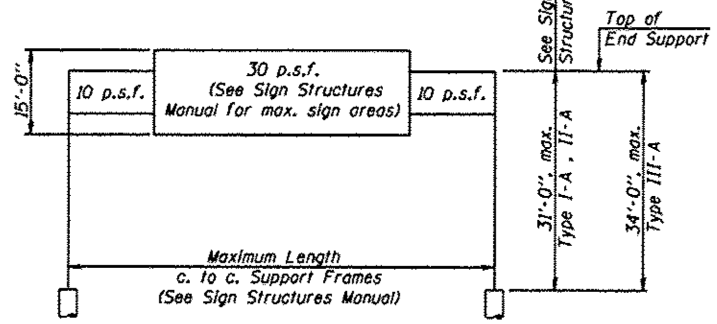
TYPICAL ELEVATION
(Looking at Face of Signs**)

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

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area (SOFT)
6S084S029R11.41	50+50	I-A	69'-1"	569.26	15'-1"	8'-6"	164.0
6S00I1172L000.8	25+00	II-A	79'-0"	474.28	41'-6"	14'-0"	353.0
6S054I055L126.2	367+25	II-A	114'-0"	564.42	28'-0"	12'-0"	343.5
6S00I1172R014.6	246+75	II-A	114'-0"	695.19	32'-0"	10'-0"	317.5

**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.



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.

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 Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

Contractor may encounter hard drilling at sign structure location

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	

OS-A-1 1-20-11

FILE NAME = *FILE*	USER NAME = *USER*	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

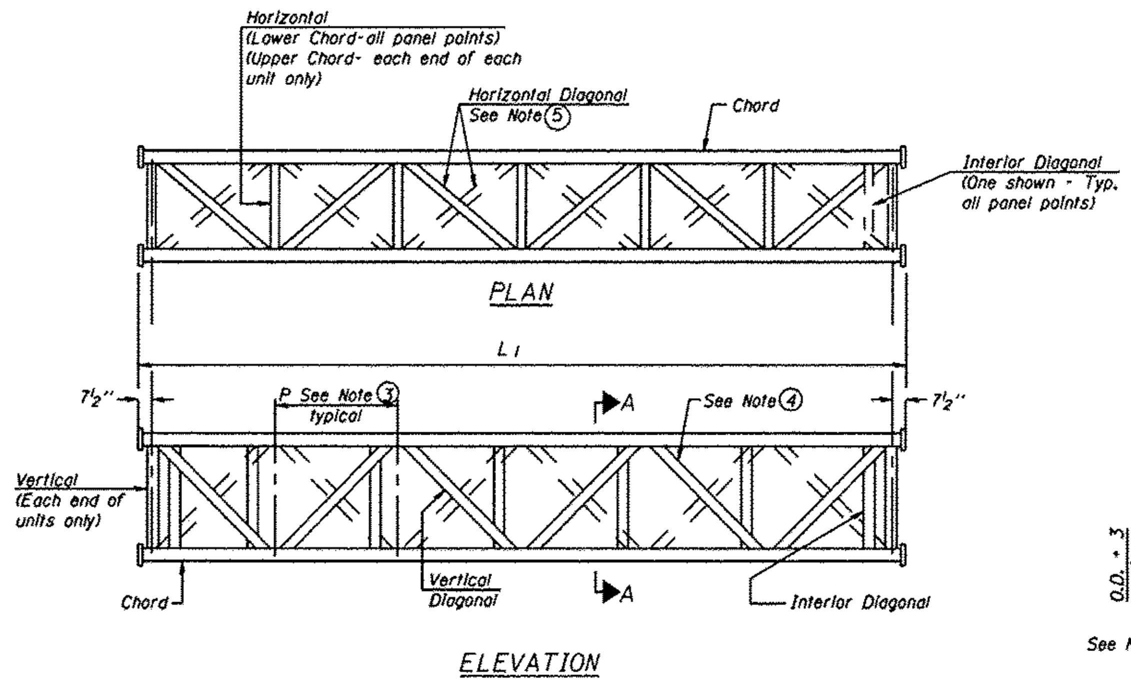
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES – GENERAL PLAN & ELEVATION – ALUMINUM TRUSS & STEEL SUPPORTS

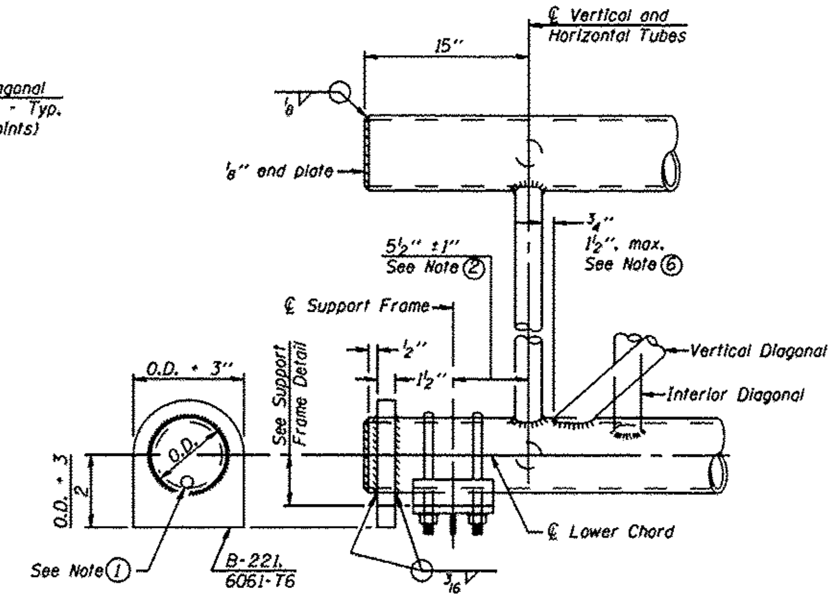
SCALE: ____ SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	0-6_0VOSINSIBBEPL12-23	VARIOUS	32	10
		CONTRACT NO. 46226		

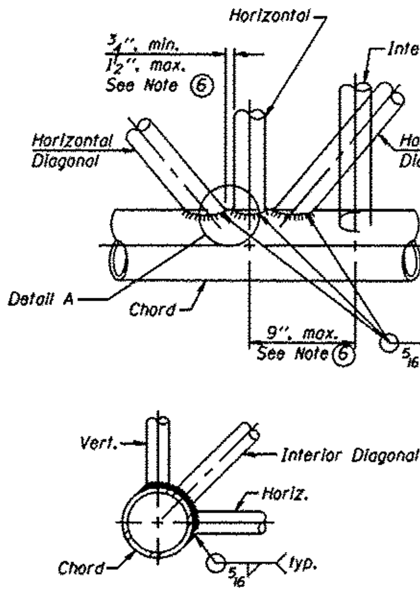
ILLINOIS FED. AID PROJECT



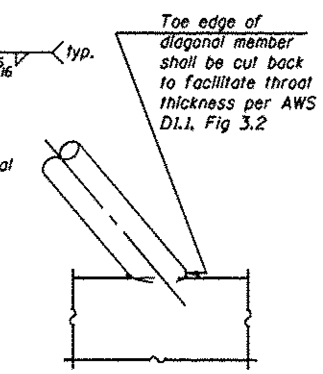
ELEVATION
TYPICAL INTERIOR UNIT
Even number of panels/interior unit required.



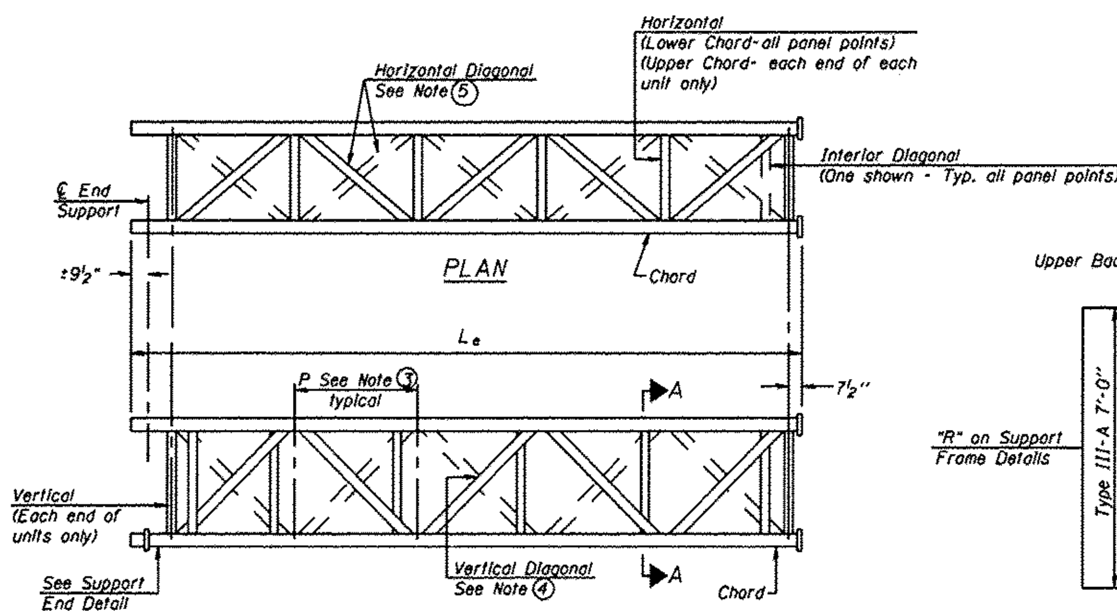
SUPPORT END DETAIL FOR EXTERIOR UNIT



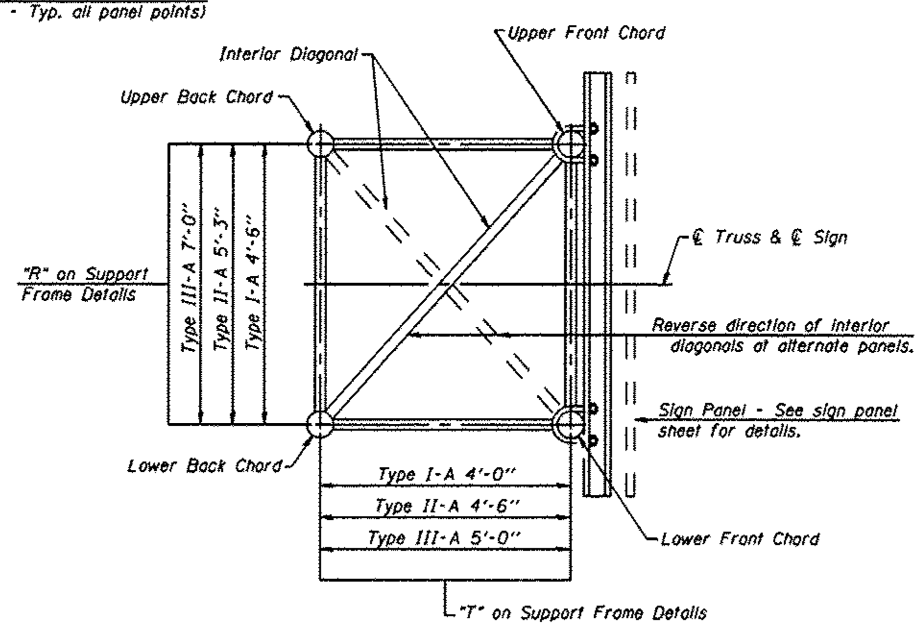
TYPICAL JOINT DETAILS



DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT
Even or odd number of panels/exterior units allowed.



SECTION A-A

1. Contractor may alternatively use standard aluminum drive-fit cap to close end. ½" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
2. 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).
3. 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.
4. Vertical Diagonals in front and back face shall alternate.
5. Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
6. All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a ¾" minimum to 1½" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OS-A-2 1-20-11

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

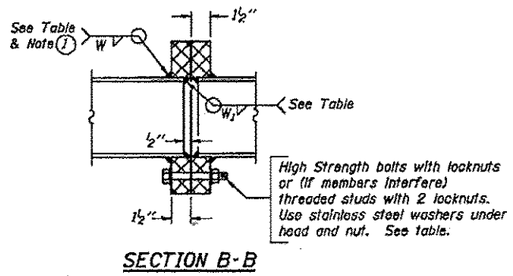
OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: ____ SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V4B	D-6 OVOSIUSTEEEL12:23	VARIOUS	32	11
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

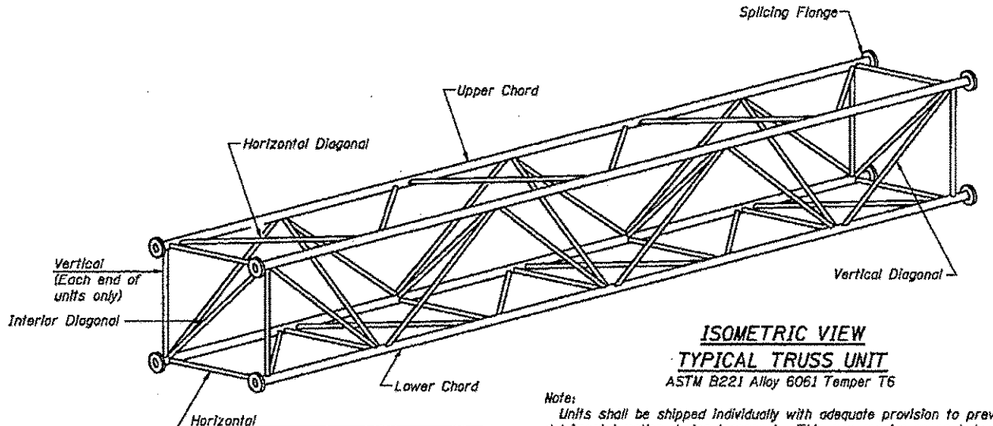
TRUSS UNIT TABLE

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_0)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L_1)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W_1		
6S084S029R11.41	50+50	I-A	7	35'-8½"	4'-10"					5"	¼"	2½"	¼"	1.75"	6	⅞"	5/16"	¼"	8¾"	11¾"
6S001I172L000.8	25+00	II-A	5	28'-10¼"	5'-4¾"	1	4	22'-10"	5'-4¾"	5½"	5/16"	3"	5/16"	1.90"	6	⅞"	⅜"	¼"	9¼"	12 ¼"
6S054I055L126.2	367+25	II-A	8	38'-8½"	4'-7¼"	1	8	38'-1"	4'-7¼"	7"	5/16"	3"	5/16"	4.20"	6	1"	⅜"	¼"	11½"	15"
6S001I172R014.6	246+75	II-A	8	38'-8½"	4'-7¼"	1	8	38'-1"	4'-7¼"	7"	5/16"	3"	5/16"	4.20"	6	1"	⅜"	¼"	11½"	15"



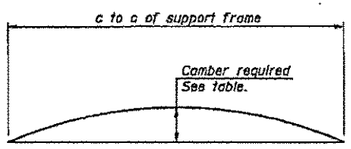
SECTION B-B

(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.



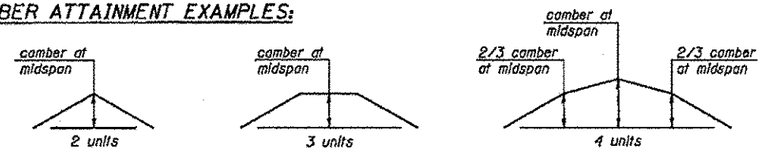
ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

Note:
Units 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 units.

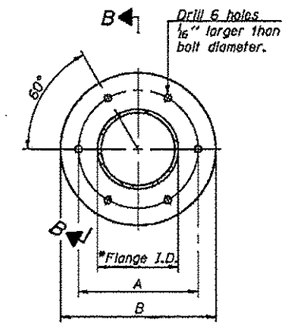


CAMBER DIAGRAM
Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

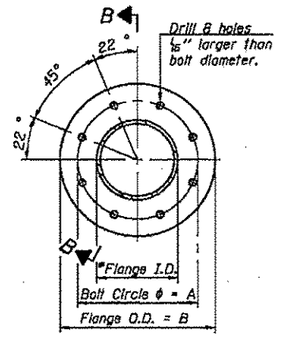
CAMBER ATTAINMENT EXAMPLES:



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



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES
ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

OS4-A-2 1-20-11

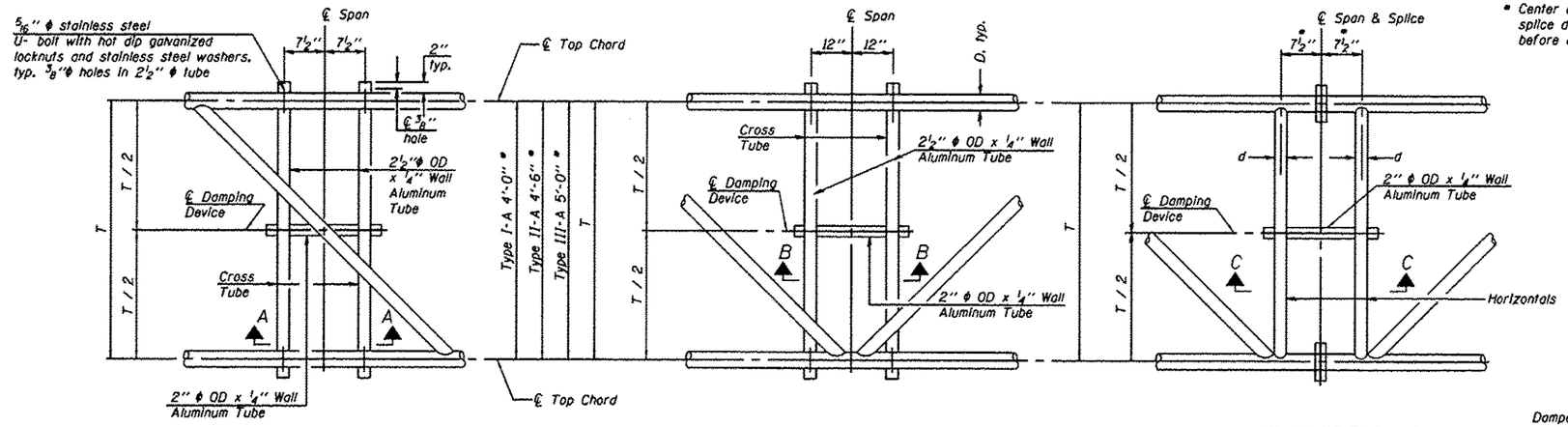
FILE NAME = S:\Sign Truss Plan Details\46226\46226sgnRepl.dgn	USER NAME = copenbargerda	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 0.1666 ft / in.	CHECKED -	REVISED -
	PLOT DATE = Nov-29-2012 8:55:41AM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-88	0-6 OVOSINSIBBEBL12-23	VARIOUS	32	12
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

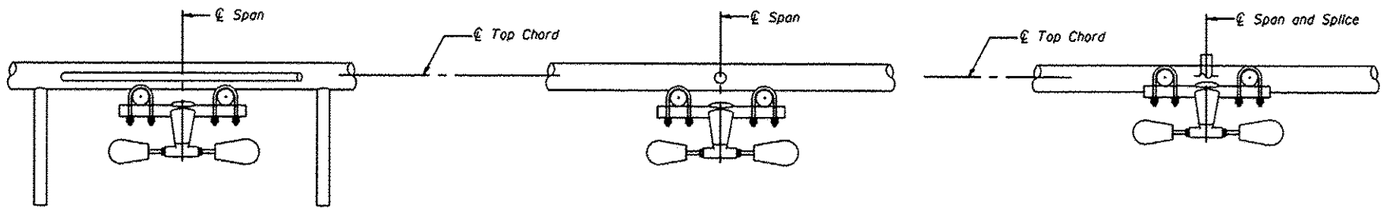


* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

PLAN DETAIL "A"
℄ Span between Panel Points

PLAN DETAIL "B"
℄ Span at Panel Point

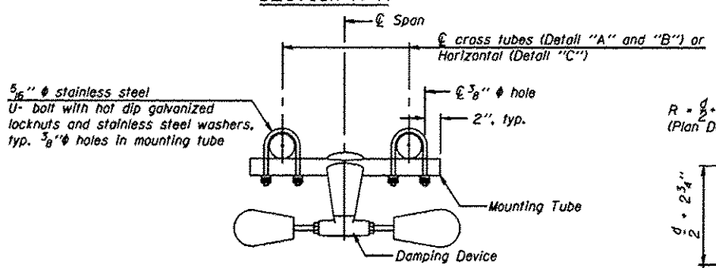
PLAN DETAIL "C"
℄ Span at ℄ Chord Splice



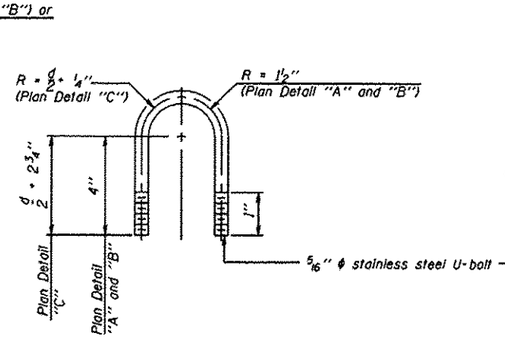
SECTION A-A

SECTION B-B

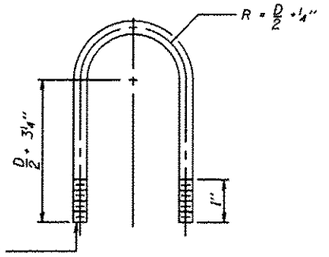
SECTION C-C



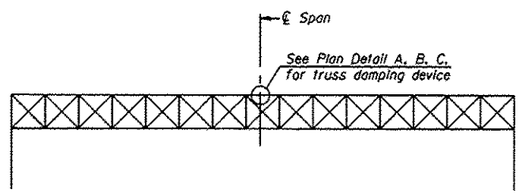
TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead Sign Truss

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...

OS-A-D 1-20-11

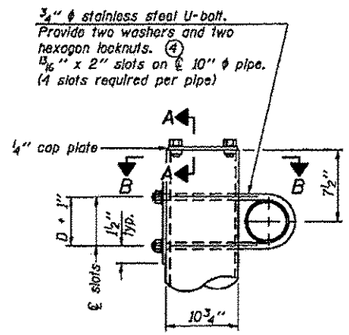
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

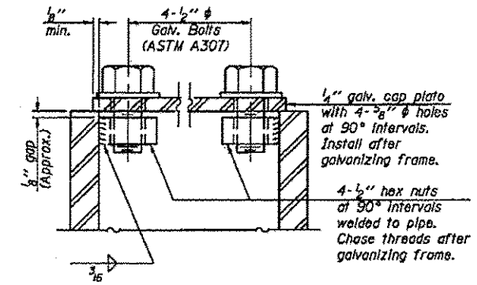
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SCALE: | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	0:6.0XDSIGSIBBEBL12:23	VARIOUS	32	13
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

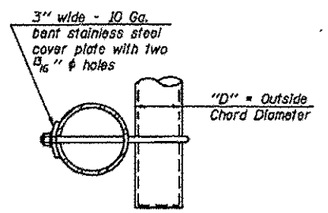


DETAIL A

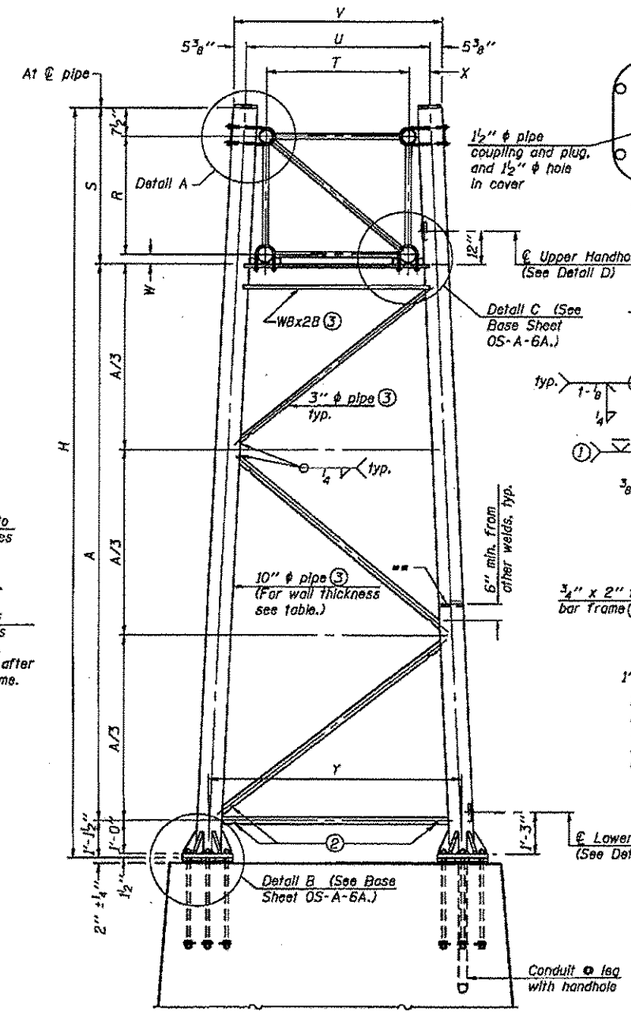


SECTION A-A

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

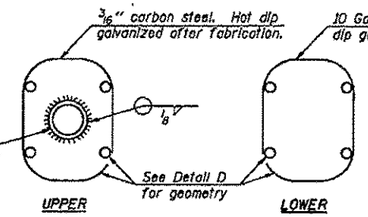


SECTION B-B

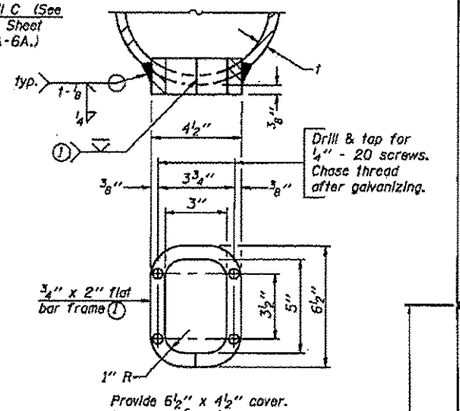


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

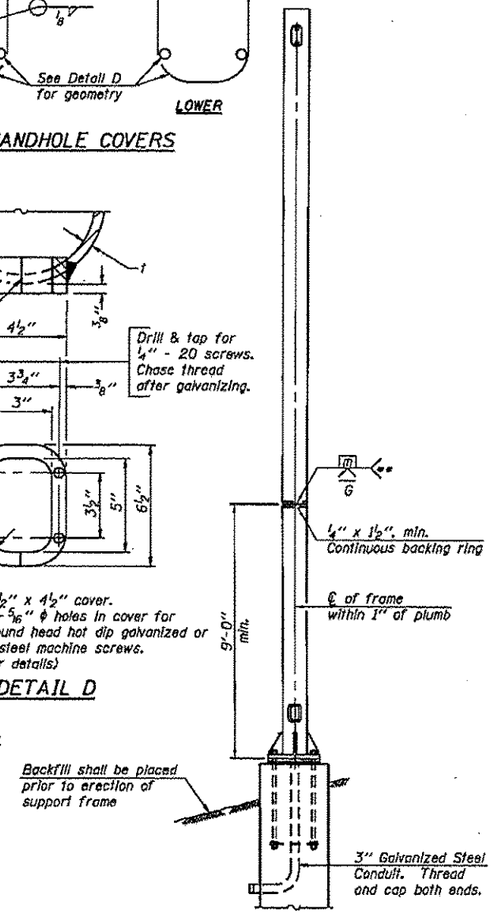


HANDHOLE COVERS



Provide 6½" x 4½" cover.
Provide 1-5/16" ϕ holes in cover for ¼"-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

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 µin 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.

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6"	5'-5½"	4'-0"	5'-6"	6'-4¾"	4"	9"	8'-3"
II-A (5)	5'-3"	6'-3¼"	4'-6"	6'-1"	6'-11¾"	4¾"	9½"	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 (6)	A
		Left	Right				
6S084S029R11.41	50+50	X		I-A	.279	26'-10"	20'-3"
			X		.279	26'-10"	20'-3"
6S054I055L126.2	367+25	X		II-A	.365	29'-5"	22'-0"
			X		.365	31'-7"	24'-2"
6S001I172R014.6	246+75	X		II-A	.365	30'-0"	22'-7½"
			X		.365	30'-0"	22'-7½"

OS-A-6 1-20-11

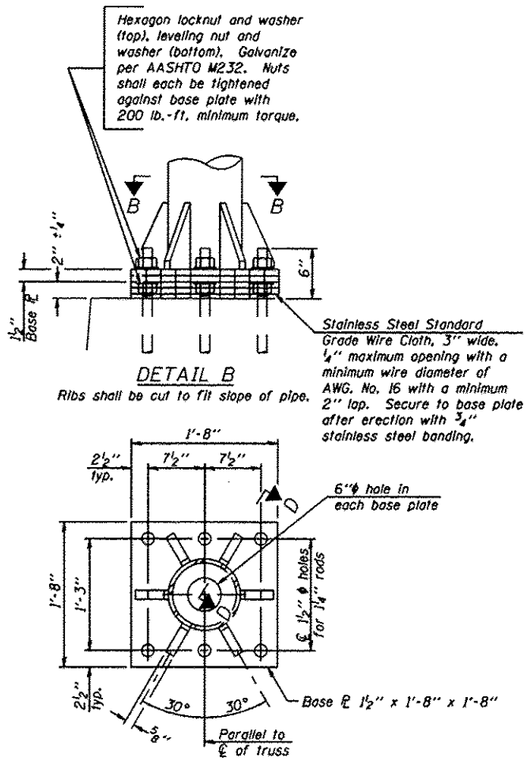
FILE NAME = S:\Sign Truss Plan Details\46226\46226sgnRepl.dgn	USER NAME = copenbergerda	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 8.1898 ft / in.	CHECKED -	REVISED -
	PLOT DATE = Nov-29-2012 08:59:16AM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

SCALE: ____ | SHEET NO. __ OF __ SHEETS | STA. ____ TO STA. ____

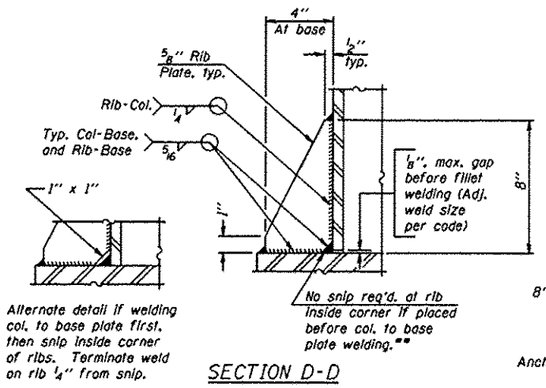
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-88	0:6_OVOSINSIBREPL12-23	VARIOUS	32	14
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			



DETAIL B

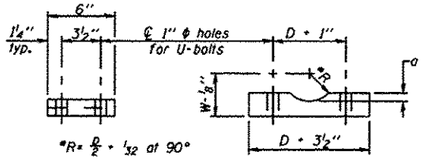
Ribs shall be cut to fit slope of pipe.

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



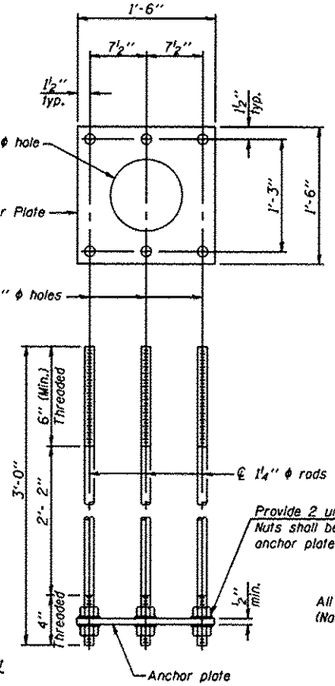
*R = D/2 + 1/32 at 90°

D = Outside Diameter of Chord. For W. see Base Sheet OS-A-6.

SADDLE SHIM DETAIL

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

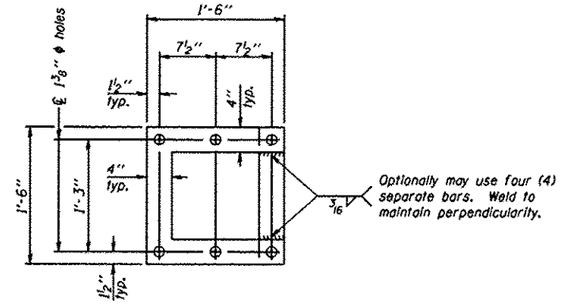
Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"



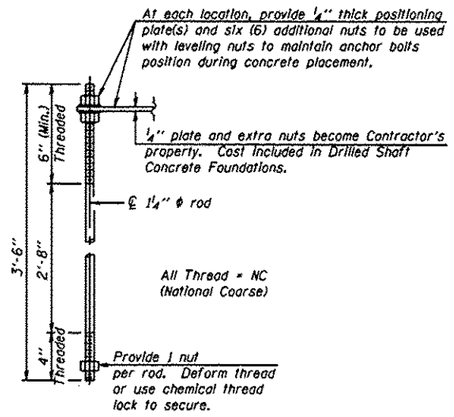
All Thread = NC (National Coarse)

ANCHOR ROD DETAIL

Spread Footing Foundation



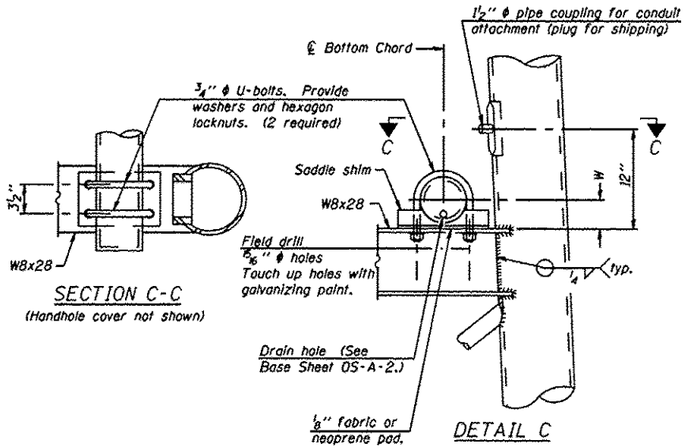
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

Drilled Shaft Foundation

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



SECTION C-C

(Handhole cover not shown)

DETAIL C

10" ϕ PIPE SUPPORT FRAME DETAILS

OS-A-6A 1-20-11

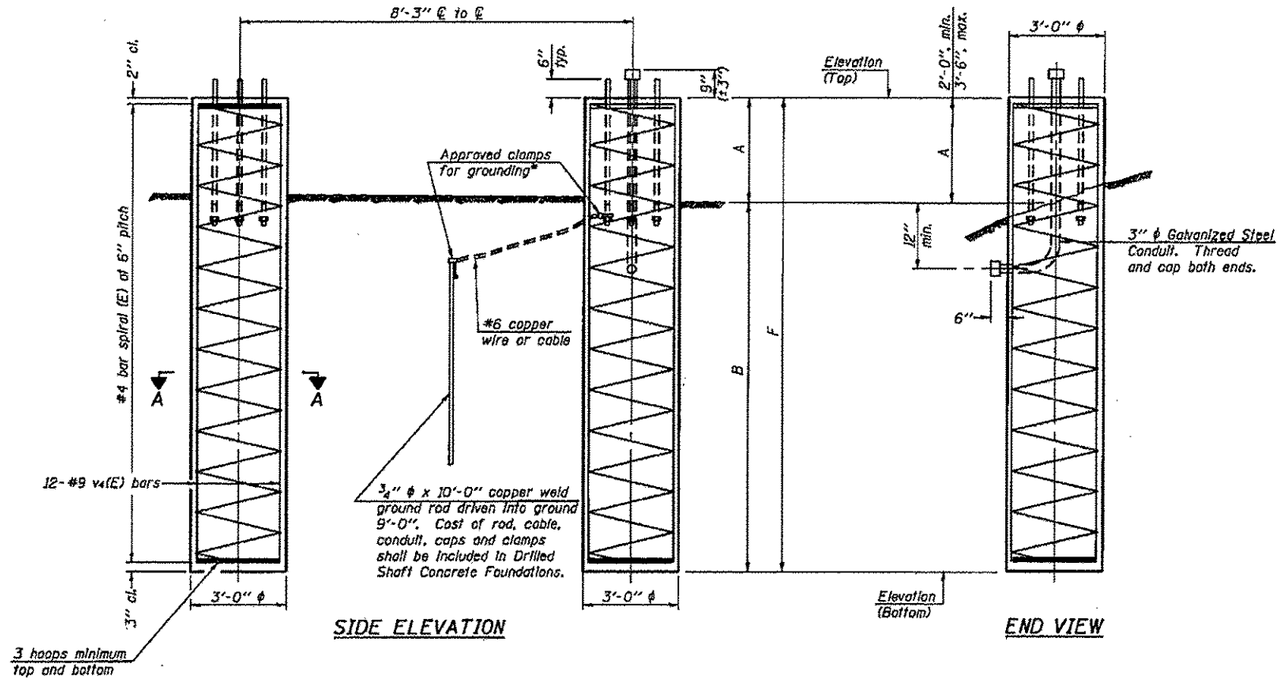
FILE NAME = *FILE1*	USER NAME = *USER*	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

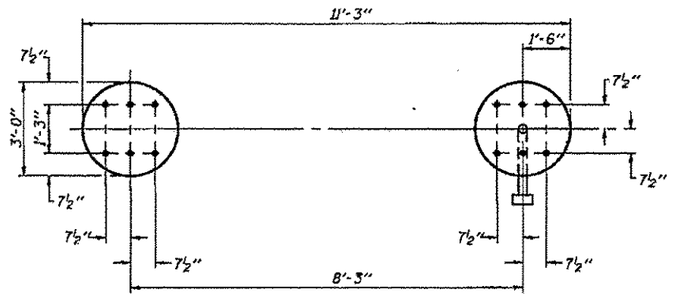
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V68	0-6.0VDSINSIBBEPL12-23	VARIOUS	32	15
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			



SIDE ELEVATION

END VIEW



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.

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 (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 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.

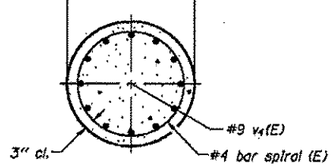
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

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.



SECTION A-A

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

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)	Drilled Shaft In Rock (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F		
6S084S029RJ1.41	50+50	570.41	553.41	3'-6"	13'-6"	17'-0	570.41	553.41	3'-6"	13'-6"	17'-0"	17.80	
6S054105SL126.2	367+25	563.45	539.45	3'-6"	20'-6"	24'-0	561.26	537.26	3'-6"	20'-6"	24'-0"	25.13	
6S001117ZR014.6	246+75	693.50	669.5	3'-6"	20'-6	24'-0	693.50	669.50	3'-6"	20'-6"	24'-0"	25.13	

OS4-F3 1-20-11

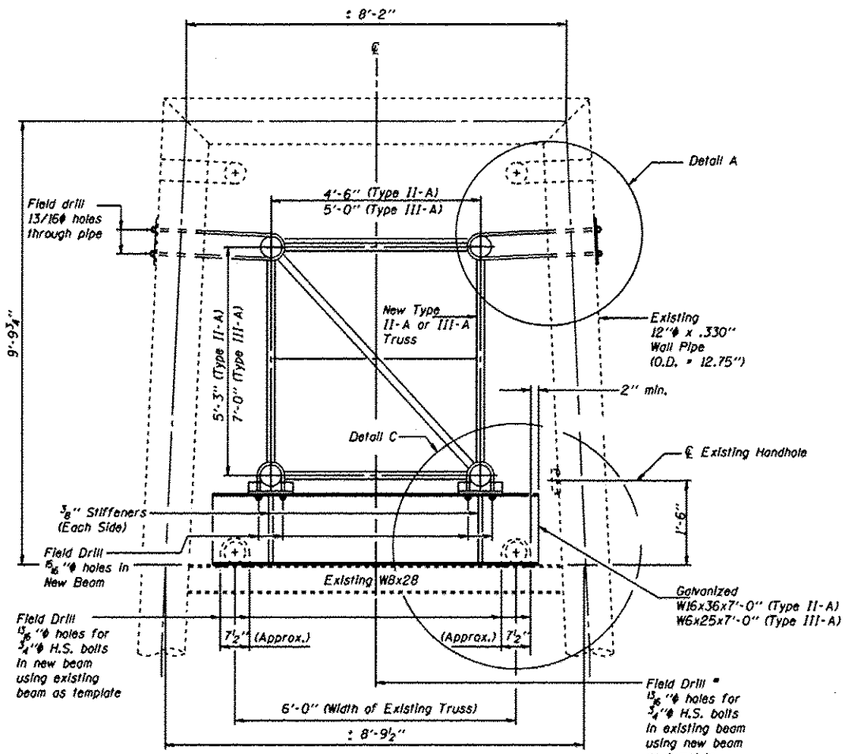
FILE NAME = S:\Sign Truss Plan Details\46226\46226sgnRepl.dgn	USER NAME = copenborgerde	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 8.1000 ft / in.	CHECKED -	REVISED -
	PLOT DATE = Nov-29-2012 08:54:29AM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

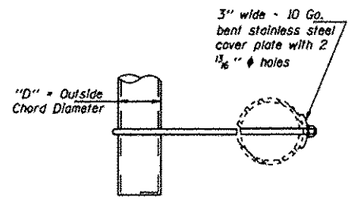
OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

SCALE: _____ SHEET NO. __ OF __ SHEETS STA. _____ TO STA. _____

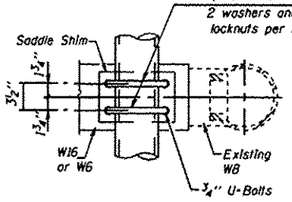
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-88	0:6_OVOSIGNSTRREPL12-23	VARIOUS	32	16
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			



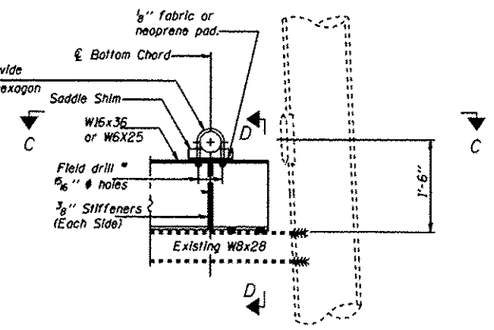
SIDE VIEW



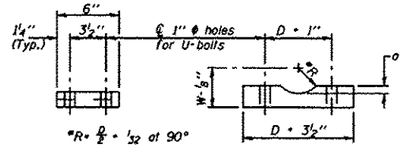
SECTION B-B



SECTION C-C



DETAIL C

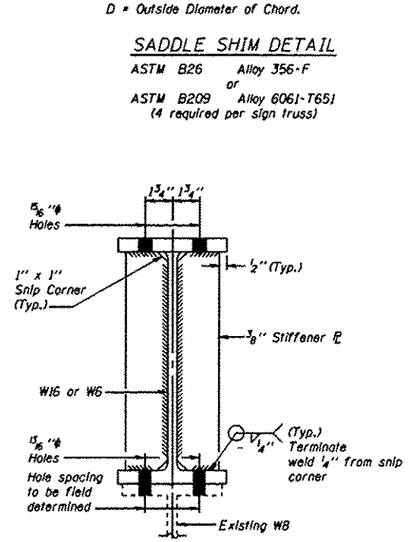


D = Outside Diameter of Chord.

SADDLE SHIM DETAIL

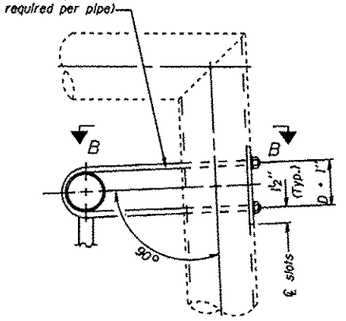
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a	W
5½"	13/16"	4 3/4"
6"	7/8"	4 3/4"
6½"	15/16"	4 3/4"
7"	1"	5½"
8½"	1¼"	5½"
9"	1 3/8"	5½"



SECTION D- D

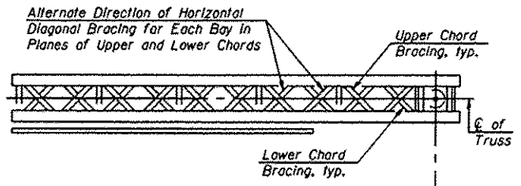
¾" ϕ stainless steel U-bolt. Provide two washers and two hexagon locknuts. Field drill 15/16" ϕ holes through pipe. (4 holes required per pipe)



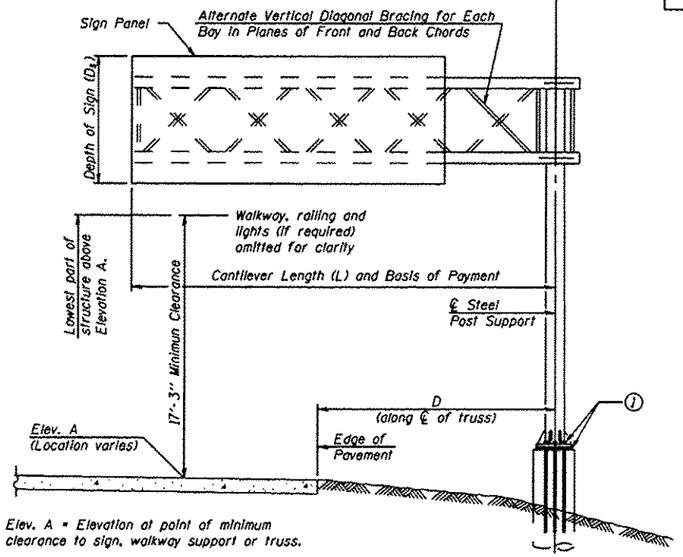
DETAIL A

OVERHEAD SIGN STRUCTURES
EXISTING SUPPORT FRAME
RETROFIT for ALUMINUM TRUSS

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			X48	0-6 OVDSINSIBBEEL12-23	VARIOUS	32	17
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -							CONTRACT NO. 46226
	PLOT DATE = $DATE$	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.		ILLINOIS	FED. AID PROJECT



TYPICAL PLAN
(Walkway not shown)



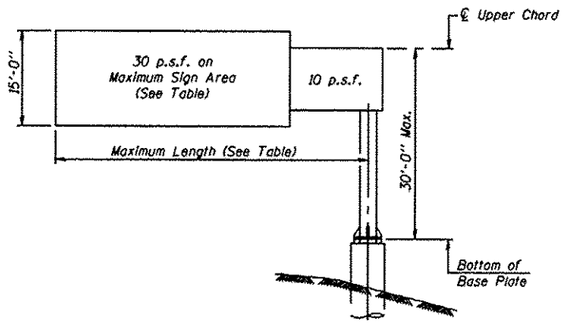
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
Looking in Direction of Traffic

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.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D_s	Total Sign Area (sqft)
6C068S016R001.19	132+15	III-C-A	35'-0"	703.7	17'-0"	6'-0"	90.0
6C068S016L000.87	128+00	III-C-A	35'-0"	702.9	16'-6"	6'-0"	111.0
6C054I055R132.2	703+85	II-C-A	30'-0"	629.2	14'-0"	11'-0"	170.5

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.



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.

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.

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.

contractor may encounter hard drilling at sign structure location

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	
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	

OSC-A-1 1-20-11

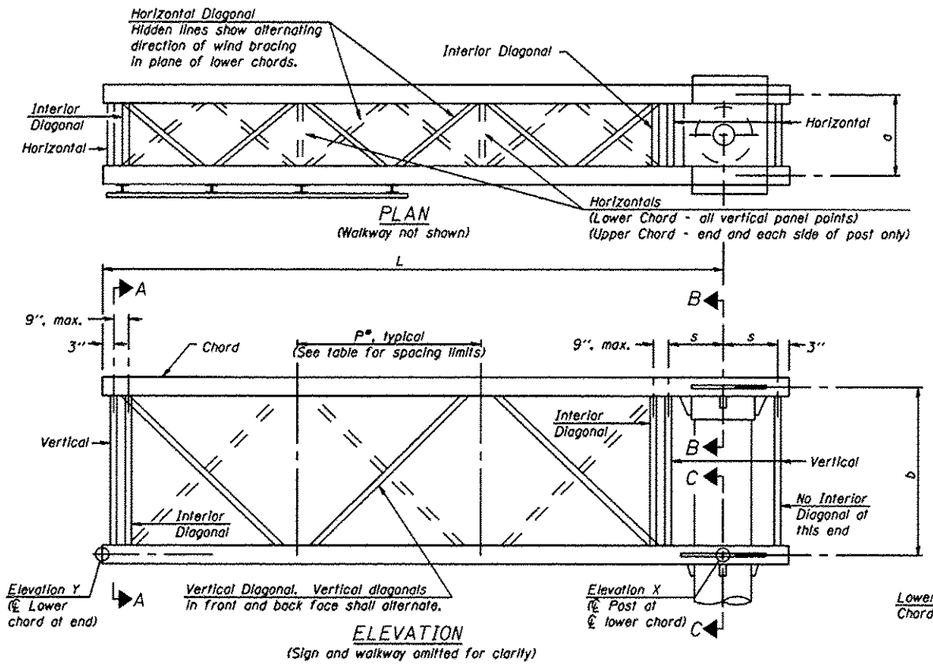
FILE NAME = @FILEL@	USER NAME = @USER@	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = @SCALE@	CHECKED -	REVISED -
	PLOT DATE = @DATE@	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST

SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

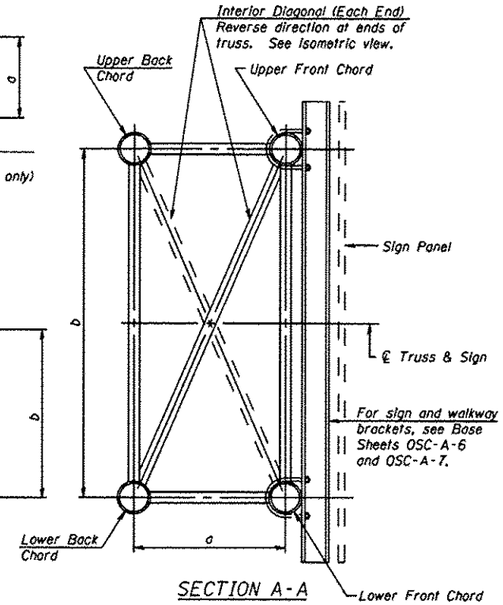
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-88	D-6 OVDSIGNS1BBEEL12-23	VARIOUS	32	18
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		



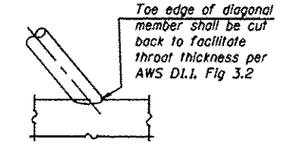
TYPICAL TRUSS UNIT

For Section B-B and Section C-C, see Base Sheet OSC-A-3.

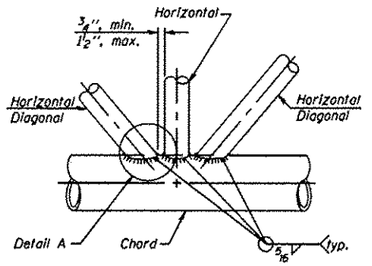
Note:
There are twice as many horizontal diagonals as there are vertical diagonals.



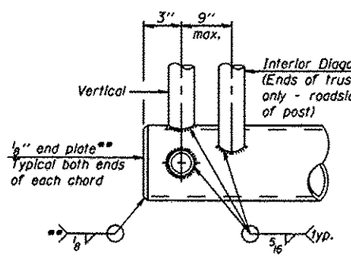
SECTION A-A



DETAIL A

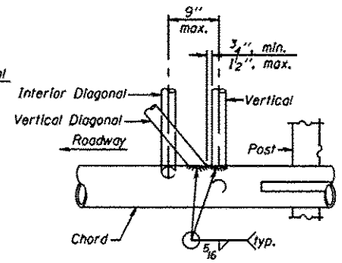


TRUSS INTERIOR JOINT DETAIL



CANTILEVER END JOINT DETAIL

** Contractor may alternatively use standard aluminum drive-fit cap to close ends.



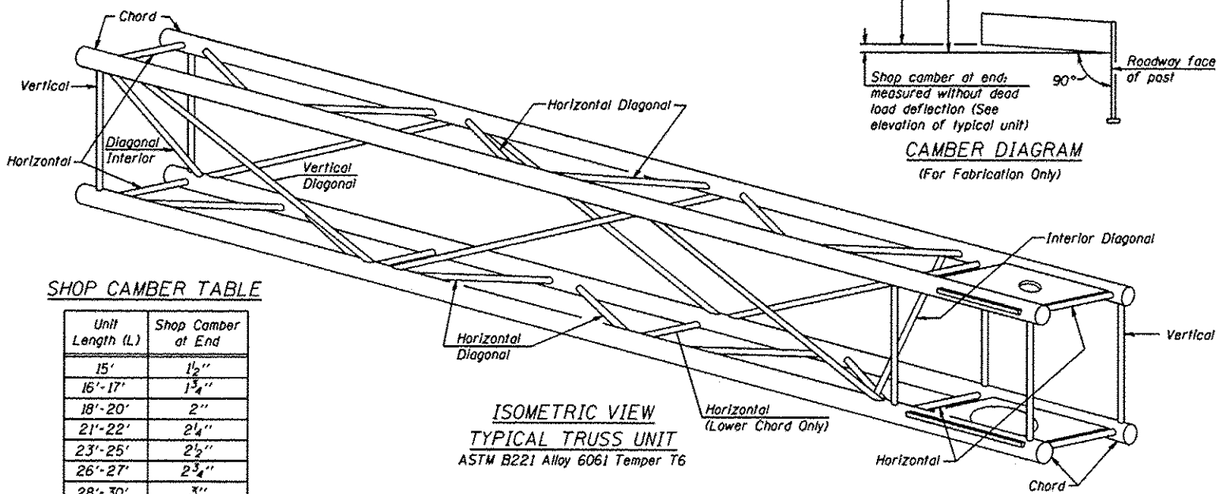
POST END JOINT DETAIL

TRUSS UNIT TABLE

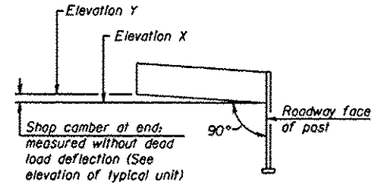
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals: Horizontals: Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2½"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6½"	5/16"	3¼"	5/16"
III-C-A (35' Max.)	36"	84"	21"	48" min. to 66" max.	7"	⅜"	3½"	⅜"
III-C-A (>35' to 40')	36"	84"	21"	48" min. to 66" max.	8"	⅜"	3½"	⅜"

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

Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
6C068S016R01.19	132+15	III-C-A	35'-0"	6	5'-6"
6C068S016L00.87	128+00	III-C-A	35'-0"	6	5'-6"
6C054105SR132.2	703+85	II-C-A	30'-0"	7	4'-0"



ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6



CAMBER DIAGRAM
(For Fabrication Only)

SHOP CAMBER TABLE

Unit Length (L)	Shop Camber at End
15'	1½"
16'-17'	1¾"
18'-20'	2"
21'-22'	2¼"
23'-25'	2½"
26'-27'	2¾"
28'-30'	3"
31'-32'	3¼"
33'-35'	3½"
36'-37'	4"
38'-40'	4½"

OSC-A-2 1-20-11

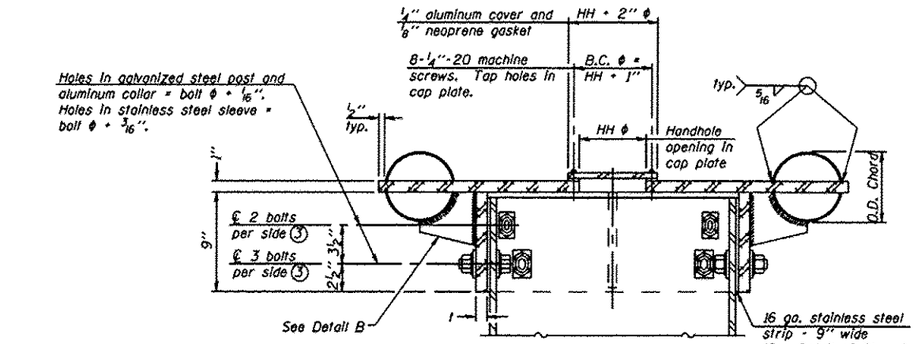
FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - ___	REVISED -
	PLOT DATE = *DATE*	DATE - ___	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: ___ | SHEET NO. __ OF __ SHEETS | STA. ___ TO STA. ___

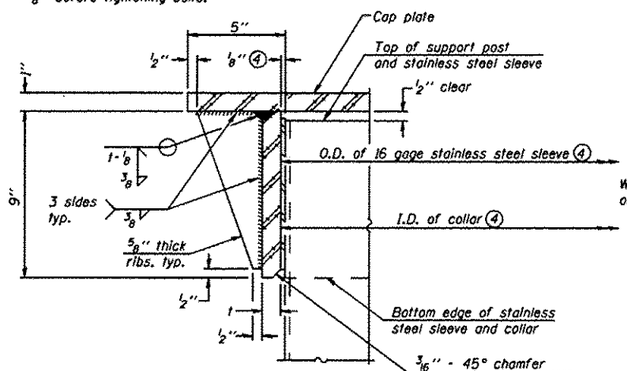
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D-6-OVDSINSIBBEEL12-23	VARIOUS	32	19
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			



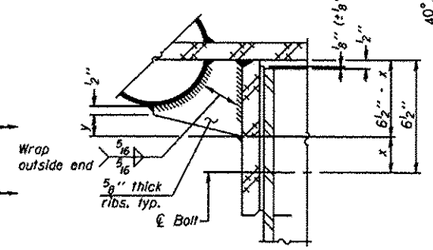
SECTION B-B

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

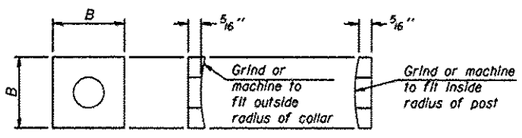
④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (±1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.



DETAIL A
(Two locations)

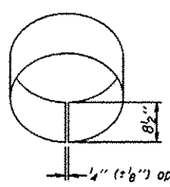


DETAIL B
Two locations
(For details not shown, see Detail C)



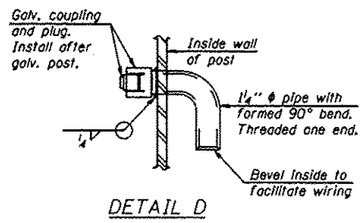
CONTOURED WASHERS

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"

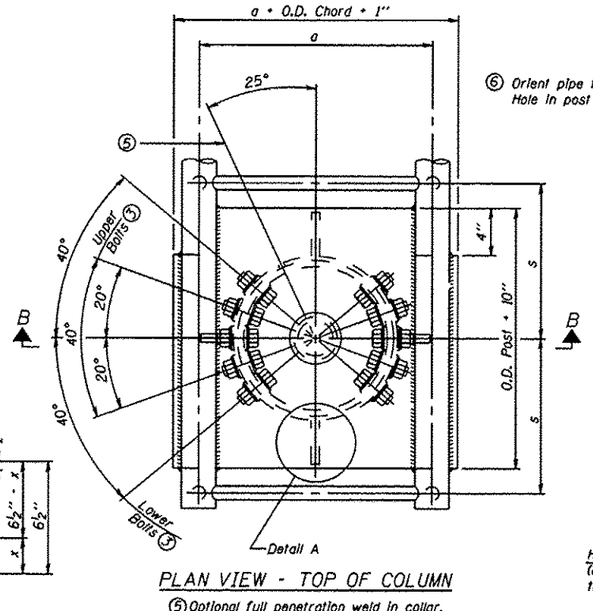


DETAIL OF STAINLESS STEEL SLEEVE

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.



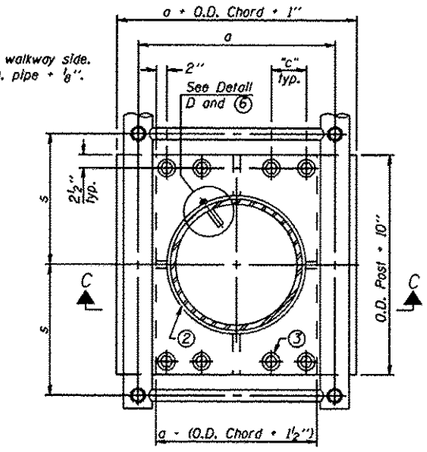
DETAIL D



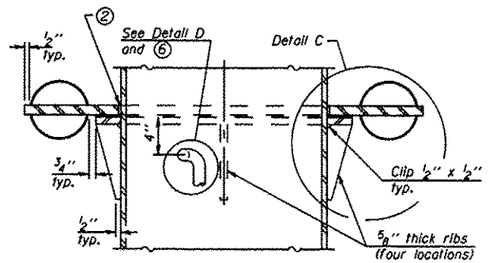
PLAN VIEW - TOP OF COLUMN

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

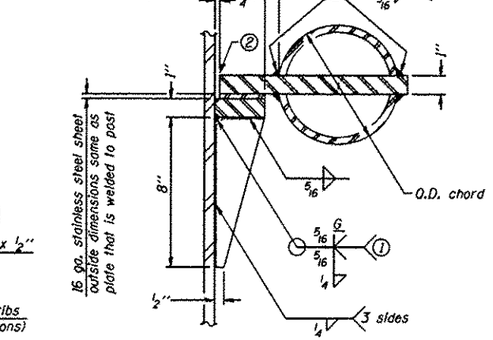
⑥ Orient pipe toward walkway side. Hole in post = O.D. pipe + 1/8".



SECTION THRU POST ABOVE LOWER CHORDS



SECTION C-C



DETAIL C

Truss Type	Post Size	Upper & Lower Connection Bolt ③ Diameter	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" ϕ (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" ϕ (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24" ϕ (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"
III-C-A (>35' to 40')	24" ϕ (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 1-20-11

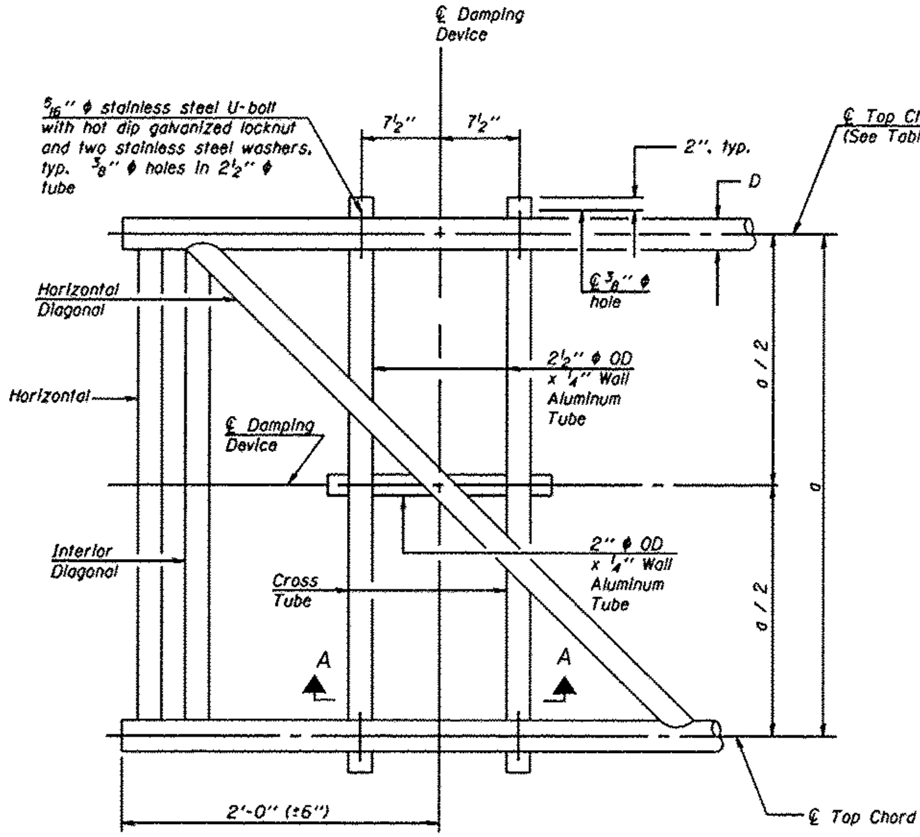
FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - ___	REVISED -
	PLOT DATE = #DATE#	DATE - ___	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

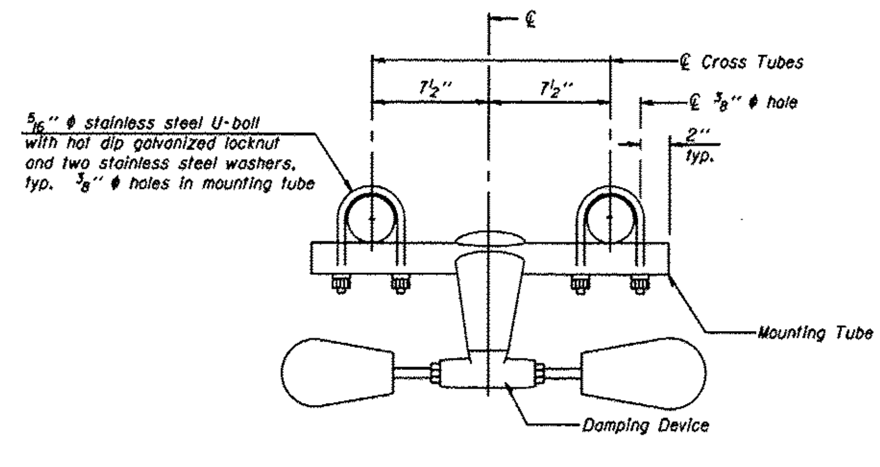
CANTILEVER SIGN STRUCTURES – JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: ___ | SHEET NO. __ OF __ SHEETS | STA. ___ TO STA. ___

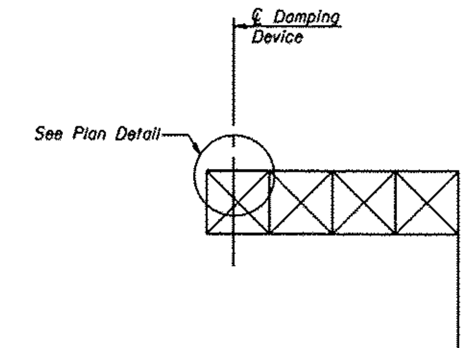
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D:\6_OVDSIN\SIBEEL12.23	VARIOUS	32	20
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		



PLAN DETAIL



TRUSS DAMPING DEVICE CONNECTION DETAIL



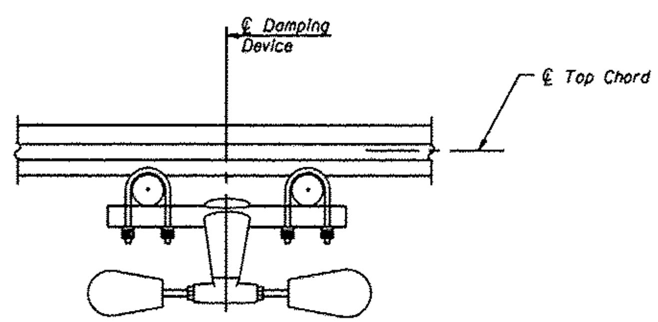
ELEVATION

Aluminum Cantilever Sign Structure

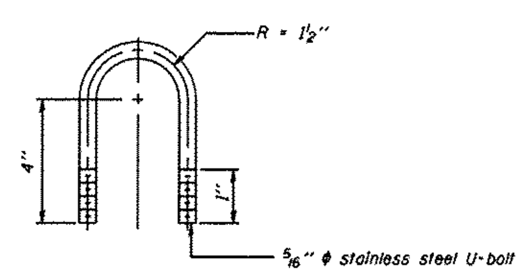
GENERAL NOTES

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

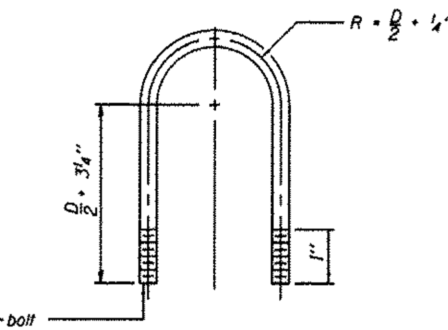


SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

(Typical)

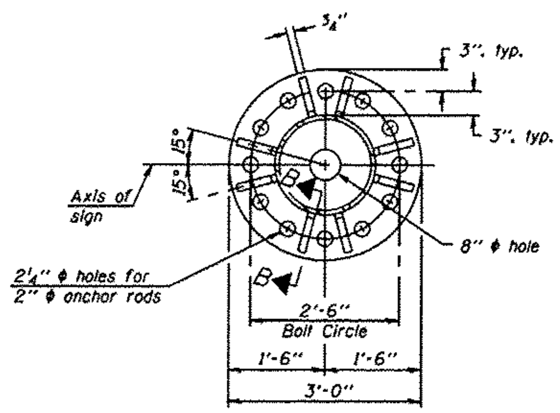


TOP CHORD TO CROSS TUBE U-BOLT DETAIL

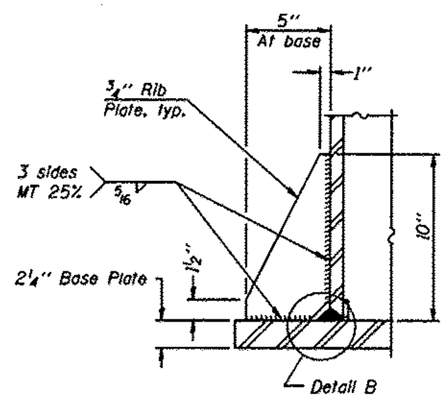
(Typical)

OSC-A-D 1-20-11

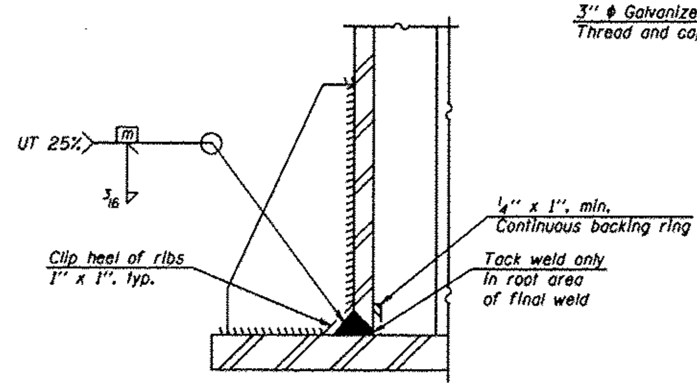
FILE NAME =	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS	CANTILEVER SIGN STRUCTURE	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
$FILEL$		DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	DAMPING DEVICE	V&B	0-6 OVDSINSIBBEEL12:23	VARIOUS	32	21
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -			CONTRACT NO. 46226				
	PLOT DATE = $DATE$	DATE -	REVISED -		SCALE: SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____	ILLINOIS FED. AID PROJECT				



SECTION A-A

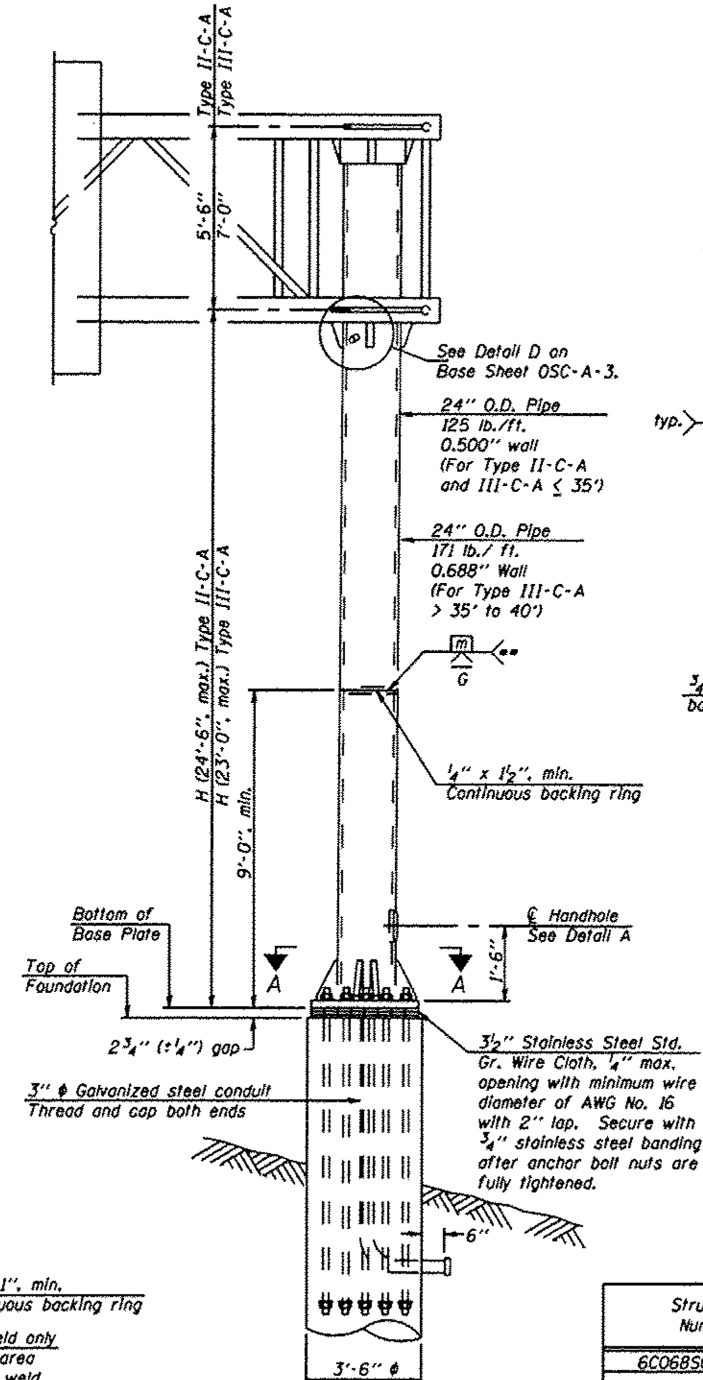


SECTION B-B



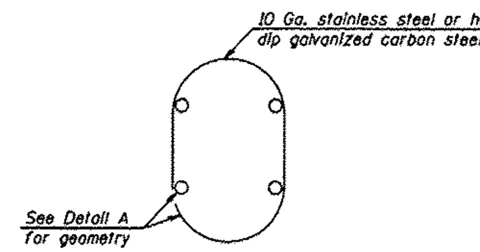
DETAIL B

(Typical rib)

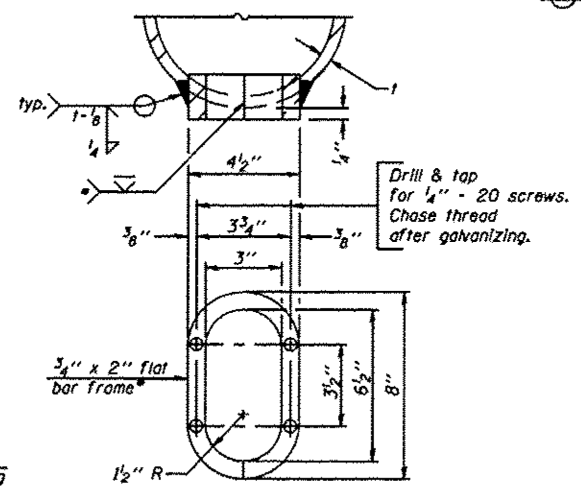


FRONT ELEVATION

For Foundation Details see Base Sheet OSC-A-9.



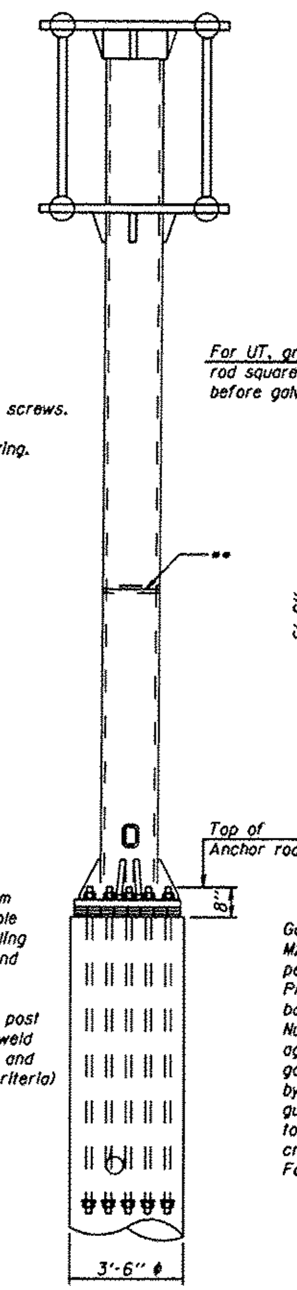
HANDHOLE COVER



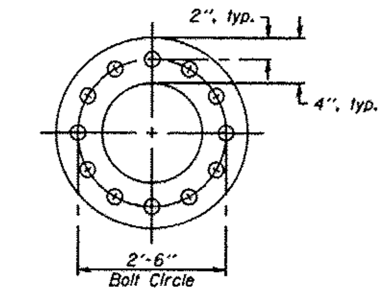
Provide 8" x 4½" cover. Outside corners = 2¼" radius. Provide 4-5/16" ϕ holes in cover for ¼" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

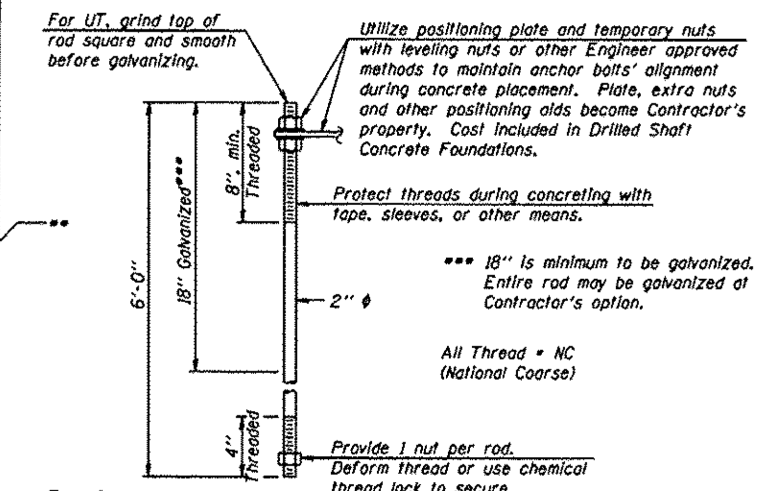
- * Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.
- ** Butt welded joint in post is only allowed for post heights (H) over 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.



SIDE ELEVATION



SUGGESTED POSITIONING PLATE



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, using a straight beam, ½" ϕ 3.5 mhz. transducer, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

Structure Number	Station	H
6C068S016R01.19	132+15	21'-2"
6C068S016L00.87	128+00	20'-11"
6C054I055R132.2	703+85	22'-6"

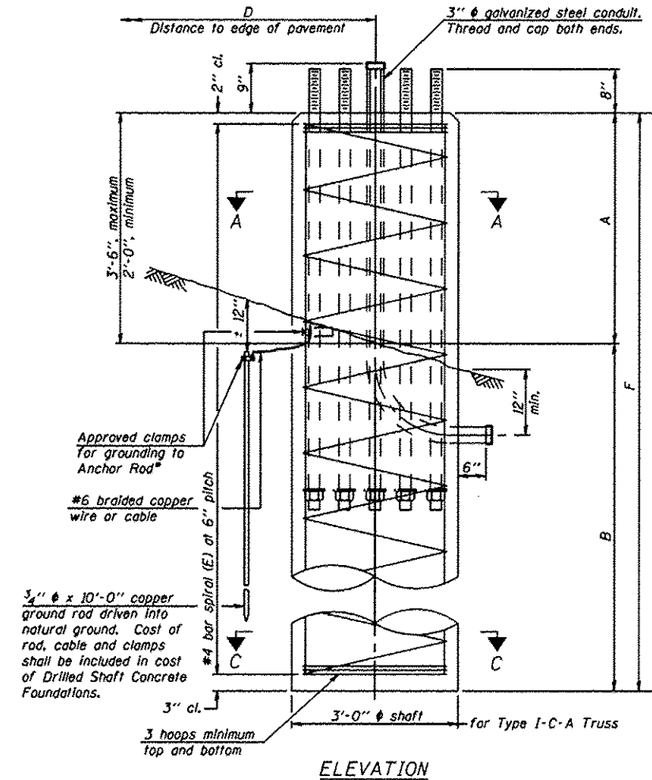
Note: "H" based on 15'-0" or actual sign height, whichever is greater.

OSC-A-5 1-20-11

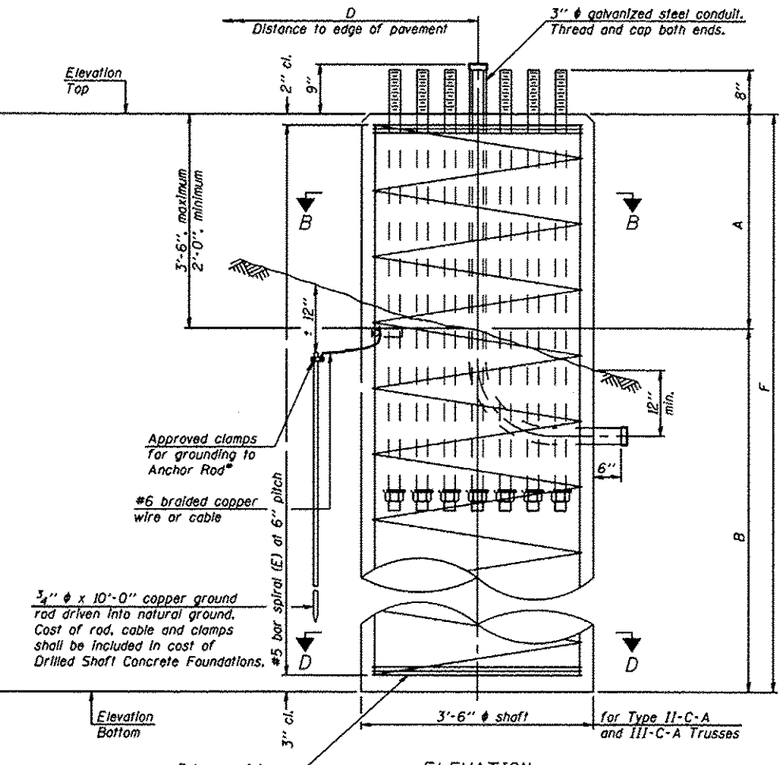
FILE NAME = =FILE=	USER NAME = =USER=	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES - TYPE II-C-A & III-C-A TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST
		DRAWN -	REVISED -		
	PLOT SCALE = =SCALE=	CHECKED -	REVISED -		
	PLOT DATE = =DATE=	DATE -	REVISED -		SCALE: SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V48	D-6 OVDSINSIBBEEL12:23	VARIOUS	32	22
		CONTRACT NO. 46226		
ILLINOIS FED. AID PROJECT				

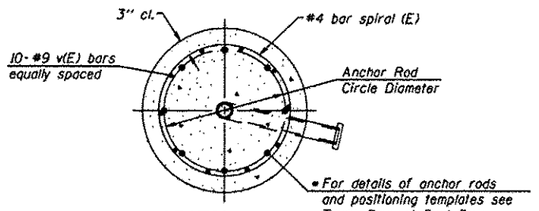
• Grind anchor rod to bright finish at ground clamp location before installing clamp.



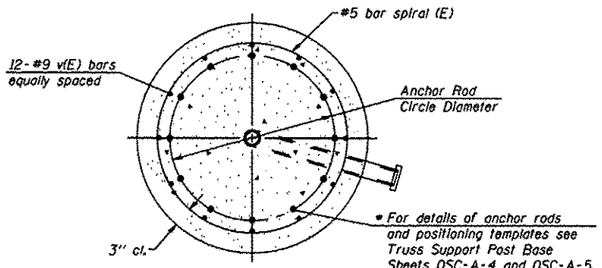
ELEVATION



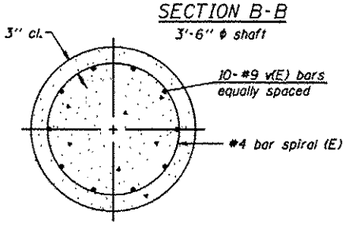
ELEVATION



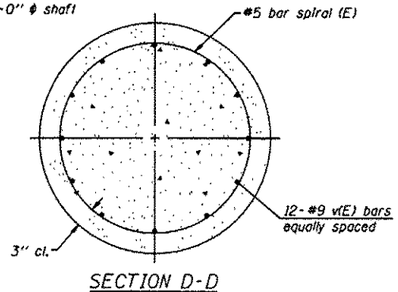
SECTION A-A
3'-0" ϕ shaft



SECTION B-B
3'-6" ϕ shaft



SECTION C-C
3'-0" ϕ shaft



SECTION D-D
3'-6" ϕ shaft

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 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".

FOUNDATION DESIGN TABLE

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods No.	Anchor Rods Diameter (in)	Anchor Rod Circle 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

FOUNDATION DATA TABLE

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
6C068S016R001.19	132+15	III-C-A	3'-6"	703.82	681.32		3'-6"	19'-0"	22'-6"	8.02
6C068S016L000.87	128+00	III-C-A	3'-6"	703.27	680.77		3'-6"	19'-0"	22'-6"	8.02
6C054I055R132.2	703+85	II-C-A	3'-6"	628.75	603.75		3'-6"	21'-6"	25'-0"	8.91

OSC-A-9 1-20-11

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED - ___	REVISED -
		DRAWN - ___	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - ___	REVISED -
	PLOT DATE = #DATE#	DATE - _____	REVISED -

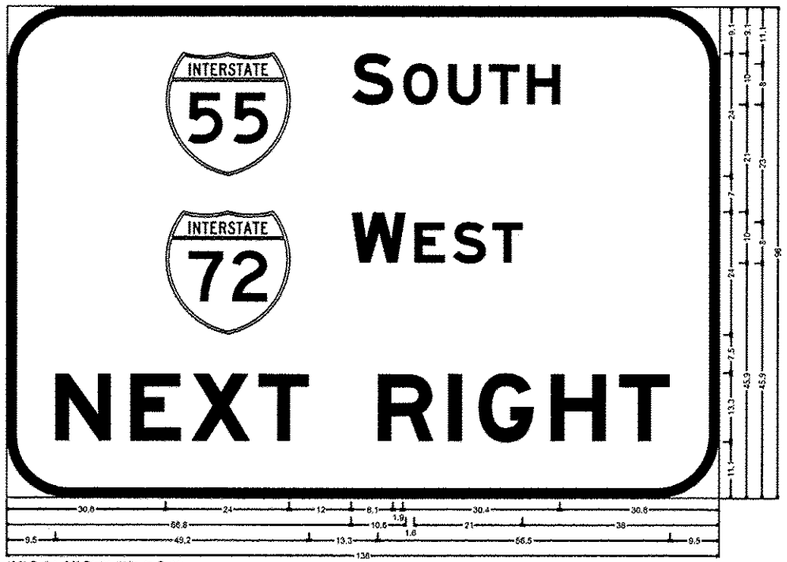
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST

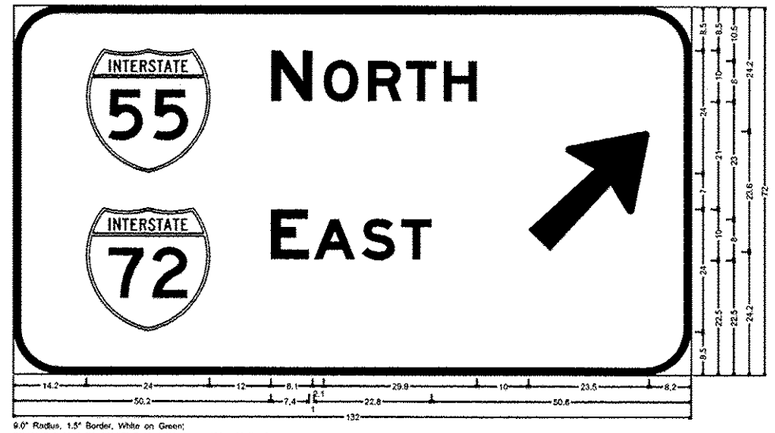
SCALE: _____ | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
_VAR	D-6_OXOSINSIBBEEL12=23	VARIOUS	32	23
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

6S084S029R11.41



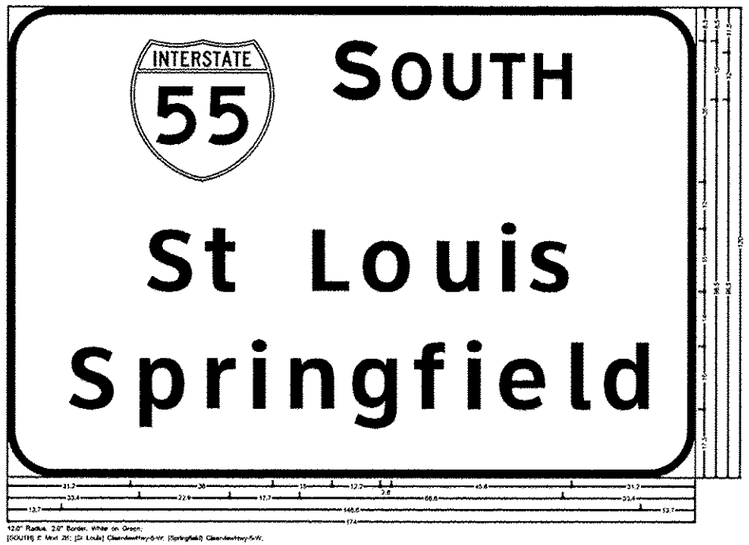
12.0" Radius, 2.0" Border, White on Green;
[SOUTH] E Mod 2K; [WEST] E Mod 2K; [NEXT RIGHT] E Mod 2K;

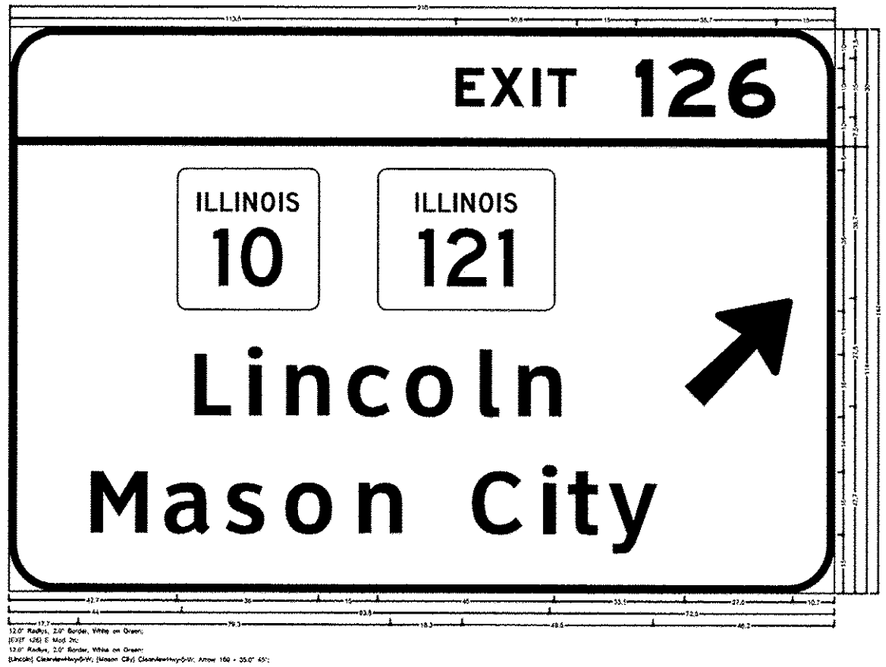


9.0" Radius, 1.5" Border, White on Green;
[NORTH] E Mod 2K; [EAST] E Mod 2K; Arrow 133 - 30.0° 45°;

FILE NAME = ®FILE®	USER NAME = ®USER®	DESIGNED - ___	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN PANEL DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - ___	REVISED -			.V68	D:6_DYDSINSIBBEEL12-23	VARIOUS	32	24
	PLOT SCALE = ®SCALE®	CHECKED - ___	REVISED -					CONTRACT NO. 46226		
	PLOT DATE = ®DATE®	DATE - _____	REVISED -		SCALE: _____ SHEET NO. __ OF __ SHEETS STA. _____ TO STA. _____			ILLINOIS FED. AID PROJECT		

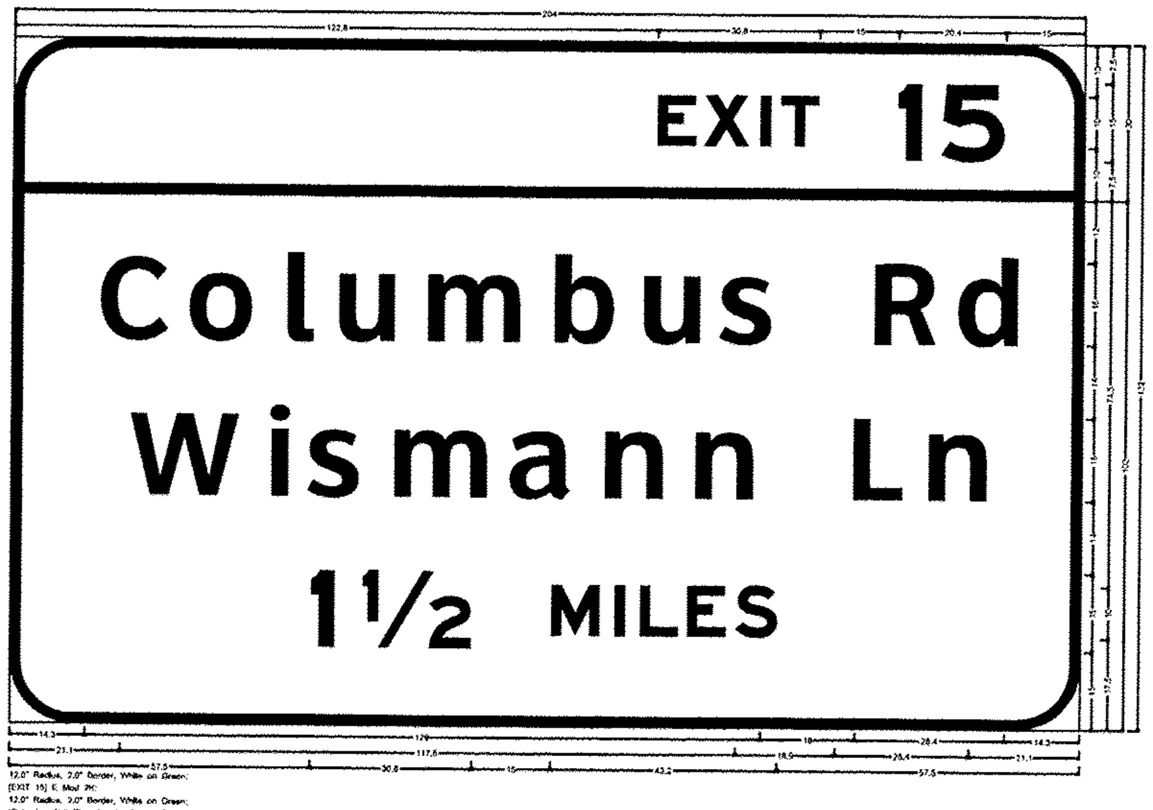
SN 6S054I055L126.2

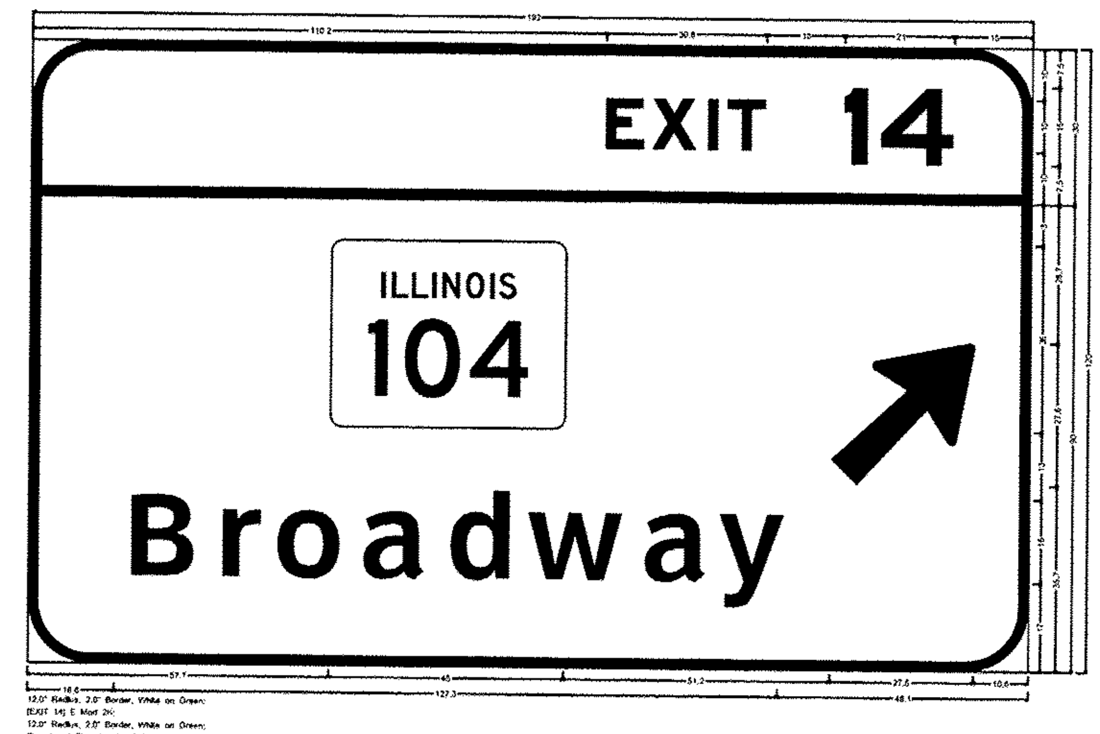




FILE NAME = #FILE1#	USER NAME = #USER#	DESIGNED - ___	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN PANEL DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - ___	REVISED -			VAR	0:6_0X0SINSIBBEPL12:23	VARIOUS	32	25
	PLOT SCALE = #SCALE#	CHECKED - ___	REVISED -							
	PLOT DATE = #DATE#	DATE - _____	REVISED -		SCALE: _____ SHEET NO. __ OF ___ SHEETS STA. _____ TO STA. _____			CONTRACT NO. 46226		
								ILLINOIS FED. AID PROJECT		

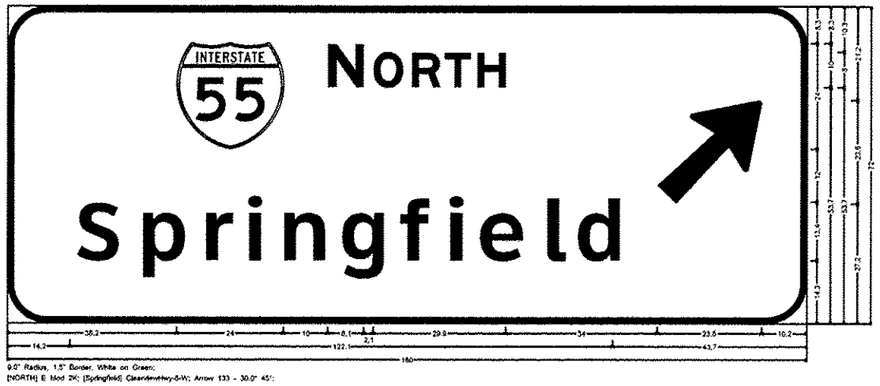
SN 6S001I172R14.6





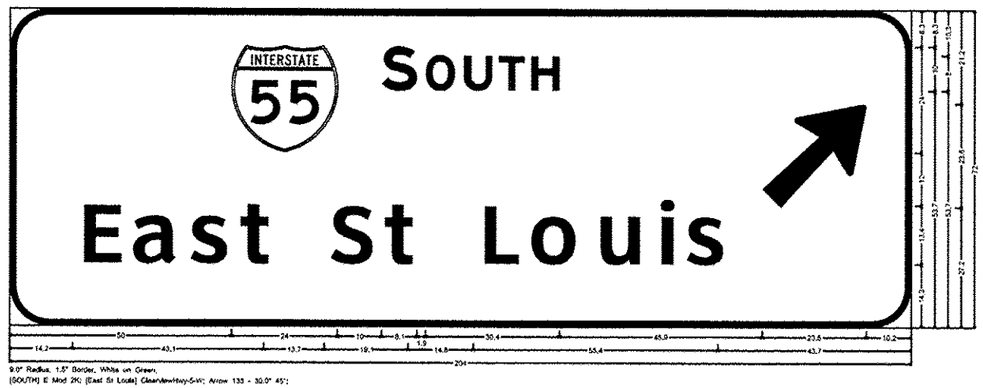
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN PANEL DETAILS	F.A. RTE. VAR	SECTION 0-6 OVDSINSIBBEPL12-23	COUNTY VARIOUS	TOTAL SHEETS 32 / SHEET NO. 26
		DRAWN -	REVISED -						
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 46226	
	PLOT DATE = $DATE$	DATE -	REVISED -				ILLINOIS FED. AID PROJECT		

SN 6C068S016R01.19



9.0" Radius, 1.5" Border, White on Green;
[NORTH] E Mod 2K; [Springfield] Clearviewhwy-5-W; Arrow 133 - 30.0° 45°;

SN 6C068S016L00.87



9.0" Radius, 1.5" Border, White on Green;
[SOUTH] E Mod 2K; [East St Louis] Clearviewhwy-5-W; Arrow 133 - 30.0° 45°;

FILE NAME = #FILE1#	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

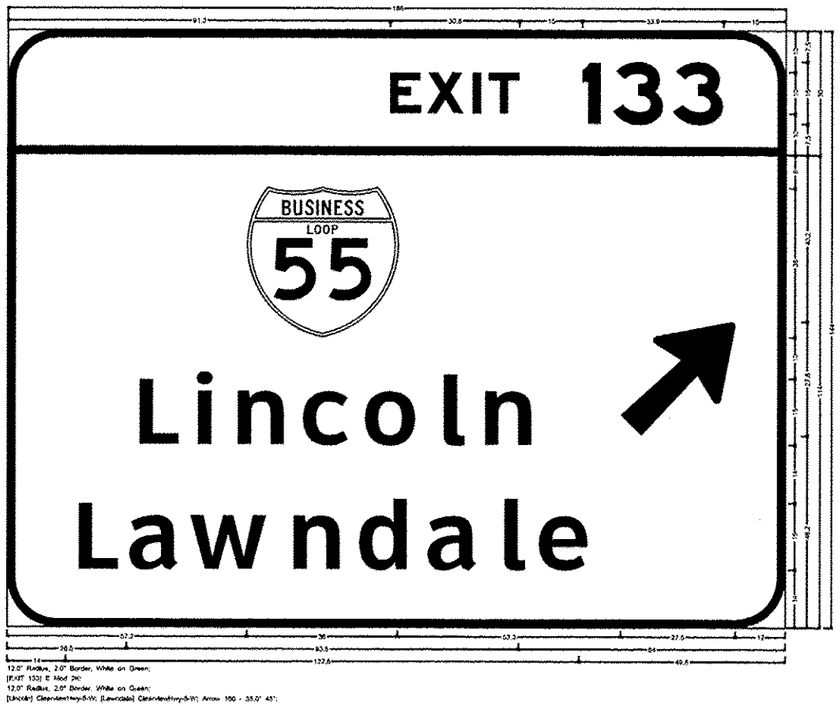
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN PANEL DETAILS

SCALE: | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XAB	0:6 .OVDSINSIRBEEL12:23	VARIOUS	32	27
				46226
	ILLINOIS FED. AID PROJECT			

SN 6C054I055R132.2



FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN PANEL DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -							
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			-V68	D-6 0X0SINSIBBEBL12-23	VARIOUS	32	28
	PLOT DATE = #DATE#	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		46226

SOIL BORINGS

SN 6C054I055R132.2

(31.6)

Page 1 of 1

Illinois Department of Transportation

SOIL BORING LOG

Date 6-5-2012

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION Exit 133 on N.B. I-55

COUNTY Logan STRUCTURE NO. 6C054I055R132.2 (Exist) X (Prop.)

BORING NO. 6C054I055R132.2 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 704+07.0
Offset 61.0 Rt
Ground Surface Elev. 628.13 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter Dry (ft.)
Upon Completion Dry (ft.)
After 48 Hrs. Dry (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt (12")	627.13				
Fill: Brown, Moist, Sandy Loam, with Gravel					
Fill: Light Brown, Moist, Clay, Silty		2.5			
Fill: Grayish Brown, Moist, Clay, Silty, with Sand, Trace Gravel			3 5 6	2.75 P	
		5			
Fill: Grayish Brown mottled Gray, Moist, Clay, Silty, Sandy, with Gravel			2 4 5	3.5 P	
Fill: Brown mottled Gray, Moist, Clay, Silty, Trace Sand and Yellow Brown, Dry, Silt, with Gravel		7.5	1 2 5	4.0 P	
Fill: Brown mottled Gray mottled Yellow Brown, Moist, Clay, Silty, Trace Sand with Silt Lenses		10	3 5 8	2.30 B	
Fill: Gray mottled Brown/Yellow Brown, Moist, Clay, Silty, Trace Sand and Gravel		12.5	3 5 7	3.42 B	
Fill: Brown mottled Gray/Yellow Brown, Moist, Silty Clay, with Clay Seams		15	2 4 8	1.51 B	

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill: Brown mottled Gray, Moist, Clay Loam, Sandy, Silty, with Seam of Clay, Silty		17.5	3 8 7	3.82 B	
Fill: Gray mottled Brown, Moist, Clay, Silty, with Seam of Clay, Trace Sand		20	3 6 9	5.15 B	
Fill: Brown mottled Yellow Brown/Gray, Moist, Clay, Silty, with Seams of Silty Clay		22.5	2 5 6	2.53 B	
Fill: Brown mottled Gray/Yellow Brown, Moist, Clay, Silty and Silty Clay, Trace Organics		25	4 8 13	2.87 B	
Fill: Yellow Brown/Light Brown mottled Gray, Clay, Silty and Seams of Silty Clay, Moist		27.5	2 7 11	2.36 B	
	598.63				
Grayish Brown mottled Gray, Moist, Clay, Silty, Trace Organics, (Loose)		30	1 4 6	2.82 B	
	597.13				
End of Boring @ 31 Ft.					
		32.5			

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 (9/05)

SN 6C068S016L00.87

Page 1 of 1

Illinois Department of Transportation

SOIL BORING LOG

Date 5-31-2012

ROUTE I-55/IL 16 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION Entrance Ramp on Overhead W.B. (IL16) for S.B. I-55

COUNTY Montgomery STRUCTURE NO. 6C068S016L00.87 (Exist) X (Prop.)

BORING NO. 6C068S016L00.87 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 187+26.9
Offset 199.3 Rt
Ground Surface Elev. 702.34 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter Dry (ft.)
Upon Completion Dry (ft.)
After 24 Hrs. Dry (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill: Brown, Moist, Gravelly Clay Loam					
Fill: Light Gray/Gray, Moist, Clay Loam, Sandy, Silty, with Gravel					
		2.5			
Fill: Gray, Moist, Clay Loam, Sandy, Silty, with Gravel and Seams of Clay, Sandy, Silty		5	3 6 5	4.5+ P	11.4
Fill: Gray, Moist, Clay Loam, Sandy, Silty, with Gravel and Seam of Loam, with Gravel			3 6 8	4.5+ P	9.2
Fill: Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel and Wood		7.5	2 4 6	2.23 S	16.6
Fill: Grayish Brown, Moist, Loam, Sandy, Silty, with Gravel		10	4 7 6	2.0 P	6.9
Fill: Reddish Brown mottled Gray, Moist, Clay Loam, Sandy, Silty		12.5	2 5 11	1.92 B	12.6
Fill: Reddish Brown, Moist, Sandy Clay Loam, Silty, Trace Gravel		15	3 5 8	2.0 P	13.2

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill: Reddish Brown, Moist, Clay, Sandy, Silty, Trace Gravel		17.5	2 5 8	2.69 B	12.9
Fill: Reddish Brown, Moist, Sandy Clay Loam, with Seams of Clay Loam, Sandy, Silty, Trace Gravel		20	3 4 8	1.54 B	13.6
Fill: Reddish Brown, Moist, Sandy Clay Loam, and Clay Loam, Sandy, Silty, with Seam of Gray, Clay, with Sand		22.5	3 5 8	3.56 B	15.0
Fill: Reddish Brown, Moist, Sandy Clay, over Brown, Clay Loam, Moist		25	3 7 10	3.42 B	10.8
	675.34				
Gray mottled Yellow Brown, Moist, Clay, Silty, Trace Sand		27.5	2 4 6	2.18 B	30.7
Light Gray mottled Yellow Brown, Silty, Trace Sand		30	2 3 4	1.78 B	22.0
	671.34				
End of Boring @ 31 Ft.					
		32.5			

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 (9/05)

FILE NAME = S:\Sign Truss Plan Details\46226\46226gn-Repl.dgn	USER NAME = mozogd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS
	PLOT SCALE = 0.1052 ft / in.	DRAWN -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.
	PLOT DATE = Aug-07-2012 03:19:22PM	CHECKED -	REVISED -		
		DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D-6_OVDSINSIGREPL12-23	VARIOUS	32	29
		CONTRACT NO. 46226		
		ILLINOIS FED. AID PROJECT		

SOIL BORINGS

SN 6C068S016R01.19

#1

Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 5-31-2012

ROUTE I-55/IL 16 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION Entrance Ramp on Overhead E.B. (IL16) for N.B. I-55

COUNTY Montgomery STRUCTURE NO. 6C068S016R01.19 (Exist) X (Prop.)

BORING NO. 6C068S016R01.19 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 168+60.8
Offset 214.6 Lt
Ground Surface Elev. 702.86 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter Dry (ft.)
Upon Completion Dry (ft.)
After 24 Hrs. Dry (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Fill: Brown, Moist, Gravelly Clay Loam					
		2.5			
Fill: Light Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel					
		2			
Fill: Light Brown, Dry, Clay Loam, Sandy, Silty, Trace Gravel		8	4.5+ P		9.8
		6			
Fill: Light Brown/Gray mottled Yellow Brown, Moist, Clay Loam, Sandy, Silty, Trace Gravel	6				
		2			
		4	2.67 B		10.0
		6			
Fill: Gray mottled Yellow Brown, Moist, Clay, over Brown, Moist, Clay, Silty, Trace Gravel and Sand	7.5	2			
		2	2.20 B		21.9
		8			
Fill: Gray mottled Yellow Brown, Moist, Clay, Silty, with Sand, Trace Gravel	10	2			
		4	1.17 B		21.7
		4			
Fill: Gray over Yellow Brown, Moist, Clay, Silty, with Sand, Trace Gravel	12.5	2			
		5	1.17 B		18.4
		6			
Fill: Gray mottled Yellow Brown/Light Gray, Moist, Clay, with Sand (Top Half)	15	2			
		4	1.78 B		23.0
		4			
Fill: Gray mottled Light Brown/ Gray, Moist, Clay, Sandy, Silty, with Seams of Clay Loam, Sandy, Silty	17.5	3			
		5	3.37 B		21.7
		7			
	20	3			
		5	2.26 B		19.7
		7			
Fill: Reddish Brown mottled Brown/ Gray, Moist, Clay Loam, Sandy, Silty, Trace Gravel with Seams of Clay, Sandy, Silty, Trace Gravel	22.5	3			
		10	7.08 B		8.9
		18			
Fill: Gray/Brown mottled Reddish Brown/ Yellow Brown, Moist, Clay, Sandy, Silty, Trace Gravel	25	3			
		7	4.51 B		22.5
		10			
675.86					
Gray mottled Brown, Moist, Clay, Silty, Trace Sand and Roots	27.6	2			
		4	2.26 B		25.9
		5			
Mottled Yellow Brown/Light Gray, Silty, Trace Sand	30	1			
		4	2.68 B		26.4
671.86		6			
End of Boring @ 31 Ft.					
	32.5				

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)

DBB 137 (8/06)

SN 6S001I172R14.6

#3

Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 5-29-2012

ROUTE IL 336 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION 1/4 Mile South on Exit 14 on IL 336 N.B.

COUNTY Adams STRUCTURE NO. 6S001I172R14.6 (Exist) X (Prop.)

BORING NO. 6S001I172R14.6 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta 246+83.2
Offset 122.6 Rt
Ground Surface Elev. 691.44 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter 6 (ft.)
Upon Completion 7.5 (ft.)
After 144 Hrs. 0.5 (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Topsoil (6"±)	690.94				
Yellow Brown, Moist, Silty Clay					
		2			
Medium Gray, Moist, Silty Loam, Trace Roots, (Loess)	4	2			
		5	4.5+ P		17.9
		5			
Gray		1			
	6	2	0.58 B		26.2
Wet, Trace Sand		1			
		0	0.23 B		28.1
Moist, Trace Sand		0			
	8	1	0.67 B		23.5
		1			
	681.94				
Gray mottled Yellow Brown, Moist, Clay, Silty, with Sand, (Glacial Till)	10	2			
		2	2.15 B		18.8
		4			
	12				
Light Gray mottled Yellow Brown, Moist/Wet, Sandy, Silty		1			
	665.44				
End of Boring @ 26 Ft.		3	1.44 B		22.0
		3			
676.94					
Yellow Brown mottled Light Gray, Moist/ Wet, Sandy Clay Loam, Silty		14			
		3			
		6	2.83 B		15.6
		9			
		16			
674.44					
Yellow Brown, Moist/Wet, Clay Loam, Sandy, Silty, with Gravel		3			
		5	1.59 B		13.3
		7			
671.94		16			
Yellow Brown, Moist, Loam, Sandy, Silty, with Gravel	20	2			
		8	1.85 B		14.2
		12			
		22			
No Sample-Pushed Rock		7			
Medium Gravel (21½ to 24½ ft.)		11			
		17			
		24			
Sandy, Silty, Trace Gravel		5			
		12	4.5+ P		14.3
	665.44	17			
End of Boring @ 26 Ft.	26				

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)

DBS 137 (8/06)

FILE NAME = S:\Sign Truss Plan Details\46226\46226sgnRep1.dgn	USER NAME = mezegd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.1852 ft / in.	DRAWN -	REVISED -			VAR	D-6 OVDSINSTBEBL12-23	VARIOUS	30	30
	PLOT DATE = Aug-07-2012 03:28:19PM	CHECKED -	REVISED -		SCALE:			CONTRACT NO. 46226		
		DATE -	REVISED -		SHEET NO. OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

SOIL BORINGS

SN 6S054I055L126.2

(#4)

Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 6-4-2012

ROUTE I-55 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION 1/4 Mile North of Exit 126 on I-55 S.B.

COUNTY Logan STRUCTURE NO. 6S054I055L126.2 (Exist) X (Prop.)

BORING NO. 6S054I055L126.2 DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 365+40.5
Offset 103.3 Lt
Ground Surface Elev. 562.66 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter 19.5 (ft.)
Upon Completion 13 (ft.)
After 24 Hrs. 15.5 (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Asphalt (12")	561.66				
Fill: Gray, Moist, Clay, Silty, with Gravel		2.5			
Fill: Gray mottled Medium Gray, Moist, Clay, Sandy, Silty, Trace Gravel		2			
		5	3 5	1.76 B	18.6
Fill: Gray, Moist, Clay, Sandy, Silty, Trace Gravel, over Yellow Brown mottled Gray, Moist, Sandy Loam, Trace Gravel			4 6 12	1.56 B	11.6
Fill: Gray mottled Yellow Brown, Moist, Clay, and Clay, Sandy, Silty, Trace Gravel, over Yellow Brown, Moist, Sand, Gravelly, Silty		7.6	2 7 24	3.03 B	12.1
Fill: Yellow Brown, Dry, Sand, with Gravel, Silty		10	5 12 11		8.1
Fill: Gray, Moist, Clay	550.06	12.6	2		
Gray mottled Yellow Brown, Moist, Clay, Silty, with Sand, Trace Organics (Alluvium)			4 6	2.97 B	20.2
Gray, Silty, Trace Sand, with Organics		15	2 3 6	2.28 B	31.2

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Silty, Trace Organics	543.06	17.5	0 1 3	1.14 B	29.9
Gray, Wet, Sand, with Gravel, Clayey, with Clay Seam, Fine to Coarse		20	1 1 1		28.6
Light Brown, with Gravel, Clayey, Fine to Coarse		22.5	2 2 5		13.4
Yellow Brown, with Gravel, Clayey, Fine to Coarse		25	5 5 7		13.6
Trace Gravel, Fine to Medium		27.5	5 7 10		17.7
Fine to Medium		30	4 8 12		19.7
Fine to Coarse		32.5	5 8 9		24.9
End of Boring @ 33½ Ft.	529.06				

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 (9/05)

FILE NAME = S:\Sign Truss Plan Details\46226\46226sheet1.dgn	USER NAME = mezepd	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 0.1852 ft / in.	CHECKED -	REVISED -
	PLOT DATE = Aug-27-2012 8:21:13PM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS

SCALE: | SHEET NO. __ OF __ SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-XAB	D-6.OVOSINSIBSEEPL12-23	VARIOUS	32	31
		CONTRACT NO. 46226		
	ILLINOIS FED. AID PROJECT			

SOIL BORINGS

6S084S029R11.41

(116)

Page 1 of 1

Illinois Department of Transportation

SOIL BORING LOG

Date 5-29-2012

ROUTE I-55/IL 29 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION East of Exit 98 (I-55) on IL 29 N.B. (South Leg of Sign)

COUNTY Sangamon STRUCTURE NO. 6S084S029R11.41 (Exist) X (Prop.)

BORING NO. 6S084S029R11.41 S DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 50+93.9
Offset 4.7 Rt
Ground Surface Elev. 566.61 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter Dry (ft.)
Upon Completion Dry (ft.)
After 42 Hrs. 7 (ft.)

SOIL DESCRIPTION	ELEV (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Topsoil (6")	566.11				
Yellow Brown, Moist, Clay, Sandy, Silty		2			
	563.11				
Yellow Brown, Moist, Clay Loam, Sandy, Silty, Trace Gravel, (Glacial Till)		4	4 13 18	4.5+ P	9.6
Sandy, Silty, Trace Gravel			6		
		8	13 19	4.5+ P	9.2
	558.61				
Yellow Brown mottled Light Brown, Dry, Loam, Sandy, Silty, Trace Gravel			11		
		8	24 25	4.5+ P	8.6
Grayish Brown mottled Yellow Brown, Sandy, Silty		10	5		
			11 17	8.39 B	12.6
	554.61	12			
Gray mottled Brown, Dry, Sandy Clay Loam, Silty with Seams of Clay Loam, Sandy, Silty			5		
			10 16	4.5+ P	12.0
Mottled Yellow Brown/Light Brown, Silty, with Seams of Clay Loam			14		
			11		
			15 20		14.5
	549.61	18			
Gray, Dry, Silt, Shaly (Weathered Siltstone Residuum)			5		
			23 50		14.7
	547.11				
Gray, Dry, Weathered Shale, Silty			20		
			100/5		6.8
			22		
Silty			34		
			100/5		9.0
	543.11				
End of Boring @ 23½ FL		24			
		26			

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 (9/06)

Page 1 of 1

Illinois Department of Transportation

SOIL BORING LOG

Date 5-30-2012

ROUTE I-55/IL 29 DESCRIPTION Overhead Sign Structure LOGGED BY BJS

SECTION D6 Overhead Sign Replace LOCATION East of Exit 98 (I-55) on IL 29 N.B. (North Leg of Sign)

COUNTY Sangamon STRUCTURE NO. 6S084S029R11.41 (Exist) X (Prop.)

BORING NO. 6S084S029R11.41 N DRILLING METHOD 3 1/4" HSA HAMMER TYPE 140 LB Automatic

Station Sta. 50+88.3
Offset 65.9 Lt
Ground Surface Elev. 568.31 (ft.)

Surface Water Elev. n/a (ft.)
Groundwater Elev.
First Encounter Dry (ft.)
Upon Completion Dry (ft.)
After 24 Hrs. 17 (ft.)

SOIL DESCRIPTION	ELEV. (ft.)	DEPTH (ft.)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Asphalt (11")					
	567.39				
Yellow Brown, Moist, Clay, Silty, with Sand		2			
	564.81				
Yellow Brown mottled Light Gray, Moist, Clay Loam, Silty, Sandy, (Glacial Till)		4	2 3 2	0.91 B	17.2
	563.31				
Yellow Brown, Moist, Sandy Clay Loam, Silty			2		
		6	3 4		16.4
	561.31				
Yellow Brown mottled Gray/Light Brown, Dry, Loam, Sandy, Silty			4		
		8	11 20	6.03 S	11.6
Mottled Gray/Brown, Sandy, Silty		10	8		
			16 24	4.5+ P	12.3
		12			
Gray mottled Yellow Brown/Brown, Sandy, Silty			6		
	542.31		14 24		14.2
	553.81		14		
Gray mottled Brown/Yellow Brown, Dry, Sandy Loam, Silty, Trace Gravel with Seams of Loam			11		
			10 27		11.7
		18			
			8		
Mottled Light Gray/Light Brown, Silty, with Gravel	550.31	18	14 18		12.7
Gray, Dry, Silt (Weathered Siltstone Residuum)					
	549.81				
Gray, Dry, Weathered Shale, Silty		20	15		
			65 100/4		8.8
		22			
Silty			23		
			83 100/3		8.1
		24			
			24		
Silty			62 100		10.3
	542.31	28			
End of Boring @ 28 FL					

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 (9/06)

FILE NAME = S:\Sign Truss Plan Details\46226\46226sgnRepl.dgn	USER NAME = mesegd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.1852 ft / in.	CHECKED -	REVISED -			WAB	D-6 OVDSIGNSTRSEEL12-23	VARIOUS	30	32
	PLOT DATE = Aug-07-2012 03:21:47PM	DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 46226		
						ILL3N015	FED. AID PROJECT			