

1-20-2012 LETTING ITEM 059

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

VARIOUS ROUTES
D-5 OVD SIN STR REPL 2012-06
VARIOUS COUNTIES
Sheet 1 of 178
Contract Number 46179

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

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VARIOUS ROUTES
D-5 OVD SIN STR REPL 2012-06
VARIOUS COUNTIES
C-60-006-12

STANDARDS
SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 18 20 11
PASSED

Justin Mann
ENGINEER OF OPERATIONS

Dec 9 20 11
acting Scott E. Still, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED Dec 9 20 11
William R. Feyler
DIRECTOR DIVISION OF HIGHWAYS

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

CONTRACT NO. 46179

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LIST OF STANDARDS

STD. NUMBER	NAME OF STANDARD
606301-04	PC CONCRETE ISLANDS AND MEDIANS
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-08	TRAFFIC BARRIER TERMINAL, TYPE 2
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701101-02	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-05	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-06	LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-06	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-08	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701421-04	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >= 45 MPH TO 55 MPH
701422-04	LANE CLOSURE, MULTILANE, FOR SPEEDS >= 45 MPH TO 55 MPH
701446-03	TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
701456-02	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701502-04	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-07	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-05	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-08	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701901-02	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
720021-02	SIGN PANELS, EXTRUDED ALUMINUM TYPE
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-09	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

* VARIOUS
 ** D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS /LIST OF STANDARDS			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca\pwwork\pwwid\ceerlockjd\0266597\0266597.dgn	46179-sht-gennote.dgn	DRAWN -	REVISED -					*	**	Various	178	2
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 46179							
PLOT DATE = 10/7/2011	DATE -	REVISED -			SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

SHEET 1 OF 2

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	RURAL 100% STATE 0021	RURAL 100% STATE 0040
20400800	FURNISHED EXCAVATION	CUYD	269.00	269.00	
60618320	CONCRETE MEDIAN SURFACE, 6 INCH	SQFT	158.00	158.00	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	212.50	212.50	
* 63100046	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.00	1.00	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	1.00	1.00	
63200310	GUARDRAIL REMOVAL	FOOT	1271.00	1271.00	
* 63400105	GUARD POSTS	EACH	10.00	10.00	
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	6.00	6.00	
64301090	ATTENUATOR BASE	SQYD	306.00	306.00	
67100100	MOBILIZATION	L SUM	1.00		1.00
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	16.00		16.00
70100315	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	EACH	2.00		2.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	19.00		19.00
70100430	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	EACH	1.00		1.00
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1.00		1.00
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1.00		1.00
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1.00		1.00
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1.00		1.00
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1.00	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	6020.00		6020.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	7310.50		7310.50
72400710	RELOCATE SIGN PANEL - TYPE 1	SQFT	99.30		99.30
72400720	RELOCATE SIGN PANEL - TYPE 2	SQFT	24.00		24.00
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	10093.00		10093.00
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	384.00		384.00
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	86.00		86.00
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	374.00		374.00
73301840	OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	FOOT	79.00		79.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	112.00		112.00
73303000	OVERHEAD SIGN STRUCTURE - MONOTUBE	FOOT	252.80		252.80
73304000	OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	FOOT	32.50		32.50
73400100	CONCRETE FOUNDATIONS	CUYD	22.90		22.90
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	201.50		201.50

GENERAL DESCRIPTION OF FUND CODES:

0021 = SAFETY - TRAFFIC SIGNALS, LIGHTING, GUARDRAIL
 0040 = SPECIAL BRIDGE - OVERHEAD SIGN STRUCTURES

* SPECIALTY ITEM

- VARIOUS
- 0-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
est\pwwork\pwwork\ceerlockjd\0266557\0	46179-sin-600.dgn	DRAWN -	REVISED -		SCALE: N/A	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	•	**	Various	178	3
	PLOT SCALE = 1/8" = 1' / 32"	CHECKED -	REVISED -								CONTRACT NO. 46179		
	PLOT DATE = 10/27/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

SUMMARY OF QUANTITIES

SHEET 2 OF 2

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	RURAL 100% STATE 0021	RURAL 100% STATE 0040
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	9.00		9.00
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	7.00		7.00
73601100	REMOVE OVERHEAD SIGN STRUCTURE, MONOTUBE - SPAN	EACH	5.00		5.00
73602000	REMOVE OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	EACH	2.00		2.00
73700100	REMOVE GROUND MOUNTED SIGN SUPPORT	EACH	2.00		2.00
73700200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	2.00		2.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	27.00		27.00
73800100	STRUCTURAL STEEL SUPPORT FOR OVERHEAD SIGN STRUCTURE - SPAN	EACH	2.00		2.00
73801100	REMOVE AND REERECT OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00		1.00
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	5.00	5.00	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1.00	1.00	
81028360	UNDERGROUND CONDUIT, <i>PVC,</i> 2 1/2" DIA.	FOOT	29.00	29.00	
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2.00	2.00	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	500.00	500.00	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	248.00	248.00	
87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	2.00	2.00	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26.00	26.00	
87900200	DRILL EXISTING HANDHOLE	EACH	2.00	2.00	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4.00	4.00	
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2.00	2.00	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2.00	2.00	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	259.00	259.00	
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	110.00	110.00	
X4403800	MEDIAN SURFACE REMOVAL	SQFT	158.00	158.00	
X6320100	GUARDRAIL REMOVAL SPECIAL	FOOT	546.00	546.00	
X6340205	GUARD POSTS REMOVAL	EACH	18.00	18.00	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	68.00	68.00	
X7330070	OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	10.00		10.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	18.00	18.00	
X8950305	REMOVE EXISTING SIGNAL HEAD	EACH	6.00	6.00	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.00		1.00
Z0029999	IMPACT ATTENUATOR REMOVAL	EACH	4.00	4.00	

GENERAL DESCRIPTION OF FUND CODES:
 0021 = SAFETY - TRAFFIC SIGNALS, LIGHTING, GUARDRAIL
 0040 = SPECIAL BRIDGE - OVERHEAD SIGN STRUCTURES

***SPECIALTY ITEM**

- * VARIOUS
- ** D-5 OVD SIN STR REPL 2012-06

FILE NAME *	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\ps_wor\work\pwidot\ceerlockjd\0266557	46179-shr-S00.dgn	DRAWN -	REVISED -		SCALE: N/A	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.		Various	178	4
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 46179							
	PLOT DATE = 10/7/2011	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-100A
ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.07
EXISTING STATE-OWNED AND MAINTAINED UTILITY ARE PRESENT AT MANY SIGN TRUSS REPLACEMENT LOCATIONS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.). THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-202
FINAL GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE ASSOCIATED PAY ITEMS FOR SIGN TRUSS REPLACEMENT WITH NO ADDITIONAL COMPENSATION ALLOWED.

• VARIOUS
•• D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw_work\pwidot\ceerlockjd\0266557\046179-shr-gennote.dgn		DRAWN -	REVISED -			•	••		Various	178	5
PLOT SCALE = 40,0000' / 1" =		CHECKED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: N/A	SHEET NO. 1 OF 1 SHEETS		STA. TO STA.			

TRAFFIC CONTROL SUMMARY

LOCATION NO.	STRUCTURE NO.	STANDARDS REQUIRED	PEAK HOURS	PEAK HOUR RESTRICTIONS	FULL ROAD CLOSURE REQUIRED?	NIGHT TIME FULL ROAD CLOSURE REQUIRED?	CHANGEABLE MESSAGE BOARD REQUIRED?
5-01	5 C 092 1074 L208.35	701400 701401 701411	3:00 p.m. to 7:00 p.m.	No lane closures or lane restrictions during peak hours.	NO	N/A	6 CAL DA
5-02	5 C 092 1074 R214.25	701411 701456	NONE	N/A	NO	N/A	5 CAL DA (See Note #3)
5-03	5 C 010 1074 L183.90	701400 701401 701411	6:00 a.m. to 6:30 a.m.	No lane closures or lane restrictions during peak hours.	NO	N/A	6 CAL DA
5-04	5 B 010 U045 L012.58	701601	NONE	N/A	NO	N/A	NO
5-05	5 S 010 1057 L235.32	701400 701401 701411	2:00 p.m. to 6:00 p.m.	No lane closures or lane restrictions during peak hours.	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	6 CAL DA
5-06	5 S 010 1057 R236.14	701400 701401	3:00 p.m. to 7:00 p.m.	No lane closures or lane restrictions during peak hours.	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	6 CAL DA
5-07	5 C 020 1074 R155.62	701400 701401 701411	NONE	N/A	NO	N/A	6 CAL DA
5-08	5 C 020 1074 L156.44	701400 701401 701411	NONE	N/A	NO	N/A	3 CAL DA (less work to be done here)
5-09	5 S 057 1074 L134.10	701400 701401 701411	NONE	N/A	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	6 CAL DA
5-10	5 S 057 1055 R156.20	701400 701401 701411	NONE	N/A	YES	YES 10:00 p.m. to 6:00 a.m. Sunday thru Thursday	6 CAL DA
5-11	5 S 057 U055 R000.20	701400 701401 701411	7:00 a.m. to 9:00 a.m.	No Full Road closures during peak hours.	YES	NO Contractor option to do at night	6 CAL DA
5-12	5 C 057 U055 L000.40	701422 701411(3 ea.)	NONE	N/A	NO	N/A	NO
5-13	5 S 057 U055 L001.70	701422	7:00 a.m. to 9:00 a.m. 3:00 p.m. to 7:00 p.m.	701422 is allowed at all times of day except 3:30 p.m. to 6:00 p.m. No Full Road closures during peak hours.	YES	NO Contractor option to do at night	NO
5-14	5 S 057 1039 R000.50	701400 701401 701411	NONE	N/A	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	SB - 6 CAL DA & NB - 6 CAL DA
5-15	5 S 057 1039 R001.00	701400 701401 701411	NONE	N/A	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	covered under 5-14
5-16	5 S 057 1039 R001.90	701400 701401 701411	NONE	N/A	YES	YES 9:00 p.m. to 6:00 a.m. Sunday thru Thursday	covered under 5-14
5-17	5 S 057 U051 R006.80	701601	7:00 a.m. to 6:00 a.m. 3:00 p.m. to 6:00 p.m.	701601 is allowed at all times of day. No Full Road closures during peak hours.	YES	NO	NO
5-18	5 C 057 U051 L006.90	701601	7:00 a.m. to 9:00 a.m. 3:30 p.m. to 6:00 p.m.	701601 is allowed at all times of day. No Full Road closures during peak hours.	YES	NO	NO
5-19	5 C 057 U051 L007.30	701601	7:00 a.m. to 8:00 a.m. 3:30 p.m. to 5:00 p.m.	701601 is allowed at all times of day. No Full Road closures during peak hours.	YES	NO	NO
5-20	5 B 057 U051 R007.10	701601	NONE	N/A	NO	N/A	NO
5-21	Manotube #227	701502	NONE	N/A	YES	NO	NO
5-22	Manotube #228	701601	NONE	N/A	YES	NO	NO
5-23	Manotube #230	701602	NONE	N/A	YES	NO	NO
5-24	Manotube #231	701601	NONE	N/A	YES	NO	NO
5-25	Manotube #232	701502	NONE	N/A	YES	NO	NO

Note: 701446 should only be needed during night time removal and erection operations. 701446 shall be utilized only between the hours of 7:00 p.m. to 6:00 a.m. Sunday thru Thursday.

NOTES:

- For truss locations where construction operations will be conducted only during daylight hours 701406 may be substituted for 701401; and 701421 may substituted for 701422.
- CMS - Pay Item X7015005 is for advanced interstate notice - 3 days prior to foundation construction & 3 days prior to truss removal and erection.
- CMS at 5-02 5C0921074R214.25 (I-74 collector lane) - to be placed back toward exit 214 "G-street" and utilized during construction activities at the discretion of the engineer.
- CMS shown on Standards are included in the cost of the Standard.
- See Special Provision SITE SPECIFIC TRAFFIC CONTROL AND PROTECTION for additional information and details.

*VARIOUS
**D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd
c:\pwwork\pwwork\ceerlockjd\2626538\0346179-ah-traffic.dgn	
PLOT SCALE = 40.0000' / 1"	
PLOT DATE = 10/7/2011	

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL SUMMARY

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	6
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

84500120 - REMOVAL OF ELECTRIC SERVICE INSTALLATION				
LOCATION NO.	STRUCTURE NO.	UNIT	QUANTITY	DESCRIPTION
5-06	5 S 010 I057 R236.14	EACH	1.0	Truss lighting # 10/601 is to have the electric service removed. The electric service to be removed is south of the sign truss on a wood pole just North of the Kirby Ave. overhead. Work shall be completed in accordance with Section 845 of the Standard Specifications including removal of the wood pole, electric box, electric meter, and photo-cell box.
5-13	5 S 057 U055 L001.70	EACH	1.0	Truss lighting # 160/601 is to have the electric service removed. The electric service to be removed is on a wood pole on the far side of the adjacent frontage road Springfield Rd. Work shall be completed in accordance with Section 845 of the Standard Specifications including removal of the wood pole, electric box, electric meter, and photo-cell box.

X8040310 - ELECTRIC SERVICE DISCONNECT				
LOCATION NO.	STRUCTURE NO.	UNIT	QUANTITY	DESCRIPTION
5-01	5 C 092 I074 L208.35	EACH	1.0	Truss lighting # 61/601 is end of run stubbed from nearby light pole # 61/102.
5-02	5 C 092 I074 R214.25	EACH	1.0	Truss lighting # 65/605 is end of run stubbed from nearby light pole # 65/127.
5-03	5 C 010 I074 L183.90	EACH	1.0	Truss lighting # 55/604 & # 55/605 are end of run stubbed from nearby light pole # 55/114 to the junction box on the NW corner of bridge 010-0024. Conduit and attachment clamps along the bottom flange of the bridge to L012.58 shall be removed. The junction box on the NW corner of the bridge shall be removed. Conduit and unit duct at the bridge shall be removed to a depth of 1 foot below ground and the hole backfilled. Cable in the unit duct from the junction box back to light pole # 55/114 shall be removed and become property of the Contractor.
5-04	5 B 010 U045 L012.58	EACH	1.0	Truss lighting # 55/604 & # 55/605 are end of run stubbed from nearby light pole # 55/114 to the junction box on the NW corner of bridge 010-0024. Conduit and attachment clamps along the bottom flange of the bridge to L012.58 shall be removed. The junction box on the NW corner of the bridge shall be removed. Conduit and unit duct at the bridge shall be removed to a depth of 1 foot below ground and the hole backfilled. Cable in the unit duct from the junction box back to light pole # 55/114 shall be removed and become property of the Contractor.
5-05	5 S 010 I057 L235.32	EACH	1.0	Truss lighting # 11/604 is end of run stubbed from nearby light pole # 11/115.
5-07	5 C 020 I074 R155.62	EACH	1.0	Truss lighting # 42/601 is end of run stubbed from nearby light pole # 42/101.
5-08	5 C 020 I074 L156.44	EACH	1.0	Truss lighting # 43/601 is end of run stubbed from nearby light pole # 43/101.
5-09	5 S 057 I074 L134.10	EACH	1.0	Truss lighting # 110/601 is end of run stubbed from nearby light pole # 110/102.
5-10	5 S 057 I055 R156.20	EACH	1.0	Truss lighting # 109/601 is end of run stubbed from nearby light pole # 109/104.
5-11	5 S 057 U055 R000.20	EACH	1.0	Truss lighting # 109/602 is end of run stubbed from nearby light pole # 109/110.
5-12	5 C 057 U055 L000.40	EACH	1.0	Truss lighting # 109/604 is end of run stubbed from nearby light pole # 109/113.
5-14 SB	5 S 057 I039 R000.50	EACH	1.0	Truss lighting # 145/605 is end of run stubbed from nearby light pole # 145/502.
5-15 SB	5 S 057 I039 R001.00	EACH	1.0	Truss lighting # 145/604 is end of run stubbed from nearby light pole # 145/514.
5-16 SB	5 S 057 I039 R001.90	EACH	1.0	Truss lighting # 146/602 is end of run stubbed from nearby light pole # 146/503.
5-17	5 S 057 U051 R006.80	EACH	1.0	Truss lighting # 122/601 is end of run stubbed from nearby light pole # 122/501.
5-18	5 C 057 U051 L006.90	EACH	1.0	Truss lighting # 122/602 is end of run stubbed from nearby light pole # 122/502.
5-19	5 C 057 U051 L007.30	EACH	1.0	Truss lighting # 122/606 is end of run stubbed from nearby light pole # 122/503.
5-20	5 B 057 U051 R007.10	EACH	1.0	Truss lighting # 122/603 is end of run stubbed from nearby light pole # 122/506. Conduit and attachment clamps along the bottom flange of bridge 057-0024 shall be removed. Conduit / unit duct at the SW corner of the West Abutment shall be removed to a depth of 1 foot below ground.

See Special Provision - "ELECTRIC SERVICE DISCONNECT" for additional details.

The information provided in this chart and the electrical shown on the plans sheets is the best guess based on "As-Built" plans and by looking in each foundation for the number of unit ducts.

Contractor shall verify the existing path of the electrical circuit and adjust work as needed.

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw\work\pwidot\ceerlockjd\0266557\046179-sht-schedule.dgn	PLOT SCALE = 40,0000' / 1" = 1'	DRAWN -	REVISED -		SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	•	••	Various	178	7
	PLOT DATE = 10/7/2011	CHECKED -	REVISED -										
		DATE -	REVISED -										
CONTRACT NO. 46179													
ILLINOIS FED. AID PROJECT													

SCHEDULE OF QUANTITIES

SHEET 2 OF 2

SCHEDULE OF QUANTITIES

CODE NUMBER	PAY ITEM	UNIT	100% STATE TOTAL QUANTITY	General Location: Scope of Work:																													
				VERMILION CNTY			CHAMPAIGN COUNTY					DEWITT COUNTY			MCLEAN COUNTY - SW SPAGHETTI BOWL						MCLEAN COUNTY - I-39						MCLEAN COUNTY - US 51 Busn						EDGAR COUNTY - MONOTUBES - Paris
				C	C	GM	GM	SS	SS	C	SR	SS	SS	SS	C	GM	SS	-	SS	-	BM	GM	GM	GM	GM	GM	BM-Rem	M	M	M	M	M	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	9.00	-	-	-	-	1.00	1.00	-	-	1.00	-	1.00	-	1.00	0.50	0.50	0.50	0.50	0.50	-	0.50	1.00	-	-	-	-	-	-	-	-	-
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	7.00	1.00	1.00	1.00	-	-	-	1.00	-	-	-	-	1.00	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-
73601100	REMOVE OVERHEAD SIGN STRUCTURE, MONOTUBE - SPAN	EACH	5.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	1.00	1.00	1.00		
73602000	REMOVE OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	EACH	2.00	-	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	-	-	-	-	-	-	
73700100	REMOVE GROUND MOUNTED SIGN SUPPORT	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	-	-	-	-	-	-	-	-	
73700200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	-	-	-	-	-	-	-	-	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	27.00	1.00	1.00	1.00	-	2.00	2.00	1.00	-	2.00	2.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	-	1.00	2.00	1.00	1.00	-	-	-	-	-	-	
73800100	STRUCTURAL STEEL SUPPORT FOR OVERHEAD SIGN STRUCTURE - SPAN	EACH	2.00	-	-	-	-	-	-	-	-	-	-	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
73801100	REMOVE AND REERECT OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00	-	-	-	-	-	-	-	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	5.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.00	-	-	-	-	-	-	-	-	-	-	-	-	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	29.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.00	25.00	-	-	-	-	-	-	-	
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2.00	-	-	-	-	-	1.00	-	-	-	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	500.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42.00	458.00	-	-	-	-	-	-	-	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	248.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	248.00	-	-	-	-	-	-	-	-
87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-	
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	26.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.00	13.00	-	-	-	-	-	-	-	
87900200	DRILL EXISTING HANDHOLE	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-	
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	2.00	-	-	-	-	-	-	-	
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	-	-	-	-	-	-	-	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	259.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	259.00	-	-	-	-	-	-	-	-	
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	110.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110.00	-	-	-	-	-	-	-	-	
X4403800	MEDIAN SURFACE REMOVAL	SQFT	158.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158.00	-	-	-	-	-	-	-	-	-	
X6320100	GUARDRAIL REMOVAL SPECIAL	FOOT	546.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	546.00	-	-	-	-	-	-	-	-	
X6340205	GUARD POSTS REMOVAL	EACH	18.00	-	-	-	-	10.00	8.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	68.00	6.00	5.00	6.00	-	6.00	6.00	6.00	3.00	6.00	6.00	6.00	-	-	6.00	6.00	**	**	**	**	**	-	-	-	-	-	-	-	-	-	
X7330070	OVERHEAD SIGN SUPPORT GROUT REPAIR	EACH	10.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	2.00	2.00	2.00	2.00		
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	18.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	-	1.00	1.00	1.00	1.00	-	-	-	-	-	-	
X8950305	REMOVE EXISTING SIGNAL HEAD	EACH	6.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	3.00	-	-	-	-	-	-	-	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.00	0.04	0.04	0.03	0.03	0.04	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03		
Z0029999	IMPACT ATTENUATOR REMOVAL	EACH	4.00	-	-	-	-	2.00	2.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BM = Overhead Sign Structure Replacement w/ Bridge Mount
 BM-Rem = Existing Bridge Mount Removal only
 C = Overhead Sign Structure Replacement w/ Cantilever
 GM = Overhead Sign Structure Replacement w/ Breakaway Ground Mount
 SS = Overhead Sign Structure Replacement w/ Simple Span
 M = Overhead Sign Structure Replacement w/ Monotube
 SR = Sign Replacement - Only

** 6 day (3 days before fdn's + 3 days before remove and erect) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (SS057I039R000.50)

• VARIOUS
 •• D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = oerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pwwork\pwwork\oerlockjd\0266557046179-sh1-schedule.dgn		DRAWN -	REVISED -			•	••	Various	178	9	
PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011		DATE -	REVISED -			SCALE: N/A		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	

SCHEDULE OF QUANTITIES
VERMILION COUNTY – INDIVIDUAL LOCATIONS

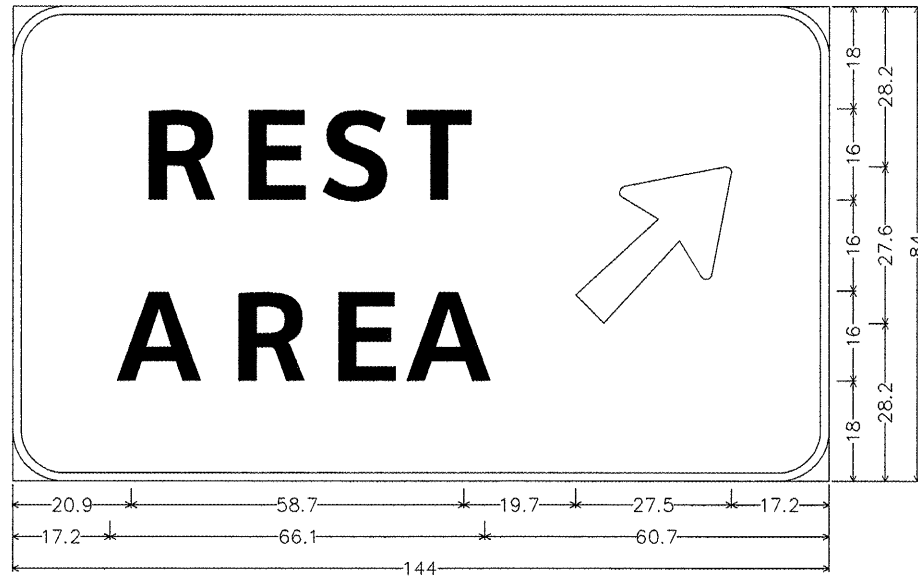
Location No.	5-01		
Structure No.	5 C 092 I074 L208.35		
County / Route	VERMILION CO. - I-74 WB - Salt Kettle Rest Area		
Scope of Work	This overhead cantilever is being replaced on a new drilled shaft foundation.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	84.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	71.50
73301840	OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	FOOT	17.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	28.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	9.00
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00
Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.			

Location No.	5-02		
Structure No.	5 C 092 I074 R214.25		
County / Route	VERMILION CO. - I-74 EB - in collector lane for IL 1 interchange		
Scope of Work	This overhead cantilever is being replaced on a new drilled shaft foundation.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	188.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	113.50
73301840	OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	FOOT	24.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	29.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	9.00
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	5.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00
3 day advanced notice CMS not needed. CMS to be placed back toward to Exit 214 "G-Street" and utilized during construction activities.			

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES VERMILION COUNTY – INDIVIDUAL LOCATIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwork\pwork\ceerlockjd\0266957\046179-sh1-schedule.dgn	DRAWN -	REVISED -	•			••	Various	178	10	
PLOT SCALE = 40.0000' / 1" =	CHECKED -	REVISED -	CONTRACT NO. 46179							
PLOT DATE = 10/7/2011	DATE -	REVISED -	SCALE: N/A			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	[ILLINOIS] FED. AID PROJECT		

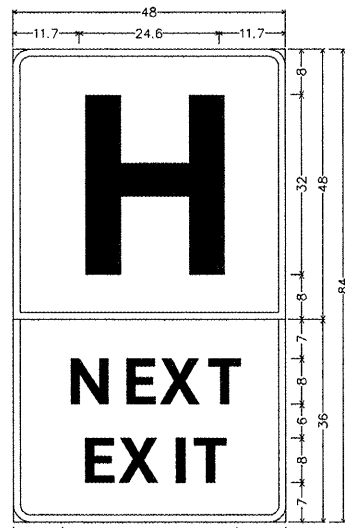
5-01
5 C 092 1074 L208.35



9.0" Radius, 1.5" Border, White on Blue;
[REST] ClearviewHwy-5-W; [AREA] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°;
Table of letter and object lefts.

R	E	S	T	↗
20.9	38.5	52.9	68.0	99.3
A	R	E	A	
17.2	36.8	54.4	68.3	

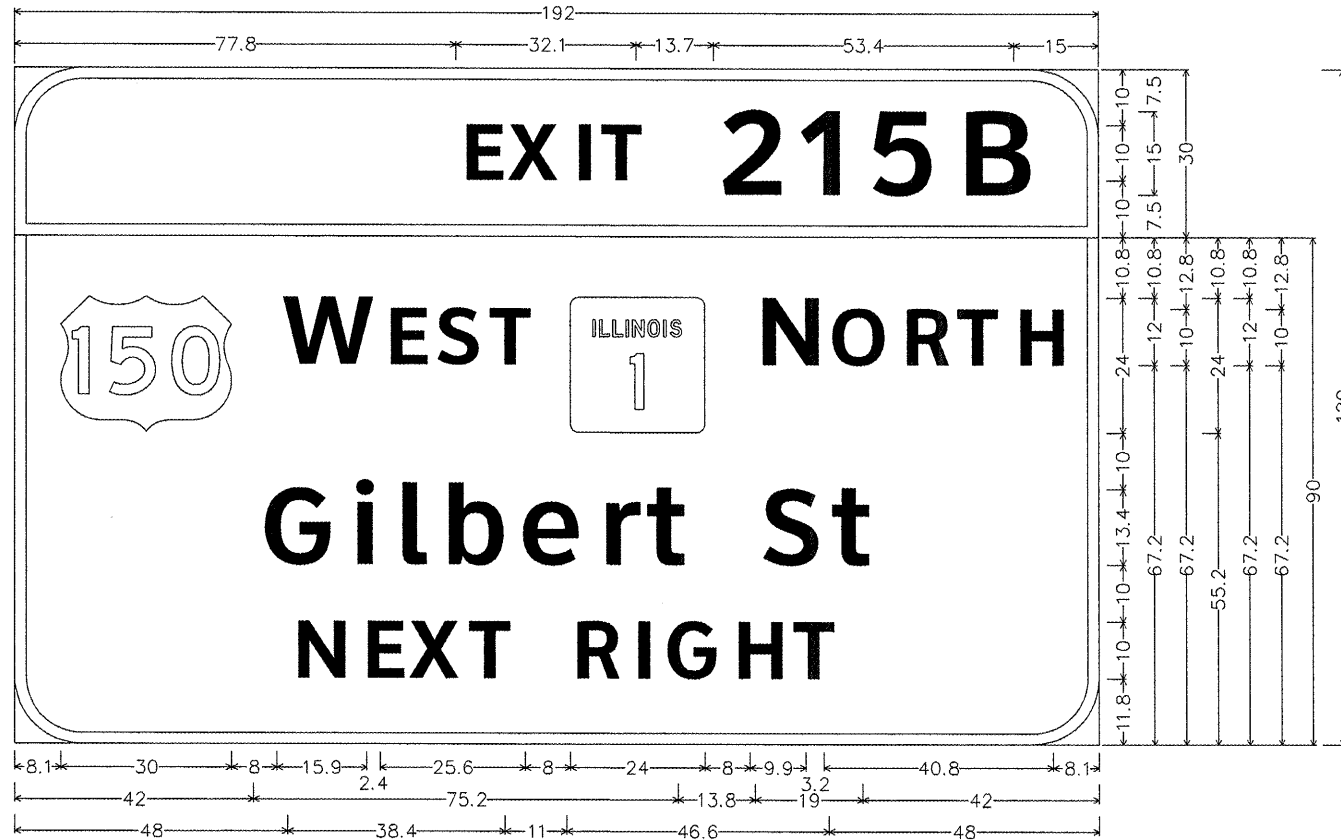
5-02 B
5 C 092 1074 R214.25 - RIGHT SIGN



3.0" Radius, 1.3" Border, White on Blue;
[H] ClearviewHwy-5-W;
3.0" Radius, 1.3" Border, White on Blue;
[NEXT] ClearviewHwy-5-W;
[EXIT] ClearviewHwy-5-W;
Table of letter and object lefts.

H			
11.7			
N	E	X	T
8.6	18.4	25.3	33.6
E	X	I	T
11.2	18.0	27.1	31.1

5-02 A
5 C 092 1074 R214.25 - LEFT SIGN



12.0" Radius, 2.0" Border, White on Green;
[EXIT 215B] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, White on Green;
[W EST] ClearviewHwy-5-W; [N ORTH] ClearviewHwy-5-W; [Gilbert St] ClearviewHwy-5-W;
[NEXT RIGHT] ClearviewHwy-5-W;
Table of letter and object lefts.

E	X	I	T	2	1	5	B			
77.8	86.3	97.7	102.6	123.6	137.8	149.8	165.6			
W	E	S	T	N	O	R	T	H		
8.1	46.1	64.4	73.4	82.8	98.0	130.0	143.1	156.0	166.0	176.2
C	i	G	i	b	e	r	S	t		
42.0	58.0	65.9	74.1	87.7	102.0	110.7	131.0	143.5		
N	E	X	T	R	I	G	H	T		
48.0	60.3	68.8	79.2	97.4	108.3	113.9	126.1	136.8		

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
c:\pw_work\pwwid\ceerlockjd\026657\046179\sh-t\Sign_Details.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
PLOT SCALE = 40.0000' / 1"		DATE - 04/26/11	REVISED -
PLOT DATE = 10/7/2011			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - VERMILION COUNTY
SCALE: SHEET NO. OF SHEETS STA. TO STA.

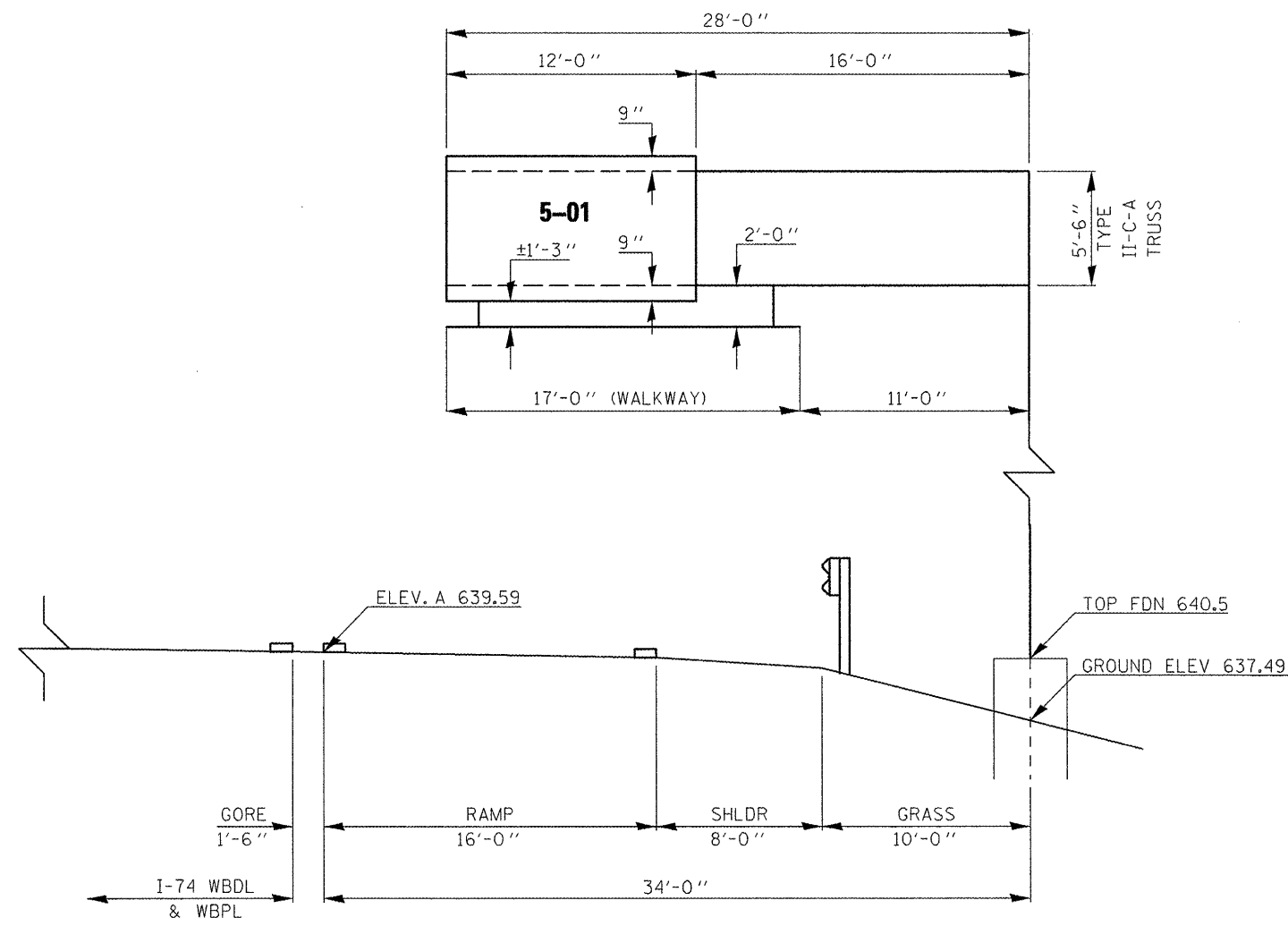
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	11
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS
•D-5 OVD SIN STR REPL 2012-06

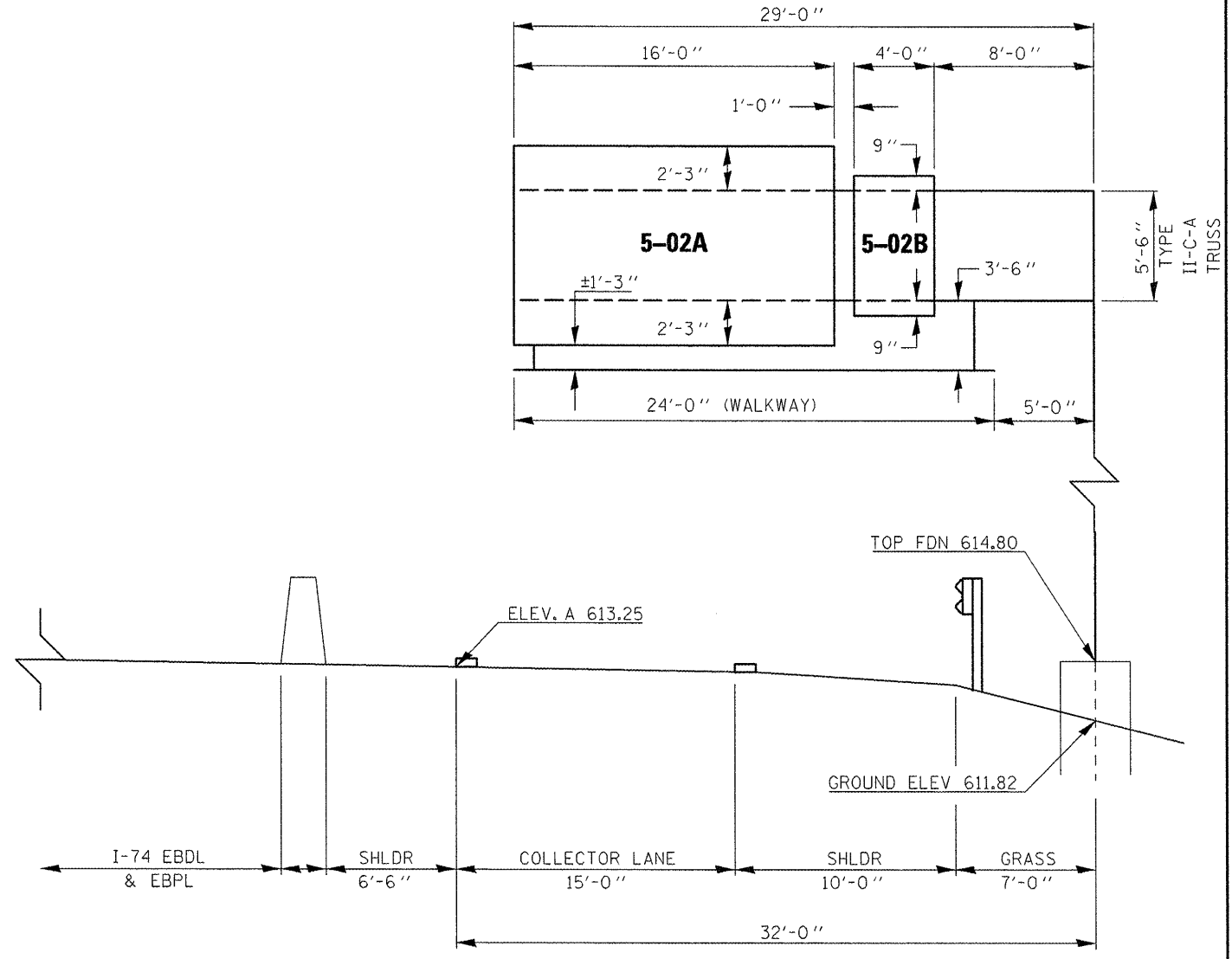
SIGN TRUSS MOUNTING DETAILS VERMILION COUNTY

5 C 092 1074 L208.35

5 C 092 1074 R214.25



TEMP. BENCHMARK = CHIS. "X" ON SW ANCHOR BOLT = 639.25 (FROM 1986 PLANS)



TEMP. BENCHMARK = CHIS "X" ON NW ANCHOR BOLT = 615.45 (FROM 1972 PLANS)

FILE NAME =	USER NAME = ceerlookjd	DESIGNED - JAL	REVISED -
en:\pwwork\pwwid\ceerlookjd\0266557\046179-shr-details.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SIGN TRUSS MOUNTING DETAILS - VERMILION COUNTY

SCALE: SHEET NO. 1 OF 10 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	12
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

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) 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.

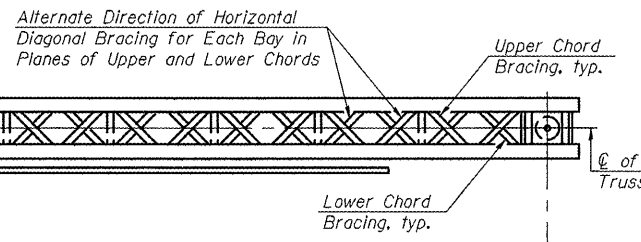
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

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

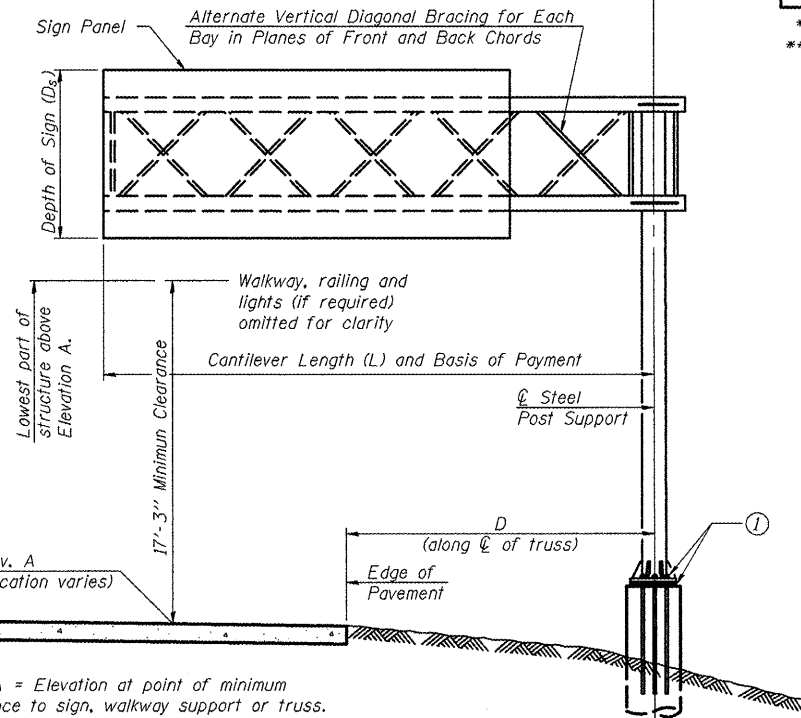
TOTAL BILL OF MATERIAL

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.	

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



TYPICAL PLAN
(Walkway not shown)



TYPICAL ELEVATION
Looking in Direction of Traffic

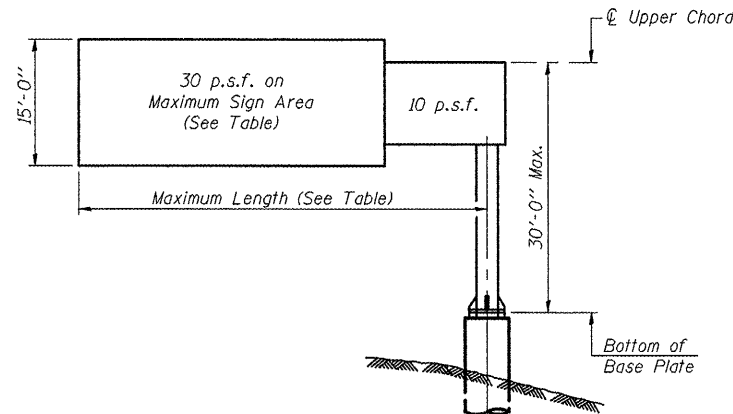
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

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.

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D _s ***	Total Sign Area
5 C 092 1074 L208.35	103+10	II-C-A	28'-0"	639.59	**	7'-0"	84.0
5 C 092 1074 R214.25	1923+65	II-C-A	29'-0"	613.25	**	10'-0"	188.0

** See Sign Truss mounting details
*** Support post heights based on 15'-0" sign height per OSC-A-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.

OSC-A-1

9-15-11

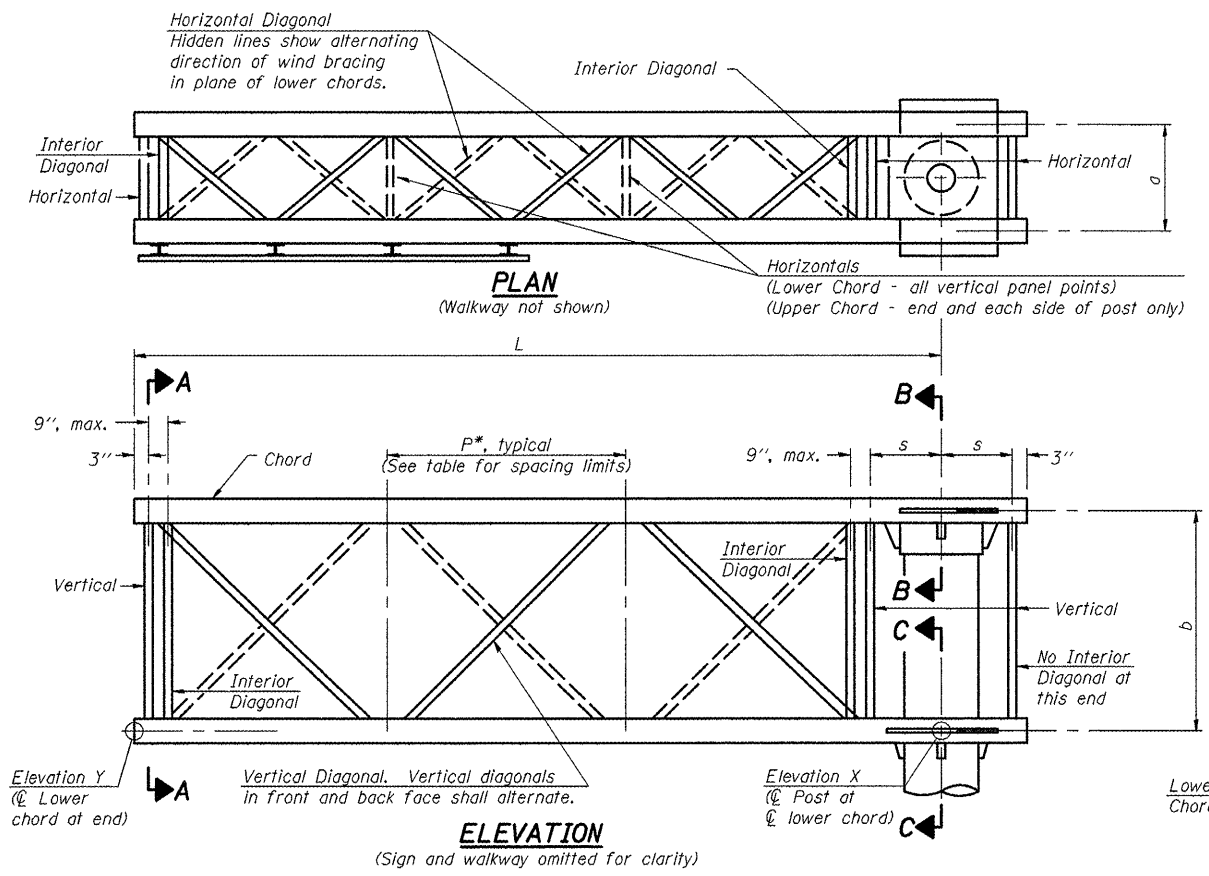
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: SHEET NO. 2 OF 10 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	13
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				



TYPICAL TRUSS UNIT

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

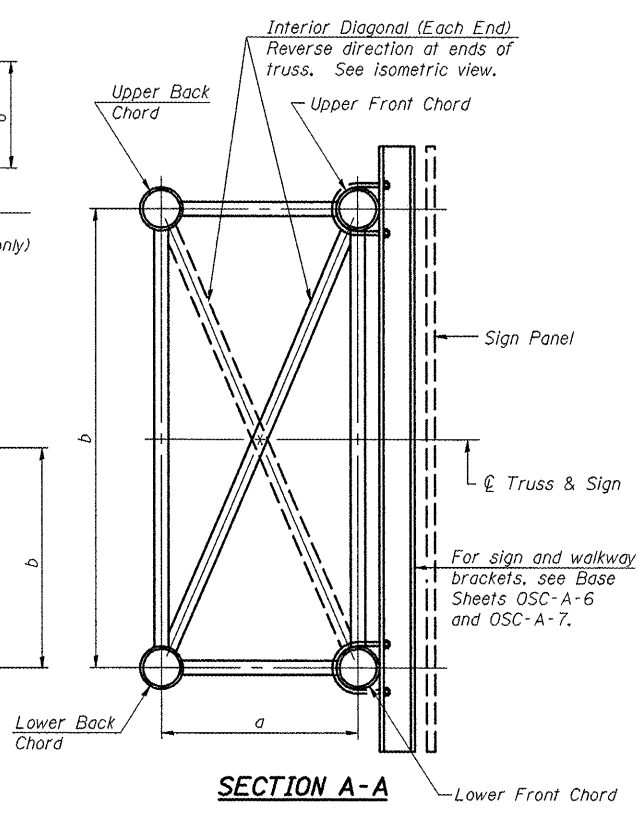
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

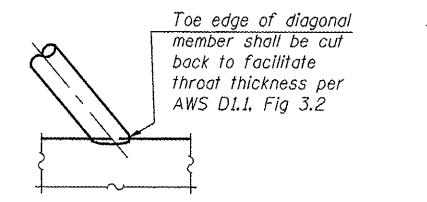
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord, Verticals, Horizontals, Vertical, Horizontal, and Interior Diagonals			
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 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 = $\frac{L - s - 3''}{\# \text{ Panels}}$

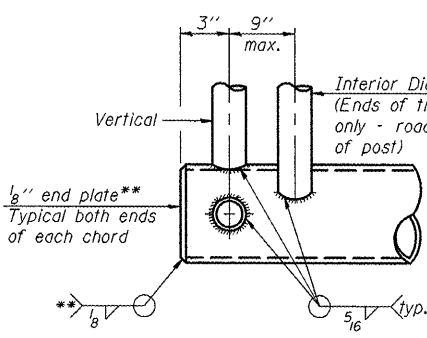
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
5 C 092 1074 L208.35	103+10	II-C-A	28'-0"	6	4'-4"
5 C 092 1074 R214.25	1923+65	II-C-A	29'-0"	6	4'-6"



SECTION A-A

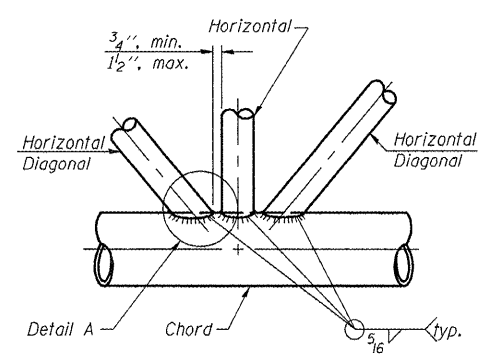


DETAIL A

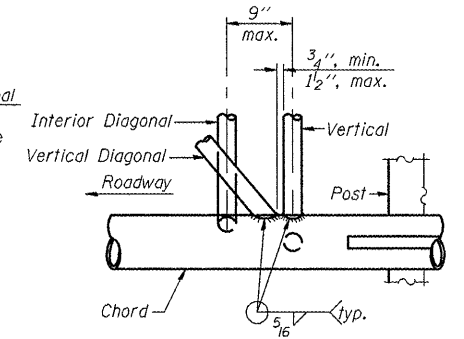


CANTILEVER END JOINT DETAIL

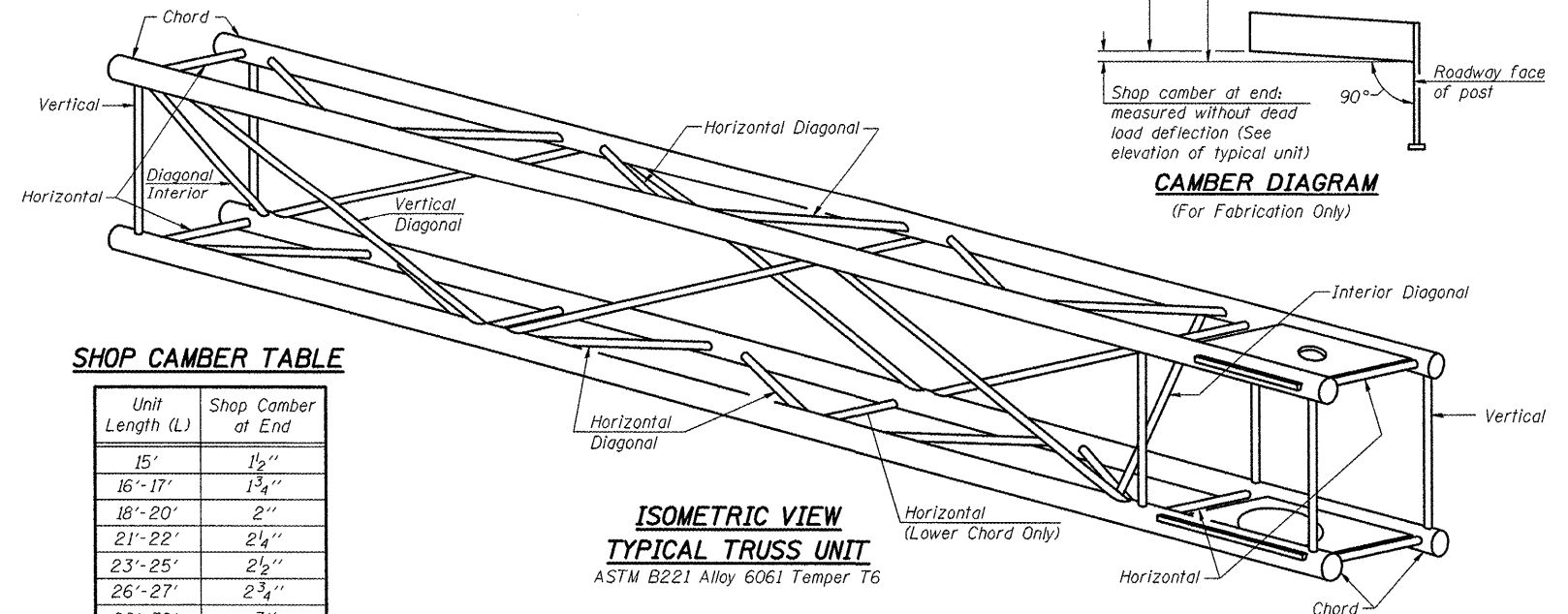
** Contractor may alternatively use standard aluminum drive-fit cap to close ends.



TRUSS INTERIOR JOINT DETAIL



POST END JOINT DETAIL

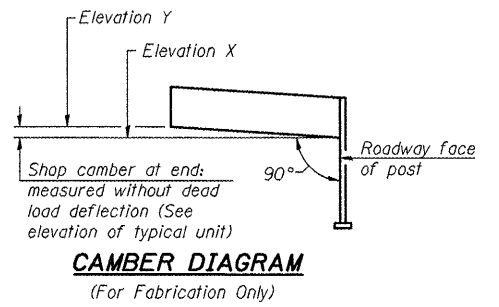


ISOMETRIC VIEW TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

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"



CAMBER DIAGRAM

(For Fabrication Only)

OSC-A-2 9-15-11

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

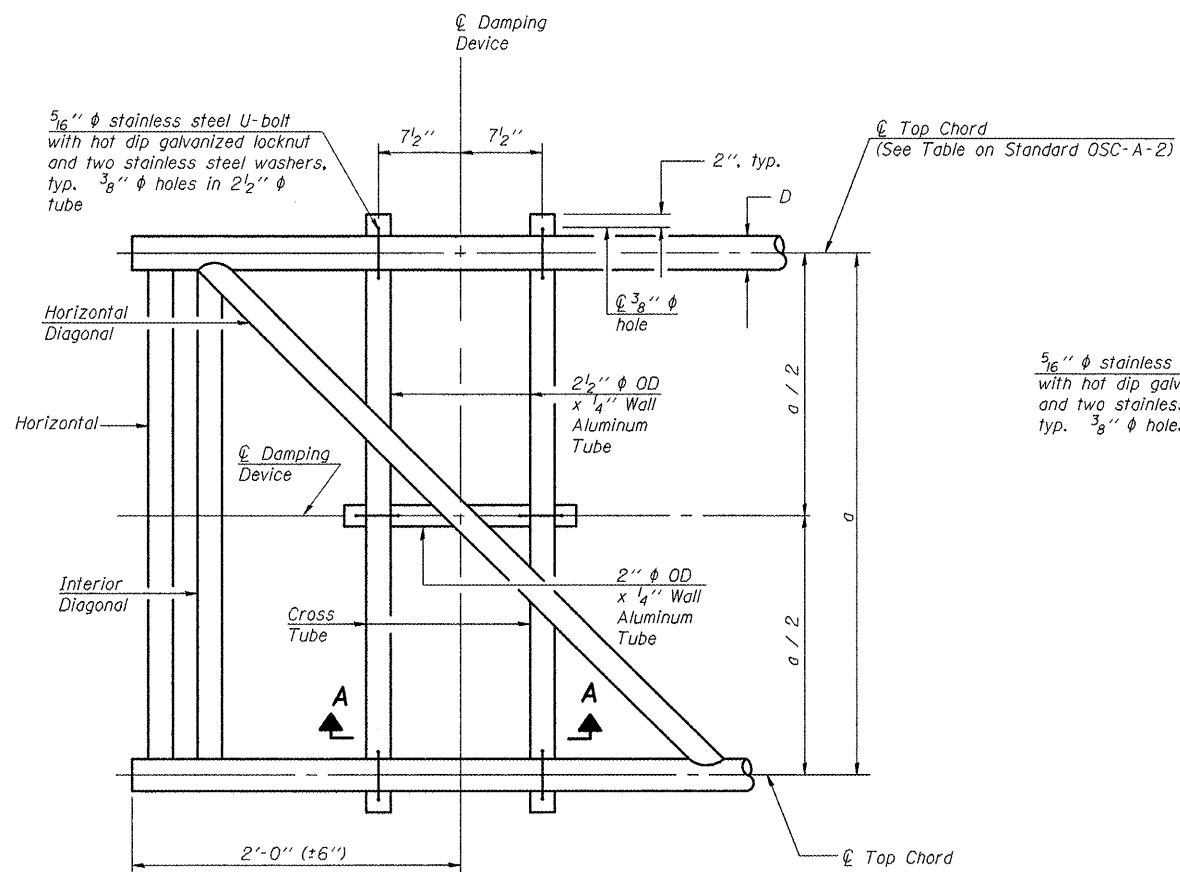
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

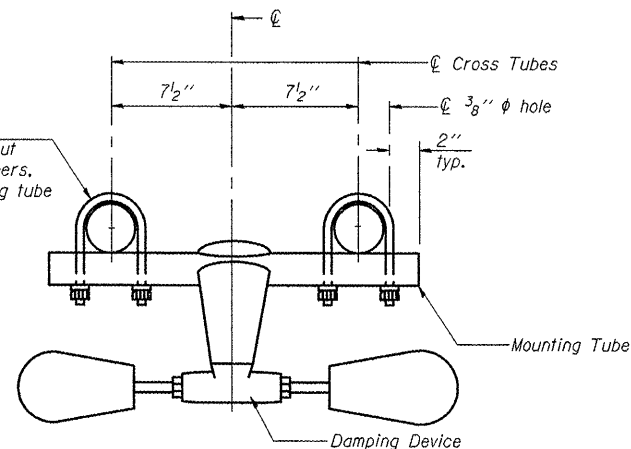
CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	**	Various	178	14
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

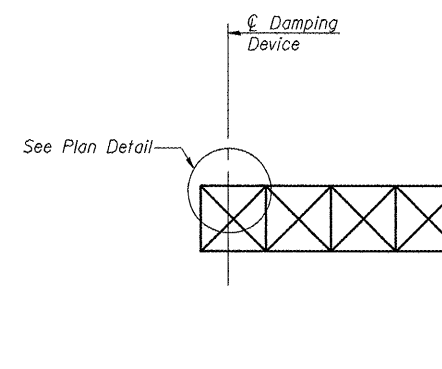
SCALE: SHEET NO. 3 OF 10 SHEETS STA. TO STA.



PLAN DETAIL



TRUSS DAMPING DEVICE CONNECTION DETAIL

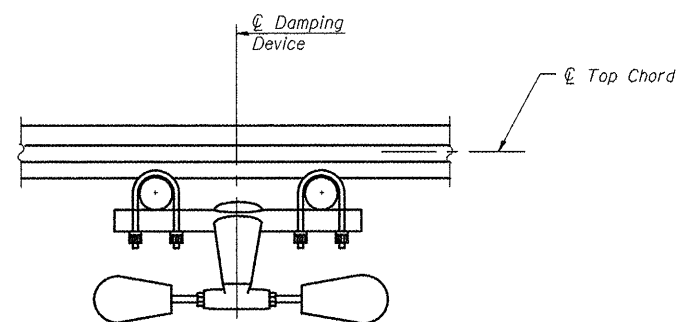


ELEVATION
Aluminum Cantilever Sign Structure

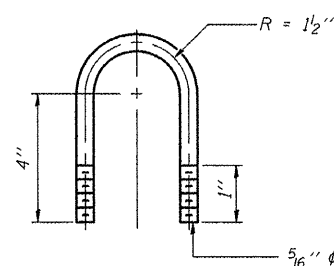
GENERAL NOTES

Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum-29" minimum between ends of weights)

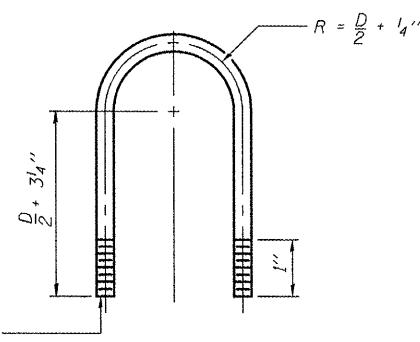
Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



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

OSC-A-D

9-15-11

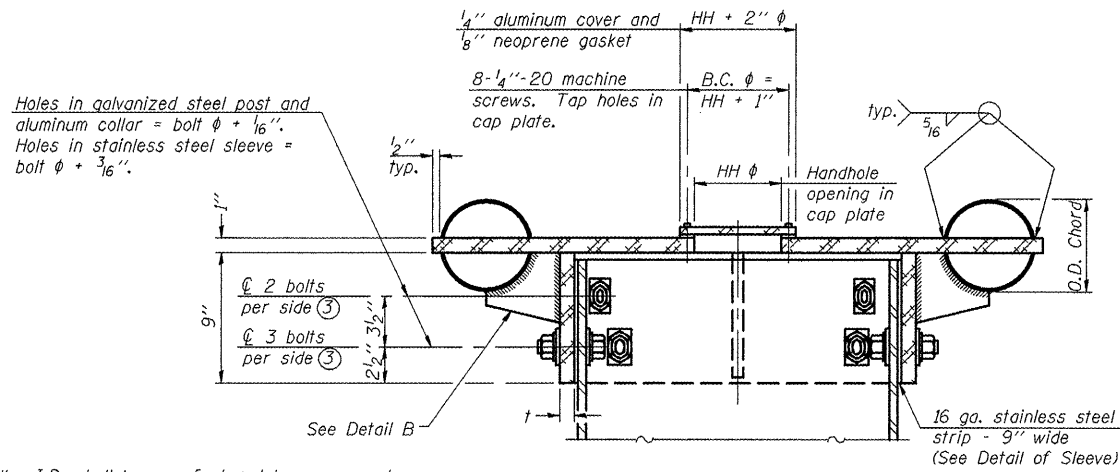
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	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET NO. 4 OF 10 SHEETS STA. TO STA.

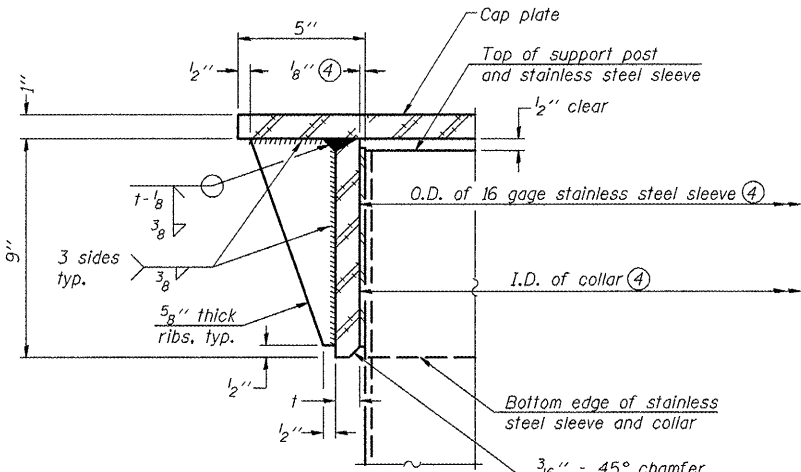
•VARIOUS COUNTIES •D-5 OVD SIN STR REPL 2012-06				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	15
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				



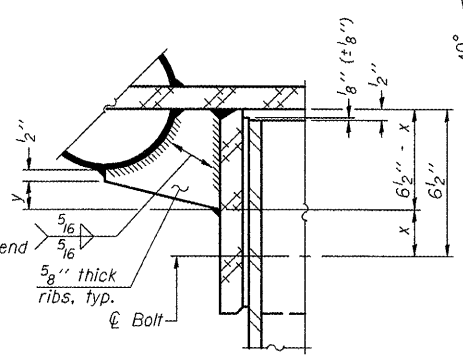
④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8\" (±1/16\"). Maximum gap between post and collar at any location equals 1/8\" before tightening bolts.

SECTION B-B

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

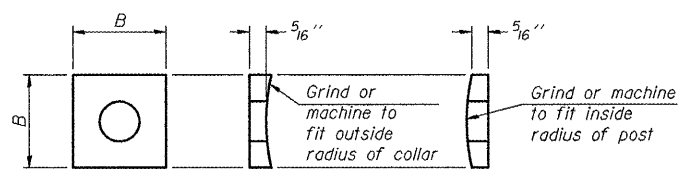


DETAIL A
(Two locations)



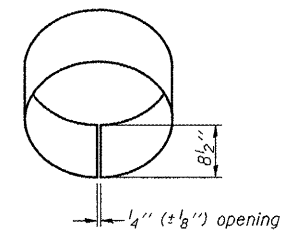
DETAIL B

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



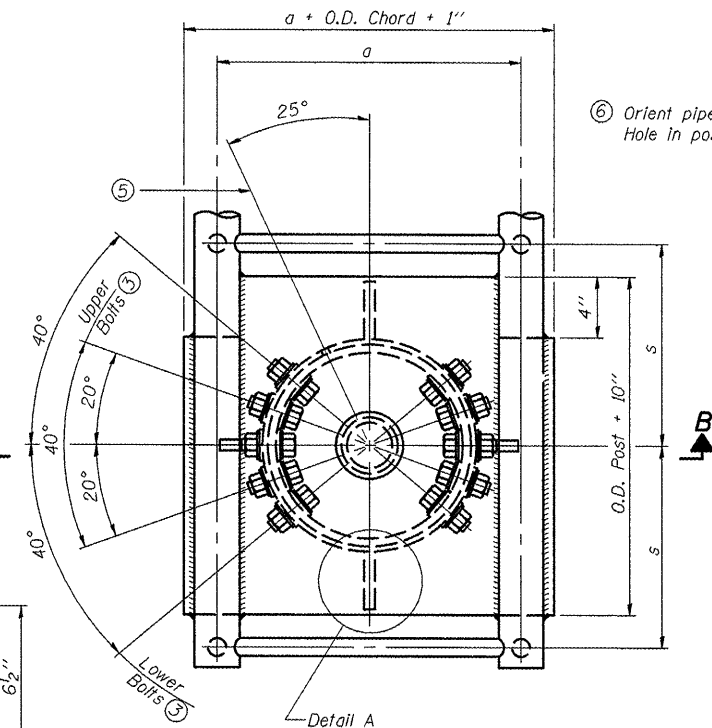
CONTOURED WASHERS

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"



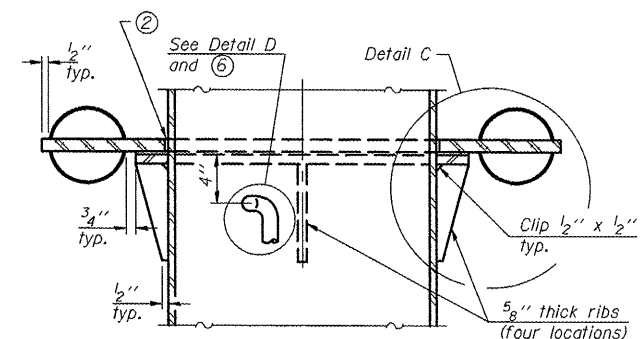
DETAIL OF STAINLESS STEEL SLEEVE

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

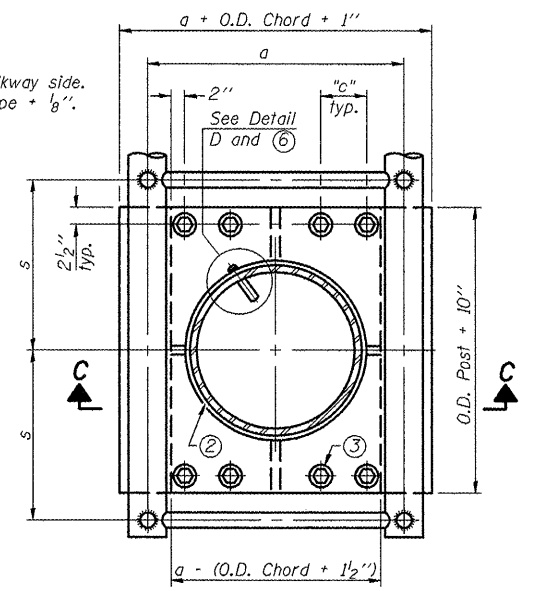


PLAN VIEW - TOP OF COLUMN

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

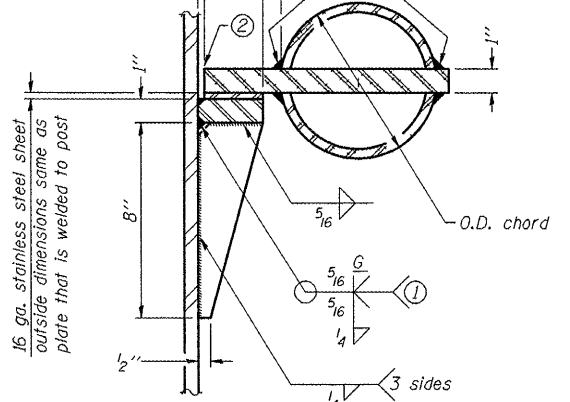


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

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

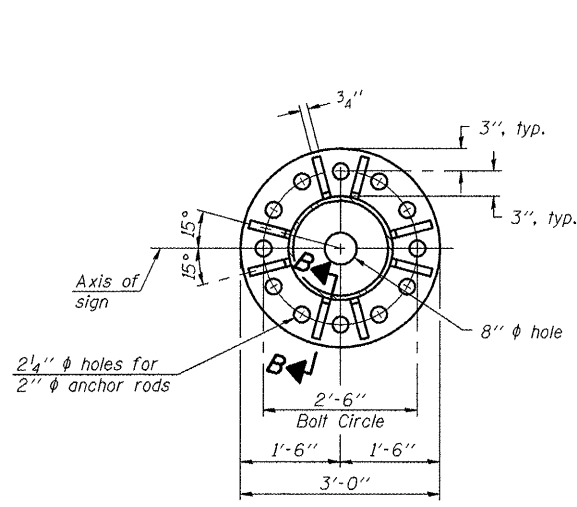


DETAIL C

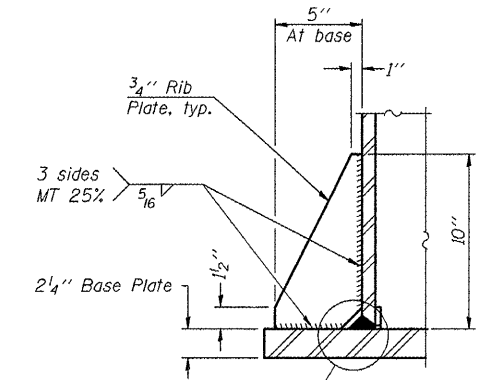
Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16" φ (83#1/)	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-C-A	24" φ (125#1/)	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-C-A (35' max.)	24"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

- Grind top if required to fully seat aluminum plate and stainless steel sheet.
- 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.
- 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.

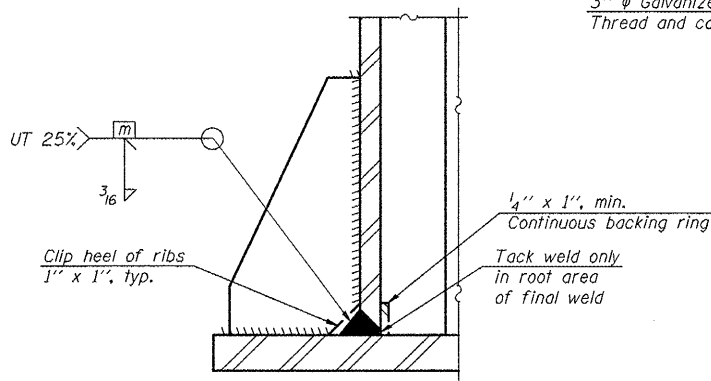
OSC-A-3 9-15-11



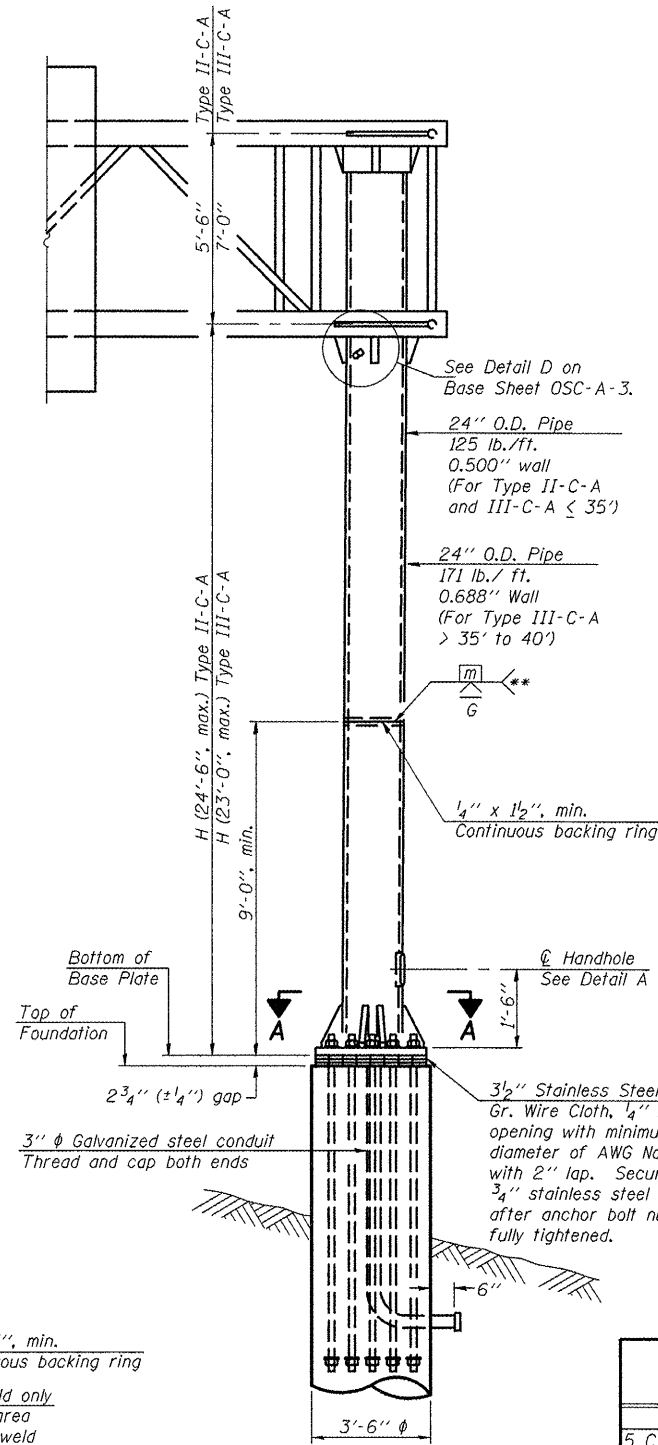
SECTION A-A



SECTION B-B

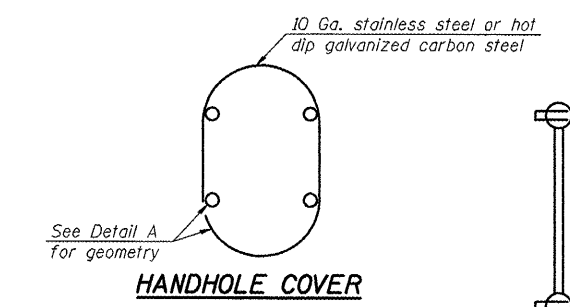


DETAIL B
(Typical rib)

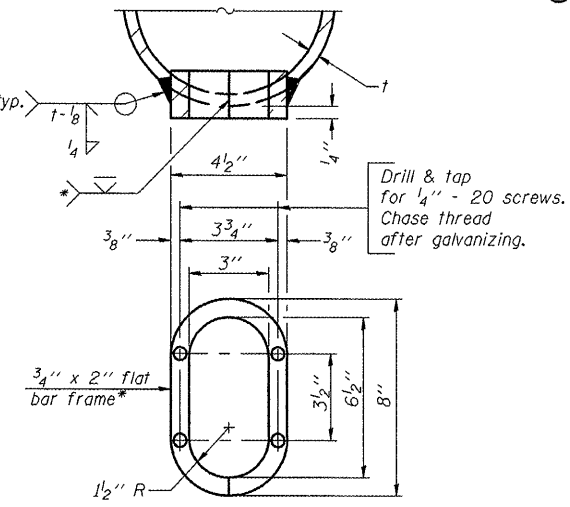


FRONT ELEVATION

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



HANDHOLE COVER



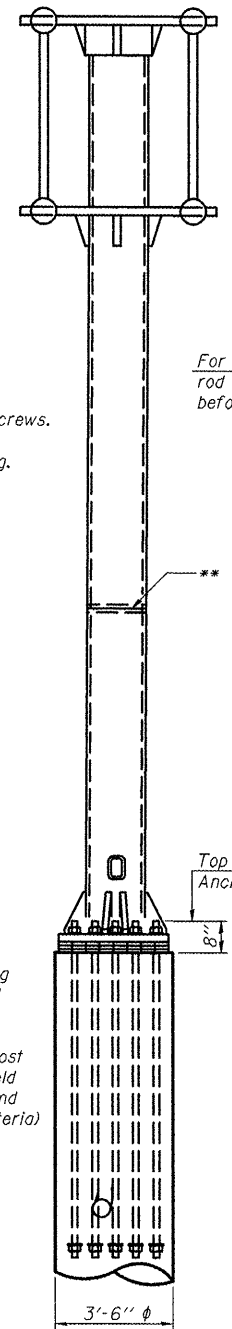
DETAIL A

* 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.

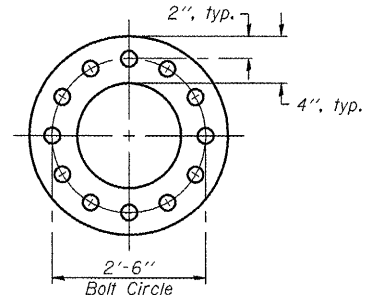
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
5 C 092 1074 L208.35	103+10	22'-6"
5 C 092 1074 R214.25	1923+65	22'-0"

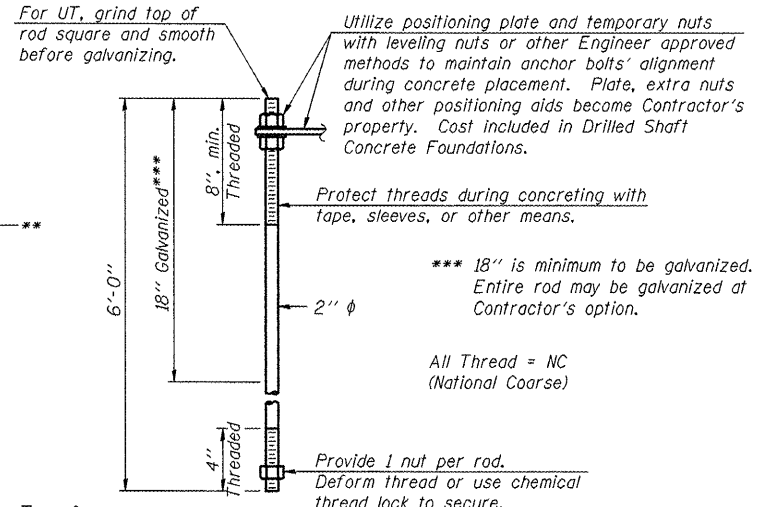
Note: "H" based on 15'-0" or actual sign height, whichever is greater.



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, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

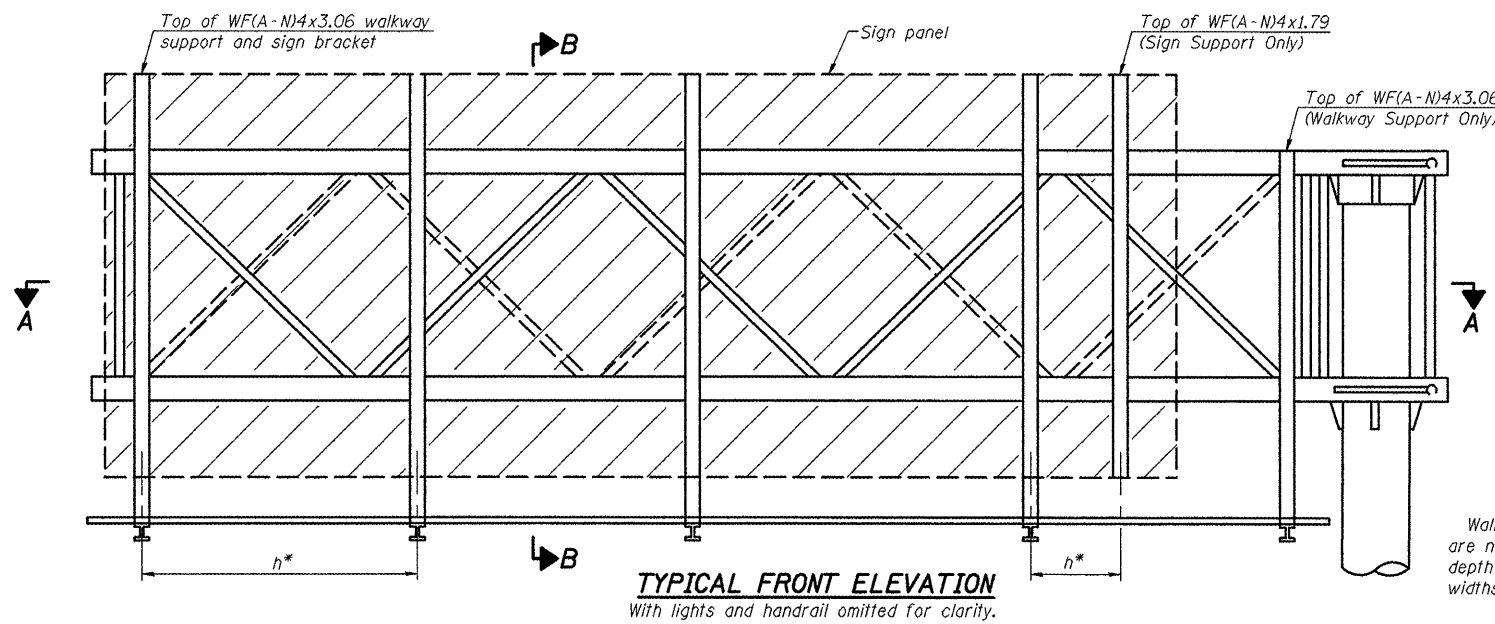
*** 18" is minimum to be galvanized. Entire rod may be galvanized at Contractor's option.

All Thread = NC (National Coarse)

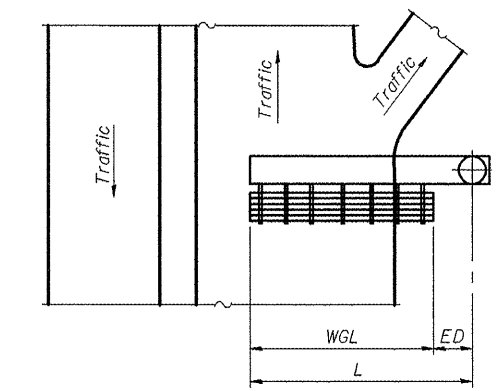
Provide 1 nut per rod. Deform thread or use chemical thread lock to secure.

OSC-A-5

9-15-11

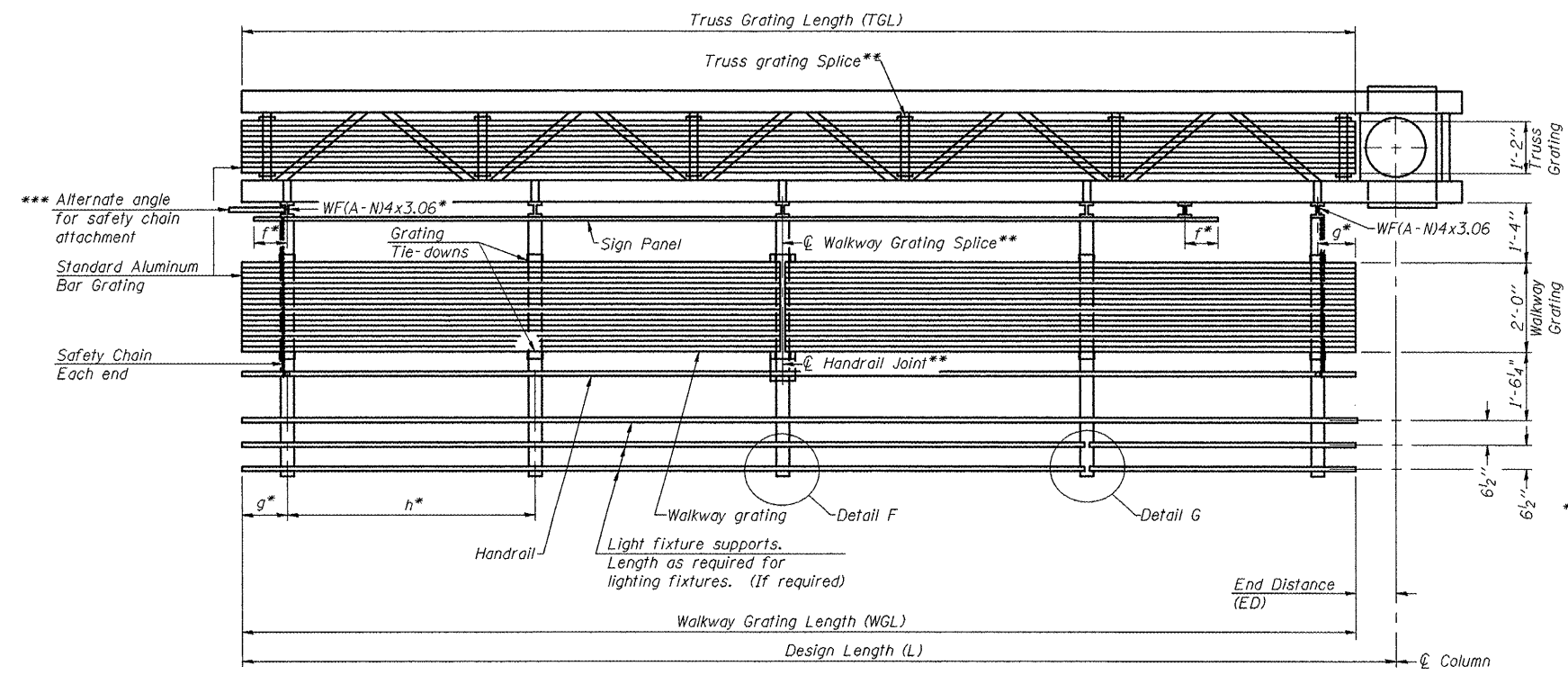


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



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

Walkway and truss grating dimensions are nominal and may vary (width ± 1/2", depth ± 1/2") based on available standard widths.



SECTION A-A

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

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

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

Structure Number	Station	WGL	ED	TGL
5 C 092 1074 L208.35	103+10	17'-0"	11'-0"	26'-6"
5 C 092 1074 R214.25	1923+65	24'-0"	5'-0"	27'-6"

Notes:
 * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.
 For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
 For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

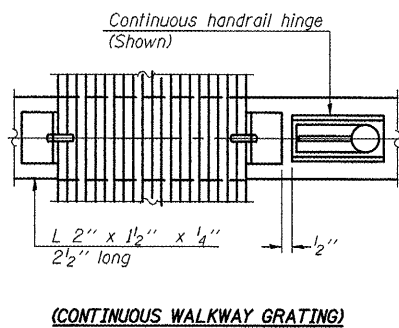
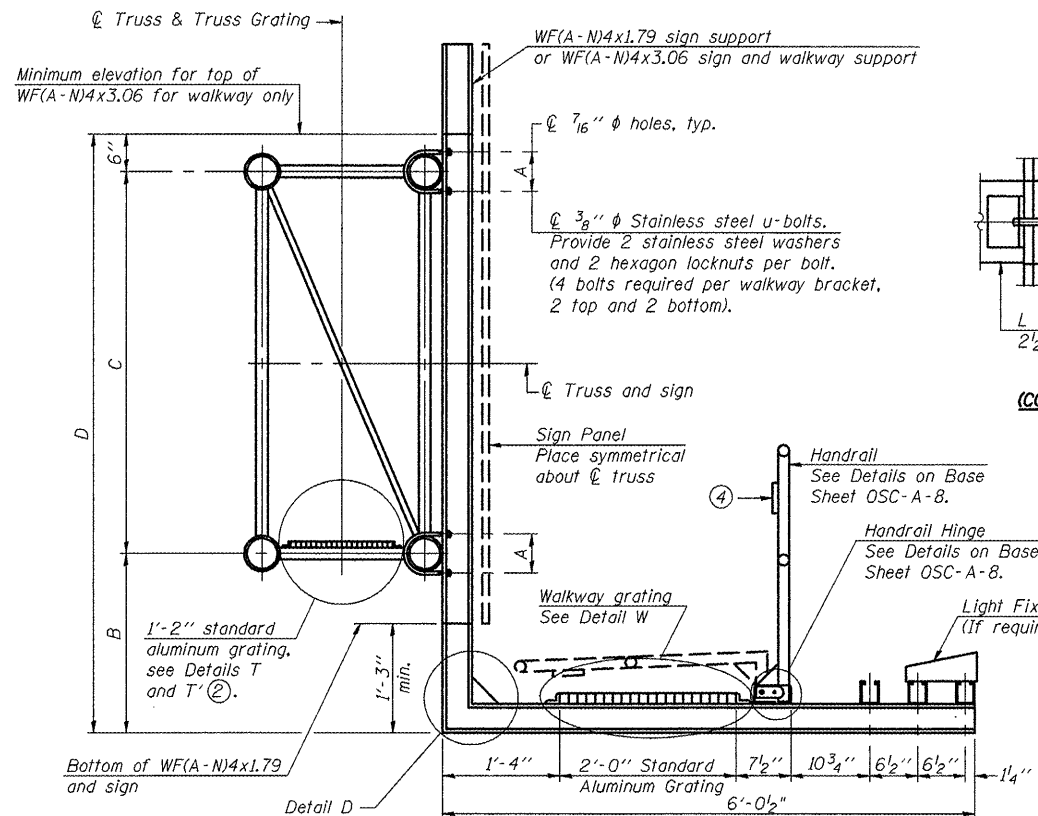
BRACKET TABLE

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

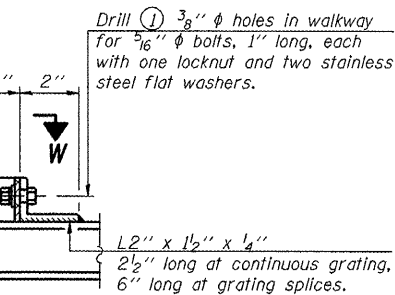
OSC-A-6 9-15-11

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

ILLINOIS FED. AID PROJECT



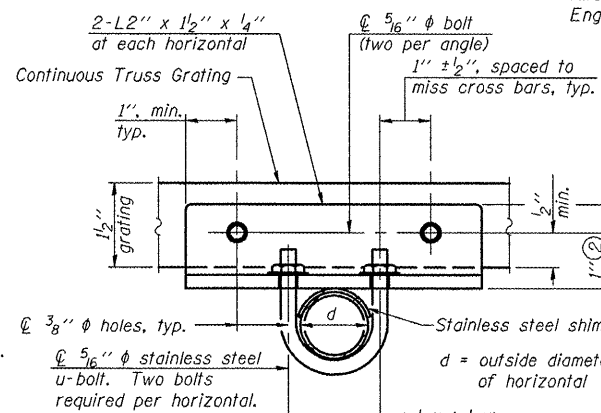
SECTION W-W



(AT WALKWAY GRATING SPLICE)

DETAIL W

(Walkway grating)



SECTION T-T

DETAIL T'

(Truss grating splice)

Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

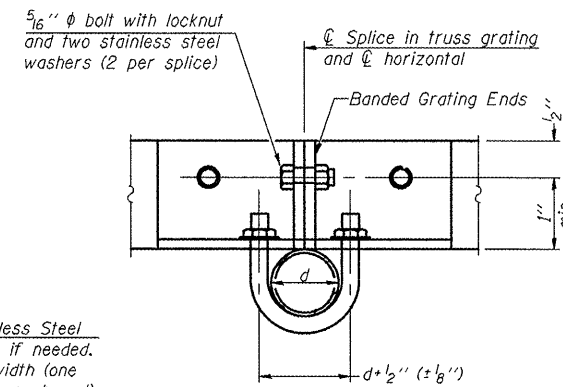
Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6. Cross bars (CB) shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

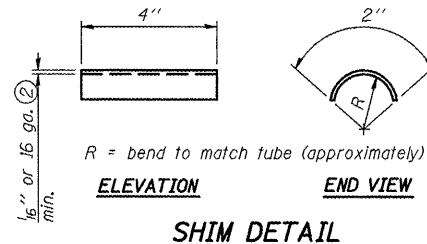
Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



SECTION T'-T'

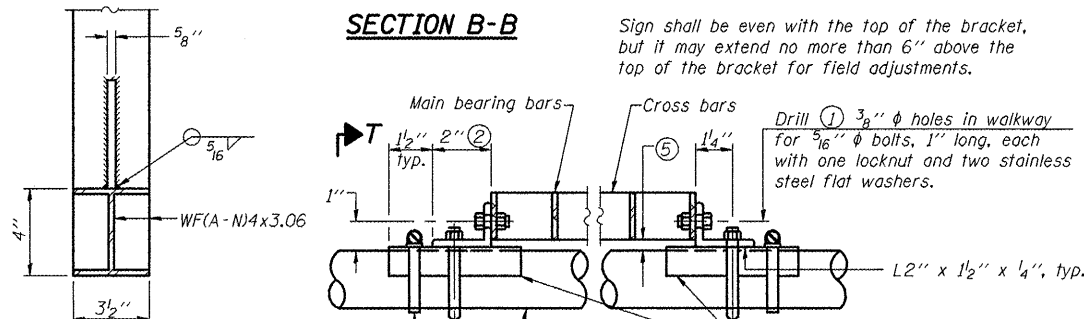


SHIM DETAIL

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual sign height. D_s, given on OSC-A-1.

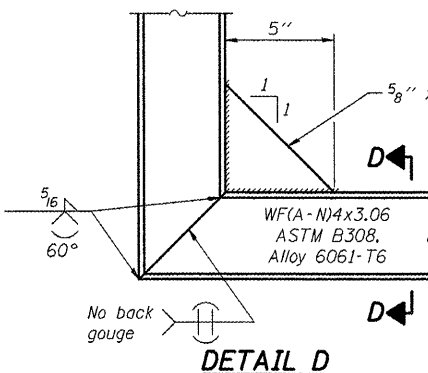
SECTION B-B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.



SECTION D-D

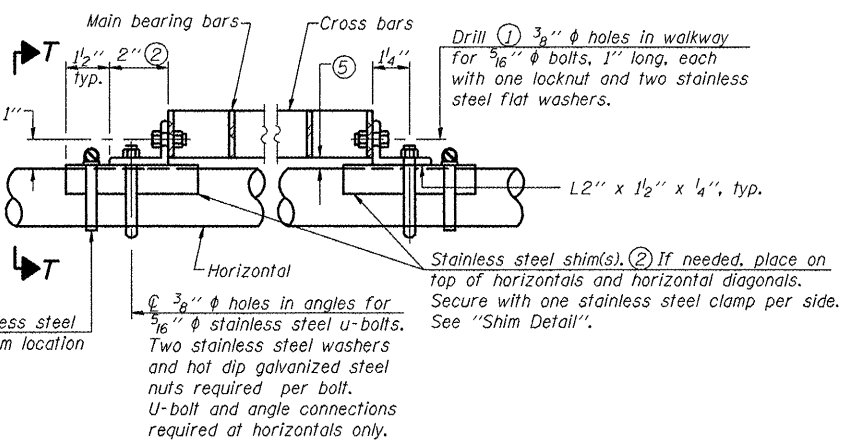
Screw type stainless steel tube clamp at shim location



DETAIL D

DETAIL T

(Continuous Truss grating)



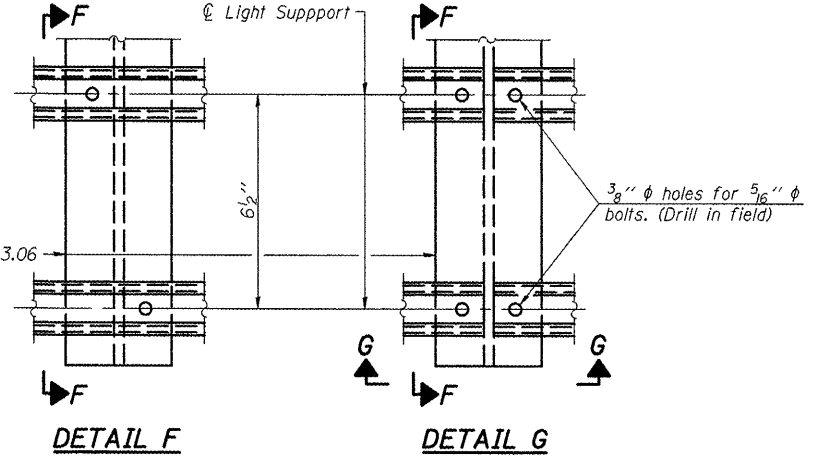
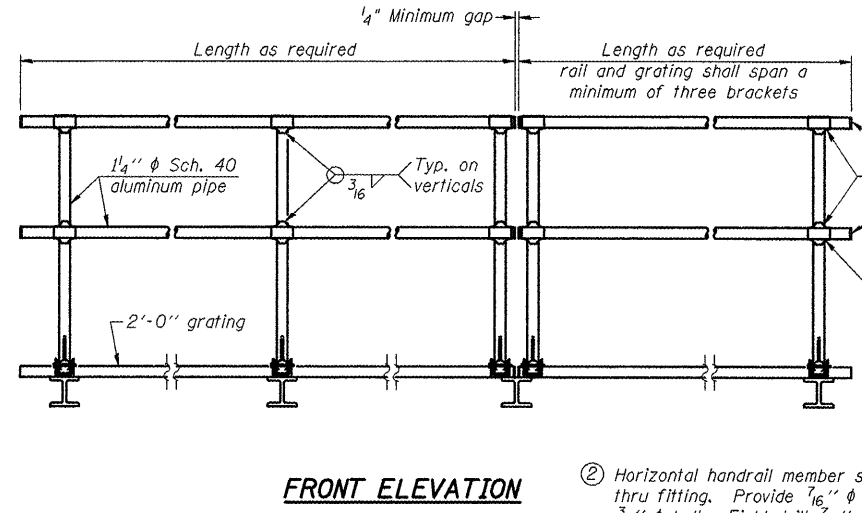
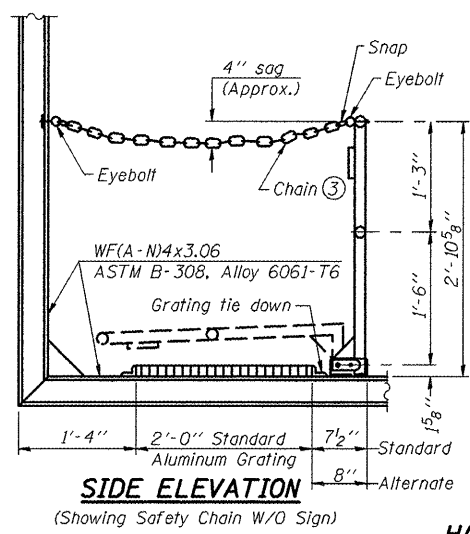
Structure Number	Station	A	⑥ B	C	⑥ D *
5 C 092 1074 L208.35	103+10		2'-0"	5'-6"	8'-0"
					& VAR.
5 C 092 1074 R214.25	1923+65		3'-6"	5'-6"	9'-6"
					& VAR.

*See also "Sign Truss Mounting Details" Sheet 12 for the information needed to determine the variable walkway support and sign support lengths.

OSC-A-7

9-15-11

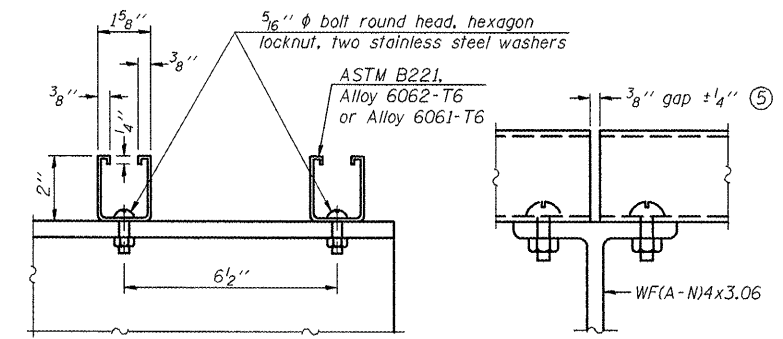
•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06



HANDRAIL DETAILS

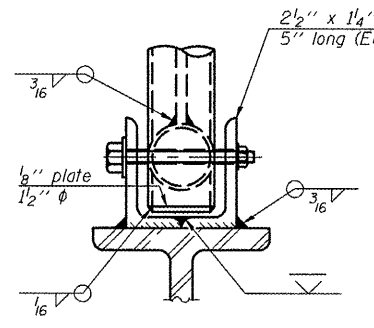
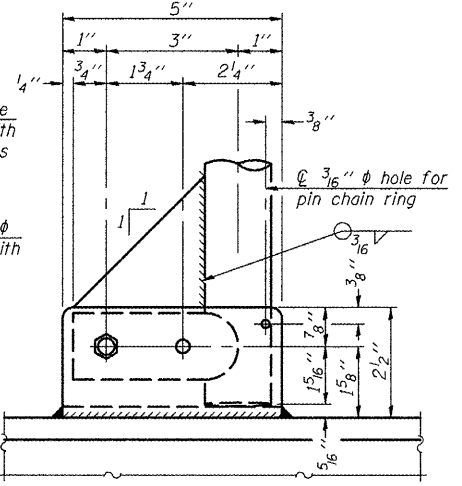
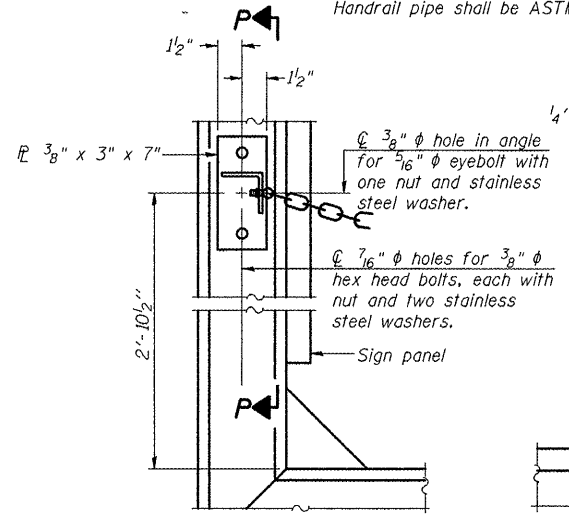
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

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



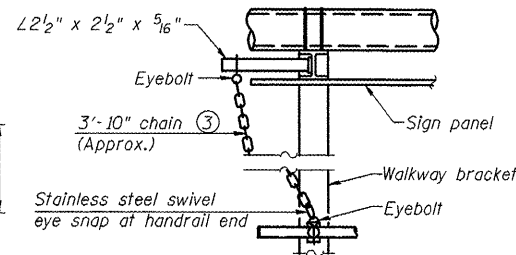
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

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

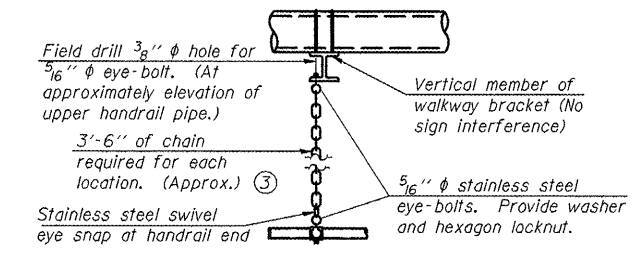


ELEVATION AT HANDRAIL JOINT ④

Details not shown same as "FRONT ELEVATION"

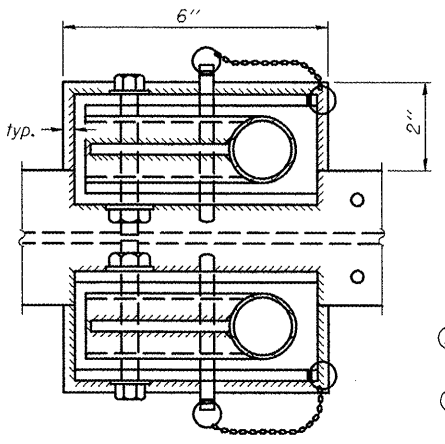
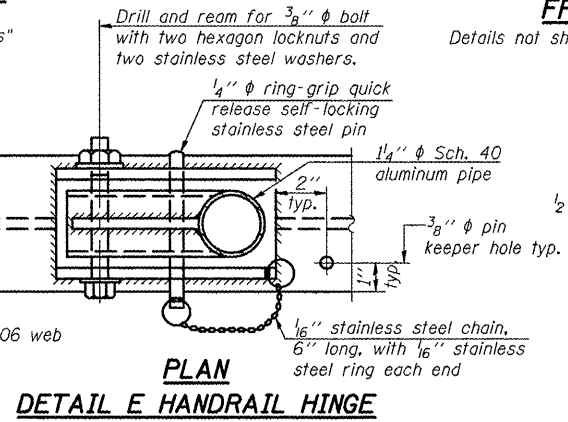
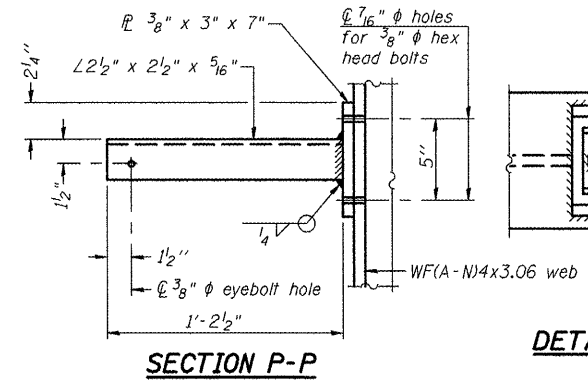


- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



ALTERNATE SAFETY CHAIN ATTACHMENT

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

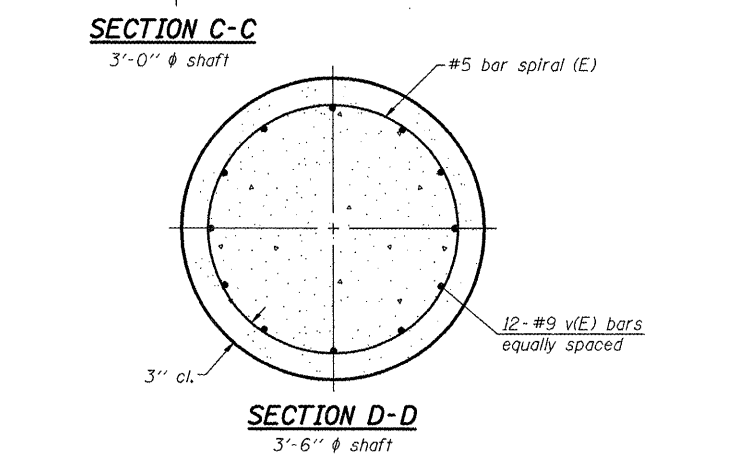
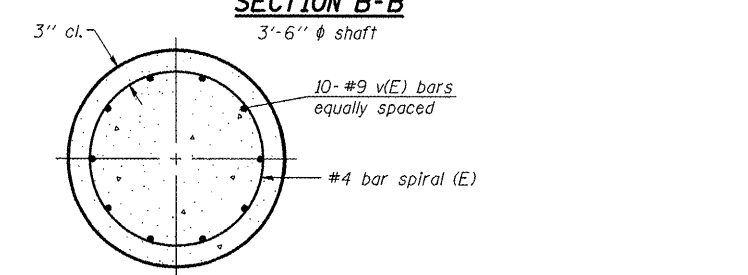
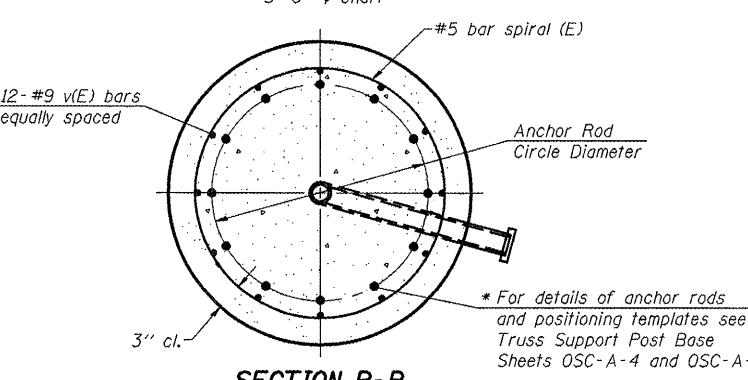
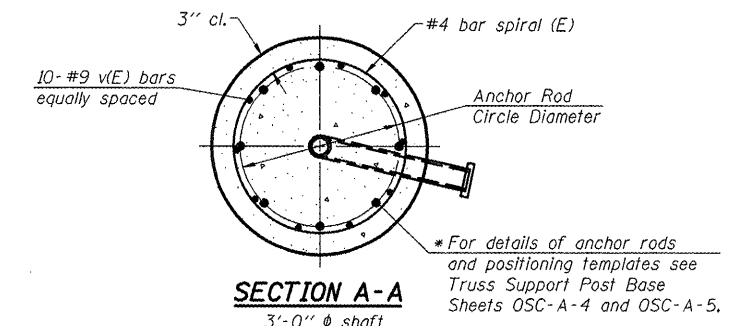
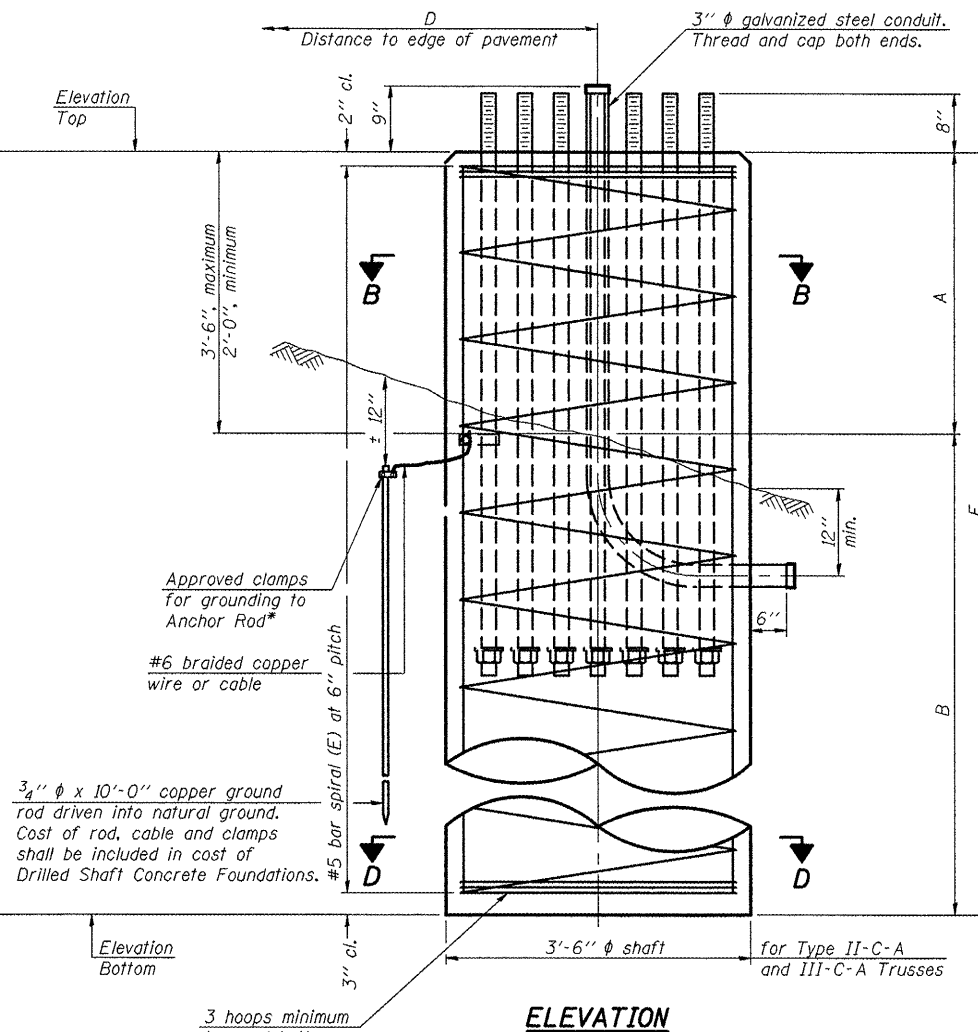
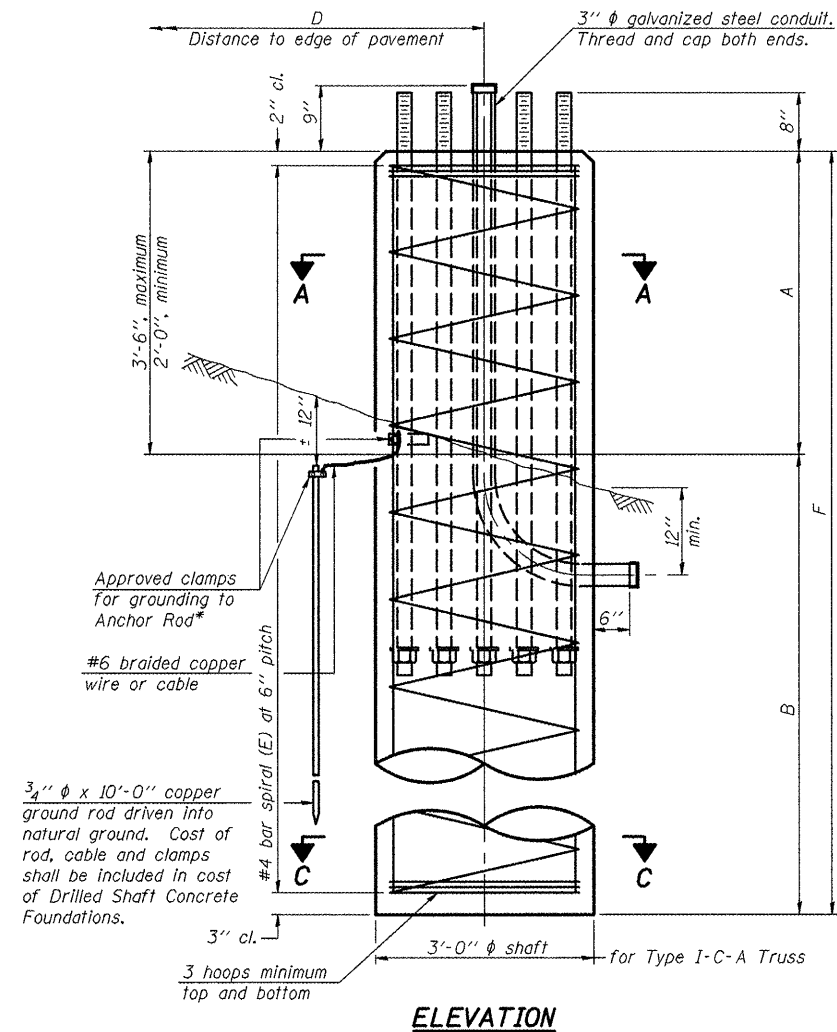


OSC-A-8 9-15-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES - HANDRAIL DETAILS ALUMINUM TRUSS & STEEL POST	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\ceerlockjd\0266557.D	046179-shr-deta1.dgn	DRAWN -	REVISED -			•	••	Various	178	20
PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISD -	REVISD -			CONTRACT NO. 46179				
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISD -	REVISD -			ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET NO. 9 OF 10 SHEETS	STA.	TO STA.			

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

* 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
5 C 092 1074 L208.35	103+10	II-C-A	3'-6"	640.5	615.5		3'-0"	22'-0"	25'-0"	9.0
5 C 092 1074 R214.25	1923+65	II-C-A	3'-6"	614.8	589.8		3'-0"	22'-0"	25'-0"	9.0

OSC-A-9

9-15-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ei:\pwwork\pwwid\ceerlockjd\0266557\046179-shd-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET NO. 10 OF 10 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	178	21
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

*VARIOUS COUNTIES
**D-5 OVD SIN STR REPL 2012-06



SOIL BORING LOG

Date 3/2/11

ROUTE FAI Rt. 74 (West Bound) DESCRIPTION Mast Arm at Off Ramp to Salt Kettle Rest Area LOGGED BY CNA
 SECTION Sign Structure LOCATION NE, SEC. 8, TWP. 19N, RNG. 12W, 2nd PM GPS:
 COUNTY Vermilion DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 C 092 1074
 Station Rt. 103+00
 BORING NO. 1 Cantilever
 Station 20' W of Exist.
 Offset 200.0 ft Lt.
 Ground Surface Elev. 638.1 ft (ft) (/6") (tsf) (%)

Soil Description	Depth (ft)	Penetration (6")	Blow Count (tsf)	Notes
Brown Mottled Silt Loam	0 - 8			Brown Sand Loam Till (continued)
	8	1.0	21	
	8	S		(No Sample Obtained)
	-5			
Brown Sandy Clay Loam Till	632.1	3		(Drilled Very Hard - 5 ft in 10 Minutes)
	5	1.0	14	
	6	B		
	4			(*NOTE: soil boring taken 20' West and 8' South of existing foundation)
	6	2.3	14	
	-10	15	B	
Brown Mottled Silt with Intermittent Fine Sand Seams	627.6			End of Boring
	18			
	10	2.5	21	
	11	B		
	10			
	15	3.5	10	
	-15	35	B	
Brown Dirty Coarse Sand with Gravel (Trace of Water)	622.1	25		
	35			
	40			
Brown Sand Loam Till	619.6	19		
	18		10	
	-20	25		

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 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)



SOIL BORING LOG

Date 10/11/07

ROUTE FAI Rt. 74 DESCRIPTION Mast Arm on I-74EB at Rt 1/US 150 SB Off Ramp LOGGED BY CNA
 SECTION _____ LOCATION SE, SEC. 18, TWP. 19N, RNG. 11W, 2nd PM GPS:
 COUNTY Vermilion DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 C 092 1074
 Station R214.21
 BORING NO. 4 Mast Arm
 Station 1922+15
 Offset 213.0 ft Rt.
 Ground Surface Elev. 610.9 ft (ft) (/6") (tsf) (%)

Soil Description	Depth (ft)	Penetration (6")	Blow Count (tsf)	Notes
Aggregate/Shoulder Stone	610.4			Gray Slightly Weathered Massive Shale with Oxidized Joints (Bedrock)
	5			
	7		14	
	-5	9		
	5			Gray Massive Shale (Bedrock)
	6		11	
	16			
	3			
	6		13	
	-10	8		
	3			
	10		10	
	15			
	7			
	10		11	
	-15	7		
	3			
	8		14	
	9			
	2			
	4		15	
	-20	4		

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 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)

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 46179				
PLOT DATE = 10/7/2011	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:		SHEET NO. OF SHEETS		STA. TO STA.						

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

SCHEDULE OF QUANTITIES CHAMPAIGN COUNTY – INDIVIDUAL LOCATIONS

Location No.	5-03		
Structure No.	5 C 010 I074 L183.90		
County / Route	CHAMPAIGN CO. - I-74 WB - at Cunningham Ave. / US 45		
Scope of Work	This overhead cantilever is to be removed & replaced with a breakaway ground mount.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	115.50
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	134.75
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	2128.00
73400100	CONCRETE FOUNDATIONS	CUYD	4.18
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-05		
Structure No.	5 S 010 I057 L235.32		
County / Route	CHAMPAIGN CO. - I-57 SB - just North of the I-72 interchange		
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
63400105	GUARD POSTS	EACH	10.00
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.00
64301090	ATTENUATOR BASE	SQYD	102.00
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	339.75
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	249.00
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	94.00
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	41.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	25.00
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
X6340205	GUARD POST REMOVAL	EACH	10.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00
Z0029999	IMPACT ATTENUATOR REMOVAL	EACH	2.00

Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-04		
Structure No.	5 B 010 U045 L012.58		
County / Route	CHAMPAIGN CO. - Cunningham Ave. / US 45 SB under I-74 bridge 010-0024		
Scope of Work	This bridge mounted truss is to be removed & replaced with a breakaway ground mount.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.14
72000300	SIGN PANEL - TYPE 3	SQFT	63.25
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	55.00
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	457.50
73400100	CONCRETE FOUNDATIONS	CUYD	1.40
73602000	REMOVE OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	EACH	1.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Electric Service Disconnect shall also include removal of all conduit and attachment clamps along the bottom flange of the fascia beam.

Location No.	5-06		
Structure No.	5 S 010 I057 R236.14		
County / Route	CHAMPAIGN CO. - I-57 NB - at Mile Marker 233.7 between Curtis Rd. & I-72		
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.00
64301090	ATTENUATOR BASE	SQYD	102.00
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	433.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	430.50
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	75.00
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	39.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	25.00
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1.00
X6340205	GUARD POST REMOVAL	EACH	8.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
Z0029999	IMPACT ATTENUATOR REMOVAL	EACH	2.00

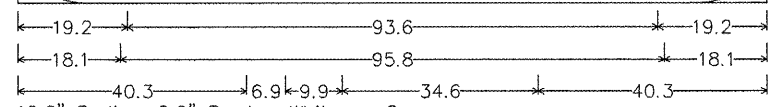
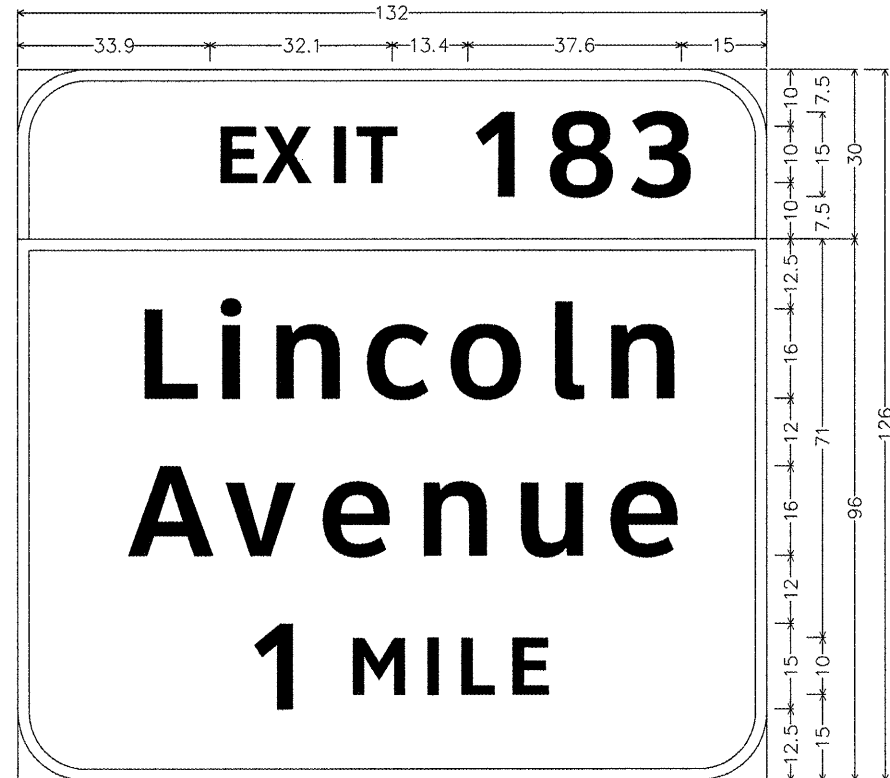
Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlookjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES CHAMPAIGN COUNTY – INDIVIDUAL LOCATIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -	CONTRACT NO. 46179							
PLOT DATE = 10/7/2011	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
				SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			

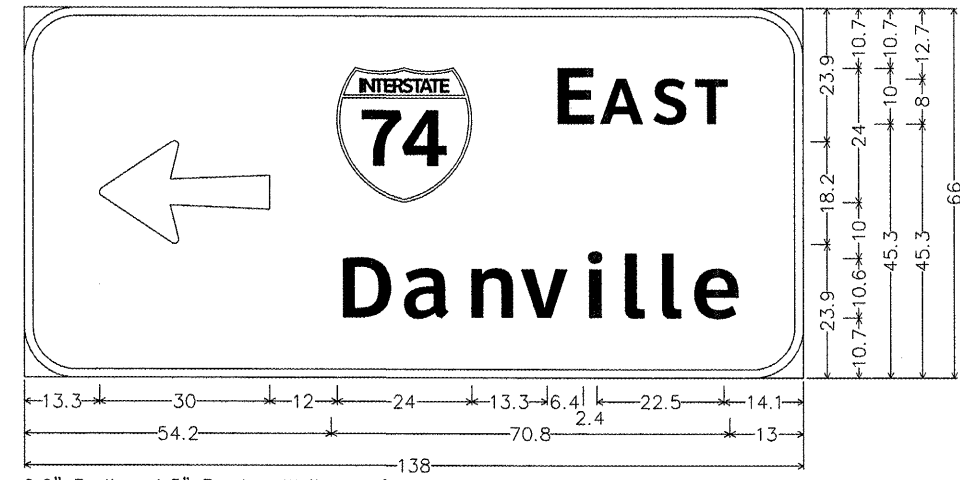
5-03
5 C 010 I074 L183.90



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 183] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [Lincoln] ClearviewHwy-5-W; [Avenue] ClearviewHwy-5-W;
 [1 MILE] ClearviewHwy-5-W;
 Table of letter and object lefts.

E	X	I	T	1	8	3
33.9	42.4	53.8	58.8	79.4	91.6	106.6
L	i	n	c	o	l	n
19.2	33.1	42.6	59.2	74.0	91.8	101.7
A	v	e	n	u	e	
18.1	35.6	51.4	68.6	85.8	102.2	
1	M	I	L	E		
40.3	57.1	70.3	76.3	85.3		

5-04
5 B 010 U045 L012.58



9.0" Radius, 1.5" Border, White on Green;
 Arrow 133 - 30.0" 180}; [E AST] ClearviewHwy-5-W; [Danville] ClearviewHwy-5-W;
 Table of letter and object lefts.

←	E	A	S	T			
13.3	55.3	92.6	101.4	110.6	118.1		
D	a	n	v	i	l	e	
54.2	65.9	77.2	87.4	98.1	104.4	111.0	117.1

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

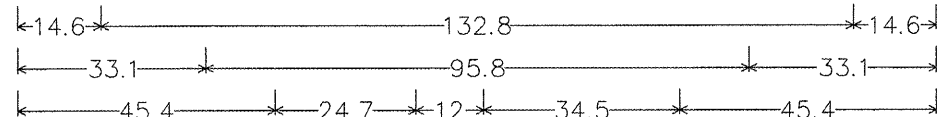
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - CHAMPAIGN COUNTY			
SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	••	Various	178	24
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06

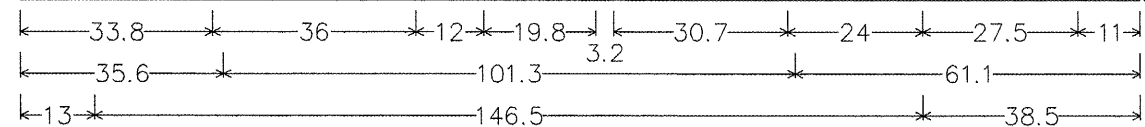
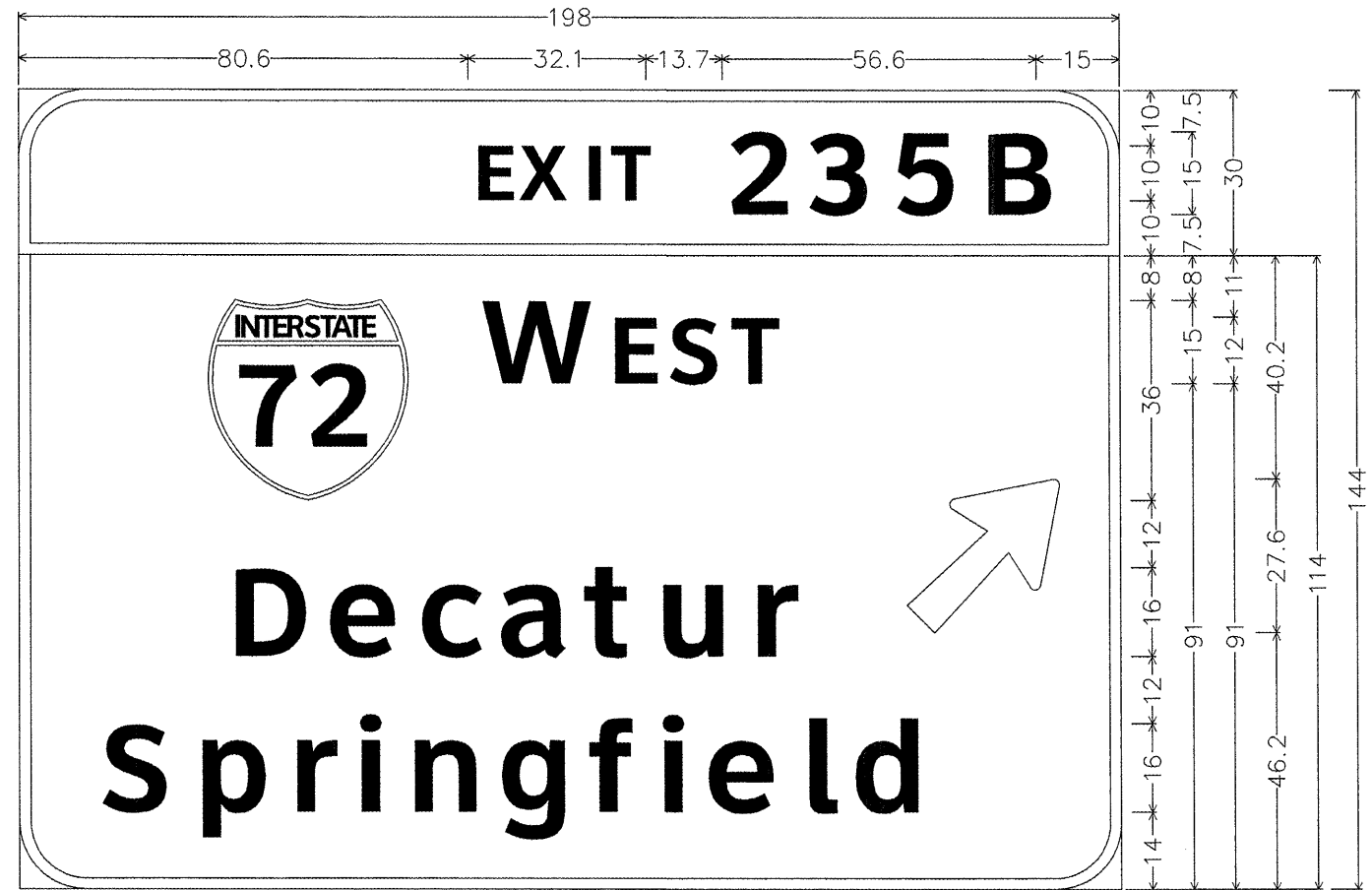
5-05 A
5 S 010 I057 L235.32 – LEFT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 235A] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [University] ClearviewHwy-5-W; [Avenue] ClearviewHwy-5-W;
 [1/4 MILE] ClearviewHwy-5-W;
 Table of letter and object lefts.

E	X	I	T	2	3	5	A		
43.6	52.1	63.5	68.4	89.4	103.7	118.8	132.9		
U	n	i	v	e	r	s	i	t	y
14.6	33.3	50.1	57.6	73.5	90.6	101.4	116.4	124.3	134.9
A	v	e	n	u	e				
33.1	50.6	66.4	83.6	100.8	117.2				
1/4	M	I	L	E					
45.4	82.1	95.2	101.2	110.3					

5-05 B
5 S 010 I057 L235.32 – RIGHT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 235B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [W EST] ClearviewHwy-5-W; [Decatur] ClearviewHwy-5-W; [Springfield] ClearviewHwy-5-W;
 Arrow 160 – 35.0" 45°;
 Table of letter and object lefts.

E	X	I	T	2	3	5	B			
80.6	89.1	100.5	105.4	126.4	140.7	155.8	171.6			
W	E	S	T							
33.8	81.8	104.8	115.5	126.9	159.5					
D	e	c	a	t	u	r				
35.6	53.5	70.1	84.5	99.9	112.5	129.5				
S	p	r	i	n	g	f	i	e	l	d
13.0	29.6	46.6	58.3	67.8	84.3	100.7	112.7	121.5	138.7	147.9

•VARIOUS
 •D-5 OVD SIN STR REPL 2012-06

5-06 A
5 S 010 I057 R236.14 - LEFT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 237A-B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [Indianapolis] ClearviewHwy-5-W; [Peoria] ClearviewHwy-5-W; [3 MILES] ClearviewHwy-5-W;
 Table of letter and object lefts.

E	X	I	T	2	3	7	A	-	B		
41.4	49.9	61.3	66.2	87.2	101.5	115.9	129.3	147.8	159.6		
75.0											
I	n	d	i	a	n	a	p	o	l	i	s
11.0	20.4	37.0	54.2	62.7	79.7	95.9	112.9	129.2	147.1	156.5	164.8
Peoria											
P	e	o	r	i	a						
51.8	67.8	84.3	102.1	113.8	122.3						
3 Miles											
3	M	I	L	E	S						
60.6	81.0	94.1	100.1	109.2	118.2						

5-06 B
5 S 010 I057 R236.14 - RIGHT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 235A-B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [University] ClearviewHwy-5-W; [Avenue] ClearviewHwy-5-W;
 [Decatur] ClearviewHwy-5-W; [1 MILE] ClearviewHwy-5-W;
 Table of letter and object lefts.

E	X	I	T	2	3	5	A	-	B
15.9	24.5	35.9	40.8	61.7	76.1	91.2	105.3	123.8	135.6
63.0									
U	n	i	v	e	r	s	i	t	y
14.6	33.3	50.1	57.6	73.5	90.6	101.4	116.4	124.3	134.9
Avenue									
A	v	e	n	u	e				
33.1	50.6	66.4	83.6	100.8	117.2				
Decatur									
D	e	c	a	t	u	r			
30.4	48.3	64.8	79.3	94.6	107.3	124.3			
1 Mile									
1	M	I	L	E					
55.3	72.1	85.3	91.3	100.3					

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ci:\pwwork\pwwork\ceerlockjd\0266557\046179-shit-Sign_Details.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - CHAMPAIGN COUNTY

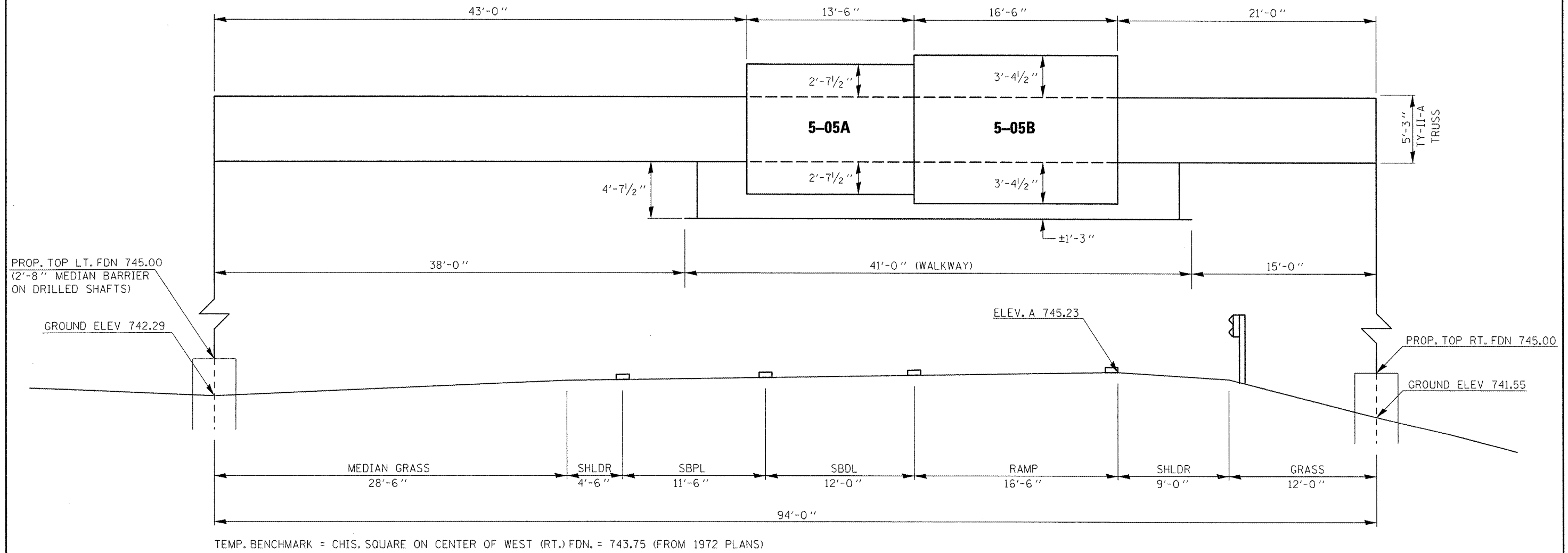
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	178	26
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06

SIGN TRUSS MOUNTING DETAIL – CHAMPAIGN COUNTY

5 S 010 1057 L235.32



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PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SIGN TRUSS MOUNTING DETAILS – CHAMPAIGN COUNTY

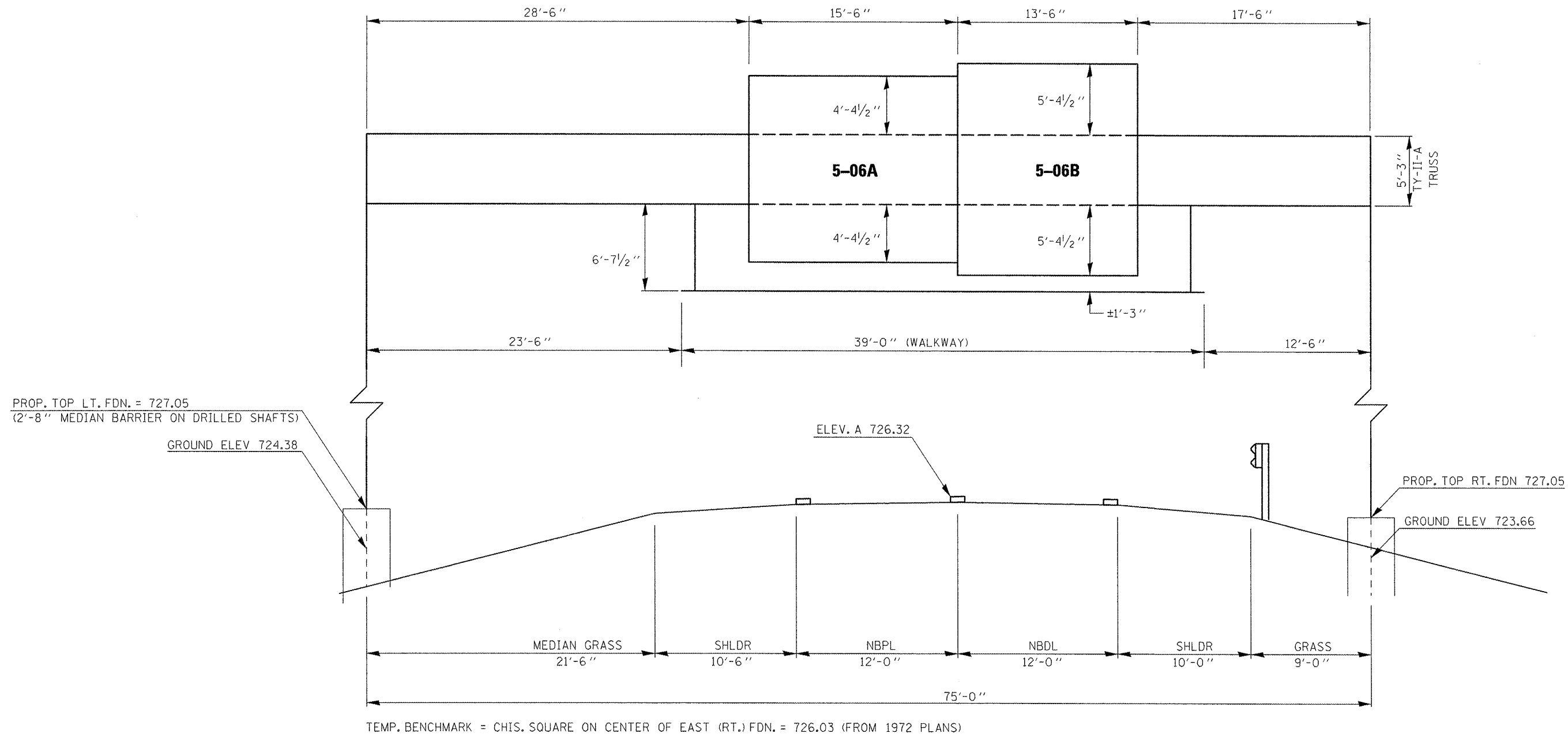
SCALE: SHEET NO. OF SHEETS STA. TO STA.

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	27
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

SIGN TRUSS MOUNTING DETAIL – CHAMPAIGN COUNTY

5 S 010 I057 R236.14



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	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

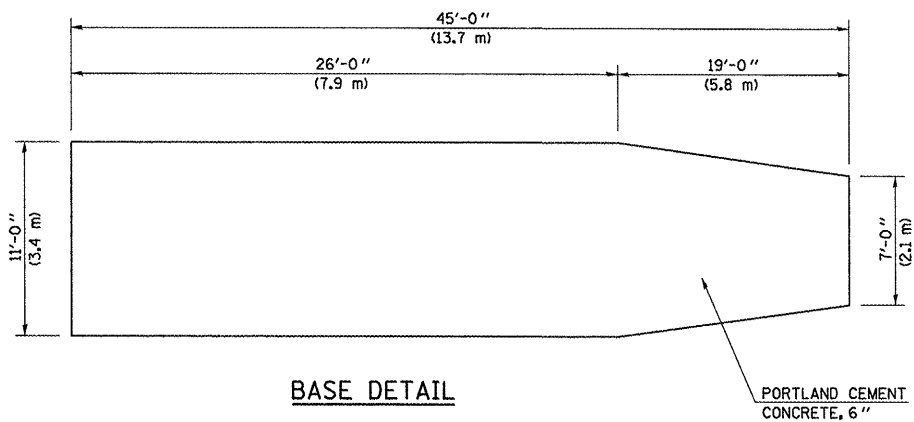
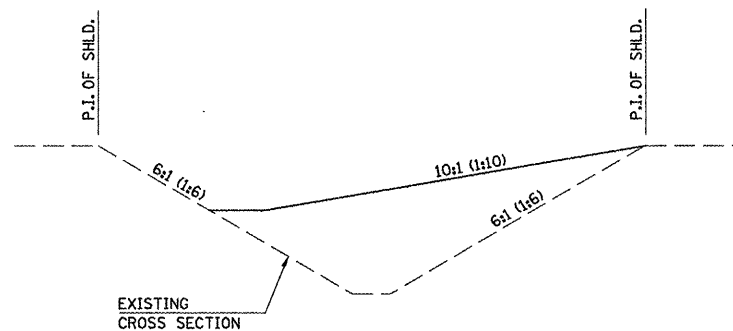
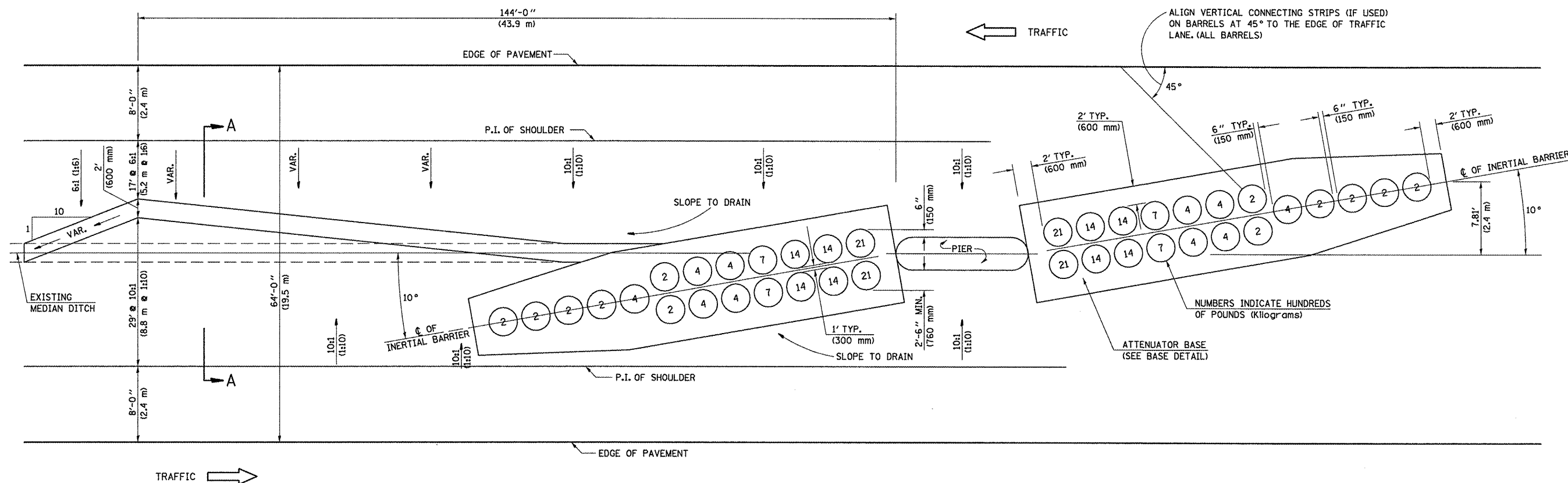
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SIGN TRUSS MOUNTING DETAILS – CHAMPAIGN COUNTY

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

*VARIOUS COUNTIES		**D-5 OVD SIN STR REPL 2012-06	
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
.	..	Various	178
		SHEET NO. 28	
CONTRACT NO. 46179			
ILLINOIS FED. AID PROJECT			

70 MPH (110 km/h) DESIGN - 64' (19.5 m) MEDIAN



SECTION A-A
GRADING AND SHAPING DETAIL

BASE DETAIL

GENERAL NOTES

- ALL 10:1 (1:10) SLOPES SHOWN ON THIS DETAIL SHALL BE CONSTRUCTED 10:1 (1:10) OR FLATTER.
- THE SLOPES AS SHOWN ON THIS DETAIL SHALL APPLY TO BOTH ENDS OF THE BRIDGE PIERS.
- THE LENGTH X WIDTH OF MODULE LAYOUT IS 41.0' x 7.0' = 19 MODULES - 14,400 LBS. (12.5 m x 2.1 m = 19 MODULES - 6532 kg).
- IN AREAS OF 10:1 (1:10) SLOPES PRECEDING THE ATTENUATOR IN THE MEDIAN INSTALLATION, FOUR OR MORE WOOD POSTS SHALL BE PLACED AT 5' (1.5 m) INTERVALS IN THE MEDIAN ϕ . SEE SPECIAL PROVISIONS AND SCHEDULES.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

DISTRICT 5 DETAIL NO. Z0030150D

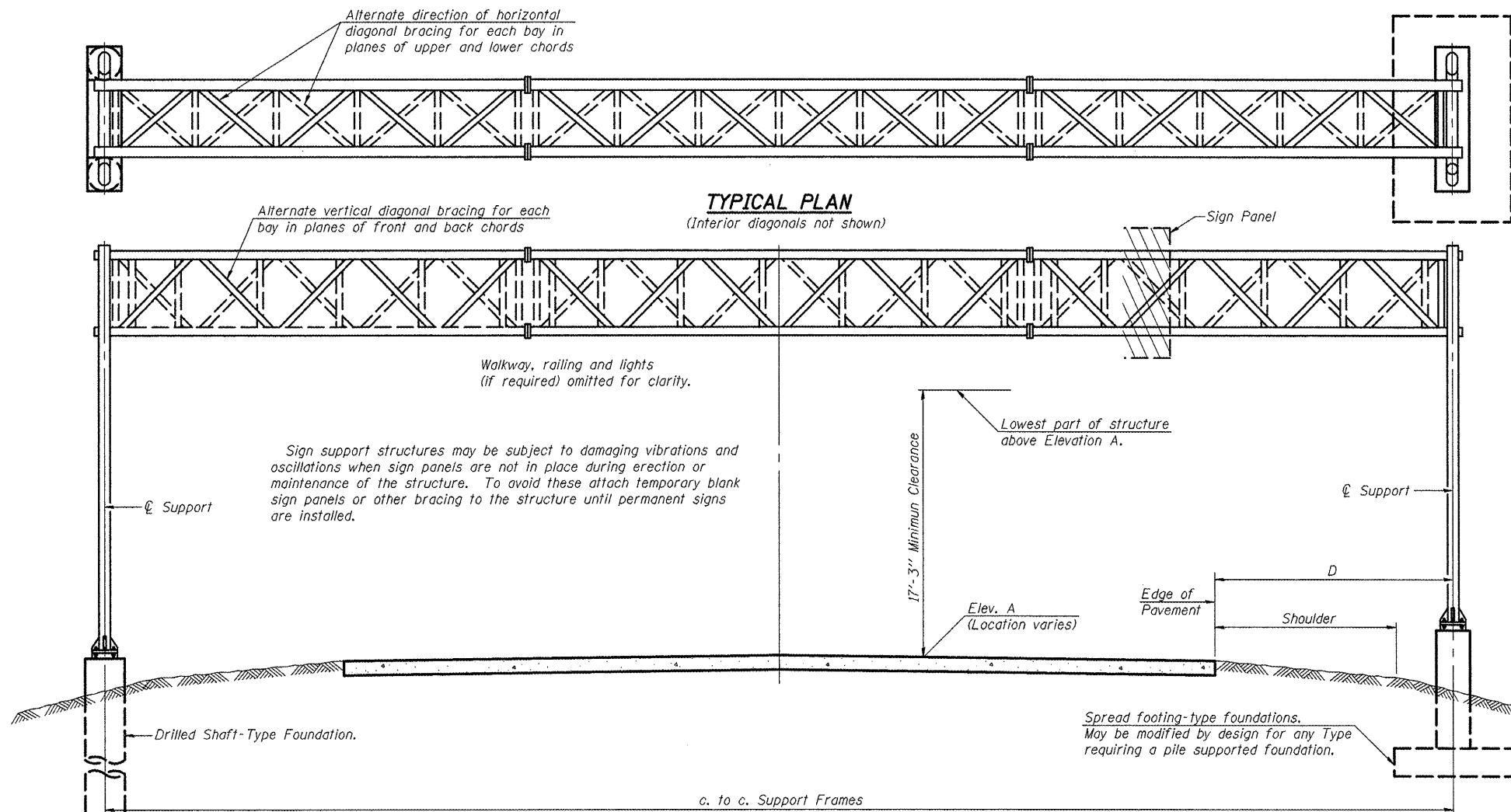
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		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IMPACT ATTENUATORS (NON-REDIRECTIVE) TEST LEVEL 3

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	29
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				



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 Sealer in accordance with the Standard Specifications.

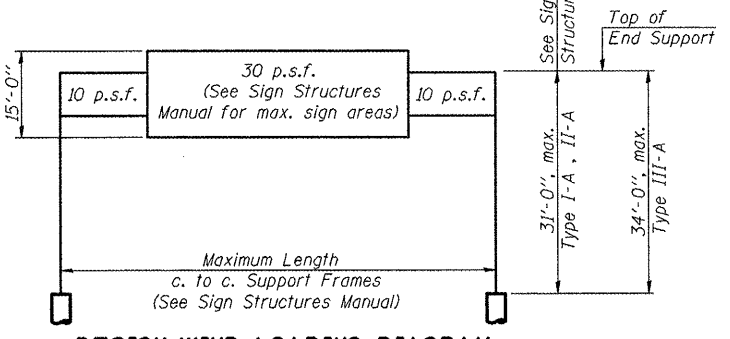
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

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

TYPICAL ELEVATION
 (Looking at Face of Signs)**

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign ****	Total Sign Area
5 S 010 1057 L235.32	496+10	II-A	94'-0"	745.23	***	12'-0"	339.75
5 S 010 1057 R236.14	414+50	II-A	75'-0"	726.32	***	16'-0"	433.0

**Looking upstation for structures with signs both sides.
 ***See Sign Truss Mounting Details
 ****End support height based on 15'-0" sign height or tallest sign whichever is greater per OS-A-6.
 * 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

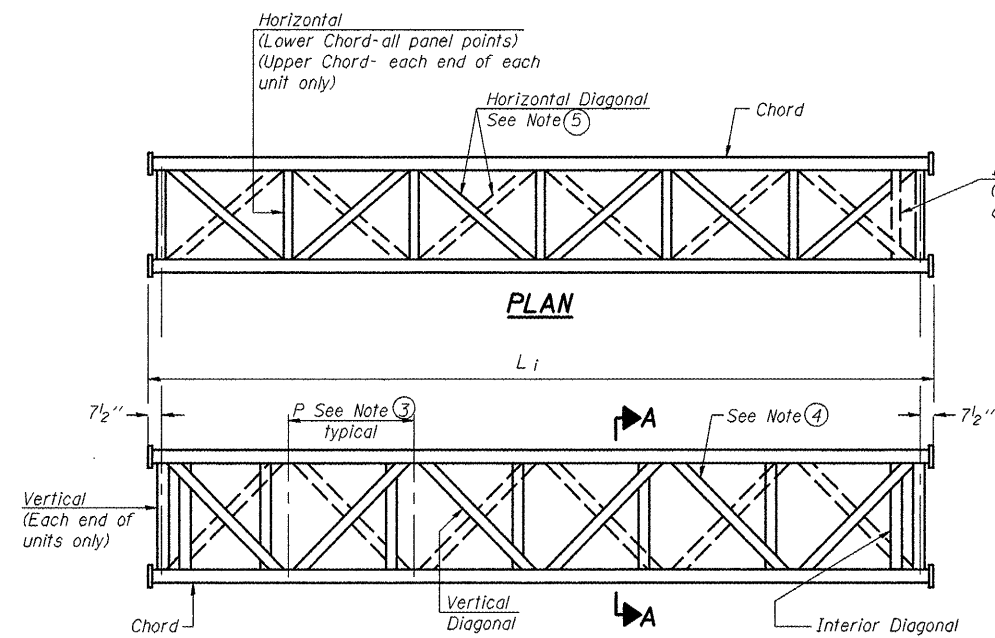
Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

TOTAL BILL OF MATERIAL

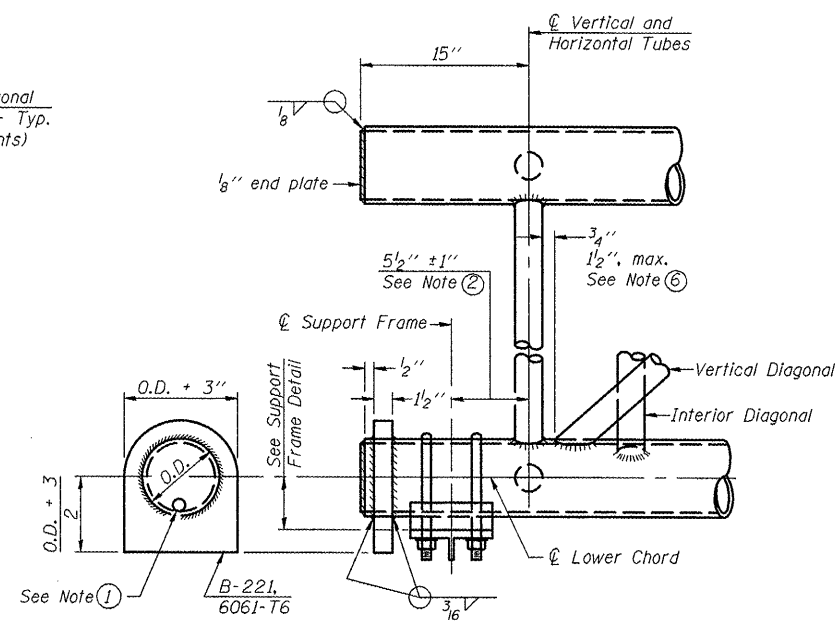
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

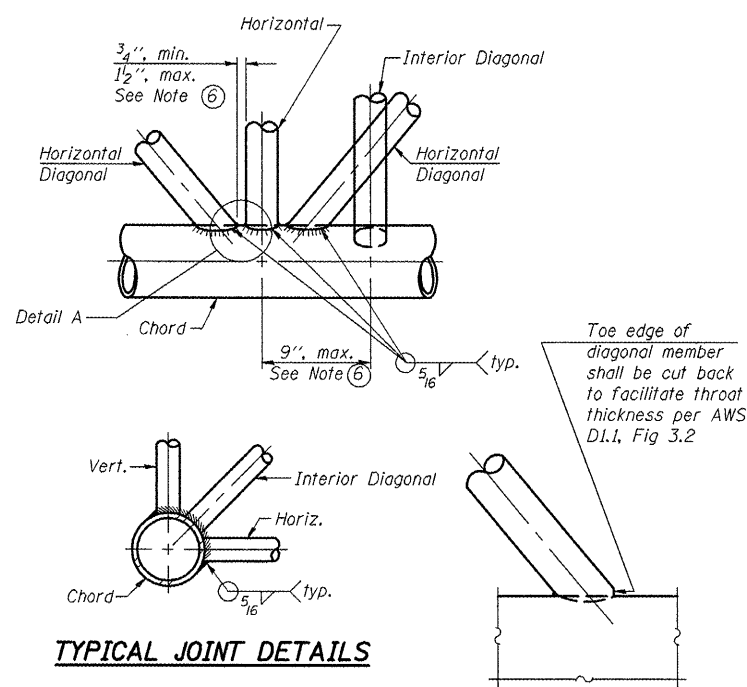
OS-A-1 1-20-11



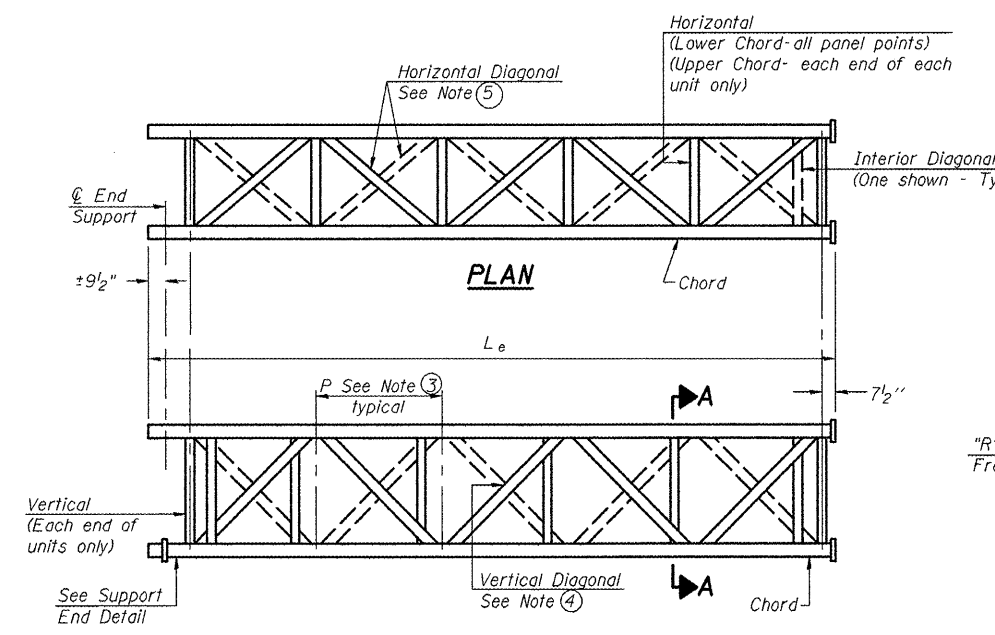
ELEVATION
TYPICAL INTERIOR UNIT
Even number of panels/interior unit required.



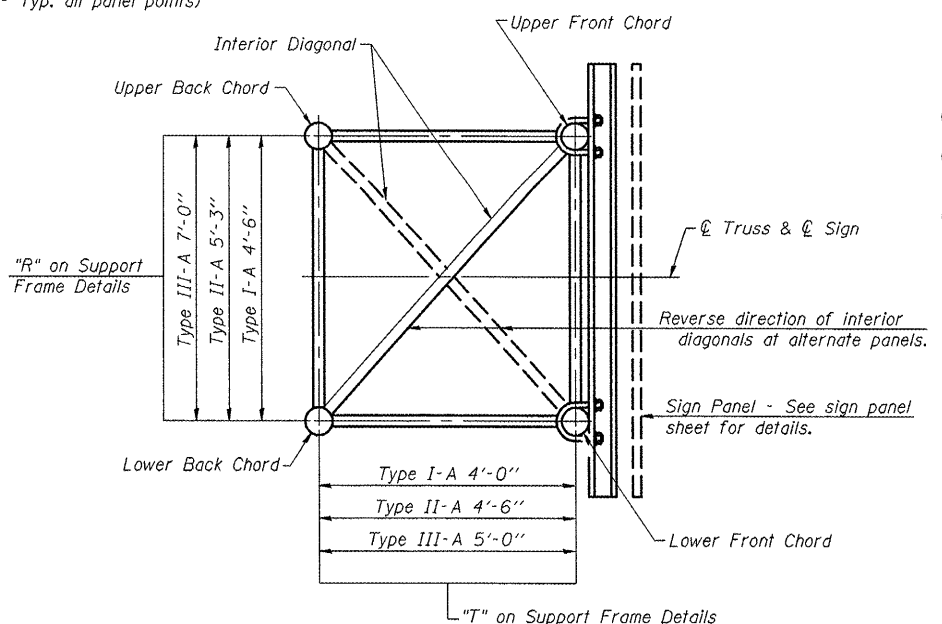
SUPPORT END DETAIL FOR EXTERIOR UNIT



TYPICAL JOINT DETAILS



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. 1/2" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by $\pm 1"$ 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 3/4" minimum to 1 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.

OS-A-2

1-20-11

FILE NAME =	USER NAME = ceer1ackjd	DESIGNED - JAL	REVISED -
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PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISIONS -	
PLOT DATE = 10/7/2011	DATE = 04/26/11	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

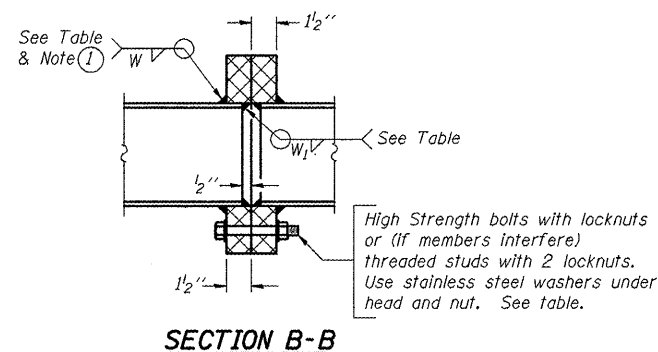
SCALE: SHEET NO. 5 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

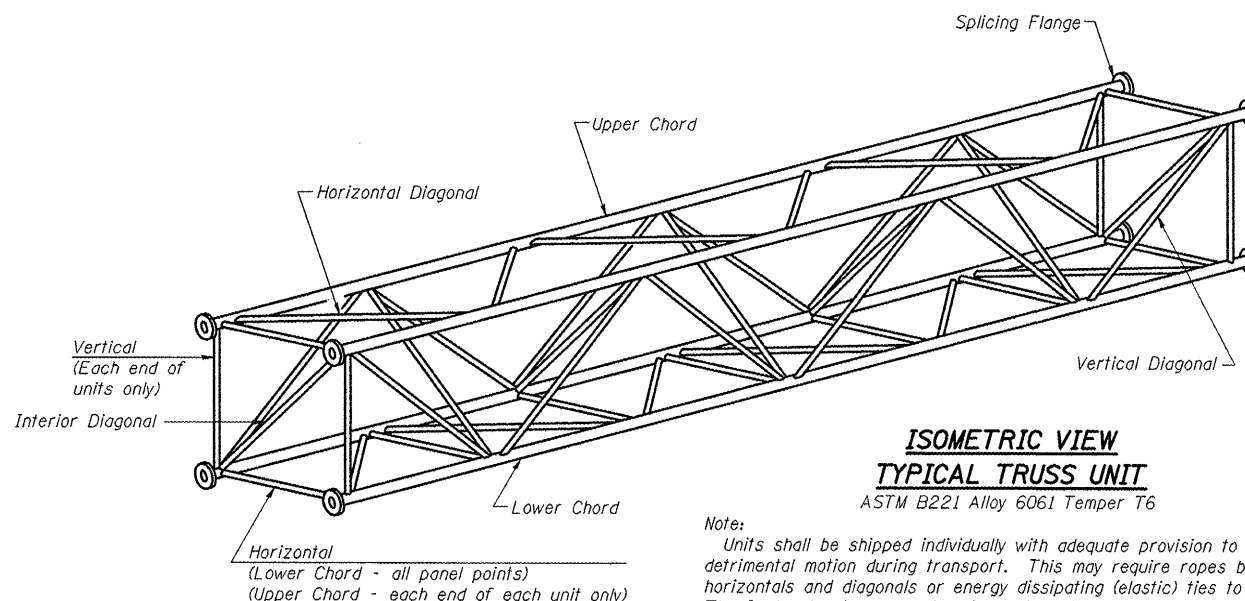
TRUSS UNIT TABLE

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 _e)	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
5 S 010 1057 L235.32	496+10	II-A	6	32'-1 1/2"	5'-0 1/2"	1	6	31'-6"	5'-0 1/2"	6"	5/16"	3"	5/16"	2 3/4"	6	7/8"	3/8"	1/4"	10 1/4"	13 3/4"
5 S 010 1057 R236.14	414+50	II-A	7	38'-4"	5'-2 1/2"	0	---	---	---	5 1/2"	5/16"	3"	5/16"	1 3/4"	6	7/8"	3/8"	1/4"	9 1/4"	12 1/4"

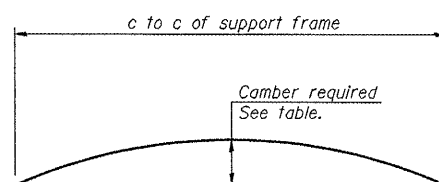


SECTION B-B

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.



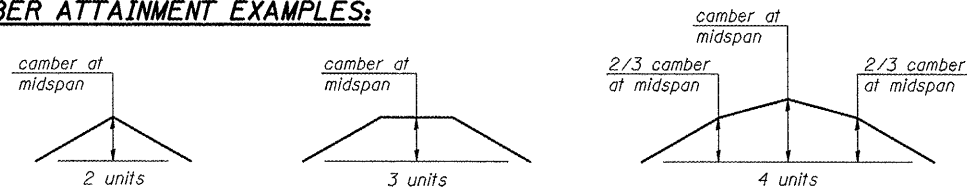
ISOMETRIC VIEW TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6



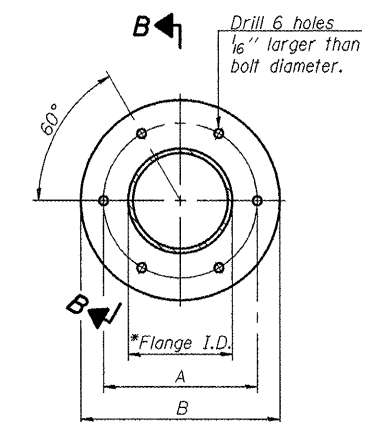
CAMBER DIAGRAM

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

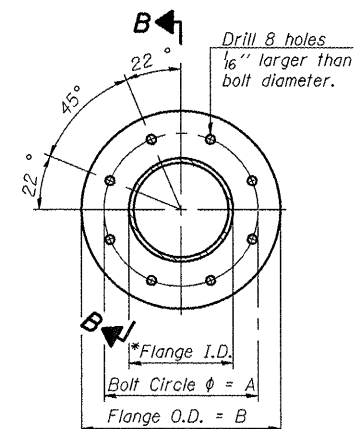
CAMBER ATTAINMENT EXAMPLES:



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

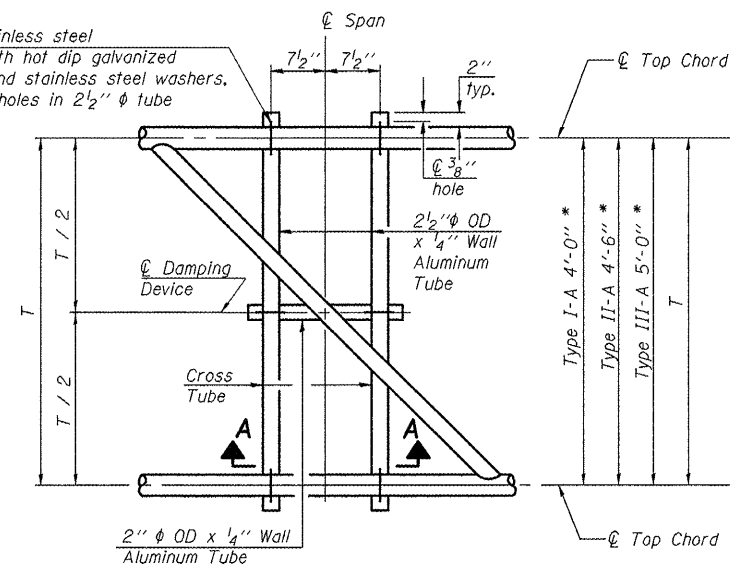
ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

OS4-A-2 1-20-11

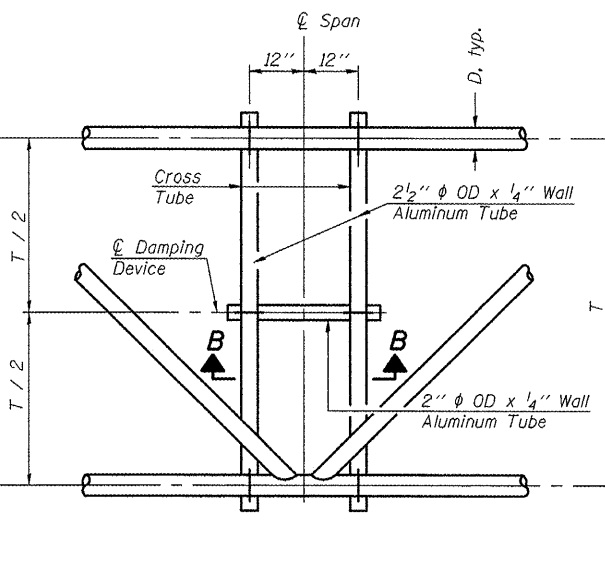
FILE NAME =	USER NAME = oearlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
et:\pwwork\puidot\oearlockjd\0266557\046179-sht-details.dgn	PLOT SCALE = 40.0000' / 1"	DRAWN -	REVISED -			•	••	Various	178	32	
PLOT DATE = 10/7/2011	DATE = 04/26/11	CHECKED -	REVISED -			SCALE:	SHEET NO. 6 OF 17 SHEETS	STA.	TO STA.		
		DATE -	REVISED -			CONTRACT NO. 46179					
ILLINOIS FED. AID PROJECT											

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

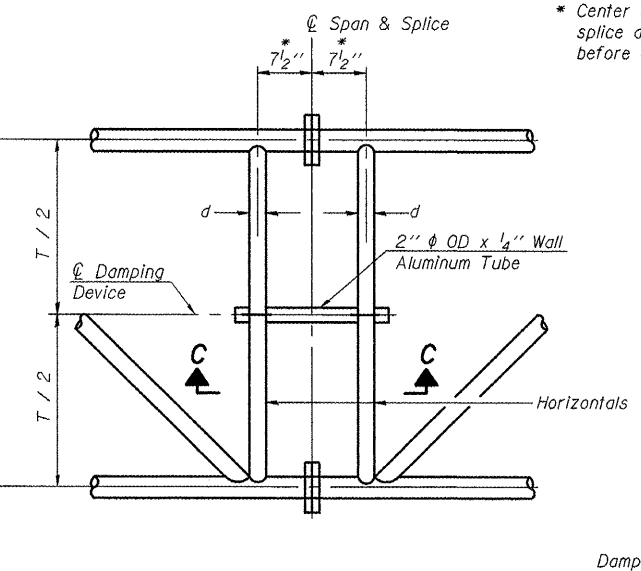
5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in 2 1/2" φ tube



PLAN DETAIL "A"
Span between Panel Points



PLAN DETAIL "B"
Span at Panel Point



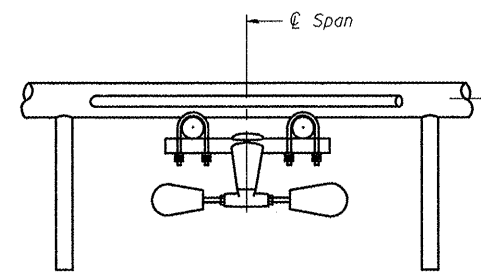
PLAN DETAIL "C"
Span at Chord Splice

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

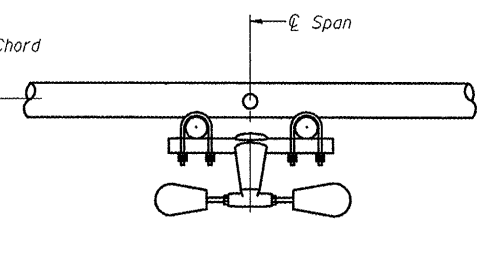
NOTES

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

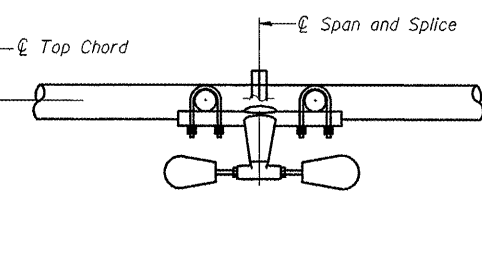
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

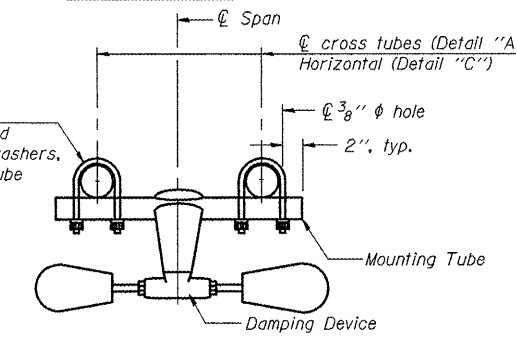


SECTION B-B

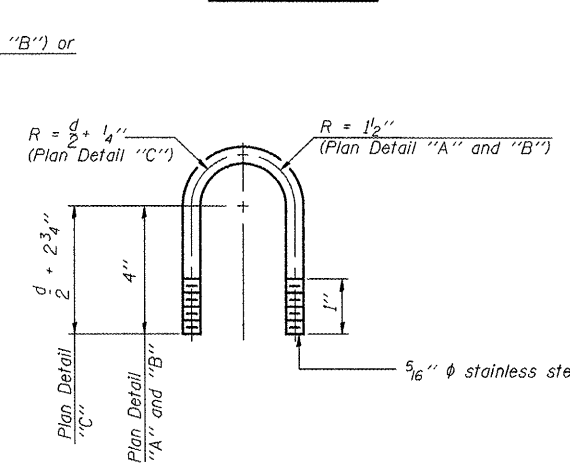


SECTION C-C

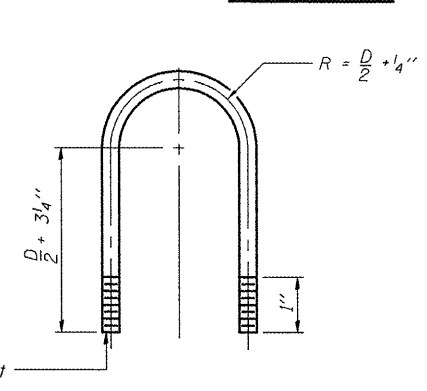
5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in mounting tube



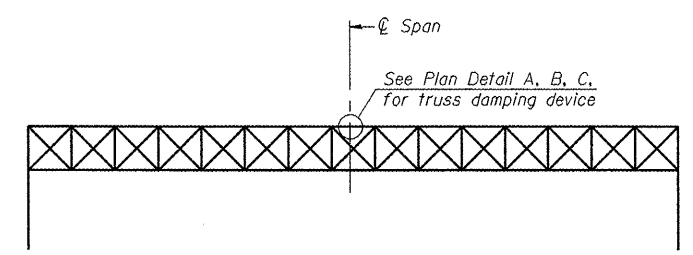
**TRUSS DAMPING
DEVICE CONNECTION DETAIL**
(Typical)



**DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL**
(Typical)



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

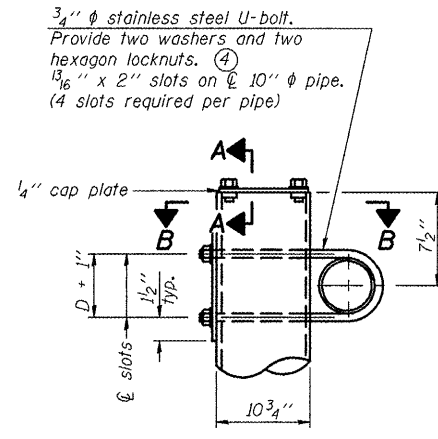


ELEVATION
Aluminum Overhead
Sign Truss

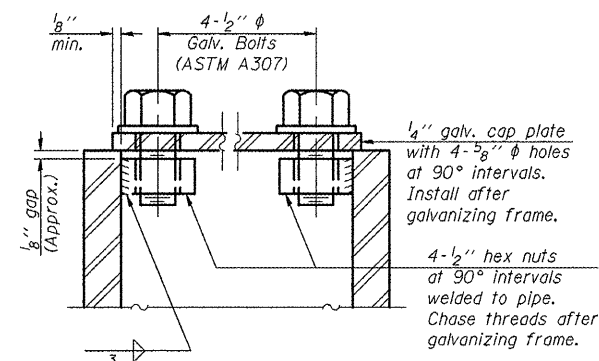
OS-A-D 1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURE DAMPING DEVICE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwork\ceerlockjd\d2665571.dwg	46179-shd-details.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO. 7 OF 17 SHEETS	STA.	TO STA.	•	••	Various	178	33
PLOT SCALE = 48.0000' / 1"	CHECKED -	REVISOR -	REVISOR -		CONTRACT NO. 46179								
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISOR -	REVISOR -		ILLINOIS FED. AID PROJECT								

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

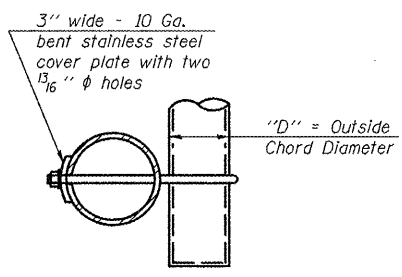


DETAIL A

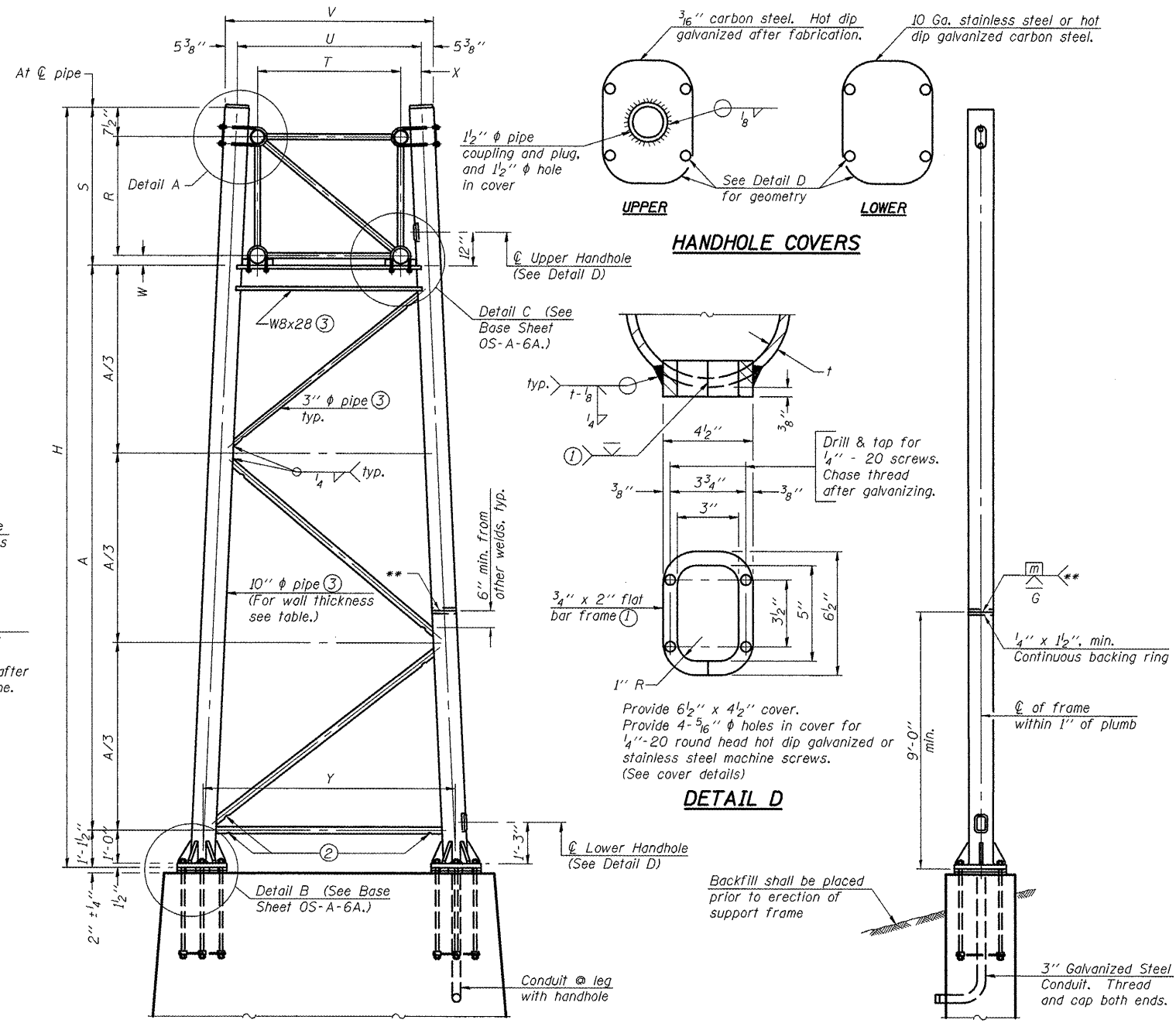


SECTION A-A

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



SECTION B-B



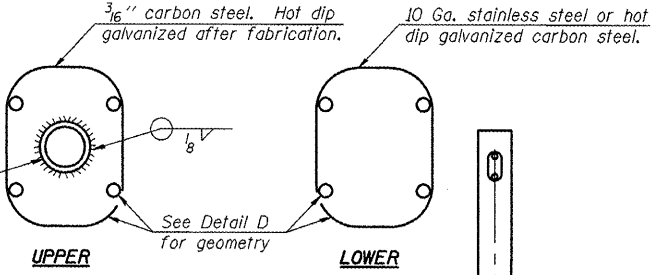
For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

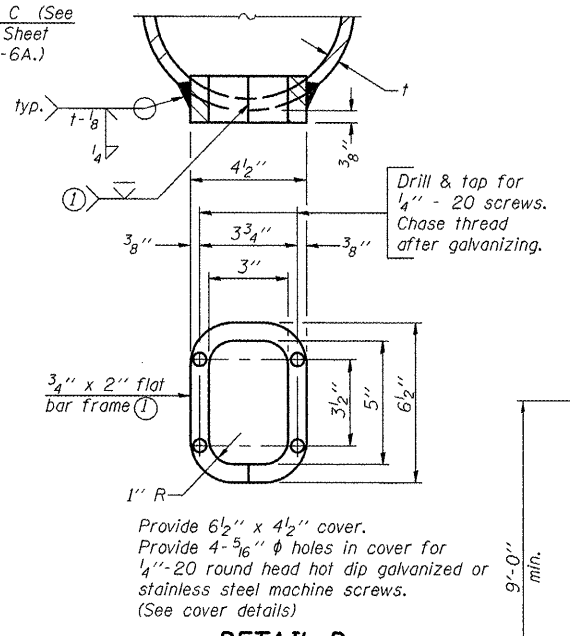
10" Ø PIPE TRUSS SUPPORT FRAME

** 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.

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	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"	

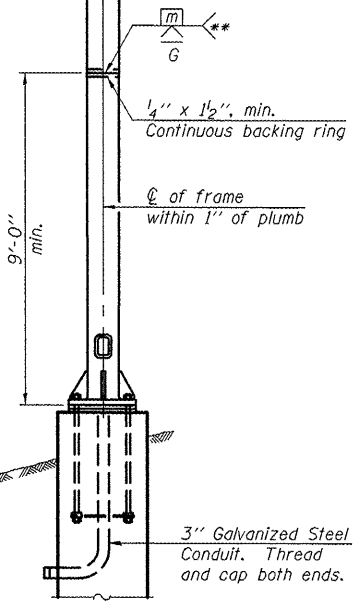


HANDHOLE COVERS



DETAIL D

Backfill shall be placed prior to erection of support frame



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.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H ⑥	A
		Left	Right				
5 S 010 1057 L235.32	496+10	X	X	II-A	0.365 (Std.)	29'-10 3/4"	22'-6"
5 S 010 1057 R236.14	414+50	X	X	II-A	0.365 (Std.)	29'-10 3/4"	22'-6"

OS-A-6 1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ce:\pwwork\pwwork\ceerlockjd\0266557.dgn	46179-shrtdetails.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.00000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

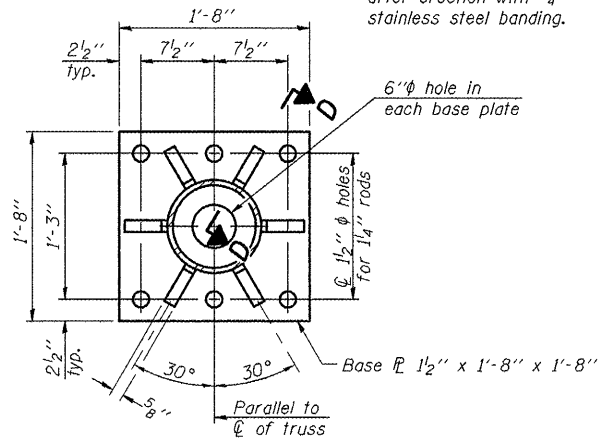
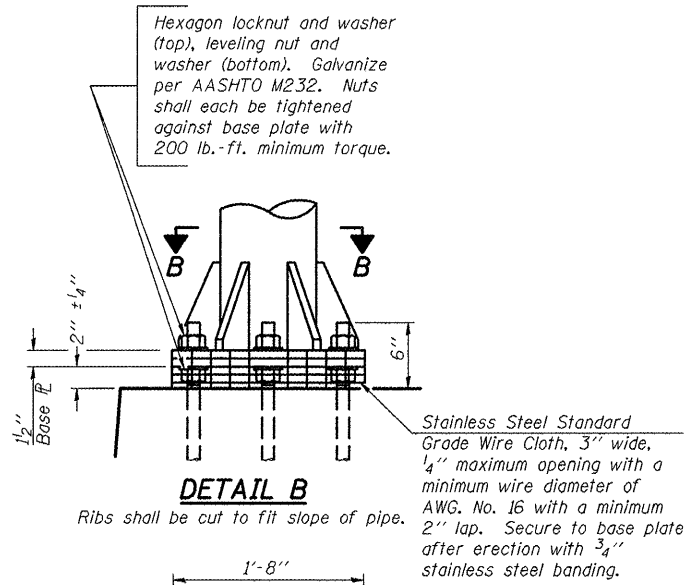
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS**

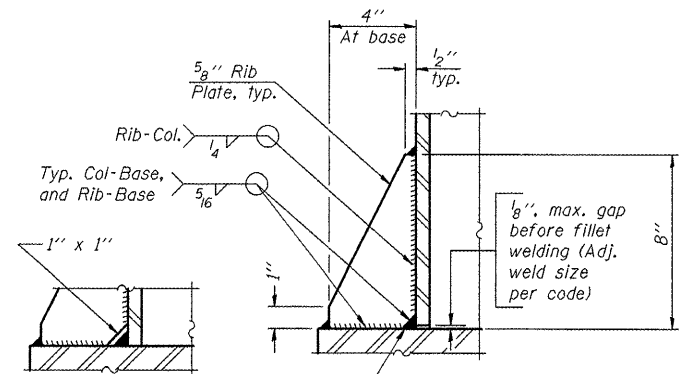
SCALE: SHEET NO. 8 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	34
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06



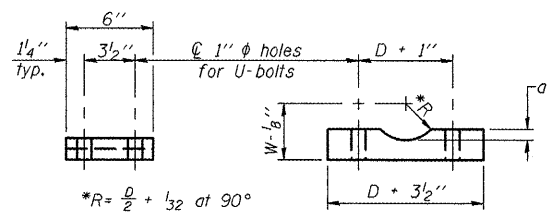
SECTION B-B



SECTION D-D

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

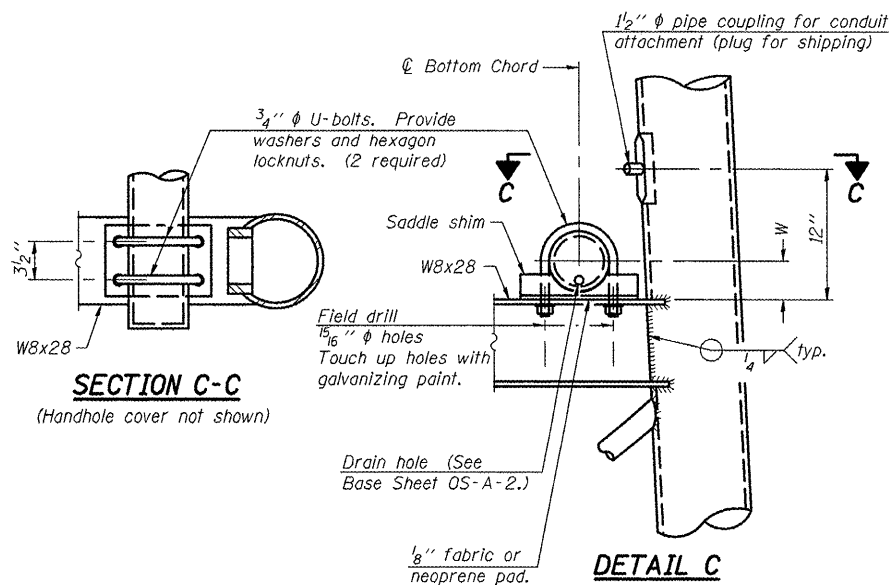
No snip req'd. at rib inside corner if placed before col. to base plate welding.**



SADDLE SHIM DETAIL

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

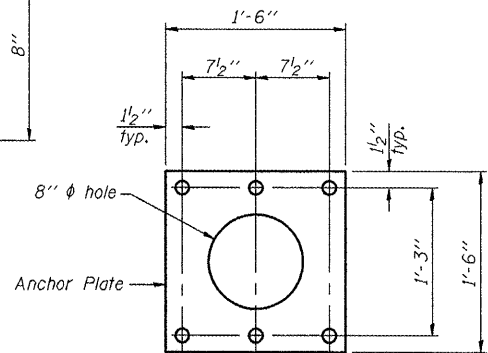
Truss Chord Nominal Dia.	a
5"	3/4"
5 1/2"	13/16"
6"	7/8"
6 1/2"	15/16"
7"	1"



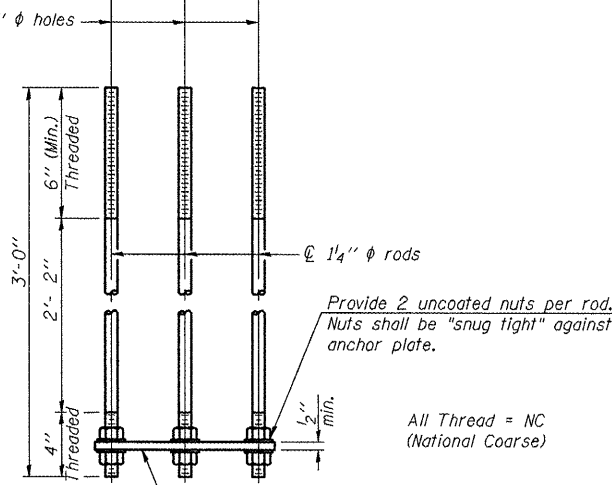
SECTION C-C

(Handhole cover not shown)

DETAIL C



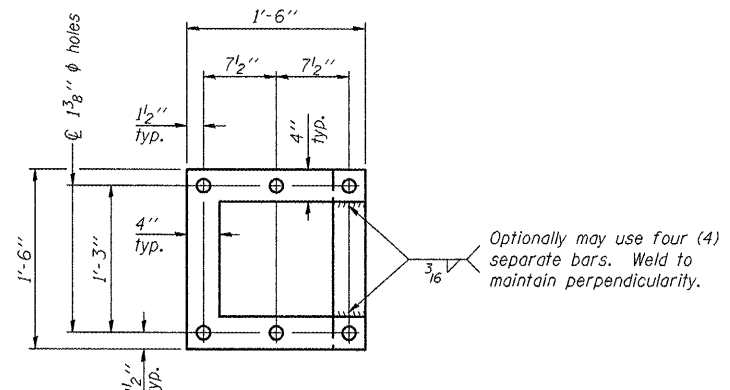
ANCHOR ROD DETAIL
Spread Footing Foundation



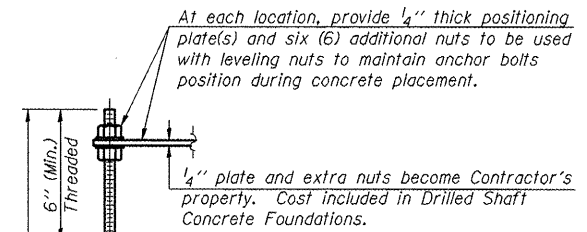
All Thread = NC (National Coarse)

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

10" ϕ PIPE SUPPORT FRAME DETAILS



POSITIONING PLATE(S)

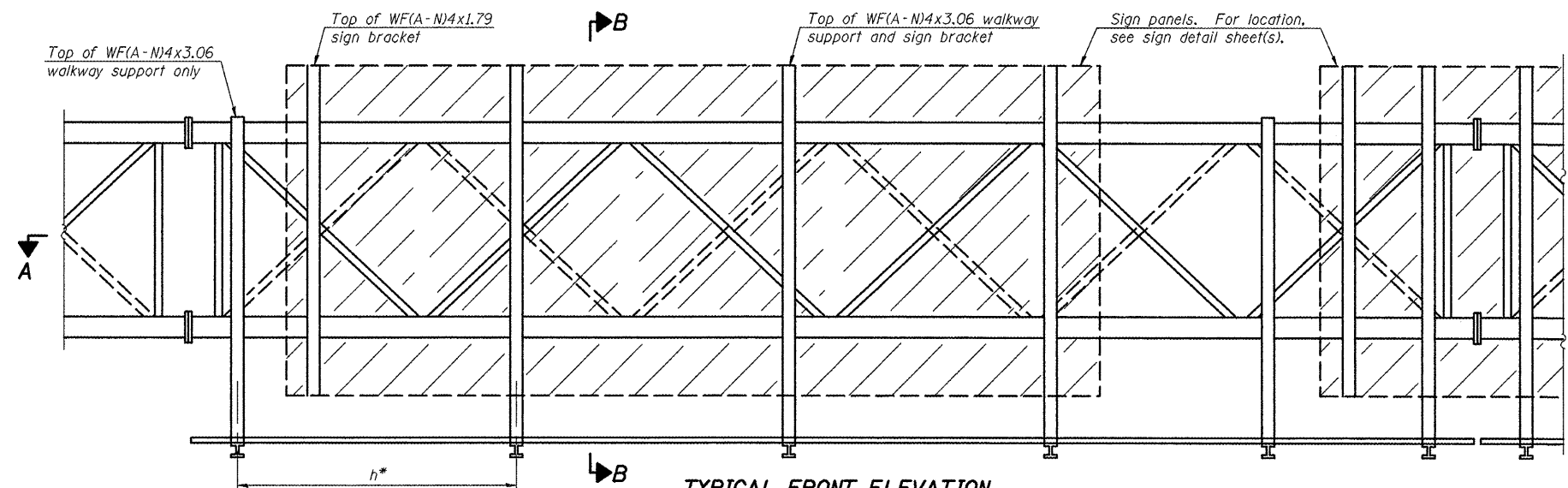


ANCHOR ROD DETAIL
Drilled Shaft Foundation

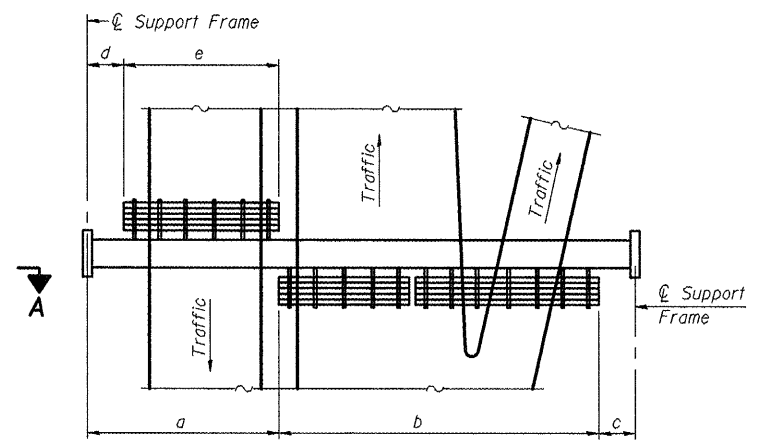
OS-A-6A 1-20-11

FILE NAME =	USER NAME = ceer-lockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES SUPPORT FRAME DETAILS - ALUMINUM TRUSS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwid\ceer-lockjd\026655710546179-sh1-detail.dgn	DRAWN -	REVISED -	REVISED -			•	••	Various	178	35	
PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO. 9 OF 17 SHEETS	STA.	TO STA.		

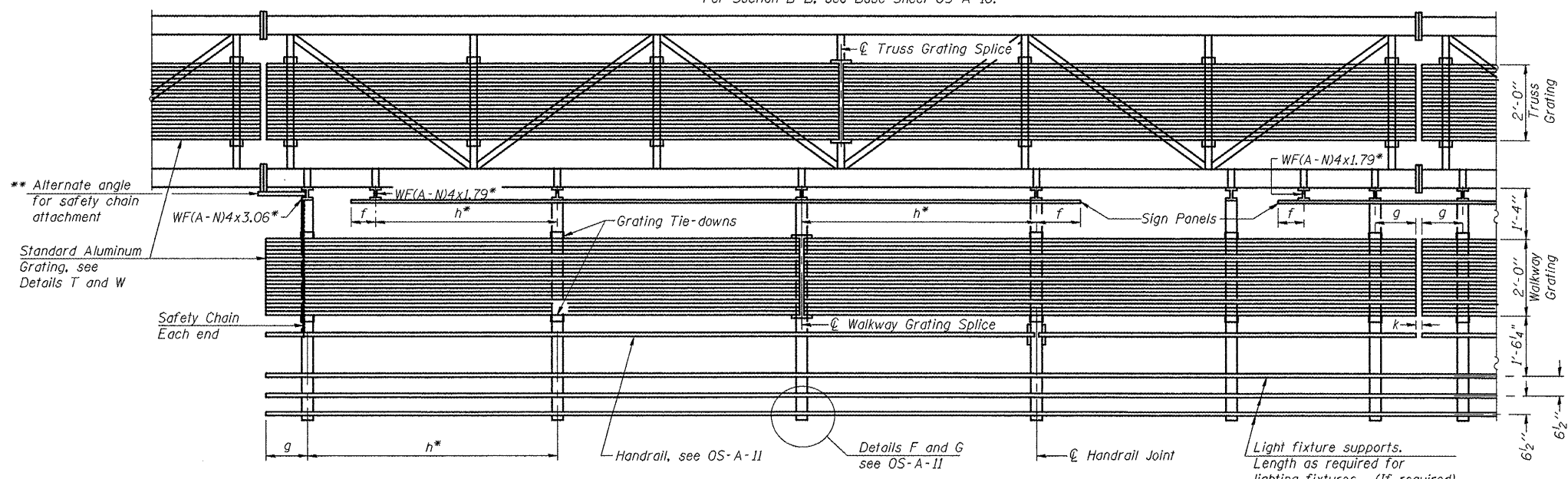
•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06



TYPICAL FRONT ELEVATION
 With lights and handrail omitted for clarity.
 For Section B-B, see Base Sheet OS-A-10.



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



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Handrail joints, grating, and light support splices placed as needed.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
 * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
 h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 k = 2" maximum gap between adjacent walkway grating sections and handrail ends
 ** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.
 For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
 For Handrail Details see Base Sheet OS-A-11.

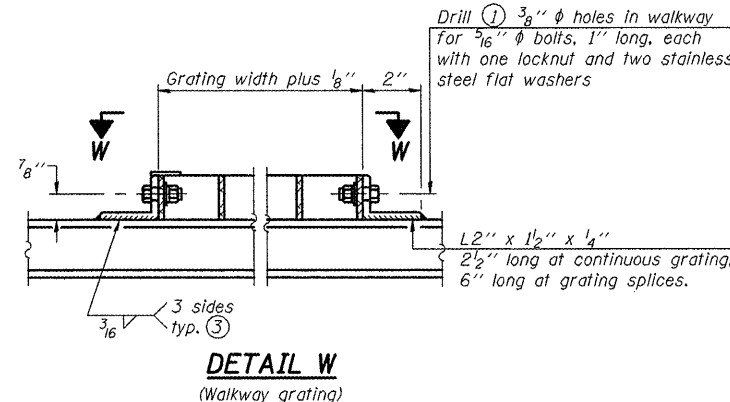
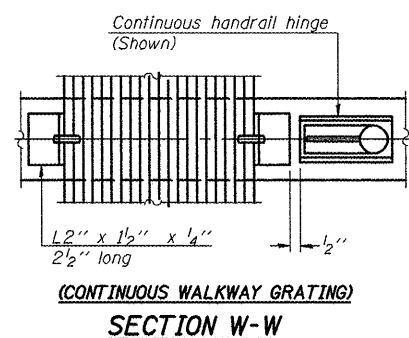
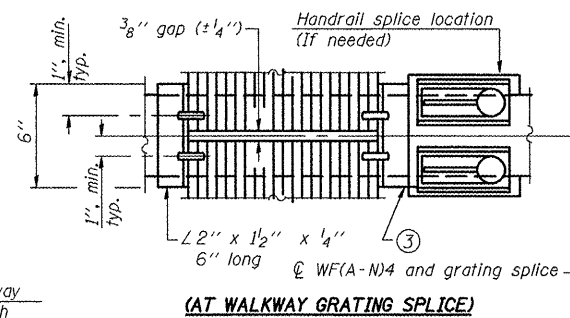
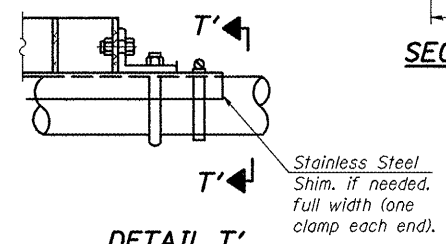
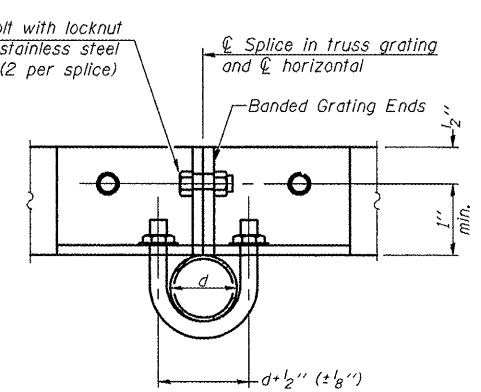
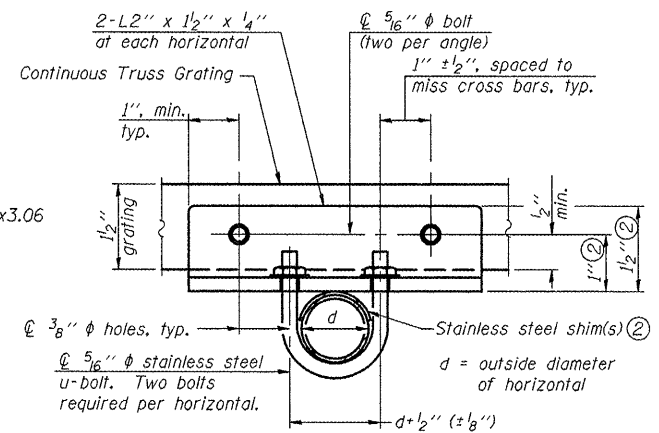
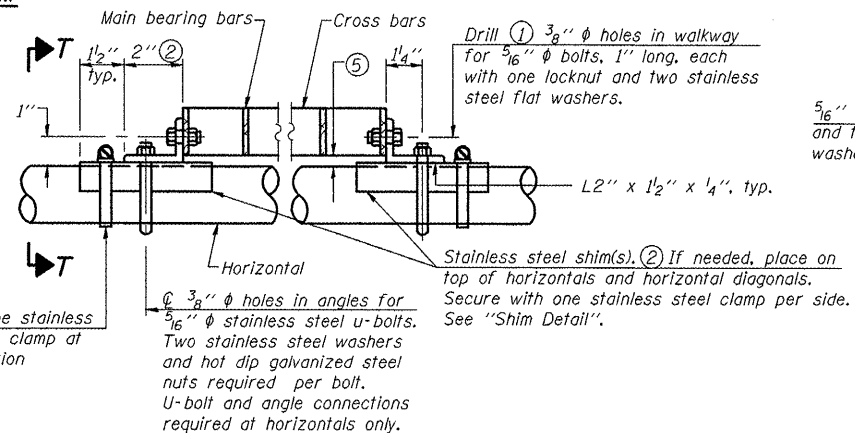
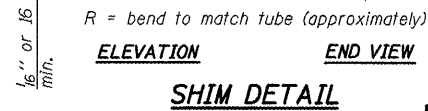
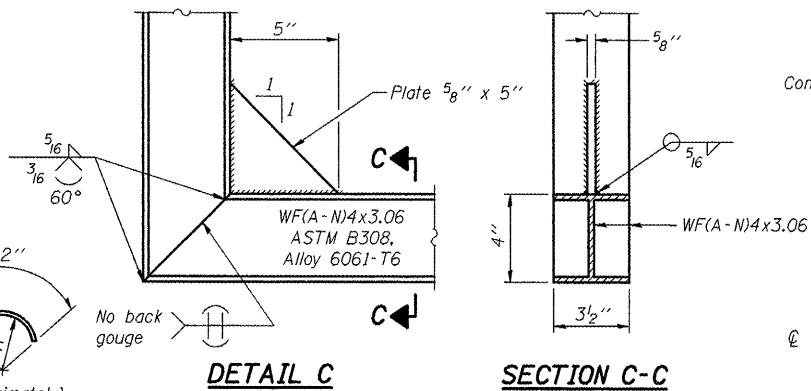
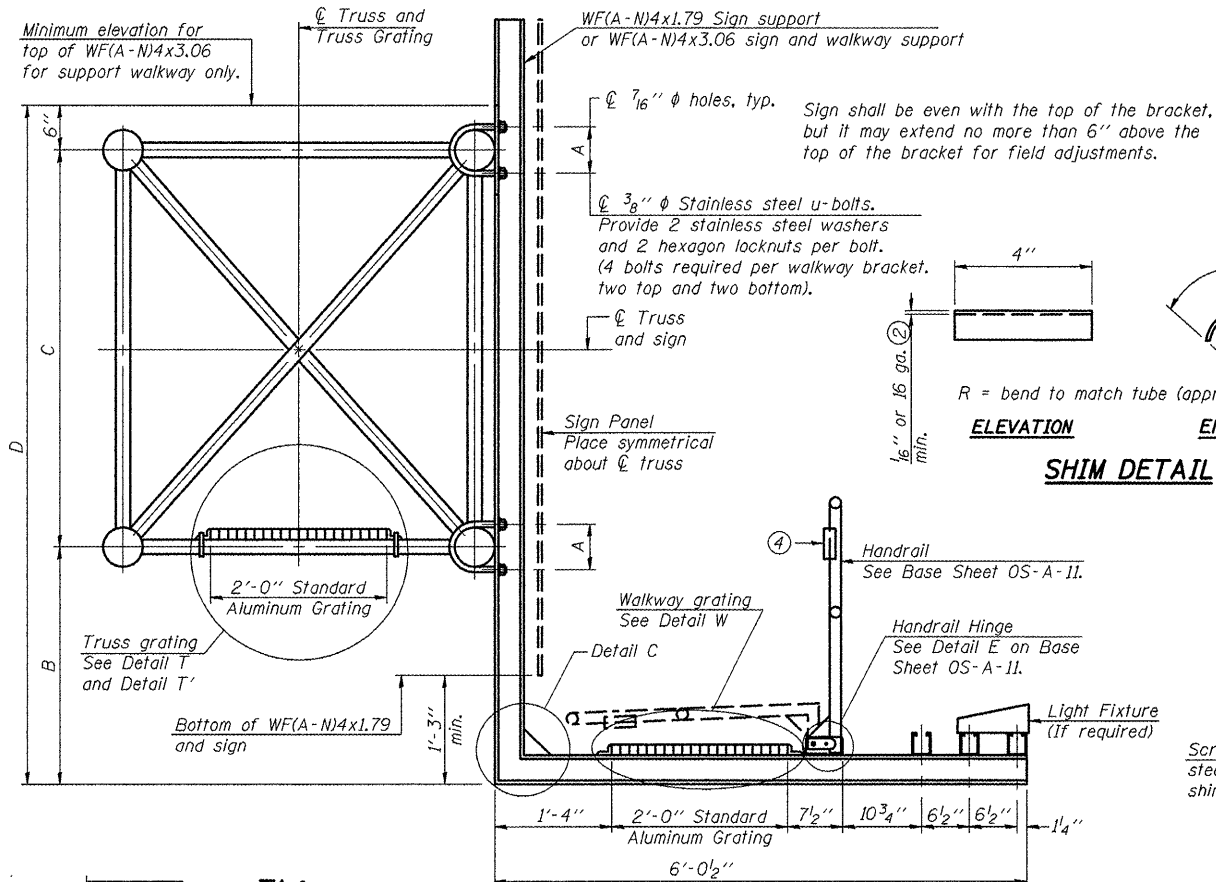
Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
5 S 010 1057 L235.32	496+10	38'-0"	41'-0"	15'-0"	-	-	41'-0"
5 S 010 1057 R236.14	414+50	23'-6"	39'-0"	12'-6"	-	-	39'-0"
See also "Sign Truss Mounting Details" Sheets 27 & 28							

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary ±1/2" based on available standard widths.

OS-A-9

1-20-11



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

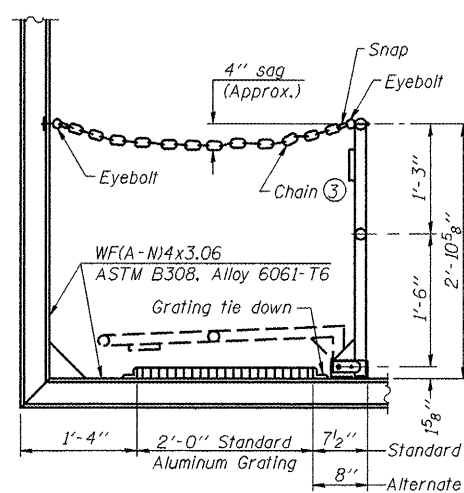
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D*
5 S 010 1057 L235.32	496+10		4'-7 1/2"	5'-3"	10'-4 1/2" & VAR.
5 S 010 1057 R236.14	414+50		6'-7 1/2"	5'-3"	12'-4 1/2" & VAR.

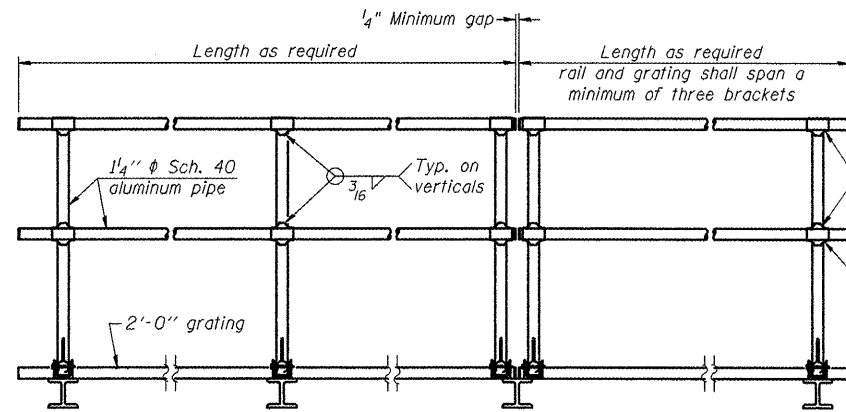
*See also "Sign Truss Mounting Details" Sheets 27 & 28 for the information needed to determine the variable walkway support and sign support lengths.

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-II.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual height of tallest sign given on OS-A-I.

OS-A-10 1-20-11



SIDE ELEVATION
(Showing safety chain w/o sign)

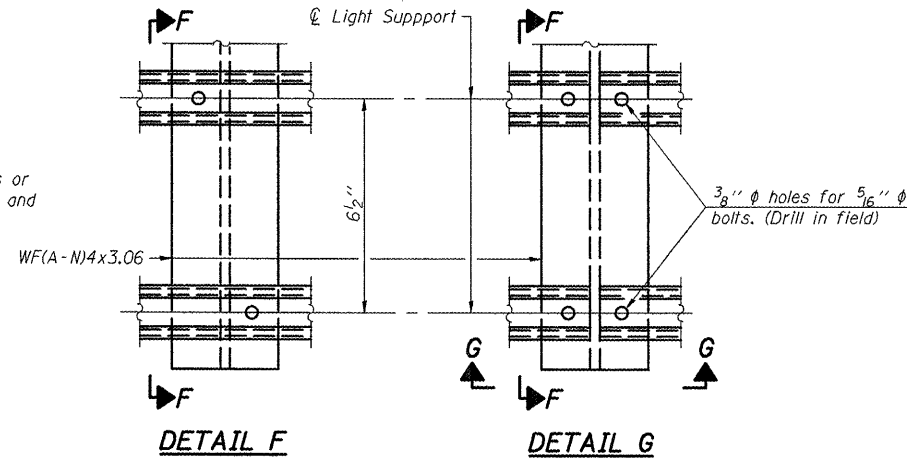


FRONT ELEVATION

HANDRAIL DETAILS

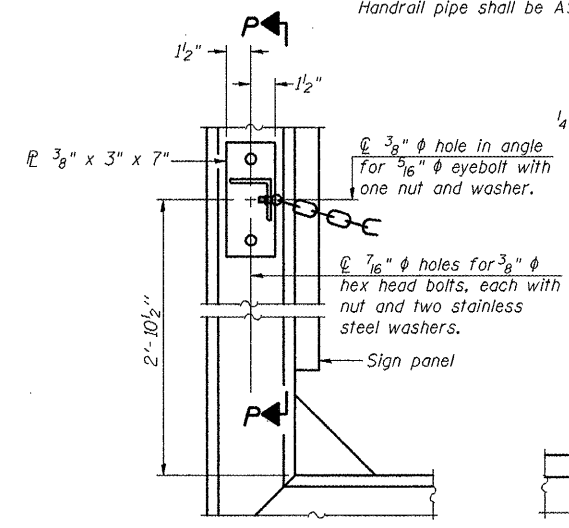
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

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



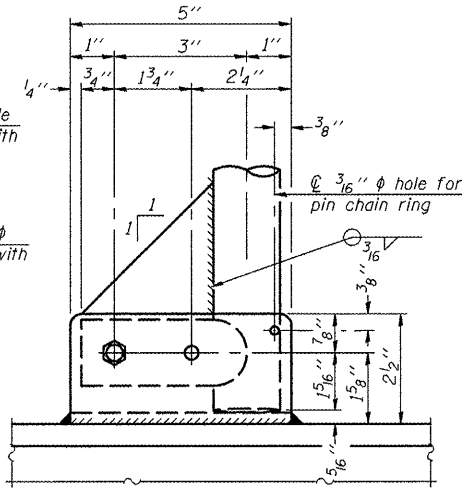
DETAIL F

DETAIL G

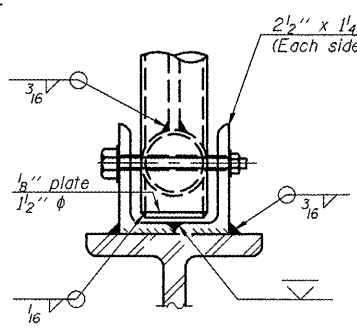


ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)

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

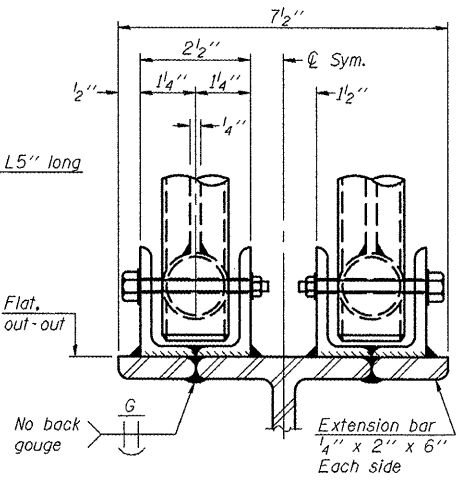


SIDE ELEVATION

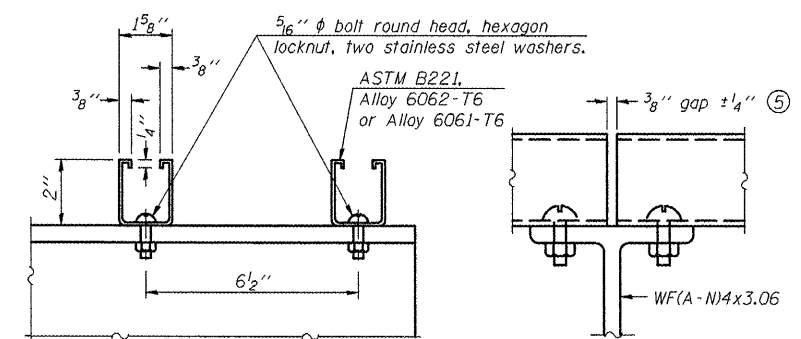


FRONT ELEVATION

See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT ④

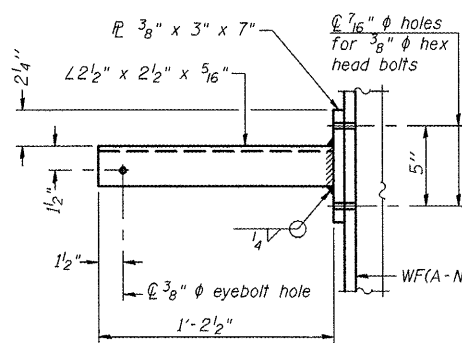


SECTION F-F

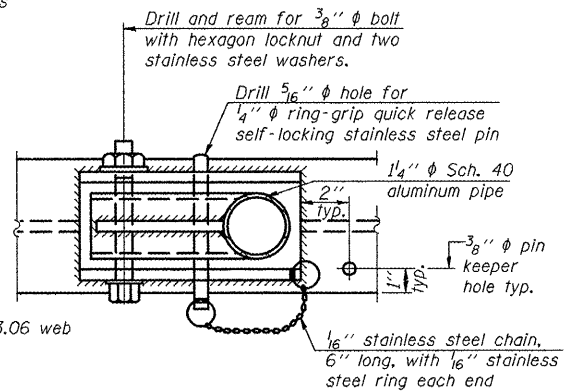
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

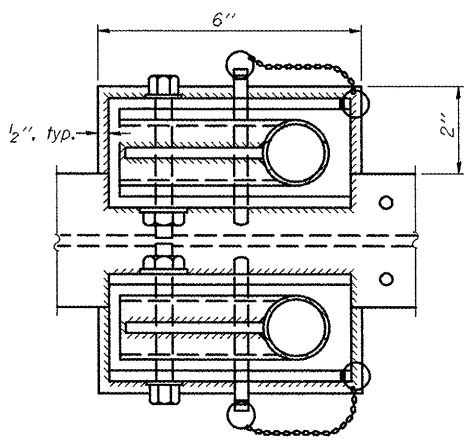
- ⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



SECTION P-P

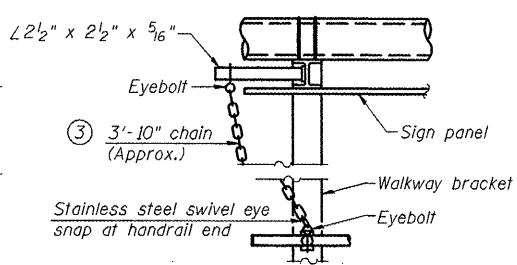


PLAN DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

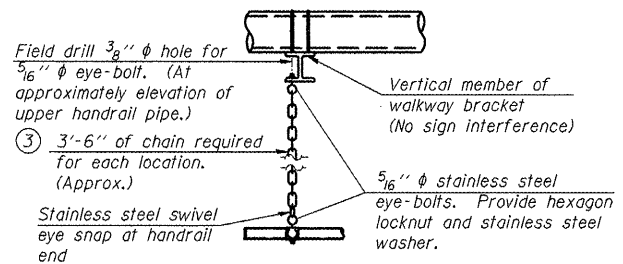
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN

One required for each end of each walkway.

OS-A-11

1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ce:\pwwork\pwwork\ceerlockjd\0266557.dwg	46179-shd-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.00000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

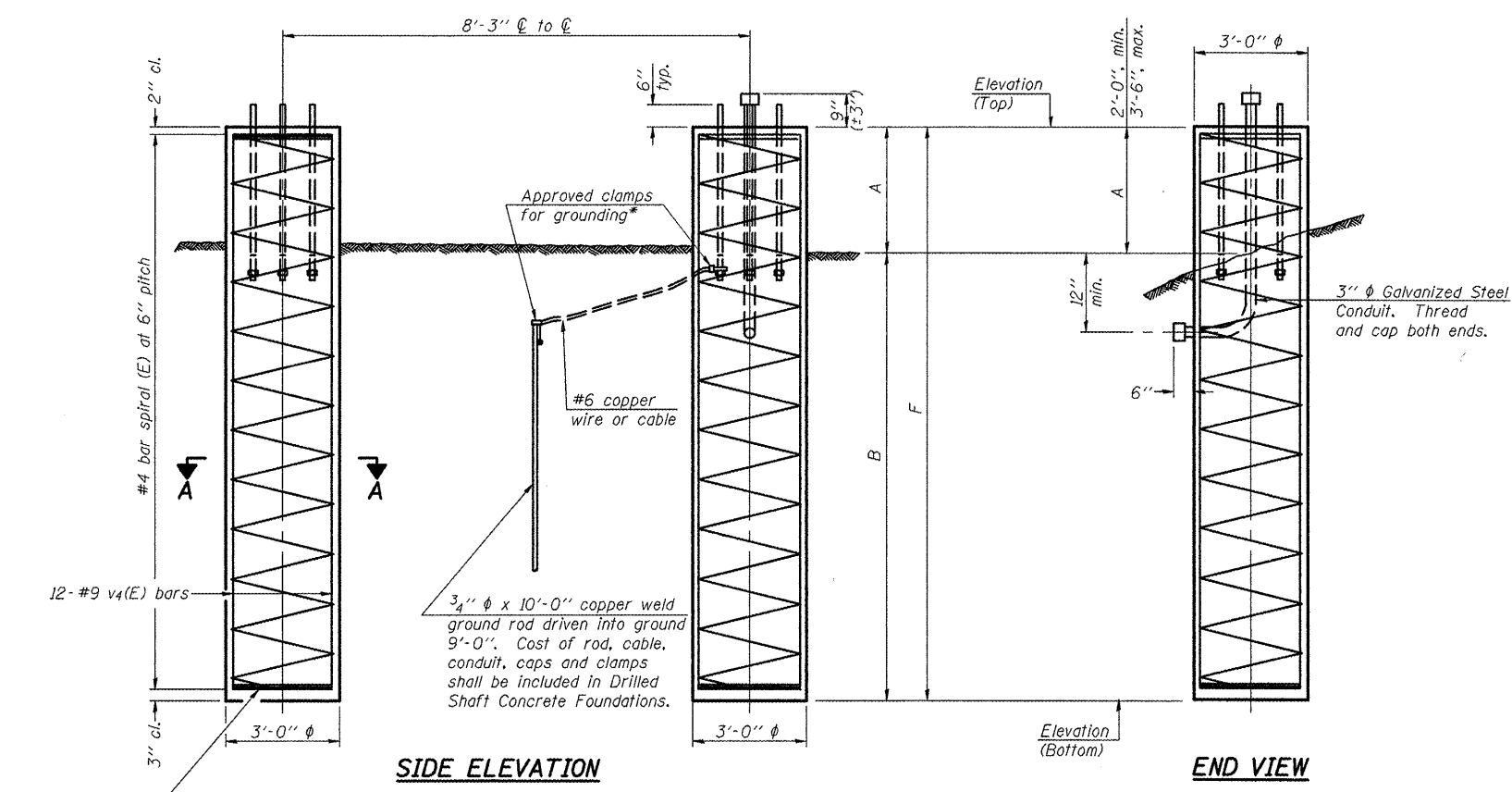
OVERHEAD SIGN STRUCTURES ALUMINUM HANDRAIL DETAILS			
SCALE:	SHEET NO. 12 OF 17 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	..	Various	178	38
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

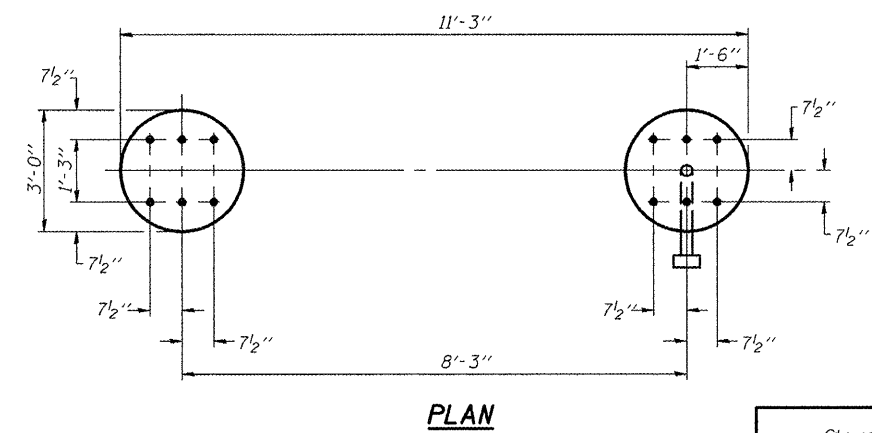
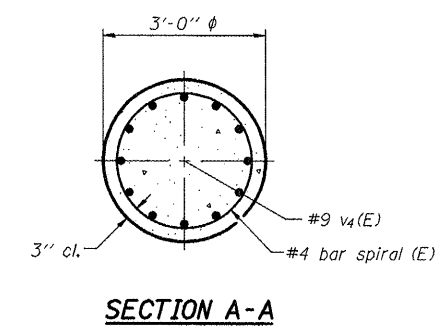
•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

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.



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" Ø SUPPORT FRAME
 TYPE I-A or II-A TRUSS**

Structure Number	Station	Left Foundation			Right Foundation			Class DS Concrete (Cu. Yds.)				
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top		Elevation Bottom	A	B	F
5 S 010 1057 L235.32	496+10	See Base Sheet OS4-Med Median Support Foundation Details					745.00	724.00	3'-6"	17'-6"	21'-0"	11.0
5 S 010 1057 R236.14	414+50	See Base Sheet OS4-Med Median Support Foundation Details					727.05	706.15	3'-4 3/4"	17'-6"	20'-10 3/4"	11.0

OS4-F3 1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ci:\pw_work\puidat\ceerlockjd\0266557\0266557.dgn	46179-shd-dt-dt-dt.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

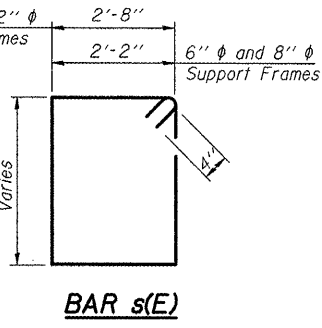
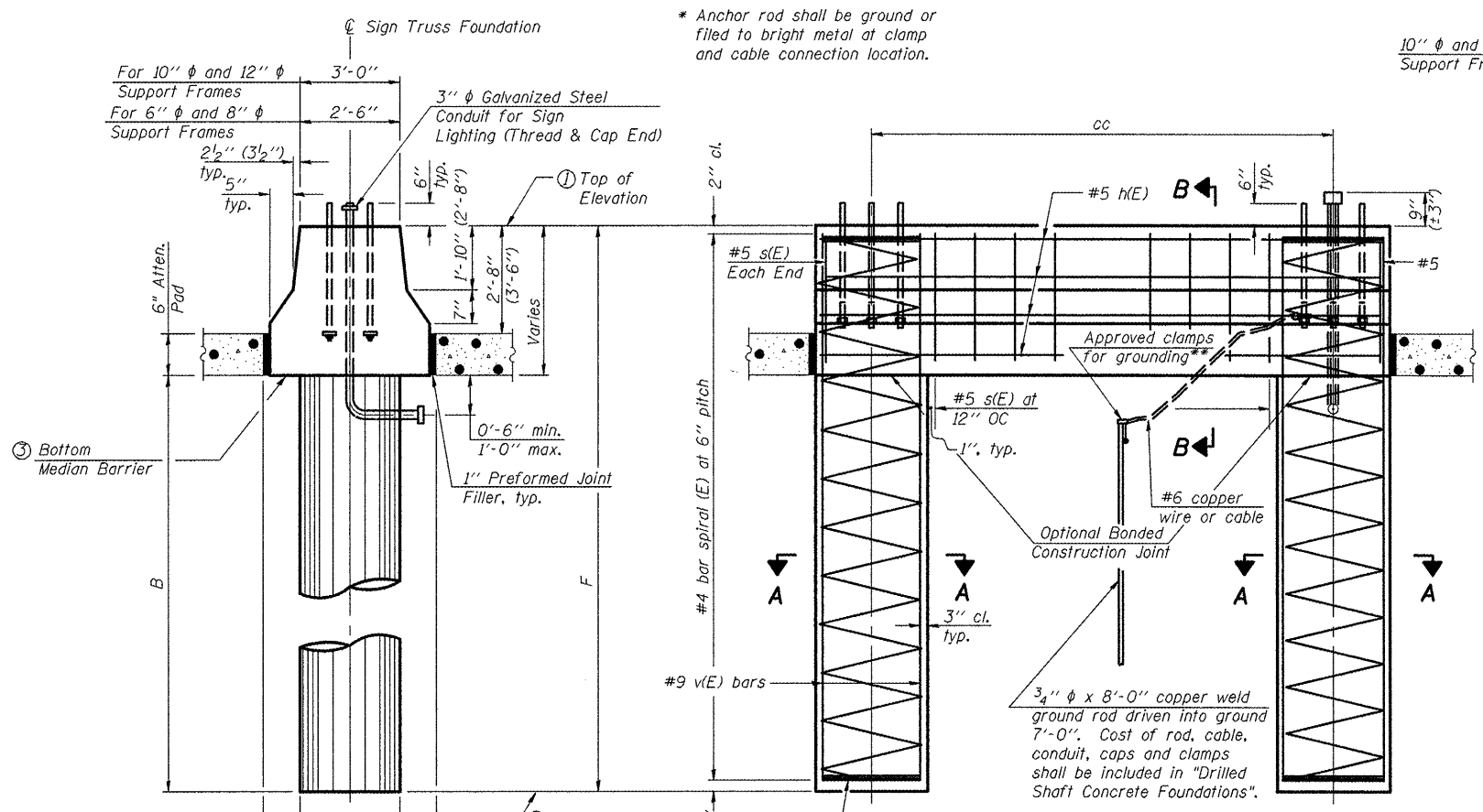
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
 DRILLED SHAFT DETAILS**

SCALE: SHEET NO. 13 OF 17 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	39
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06



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.

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—
#4(E) bar spiral - see Side Elevation				

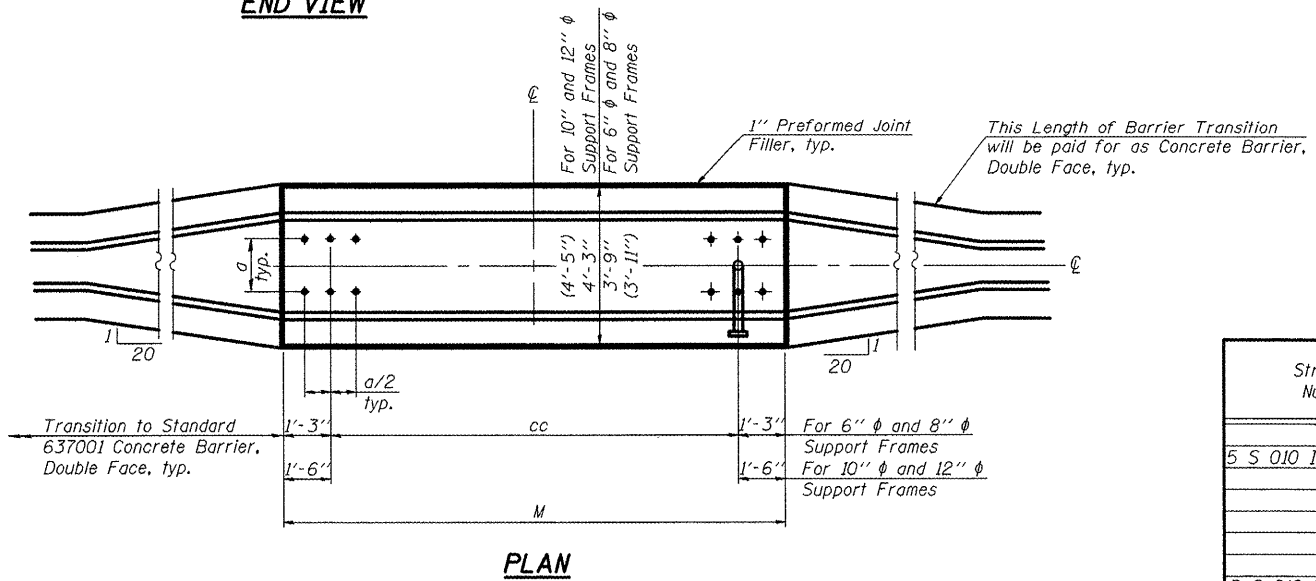
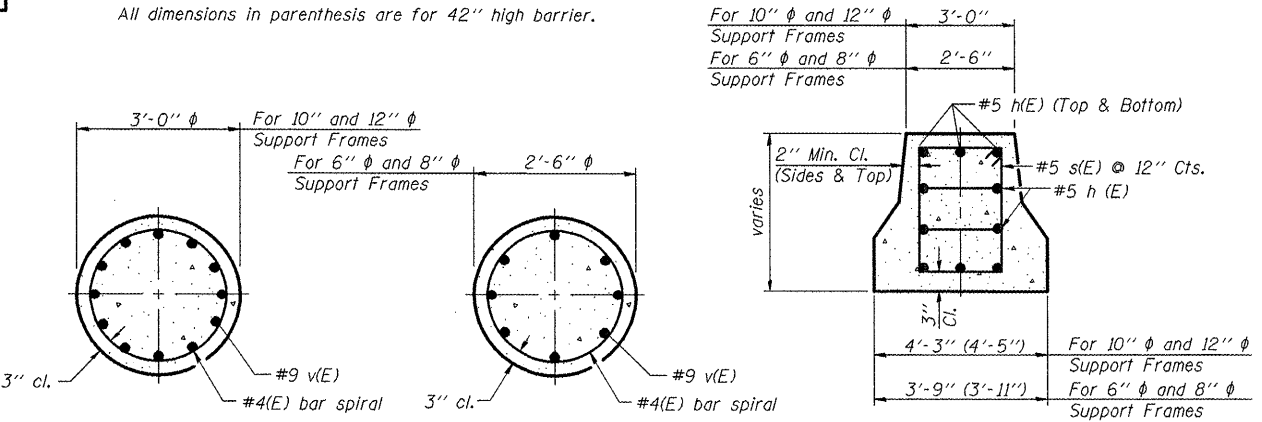
Pipe Support Frames	cc	M	a	a/2
6" φ	7'-0"	9'-6"	0'-11"	5 1/2"
8" φ	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10" φ	8'-3"	11'-3"	1'-3"	7 1/2"
12" φ	9'-0"	12'-0"	1'-6"	9"

All dimensions in parenthesis are for 42" high barrier.

END VIEW

For 6" φ and 8" φ Support Frames	7 1/2" (8 1/2")	2'-6"	7 1/2" (8 1/2")
For 10" φ and 12" φ Support Frames	7 1/2" (8 1/2")	3'-0"	7 1/2" (8 1/2")

SIDE ELEVATION
 Concrete Foundation poured monolithically with no construction joint.



Structure Number	Station	Left Foundation		Right Foundation		Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	
5 S 010 1057 L235.32	496+10	① 745.00	② 724.33	17'-6"	20'-8"	See Base Sheet OS4-F3 Drilled Shaft Details 14.0
			③ 741.83			
			Median Barrier			
5 S 010 1057 R236.14	414+50	① 727.05	② 706.38	17'-6"	20'-8"	See Base Sheet OS4-F3 Drilled Shaft Details 14.0
			③ 723.88			
			Median Barrier			

OS4-MED 1-20-11

FILE NAME = c:\pwwork\pwwork\cearlock\jd\0266577.dwg	USER NAME = cearlockjd	DESIGNED - JAL	REVISED -
PLOT SCALE = 40.0000' / 1"	DATE = 04/26/11	CHECKED -	REVISED -
PLOT DATE = 10/7/2011			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS

SCALE: SHEET NO. 14 OF 17 SHEETS STA. TO STA.

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

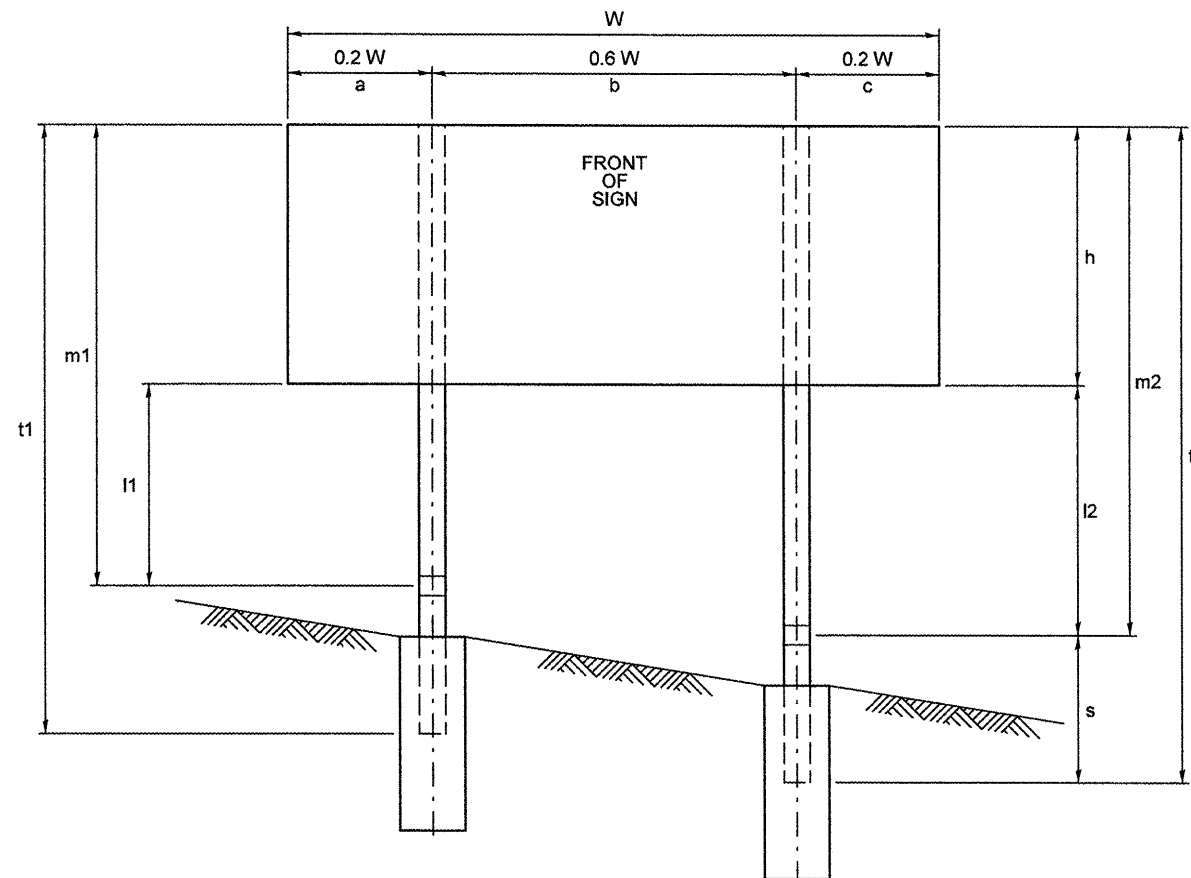
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	40

CONTRACT NO. 46179
 ILLINOIS FED. AID PROJECT

BREAK AWAY GROUND MOUNT SIGNAGE LAYOUT CHAMPAIGN COUNTY

Location No.	Structure No.	Mounting OFFSET to the near edge of sign	Mounting HEIGHT to the bottom edge of sign	Sign Size W x h ft	Sign Width W ft	0.2W a ft	0.6W b ft	0.2W c ft	Clear Height CH ft	Sign Height h ft	leg 1 l1 ft	leg 2 l2 ft	main post 1 m1 ft	main post 2 m2 ft	stub post s ft	Total post 1 t1 ft	Total post 2 t2 ft	Post Type	Nominal wt. lbs/ft	Total Weight (both posts) lbs	Total Concrete cu. yds.
5-03	5 C 010 I074 L183.90	30 feet from white stripe / edge of pavement	10 feet from white stripe / edge of pavement	11.0' x 10.5'	11.0	2.2	6.6	2.2	14.5	10.5	13.5	14.50	24.0	25.0	3.5	27.5	28.5	W14 x 38	38.0	2128.0	4.18
5-04	5 B 010 U045 L012.58	4 feet from the back of curb	7 feet above the top of curb	11.5' x 5.5'	11.5	2.3	6.9	2.3	7.5	5.5	7.0	7.5	12.5	13.0	2.5	15.0	15.5	W6 x 15	15.0	457.5	1.40

Location No.	Structure No.	Station - Proposed Location
5-03	5 C 010 I074 L183.90	The proposed breakaway ground mount is to be moved 28' west of the existing cantilever (from Sta. 1319+39 to Sta. 1319+11).
5-04	5 B 010 U045 L012.58	The proposed breakaway ground mount is to be moved 31' north of the existing bridge mount (from Sta. 38+46 to Sta. 38+77).



CH = Clear Height = the greater of l1 or l2

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
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	PLOT SCALE = 48.0000' / 1" =	CHECKED -	REVISED -
	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

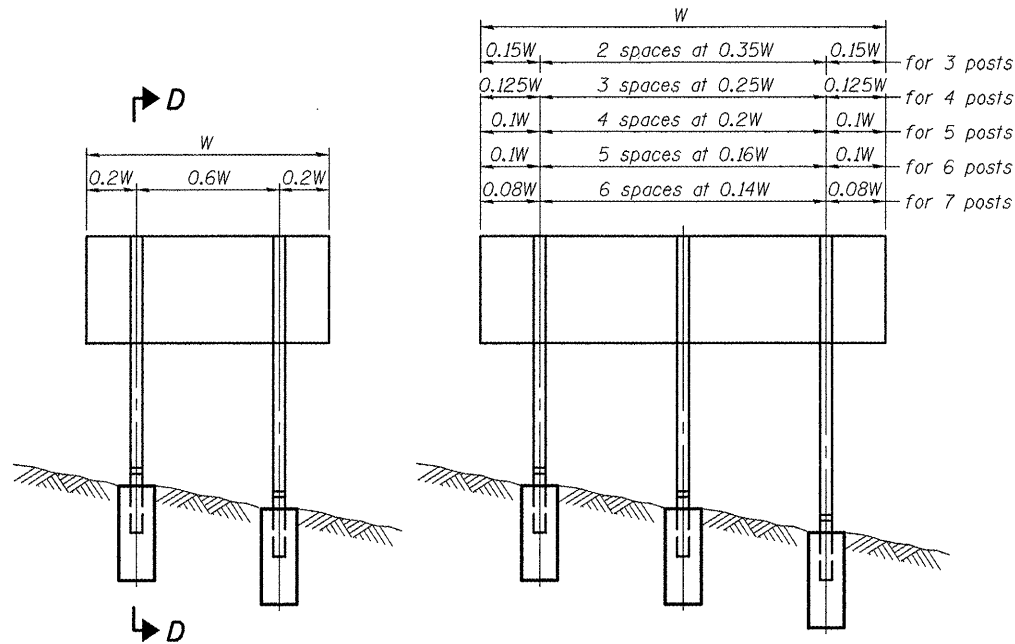
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BREAK AWAY GROUND MOUNT SIGNAGE LAYOUT
CHAMPAIGN COUNTY**

SCALE: SHEET NO. 15 OF 17 SHEETS STA. TO STA.

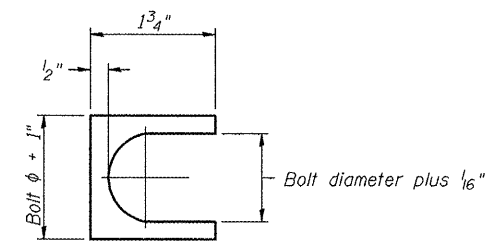
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	41
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



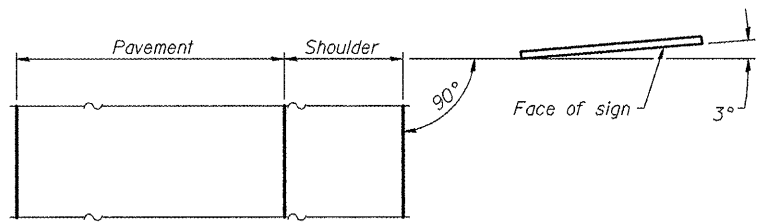
ELEVATION

0.15W	2 spaces at 0.35W	0.15W	for 3 posts
0.125W	3 spaces at 0.25W	0.125W	for 4 posts
0.1W	4 spaces at 0.2W	0.1W	for 5 posts
0.1W	5 spaces at 0.16W	0.1W	for 6 posts
0.08W	6 spaces at 0.14W	0.08W	for 7 posts

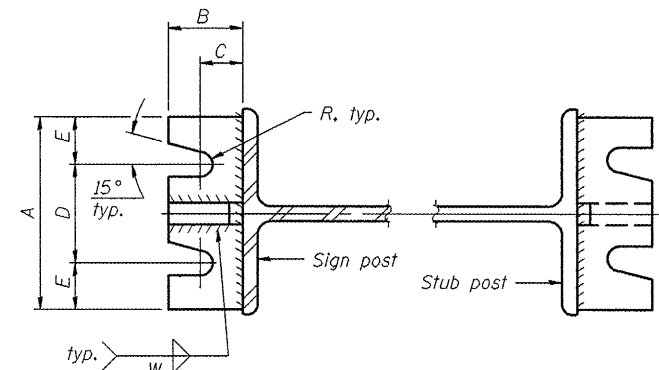


SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

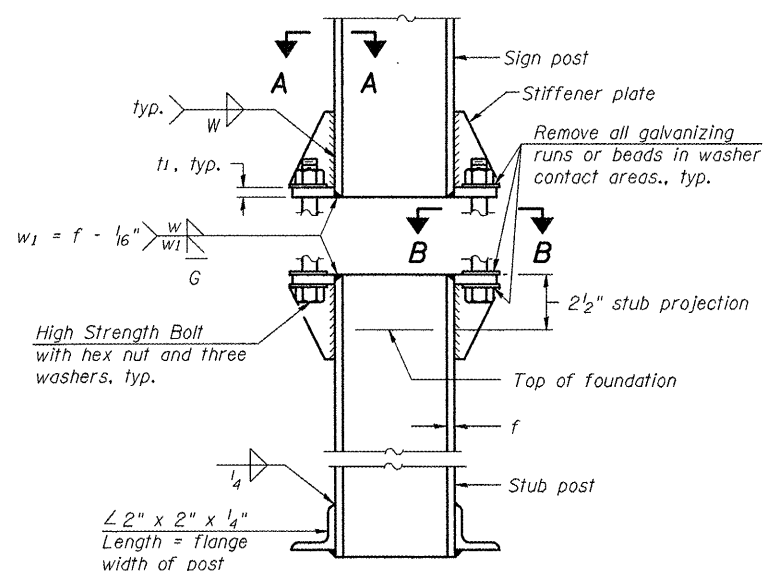


LOCATION SKETCH

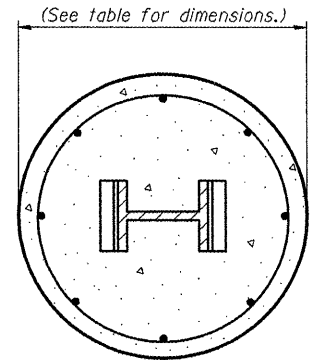


SECTION A-A

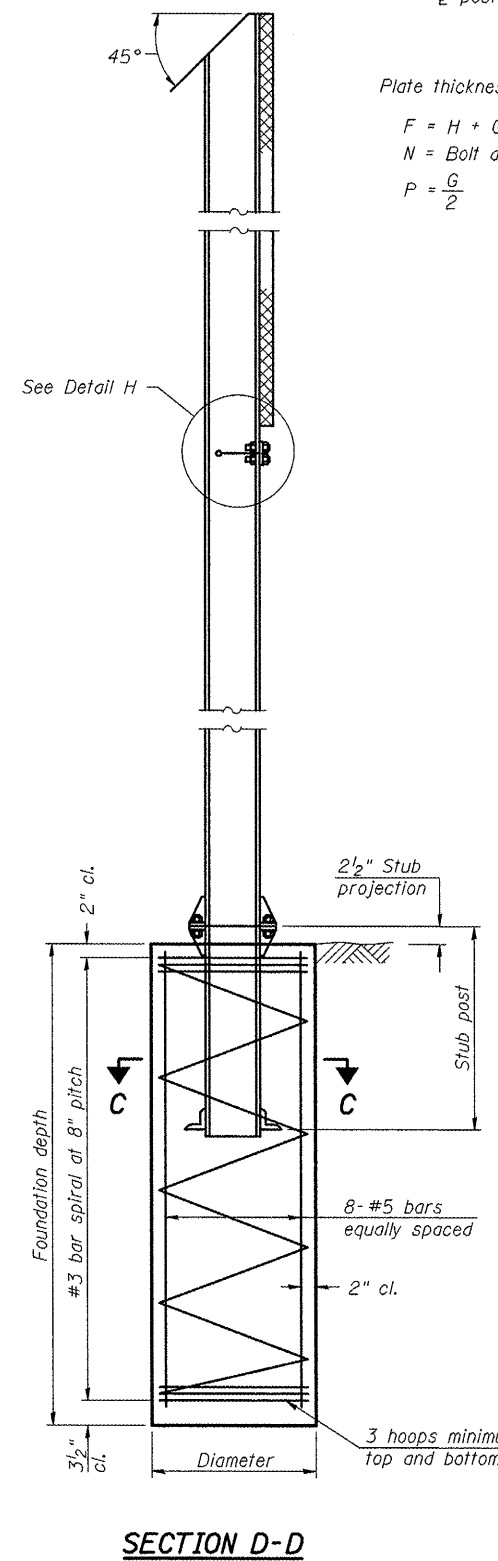
SECTION B-B



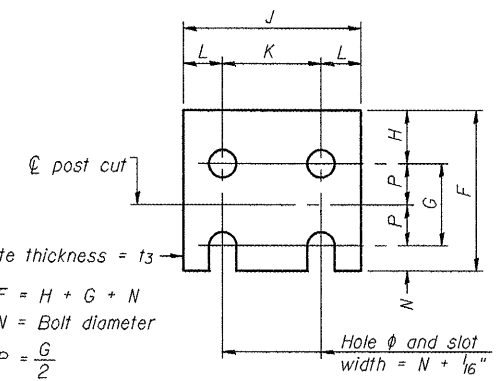
ELEVATION SIGN POST & STUB POST



SECTION C-C

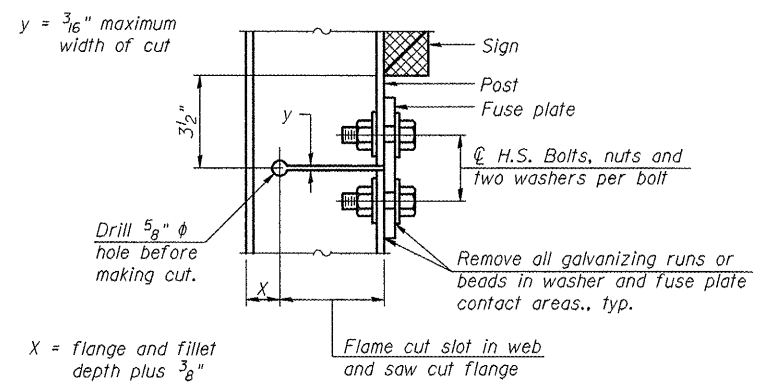


SECTION D-D

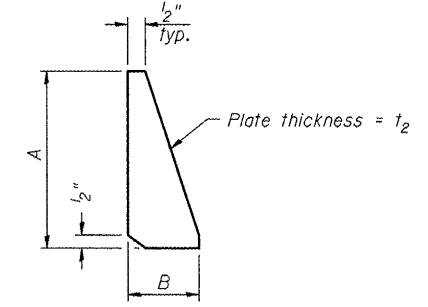


FUSE PLATE DETAIL
(Install with notches down.)

N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



DETAIL H



STIFFENER PLATE DETAIL

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
Structural steel - 20,000 p.s.i.
Reinforcing steel - 20,000 p.s.i.
Concrete - 1,400 p.s.f.
Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.
•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

BAW-A-1

1-20-11

(Sheet 1 of 2)

FILE NAME =	USER NAME = ceerlock_jd	DESIGNED - JAL	REVISED -
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PLOT SCALE = 40.0000 ' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	42
CONTRACT NO. 46179				

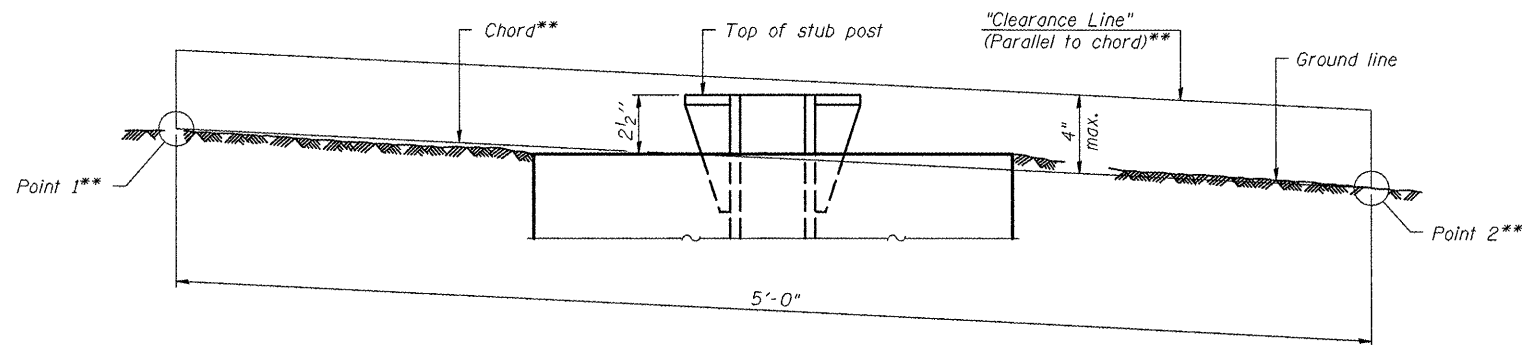
SCALE: SHEET NO. 16 OF 17 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

POST	CONCRETE FOUNDATION TABLE							POST TO STUB POST CONNECTION DATA								FUSE PLATE DATA						
	Foundation			Reinforcement			Stub Post Length	Bolt Size	A	B	C	D	E	t ₁	t ₂	R	W	J	K	L	t ₃	
	Diameter	Minimum Depth	Concrete (1) cu. yds.)	Vertical Bars Length	Bar Spirals Diameter	Bar Spirals Length																lbs. (2)
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	1 1/2"	3/8"	7"	3 1/2"	1 3/4"	1/2"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																					
	Sign Height																					
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"	
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---	
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	---	---	---	
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---	---	
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---	
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"
W16x45	---	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	7/8" x 2 1/2"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"	1" x 2 3/4"



ELEVATION
GROUND LINE & STUB POST

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

Note: All necessary excavation or drilling, backfilling, disposal of material, formwork, and furnishing and placing all materials including Class DS Concrete and reinforcing steel shall be included in the pay item for "Concrete Foundations".

BAW-A-2

1-20-11

(Sheet 2 of 2)

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceer-lock_jd	DESIGNED - JAL	REVISED -
cs:\pwwork\pwwork\ceer-lock_jd\026655710	46179-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000' / 1"	CHECKED -	DATE - 04/26/11	REVISED -
PLOT DATE = 10/7/2011			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
STEEL SIGN POST TABLES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	**	Various	178	43
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 17 OF 17 SHEETS STA. TO STA.



SOIL BORING LOG

Page 1 of 1

Date 3/10/11

ROUTE FAI Rt. 57 (South Bound) DESCRIPTION Off Ramp to I-72 WB (Exit 235B) LOGGED BY CNA
 SECTION Sign Structure LOCATION NW, SEC. 9, TWP. 19N, RNG. 8E, 3rd PM GPS:
 COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	BORING NO. Station Offset	Ground Surface Elev. ft	DELT				Surface Water Elev. ft	Stream Bed Elev. ft	DELT			
			(ft)	(/6")	(tsf)	(%)			(ft)	(/6")	(tsf)	(%)
5 S 010 1057 L235.32 496+00	1 Sign Truss 495+91 84.0 ft Lt.	744.7										
Asphalt Shoulder												
Black Silty Clay												
(No Sample Obtained)												
Brown/Gray Mottled Clay Loam												
Brown Mottled Clay Loam Till												
Gray Clay Loam Till												
End of Boring												

5/27/2011 7:35:37 AM C:\PROGRAM FILES\GINT\PROJECTS\SIGNTRUSS I-57SB 55010057L235_32.GPJ

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 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)



SOIL BORING LOG

Page 1 of 1

Date 3/10/11

ROUTE FAI Rt. 57 (North Bound) DESCRIPTION 0.75 Miles South of IL 10 at Turn Around LOGGED BY CNA
 SECTION Sign Structure LOCATION NE/SE, SEC. 16, TWP. 19N, RNG. 8E, 3rd PM GPS:
 COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. Station	BORING NO. Station Offset	Ground Surface Elev. ft	DELT				Surface Water Elev. ft	Stream Bed Elev. ft	DELT			
			(ft)	(/6")	(tsf)	(%)			(ft)	(/6")	(tsf)	(%)
5 S 010 1057 R236.14 415+00	1 Sign Truss 415+10 69.0 ft Rt.	725.5										
Gray Silty Clay to Clay												
Gray/Brown Mottled Clay												
Brown Mottled Clay Loam Till												
Brown/Gray Clay Loam Till												
Gray Clay Loam Till												
End of Boring												

5/27/2011 7:38:23 AM C:\PROGRAM FILES\GINT\PROJECTS\MAST ARM I-57NB S OF IL 10.GPJ

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
 The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 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)

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pwork\pwork\ceerlockjd\0266557-046179-sht-blog.dgn	PLOT SCALE = 40.0000' / 1in.	DRAWN -	REVISED -						Various	178	45
	PLOT DATE = 10/7/2011	CHECKED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.	CONTRACT NO. 46179	
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

*VARIOUS COUNTIES
 **D-5 OVD SIN STR REPL 2012-06

SCHEDULE OF QUANTITIES DEWITT COUNTY – INDIVIDUAL LOCATIONS

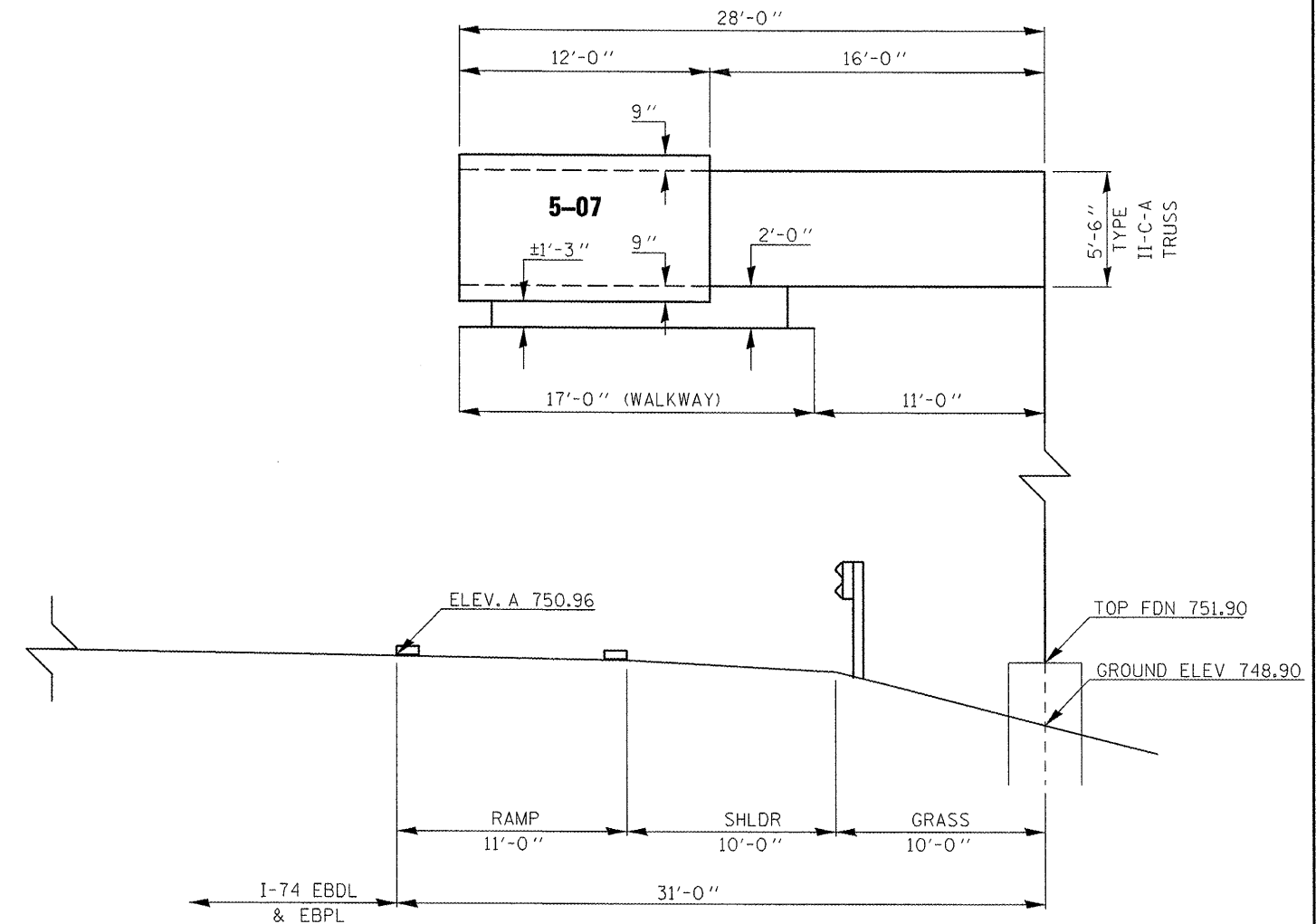
Location No.	5-07		
Structure No.	5 C 020 I074 R155.62		
County / Route	DEWITT CO. - I-74 EB - Farmland Rest Area - West of Farmer City		
Scope of Work	This overhead cantilever is being replaced on a new drilled shaft foundation.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	84.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	47.50
73301840	OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	FOOT	17.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	28.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	9.00
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-08		
Structure No.	5 C 020 I074 L156.44		
County / Route	DEWITT CO. - I-74 WB - Farmland Rest Area - West of Farmer City		
Scope of Work	Replace green sign & remove electrical. Cantilever structure to remain in place. Lights, conduit, & other electrical items to be removed from truss. Cap conduit stub.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	84.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	47.50
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	3.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

SIGN TRUSS MOUNTING DETAIL – DEWITT COUNTY 5 C 020 I074 R155.62



TEMP. BENCHMARK = CHIS. SQUARE ON SW SIDE OF EXISTING FDN. = 748.50 (FROM 1993 PLANS)

FILE NAME =	USER NAME = ceer-lockjd	DESIGNED - JAL	REVISED -
es:\pwwork\pwwork\ceer-lockjd\02669571\046179-sht-details.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

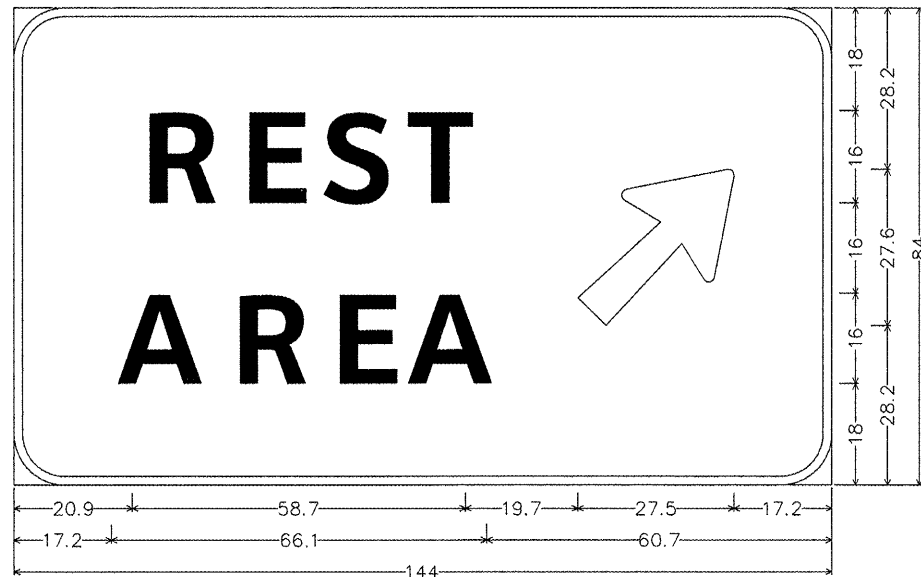
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES & SIGN TRUSS MOUNTING DETAILS
DEWITT COUNTY**

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

*VARIOUS COUNTIES		**D-5 OVD SIN STR REPL 2012-06	
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
.	**	Various	178
		SHEET NO.	46
		CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT			

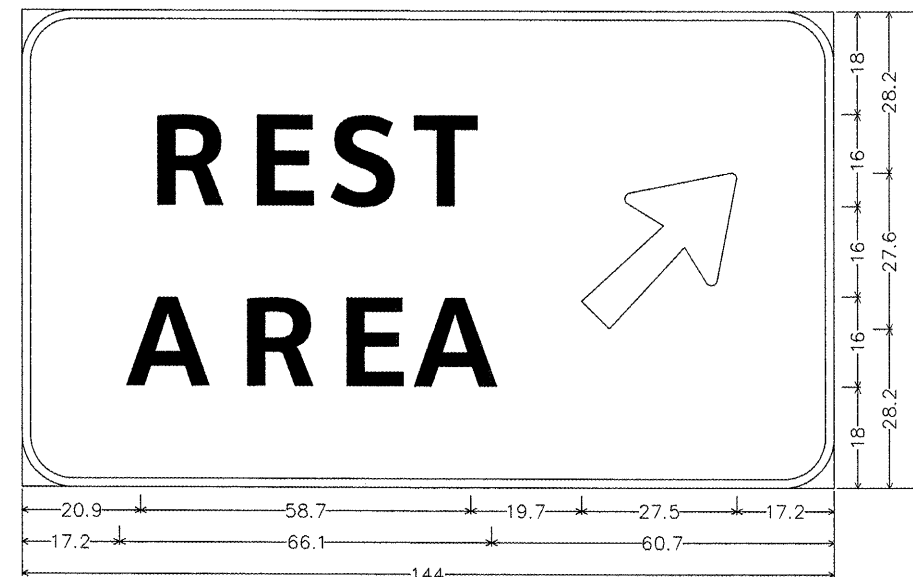
5-07
5 C 020 I074 R155.62



9.0" Radius, 1.5" Border, White on Blue;
 [REST] ClearviewHwy-5-W; [AREA] ClearviewHwy-5-W; Arrow 160 - 35.0" 45;
 Table of letter and object lefts.

R	E	S	T	↗
20.9	38.5	52.9	68.0	99.3
A	R	E	A	
17.2	36.8	54.4	68.3	

5-08
5 C 020 I074 L156.44



9.0" Radius, 1.5" Border, White on Blue;
 [REST] ClearviewHwy-5-W; [AREA] ClearviewHwy-5-W; Arrow 160 - 35.0" 45;
 Table of letter and object lefts.

R	E	S	T	↗
20.9	38.5	52.9	68.0	99.3
A	R	E	A	
17.2	36.8	54.4	68.3	

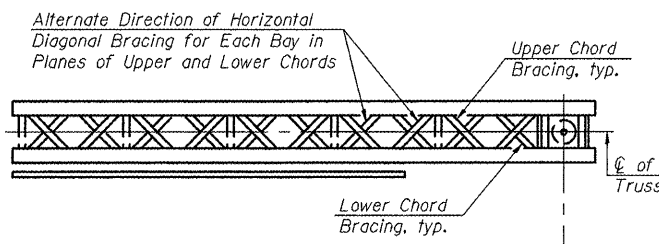
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PLOT SCALE = 48.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

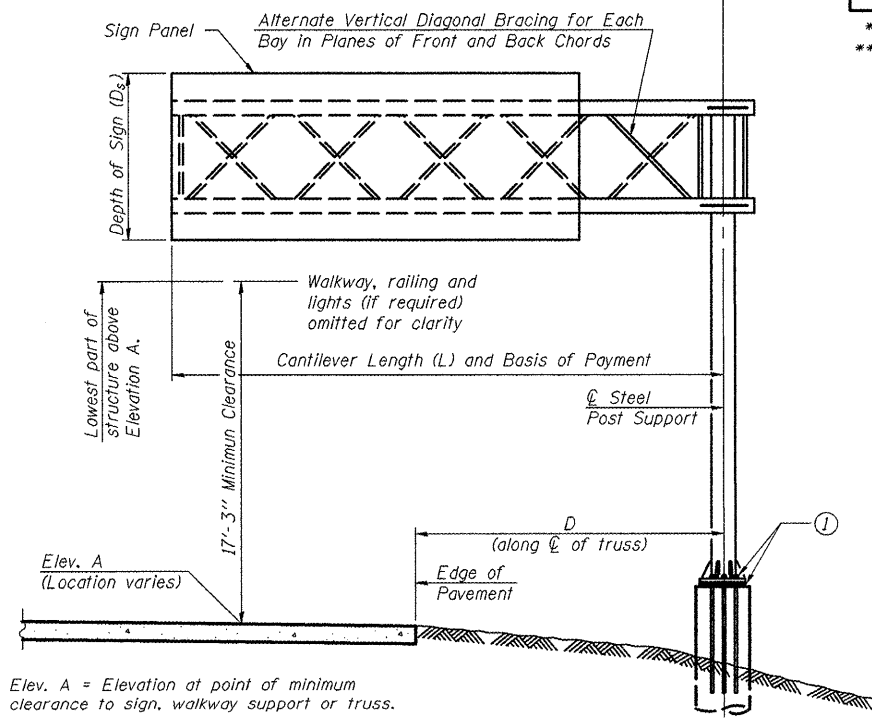
SIGNING DETAILS - DEWITT COUNTY			
SCALE:	SHEET NO. OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	..	Various	178	47
CONTRACT NO. 46179			ILLINOIS FED. AID PROJECT	

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06



TYPICAL PLAN
(Walkway not shown)



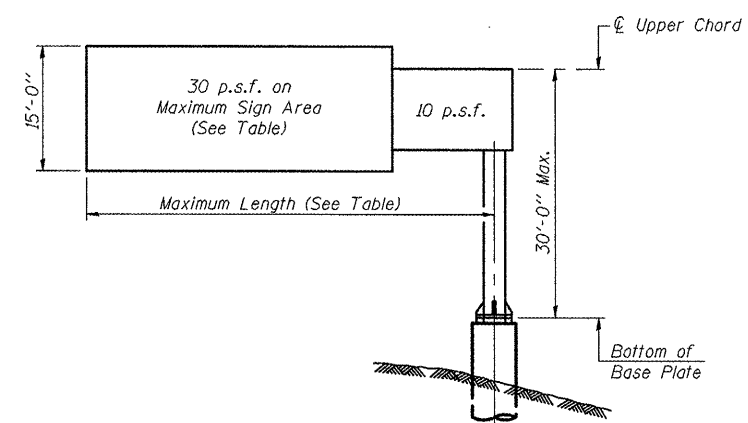
TYPICAL ELEVATION
Looking in Direction of Traffic

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
5 C 020 1074 R155.62	657+53	II-C-A	28'-0"	750.96	**	7'-0"	84.0

** See Sign Truss mounting details
*** Support post heights based on 15'-0" sign height per OSC-A-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) 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.

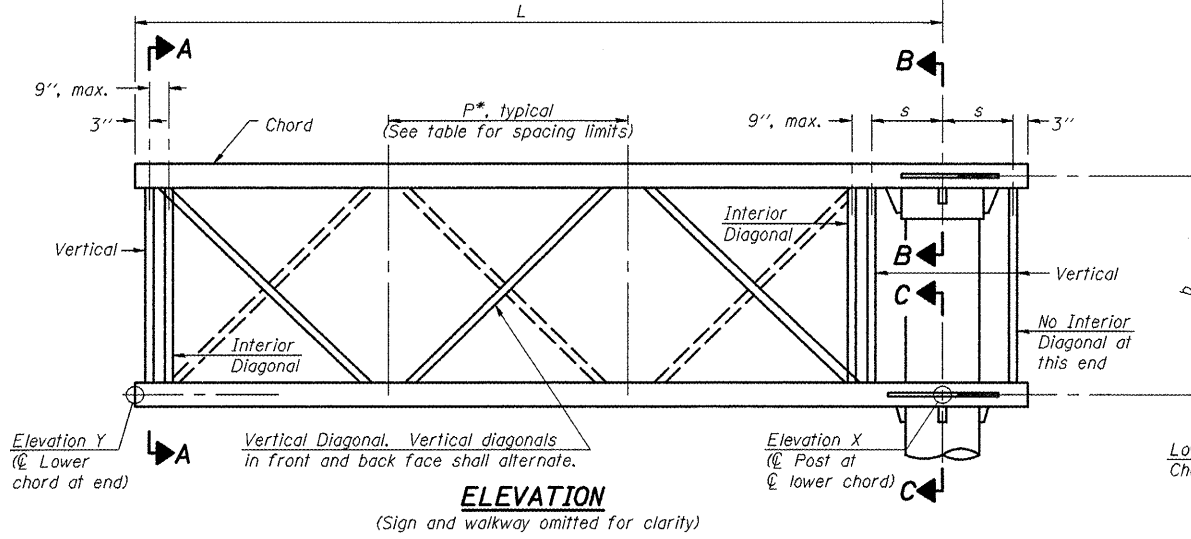
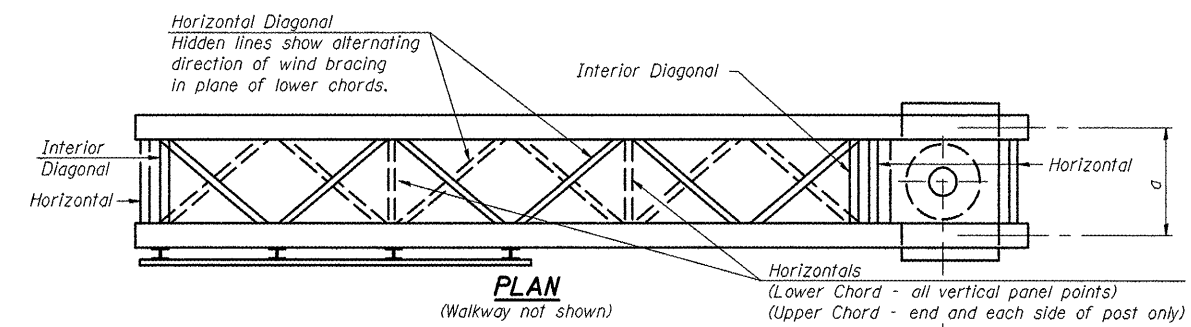
TOTAL BILL OF MATERIAL

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.	

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

OSC-A-1 9-15-11

FILE NAME =	USER NAME = oeejockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES - GENERAL PLAN & ELEVATION ALUMINUM TRUSS & STEEL POST	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pwwork\pwwork\oeejockjd\026655710846179-shr-details.dgn	PLOT SCALE = 40,0000 ' / 1".	DRAWN -	REVISED -			•	••	Various	178	48
PLOT DATE = 10/7/2011	DATE = 04/26/11	CHECKED -	REVISED -			CONTRACT NO. 46179				
						ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET NO. 2 OF 10 SHEETS	STA.	TO STA.			



TYPICAL TRUSS UNIT

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

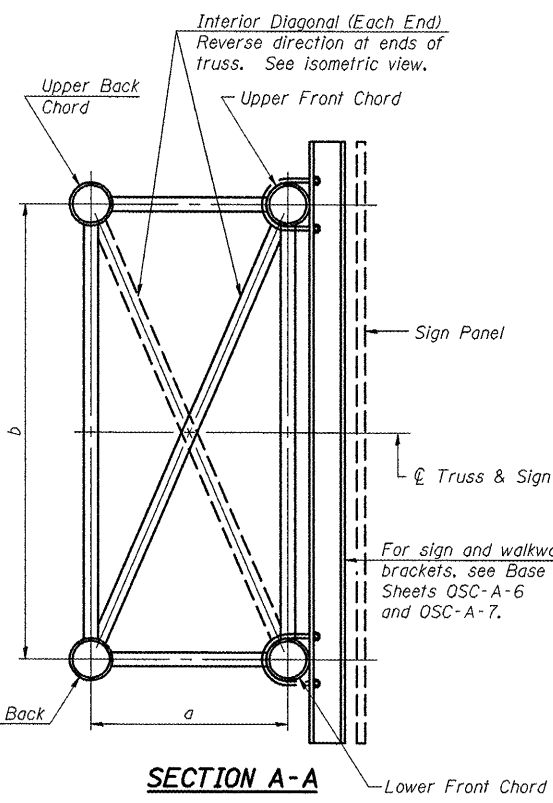
There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

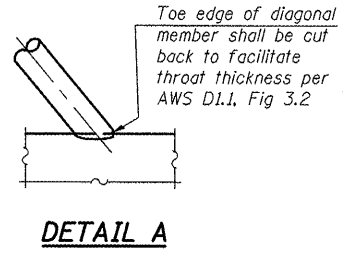
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord, Verticals, Horizontal, and Interior Diagonals			
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	5/16"	3 1/4"	5/16"
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 = $\frac{L-s-3''}{\# \text{ Panels}}$

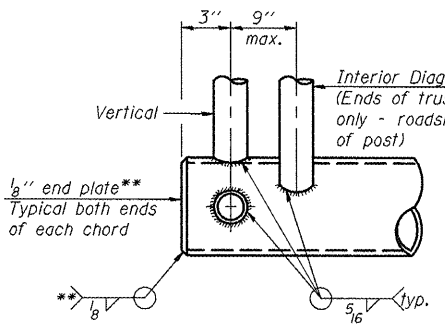
Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
5 C 020 1074 R155.62	657+53	II-C-A	28'-0"	6	4'-4"



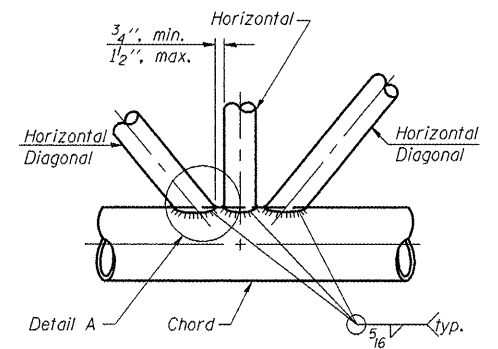
SECTION A-A



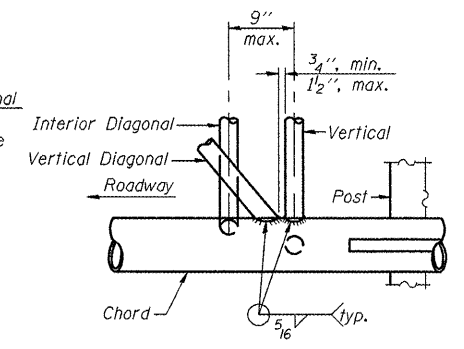
DETAIL A



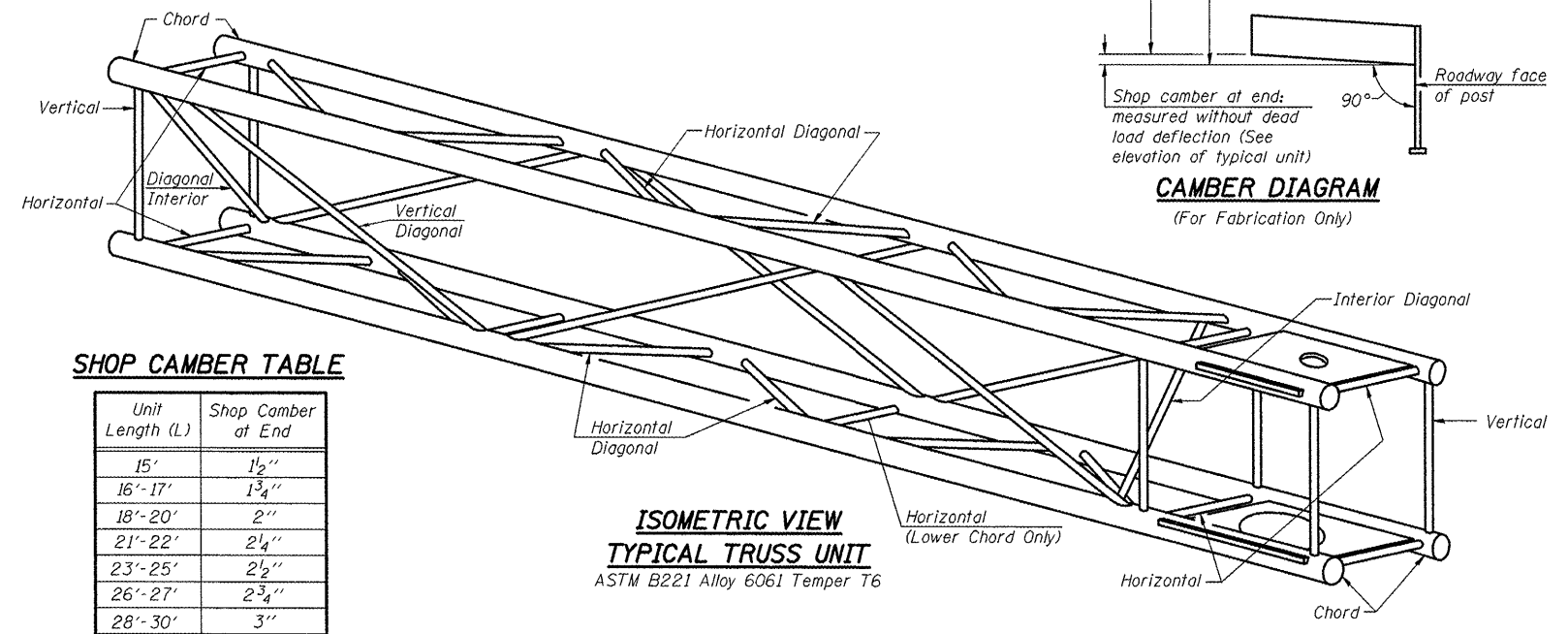
CANTILEVER END JOINT DETAIL



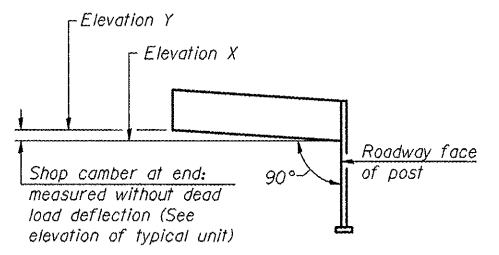
TRUSS INTERIOR JOINT DETAIL



POST END JOINT DETAIL



ISOMETRIC VIEW TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6



CAMBER DIAGRAM

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 9-15-11

FILE NAME =	USER NAME = ceerlook_jd	DESIGNED - JAL	REVISED -
es:\pwwork\pwwork\ceerlook_jd\0266557\046179-sht-details.dgn		DRAWN -	REVISED -
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

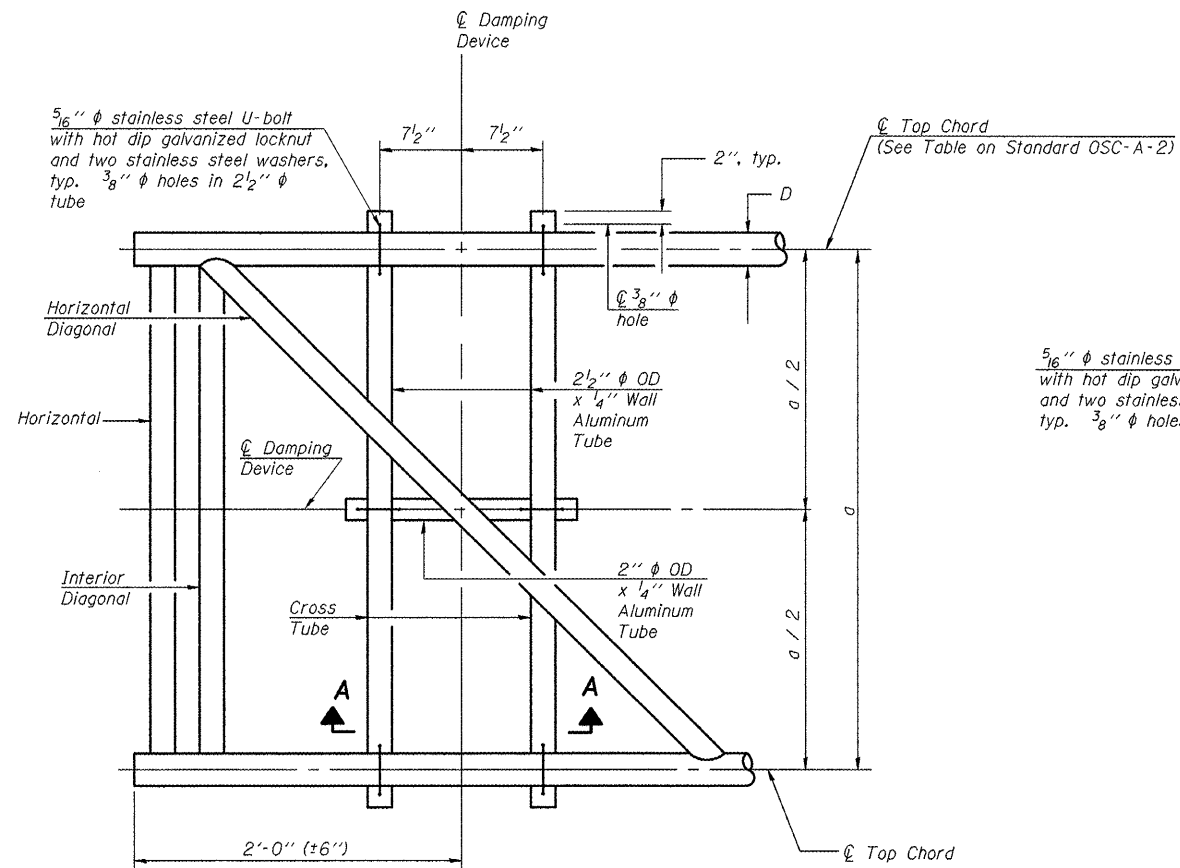
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST

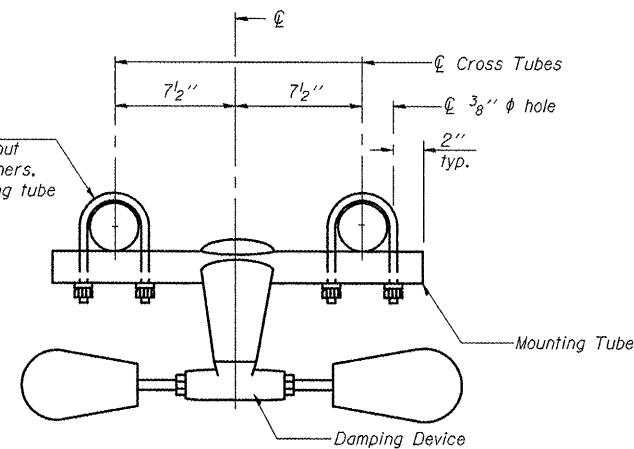
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			178	49
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

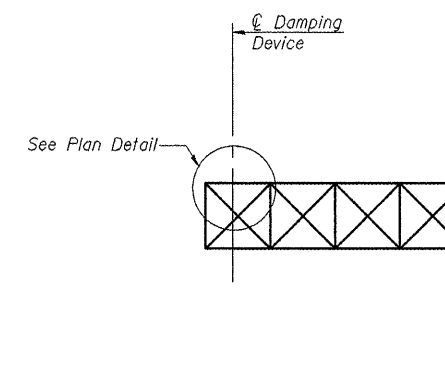
SCALE: SHEET NO. 3 OF 10 SHEETS STA. TO STA.



PLAN DETAIL



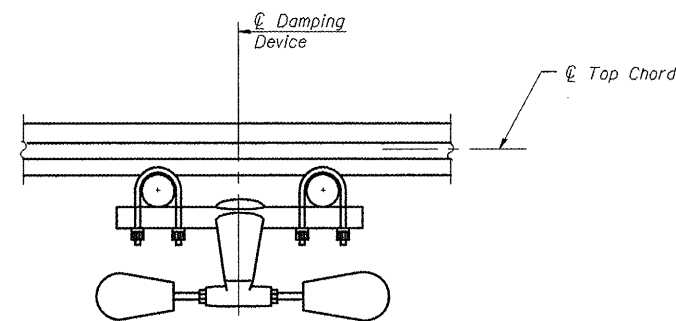
TRUSS DAMPING DEVICE CONNECTION DETAIL



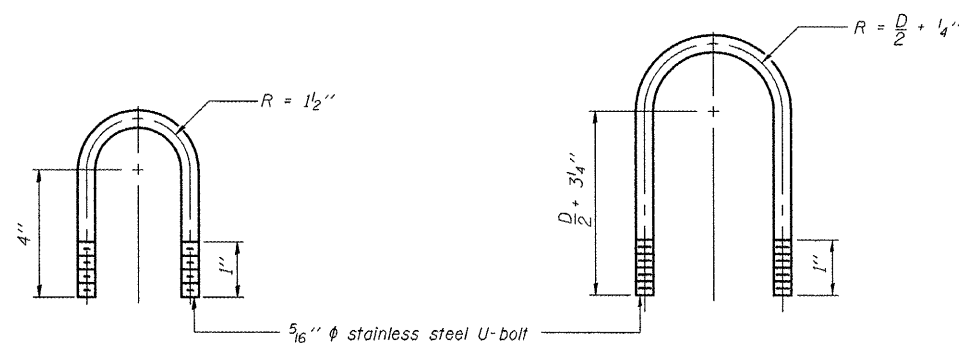
ELEVATION
Aluminum Cantilever Sign Structure

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

9-15-11

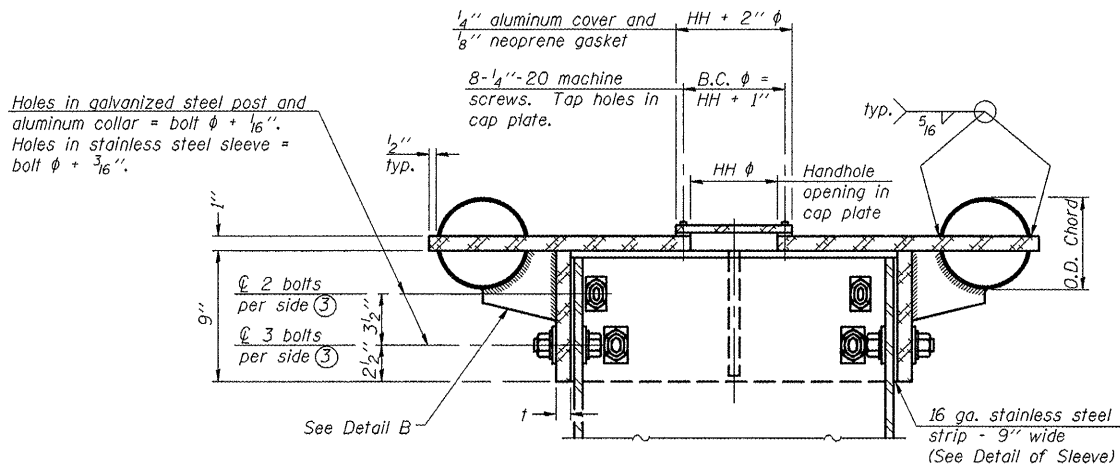
FILE NAME =	USER NAME = ceer-lockjd	DESIGNED - JAL	REVISED -
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PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET NO. 4 OF 10 SHEETS STA. TO STA.

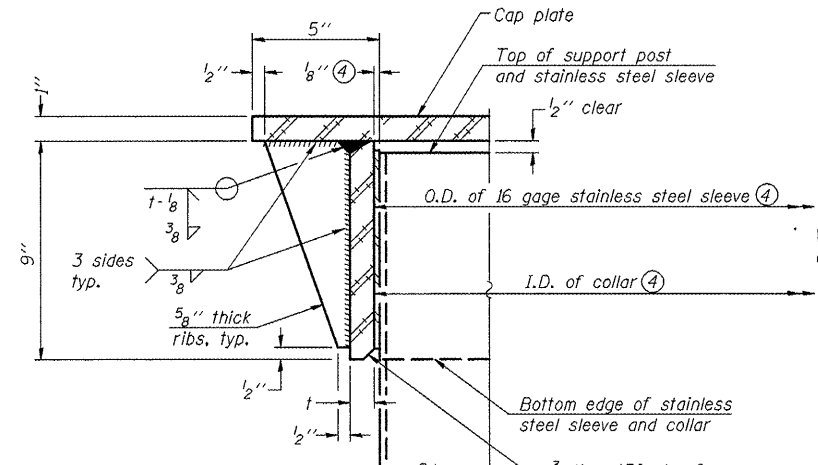
•VARIOUS COUNTIES		•D-5 OVD SIN STR REPL 2012-06	
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
•	••	Various	178
			SHEET NO. 50
CONTRACT NO. 46179			
ILLINOIS FED. AID PROJECT			



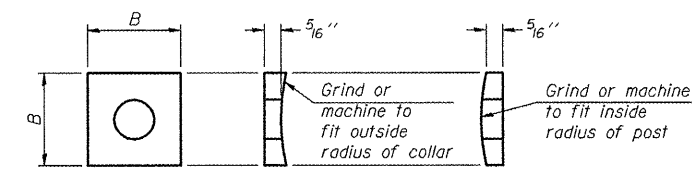
④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (±1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

SECTION B-B

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

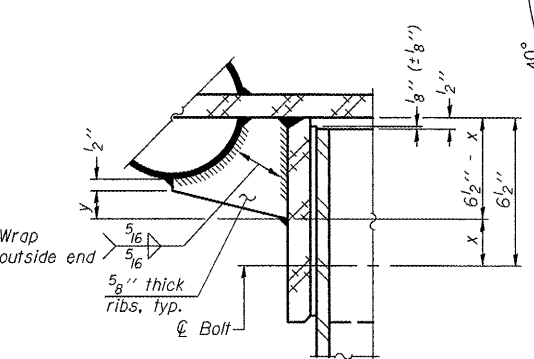


DETAIL A
(Two locations)



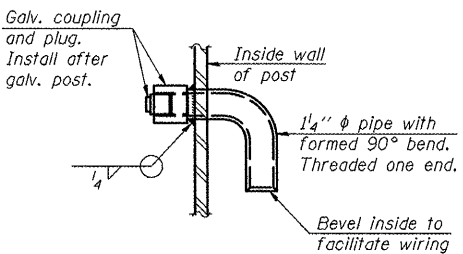
CONTOURED WASHERS

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 B

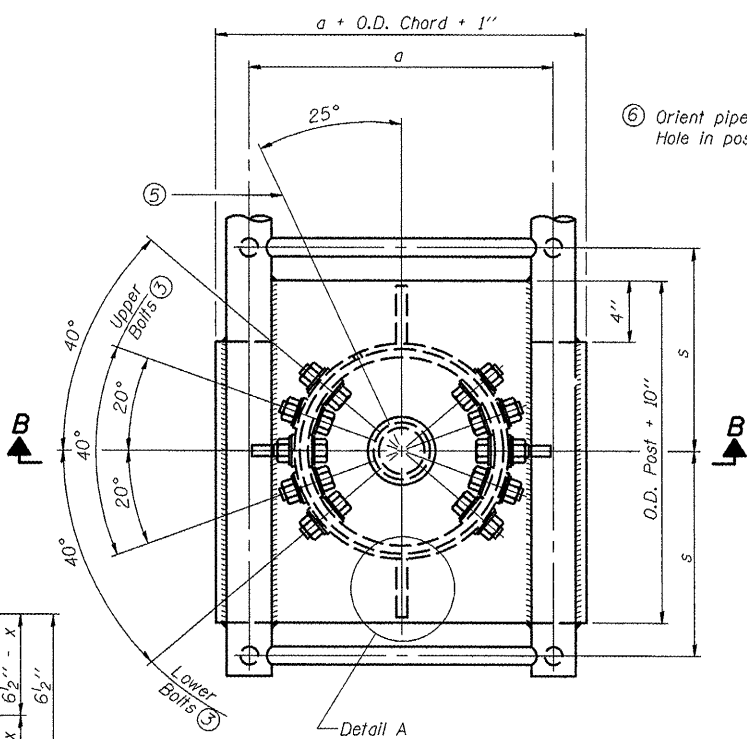
Two locations
(For details not shown, see Detail C)



DETAIL D

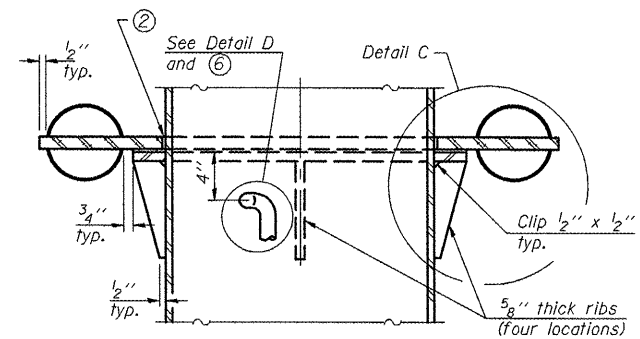
DETAIL OF STAINLESS STEEL SLEEVE

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

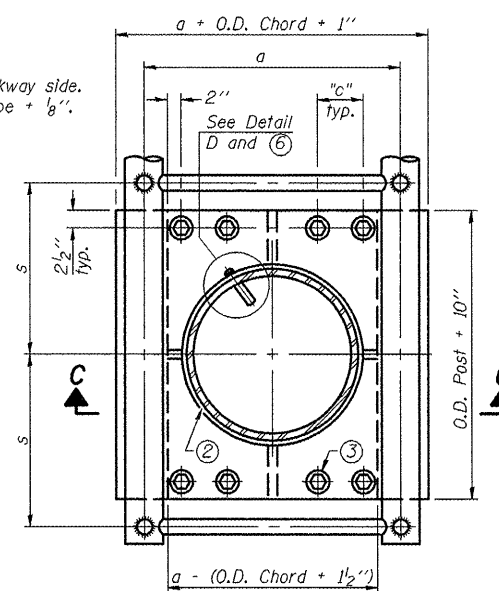


PLAN VIEW - TOP OF COLUMN

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

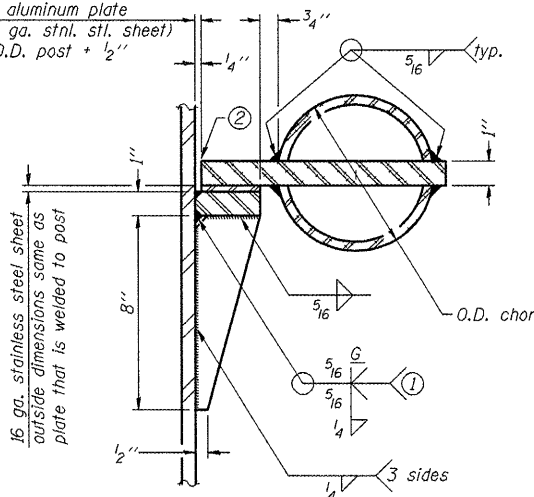


SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS

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



DETAIL C

- 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

9-15-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ct:\pw\work\p\widet\ceerlockjd\0266557\0266179-shit-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.00000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

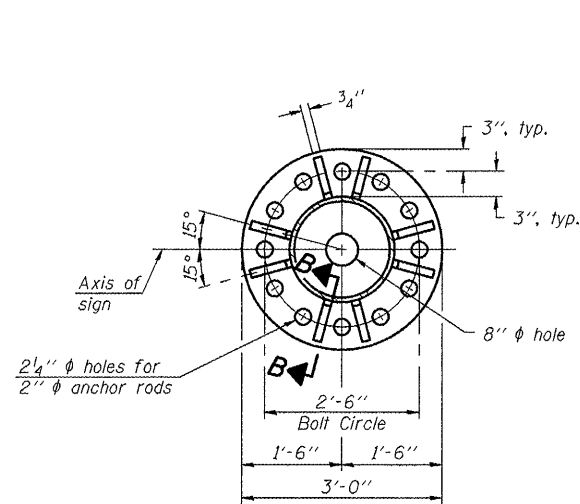
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

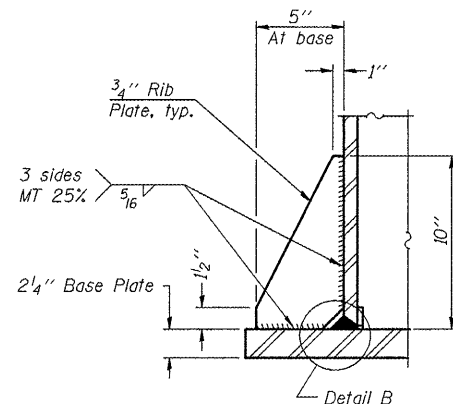
SCALE: SHEET NO. 5 OF 10 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

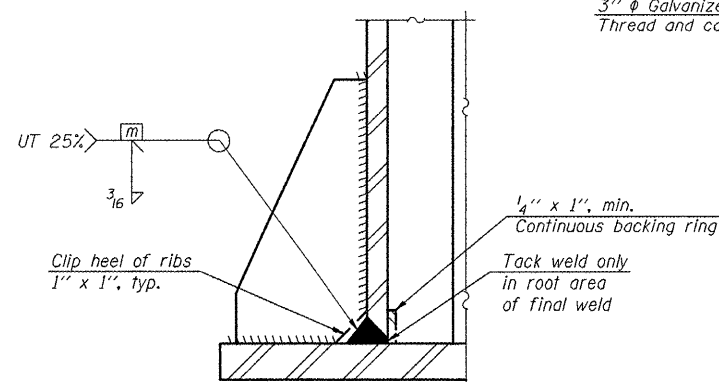
•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



SECTION A-A

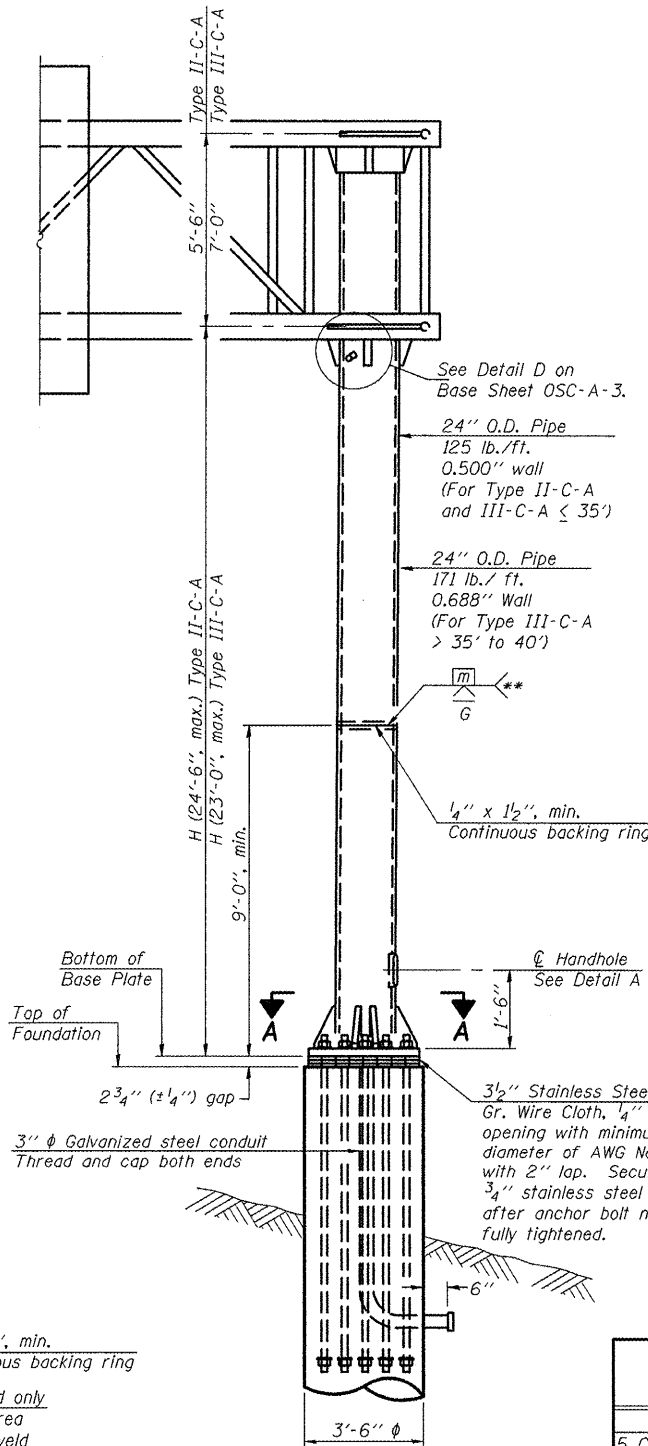


SECTION B-B



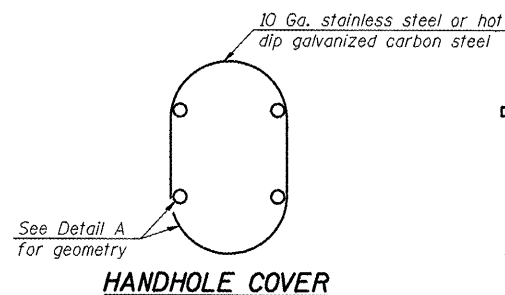
DETAIL B

(Typical rib)

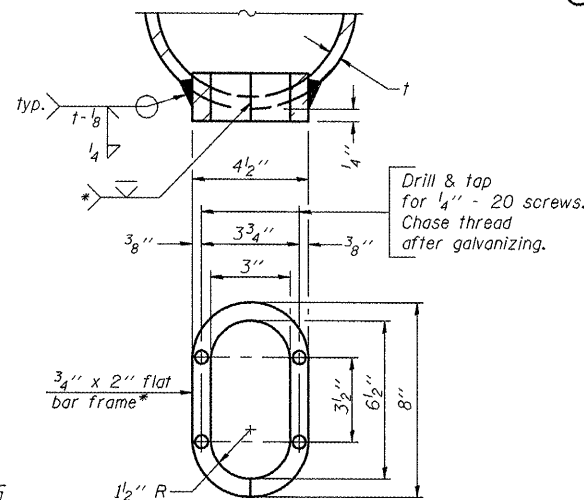


FRONT ELEVATION

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



HANDHOLE COVER



DETAIL A

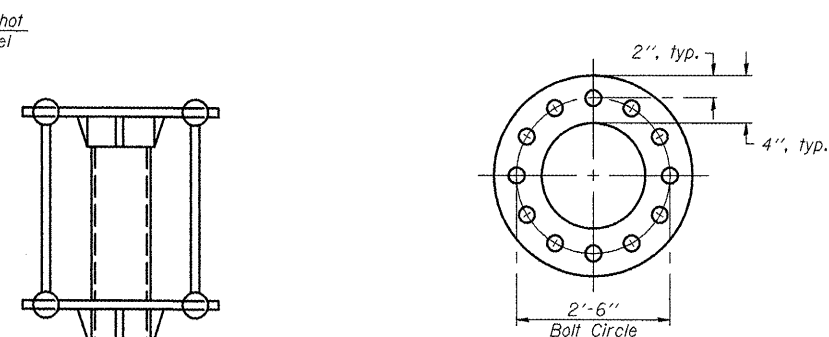
Provide 8" x 4 1/2" cover. Outside corners = 2 1/4" radius. Provide 4-5/16" holes in cover for 1/4" - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

* 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.

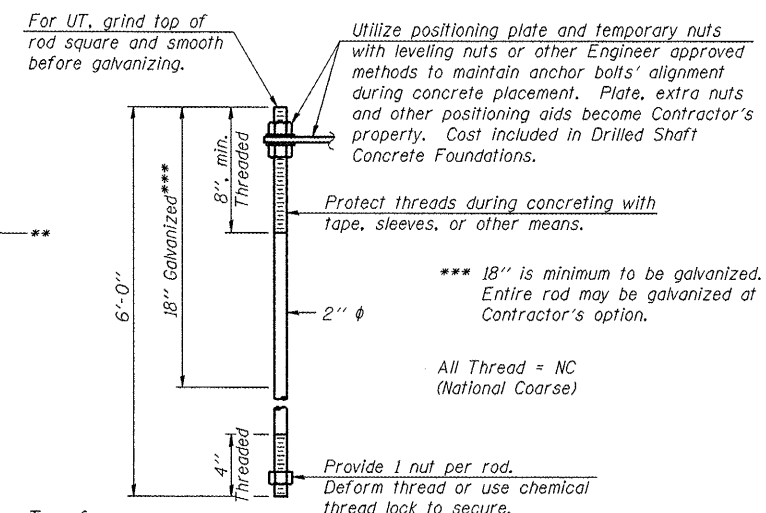
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. In length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
5 C 020 1074 R155.62	657+53	22'-6"

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



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, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = oerlockjd	DESIGNED - JAL	REVISED -
c:\pwwork\pwwork\oerlockjd\0266557.D	046179-shd-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISOR -	REVISED -
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISOR -	REVISED -

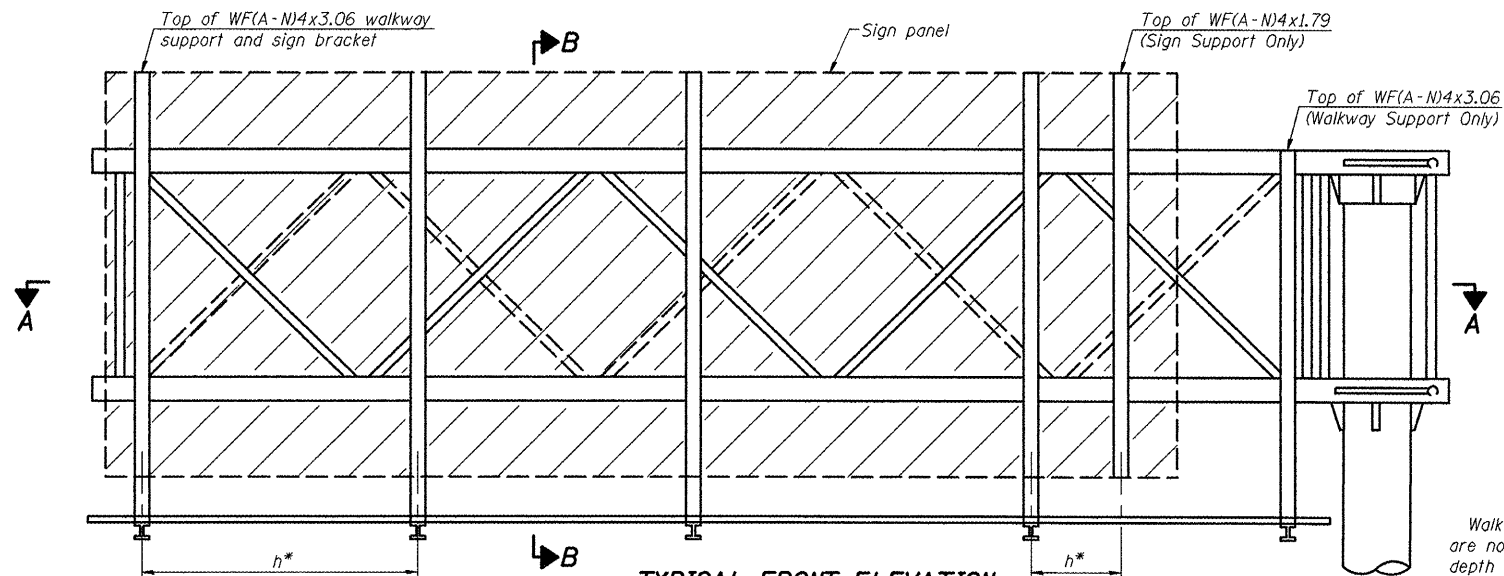
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
SCALE:	SHEET NO. 6 OF 10 SHEETS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	52
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

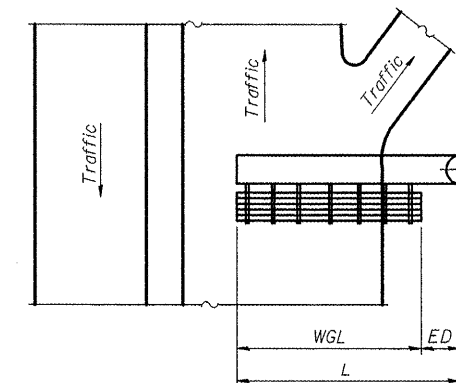
OSC-A-5

9-15-11

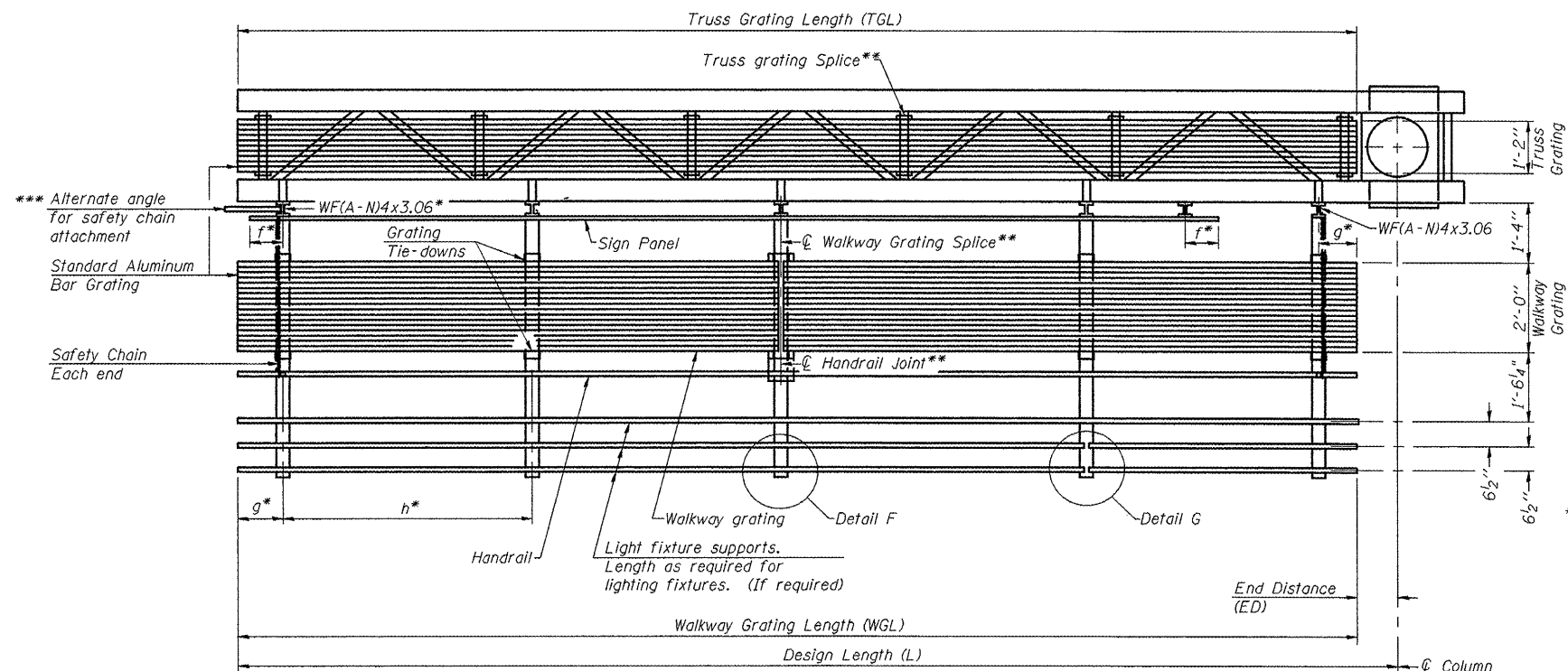


TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ± 1/2", depth ± 1/2") based on available standard widths.



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



SECTION A-A

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

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

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

Structure Number	Station	WGL	ED	TGL
5 C 020 1074 R155.62	657+53	17'-0"	11'-0"	26'-6"

Notes:
 * Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
 h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 *** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.
 For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
 For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

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

OSC-A-6

9-15-11

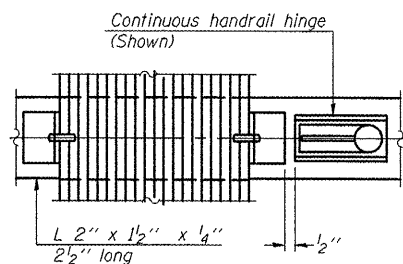
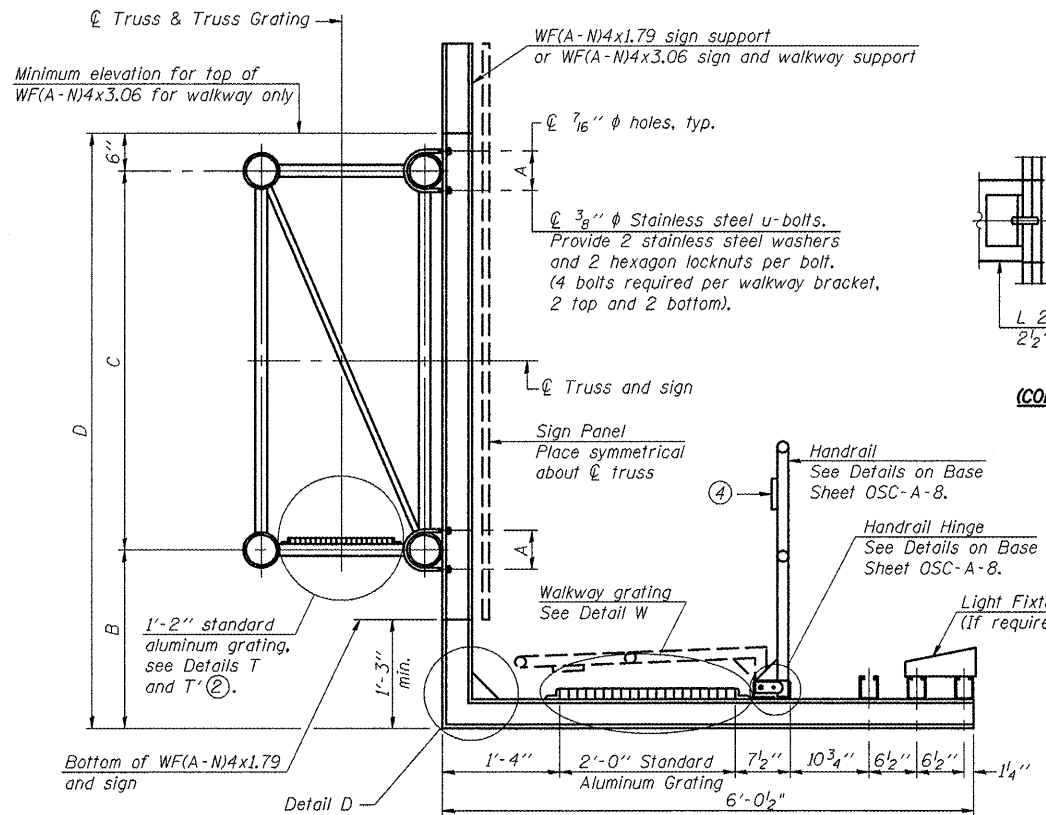
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

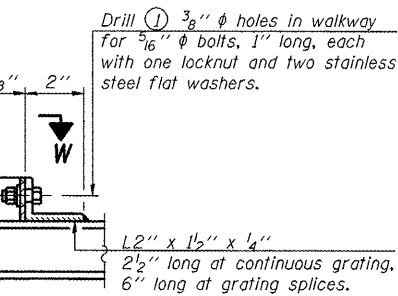
SCALE: SHEET NO. 7 OF 10 SHEETS STA. TO STA.

•VARIOUS COUNTIES				
••D-5 OVD SIN STR REPL 2012-06				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	53
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				



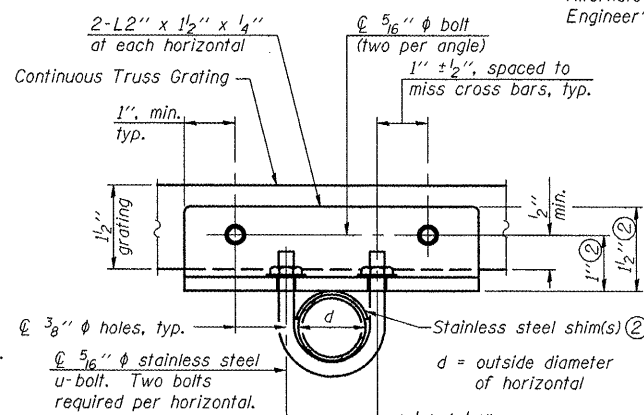
(CONTINUOUS WALKWAY GRATING)

SECTION W-W



DETAIL W

(Walkway grating)



SECTION T-T

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

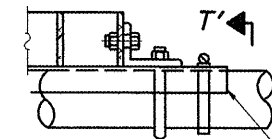
Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
 Cross bars (CB) shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

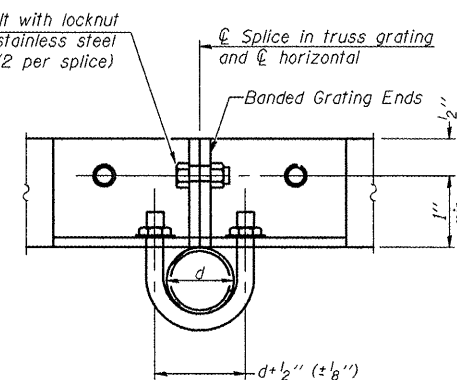
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.



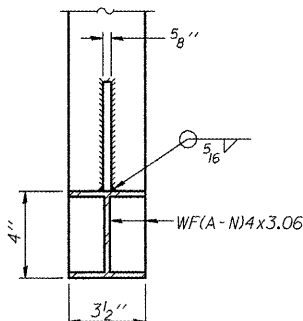
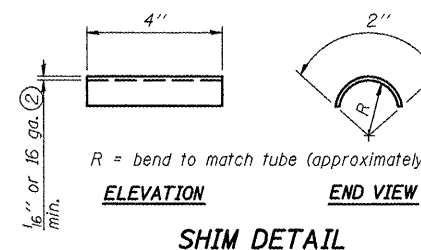
DETAIL T'

(Truss grating splice)

Details not shown same as Detail T.
 Alternate materials may be used subject to the Engineer's review and approval.

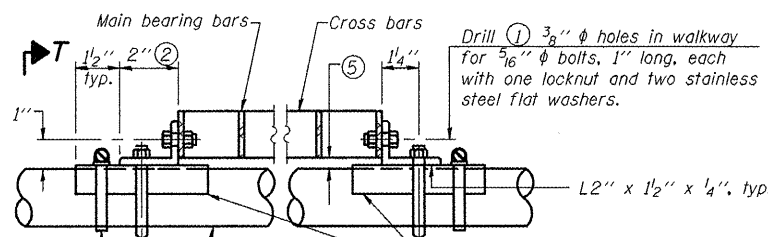


SECTION T'-T'



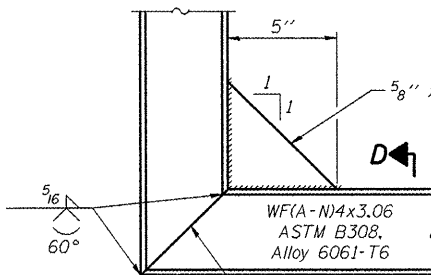
SECTION B-B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.



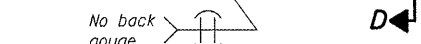
SECTION D-D

Screw type stainless steel tube clamp at shim location



DETAIL T

(Continuous Truss grating)

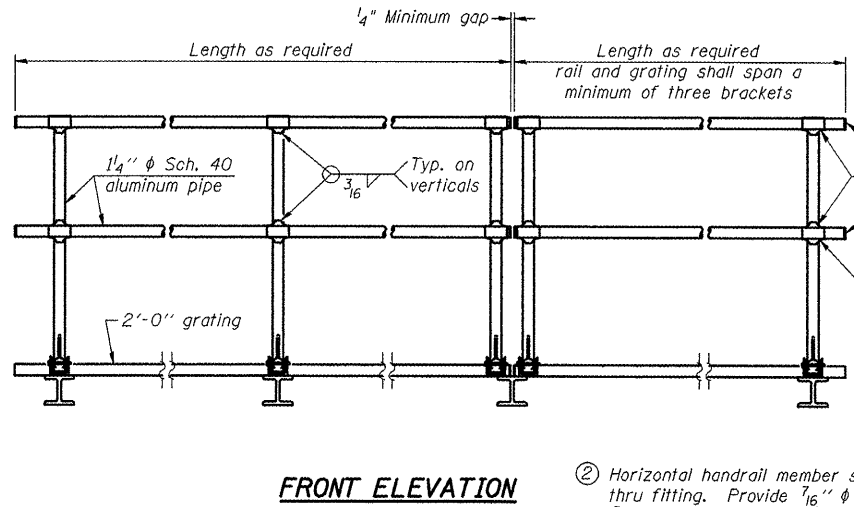
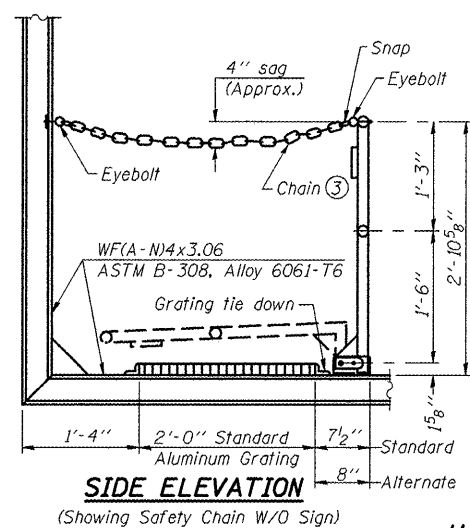


DETAIL D

Structure Number	Station	A	6 B	C	6 D*
5 C 020 1074 R155.62	657+53		2'-0"	5'-6"	8'-0" & VAR.

* See also "Sign Truss Mounting Details" Sheet 46 for the information needed to determine the variable walkway support & sign support lengths.

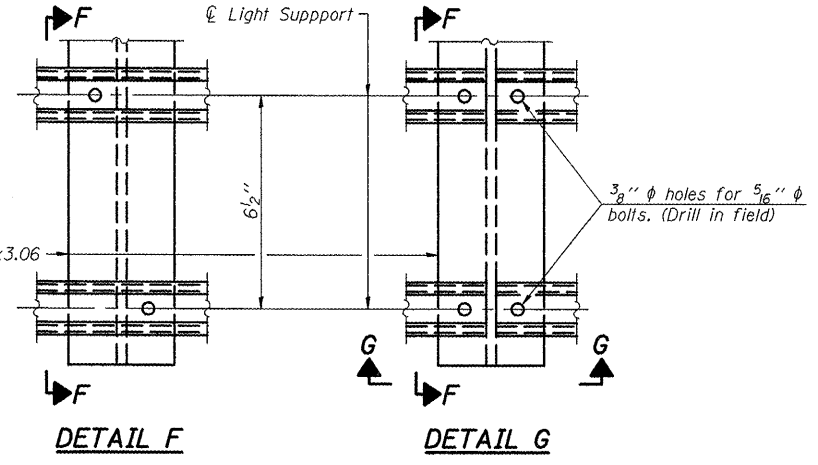
- 1 Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- 2 Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- 3 If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- 4 L 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- 5 Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- 6 Based on actual sign height, D_s, given on OSC-A-1.



HANDRAIL DETAILS

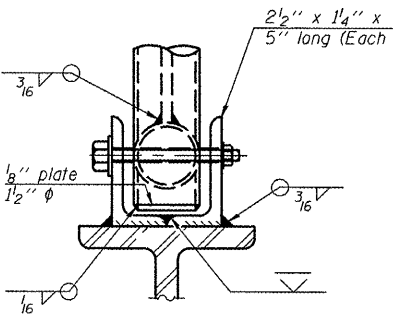
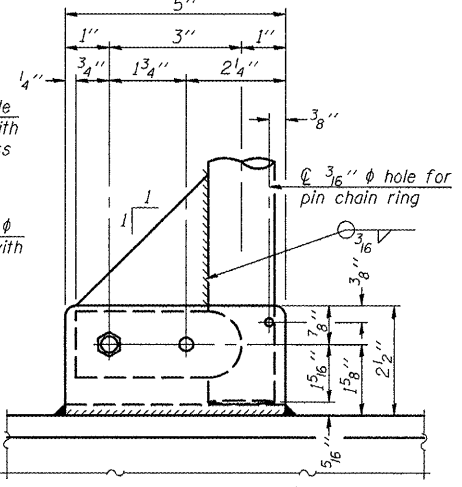
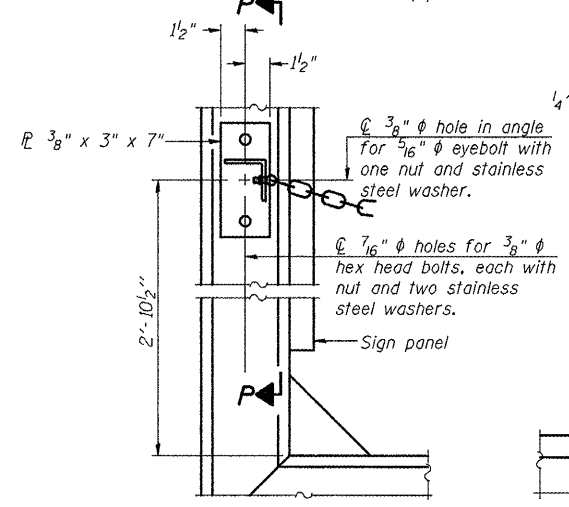
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

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



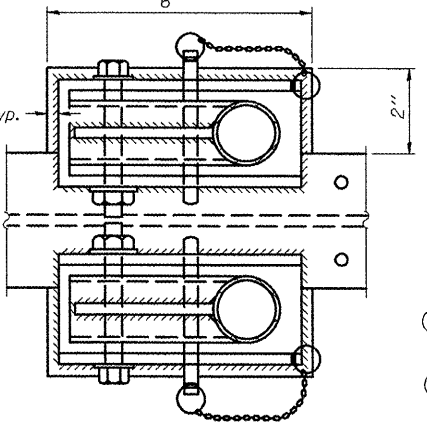
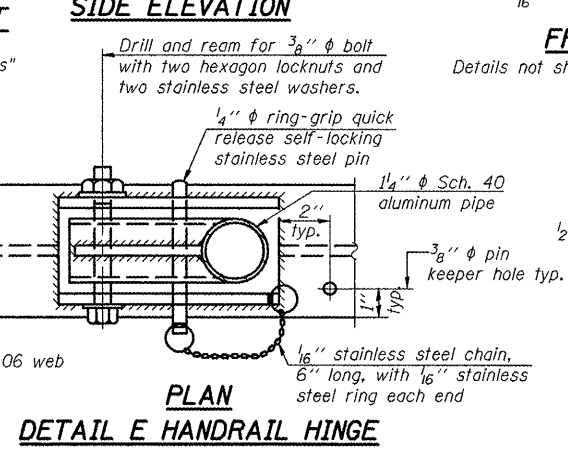
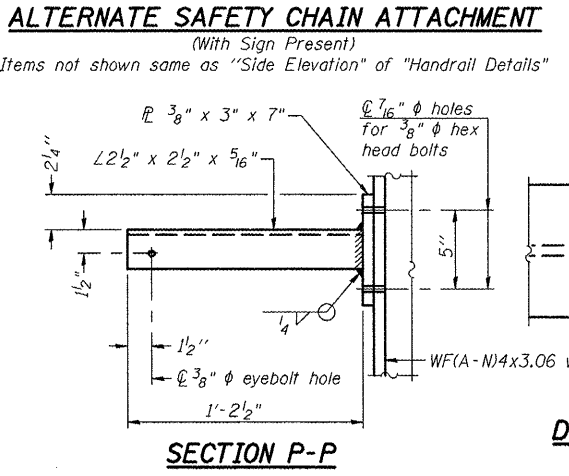
SECTION F-F **SECTION G-G**
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

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

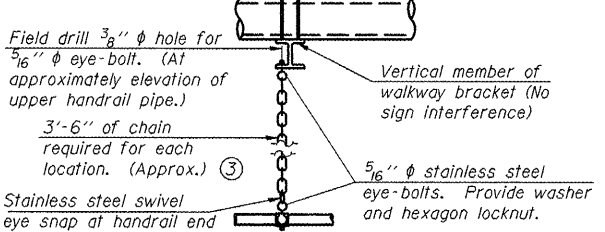


ELEVATION AT HANDRAIL JOINT ④

Details not shown same as "FRONT ELEVATION"



Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT

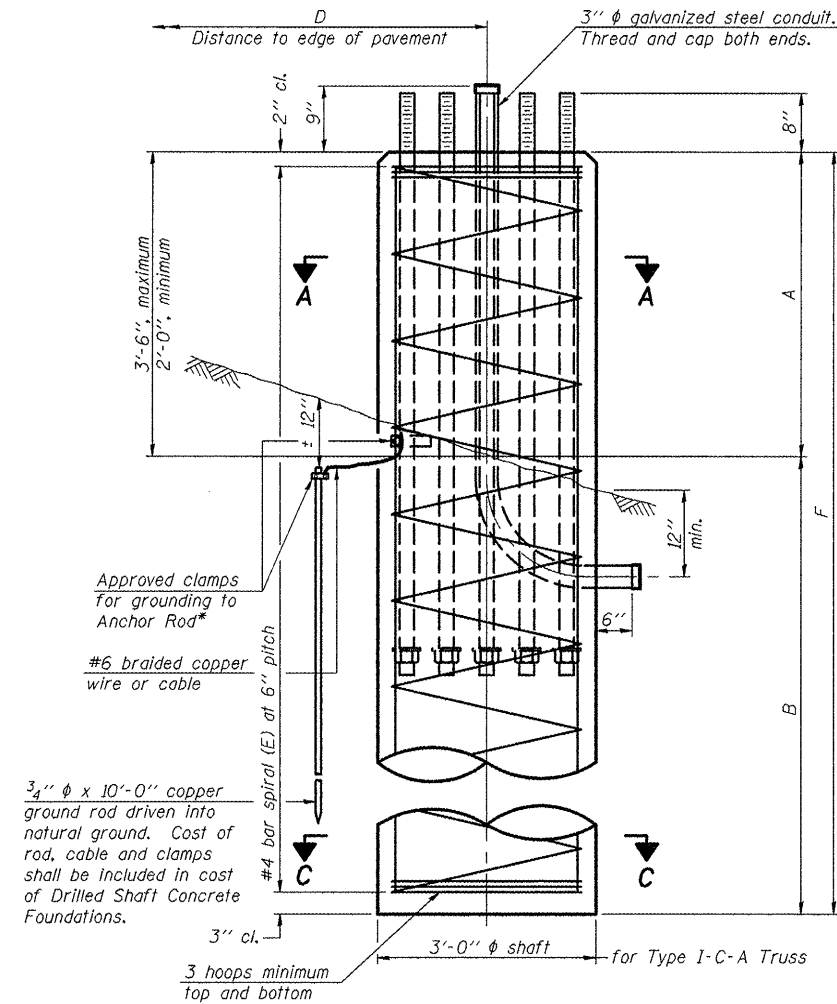
Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.

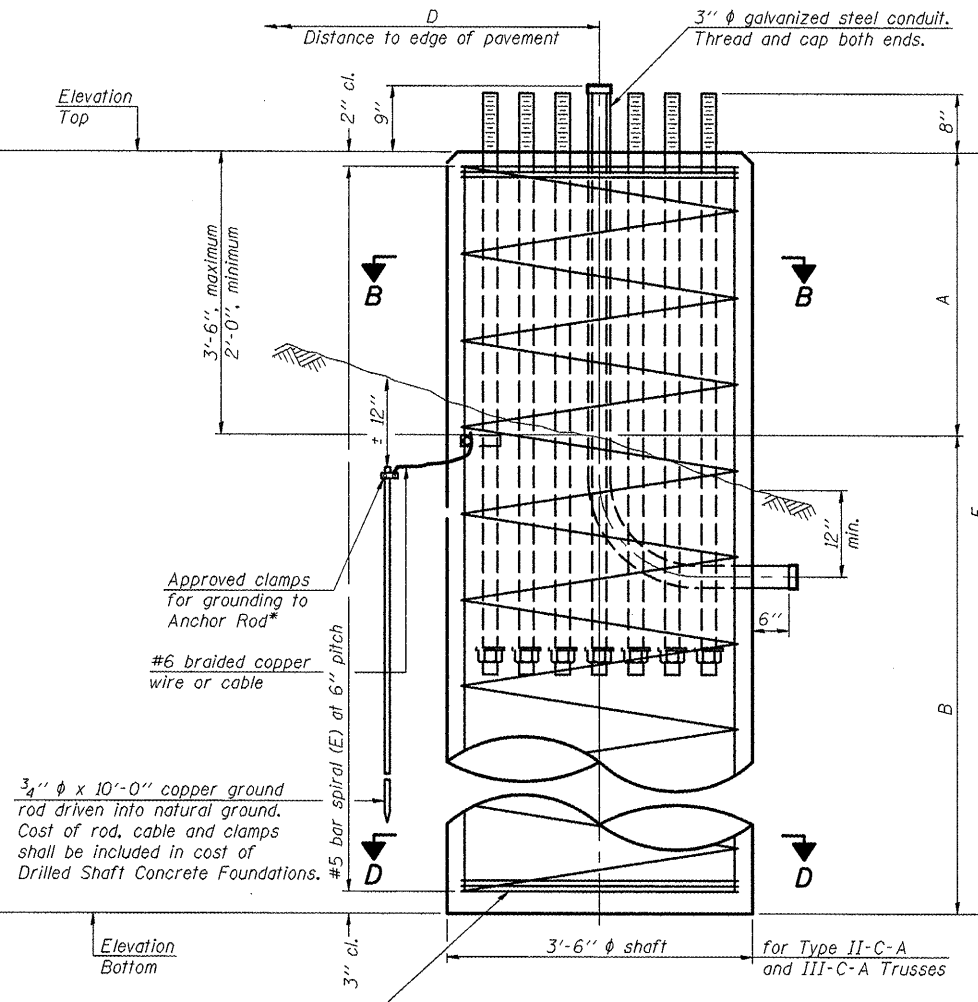
OSC-A-8 9-15-11

FILE NAME =	USER NAME = ceerlookjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES - HANDRAIL DETAILS ALUMINUM TRUSS & STEEL POST			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pwwork\pwwid\ceerlookjd\0266557\0546179-shd-details.dgn	PLOT SCALE = 48.0000' / 1"	DRAWN -	REVISED -		SCALE:	SHEET NO. 9 OF 10 SHEETS	STA.	TO STA.	Various	178	55	
	PLOT DATE = 10/7/2011	CHECKED -	REVISED -						CONTRACT NO. 46179			
		DATE - 04/26/11	REVISED -						ILLINOIS FED. AID PROJECT			
									*VARIOUS COUNTIES **D-5 OVD SIN STR REPL 2012-06			

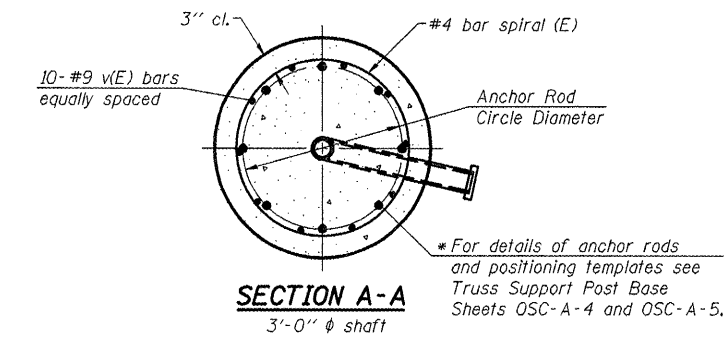
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



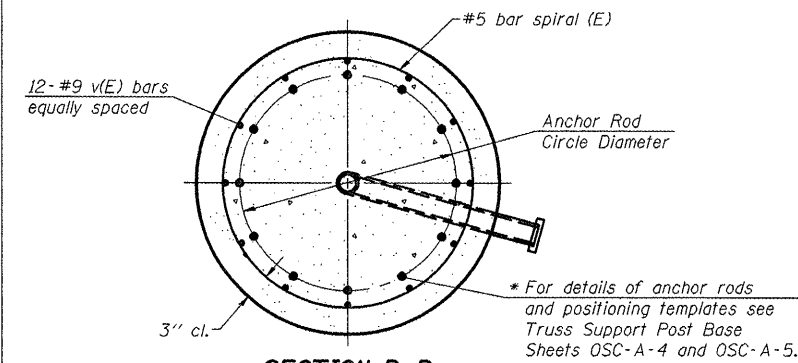
ELEVATION



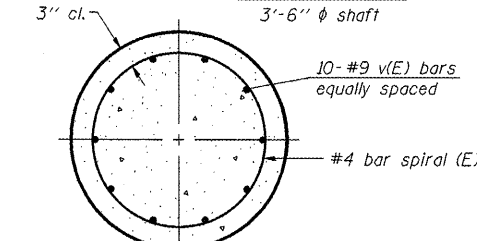
ELEVATION



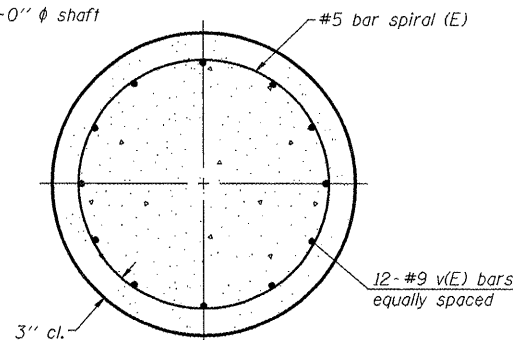
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (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 No.	Anchor Rod 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

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Q_u	A	B	F	Class DS Concrete Cubic Yards
5 C 020 1074 R155.62	657+53	II-C-A	3'-6"	751.90	726.90		3'-0"	22'-0"	25'-0"	9.0

OSC-A-9

9-15-11

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06



Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 9/4/11

ROUTE FAI Rt. 74 (East Bound) DESCRIPTION Mast Arm at Off Ramp to EB Farmer City Rest Area LOGGED BY RRW
SECTION Sign Structure LOCATION SE. SEC. 18, TWP. 21N, RNG. 5E, 3rd PM GPS:
COUNTY DeWitt DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 C 020 1074
Station R155.62
Rt. 660+00
BORING NO. 1 Sign Truss
Station 660+08
Offset 4.0 ft N of Exist.
Ground Surface Elev. 749.1 ft (ft) (/6") (tsf) (%)

Soil Description	Elev. (ft)	D (ft)	B (/6")	U (tsf)	M (%)	Soil Description	Elev. (ft)	D (ft)	B (/6")	U (tsf)	M (%)
Brown Sandy Clay Loam (Embankment)	749.1					Gray Sandy Clay Loam Till (continued)					
	746.1										
Black Silty Clay Loam (Topsoil)			5					7			
	744.1		6	2.9	23	(Soil Boring taken 4' North and 8' East of existing foundation)	724.1	11	7.4	11	
Brown/Gray Silty Clay			7	B		End of Boring		15	B		
	741.1		2								
			2	1.0	21						
Brown Silty Clay			3	B							
			1								
			1	0.6	27						
			2	B							
			0								
			2	1.6	27						
			4	B							
			1								
			2	1.6	24						
Gray Sandy Clay Loom Till	734.1		4	B							
			2								
			4	1.6	18						
			4	B							
			2								
			6	4.7	9						
			8	B							

9/16/2011 10:03:28 AM S:\SOILS\2011 SOIL WORKS\MAST ARM SOIL BORINGS\5_C_020_1074_R155_62.GPJ

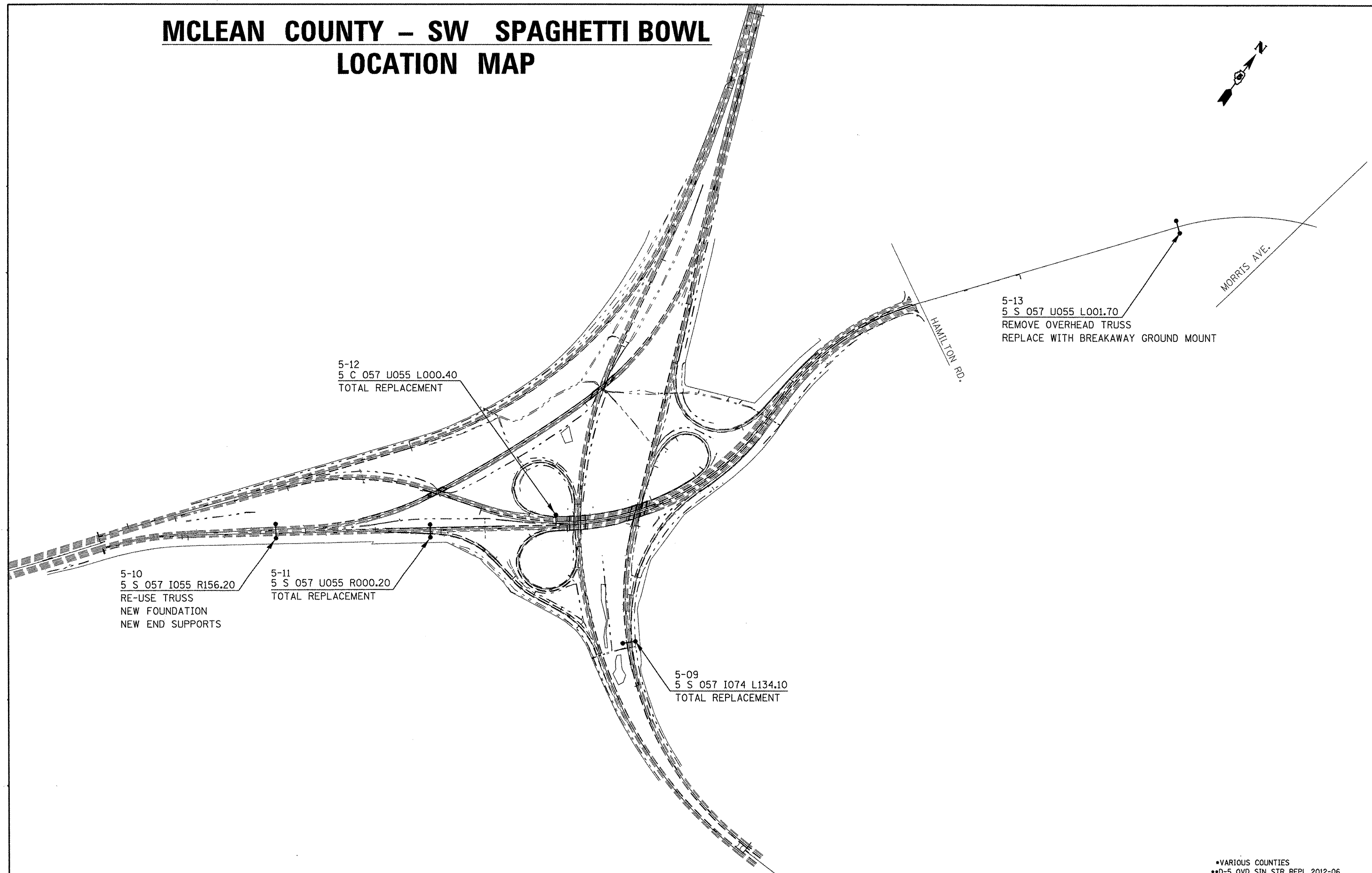
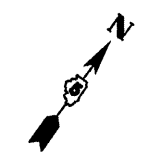
An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrator)
The SPT (N Value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\ceerlockjd\0266557\0	46179-sht-biog.dgn	DRAWN -	REVISED -			•	••	Various	178	57	
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

MCLEAN COUNTY – SW SPAGHETTI BOWL LOCATION MAP



5-10
5 S 057 I055 R156.20
RE-USE TRUSS
NEW FOUNDATION
NEW END SUPPORTS

5-11
5 S 057 U055 R000.20
TOTAL REPLACEMENT

5-12
5 C 057 U055 L000.40
TOTAL REPLACEMENT

5-09
5 S 057 I074 L134.10
TOTAL REPLACEMENT

5-13
5 S 057 U055 L001.70
REMOVE OVERHEAD TRUSS
REPLACE WITH BREAKAWAY GROUND MOUNT

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -
ct:\pw\work\pwidot\ceerlockjd\0266557\0	46179-shh-McLean_map.dgn	DRAWN -	REVISED -
	PLOT SCALE = 800.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/7/2011	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MCLEAN COUNTY – SW SPAGHETTI BOWL
LOCATION MAP**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	**	Various	178	58
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

SCHEDULE OF QUANTITIES
MCLEAN COUNTY – S.W. SPAGHETTI BOWL – INDIVIDUAL LOCATIONS

SHEET 1 OF 2

Location No.	5-09		
Structure No.	5 S 057 1074 L134.10		
County / Route	MCLEAN CO. - I-74 WB - just East of the I-55/Business Loop 55 interchange		
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	689.50
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	721.00
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	86.00
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	65.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	22.00
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.
 Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-10		
Structure No.	5 S 057 1055 R156.20		
County / Route	MCLEAN CO. - I-55 NB - just South of the split with Loop 55 & I-74 East		
Scope of Work	Truss is to be removed & re-erected on new end supports and new drilled shaft fdns.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
70100430	TRAFFIC CONTROL AND PROTECTION, STANDARD 701446	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	622.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	710.75
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	71.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	23.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
73800100	STRUCTURAL STEEL SUPPORT FOR OVERHEAD SIGN STRUCTURE - SPAN	EACH	2.00
73801100	REMOVE AND REERECT OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-11		
Structure No.	5 S 057 U055 R000.20		
County / Route	MCLEAN CO. - NB Business Loop 55 / Veterans Pkwy - just S. of the exit to I-74 EB		
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	510.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	441.00
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	70.00
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	58.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	21.50
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.
 Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

SCHEDULE OF QUANTITIES
MCLEAN COUNTY – S.W. SPAGHETTI BOWL – INDIVIDUAL LOCATIONS
SHEET 2 OF 2

Location No.	5-12		
Structure No.	5 C 057 U055 L000.40		
County / Route	MCLEAN CO. - SB Business Loop 55 / Veterans Pkwy - over the off-ramp to I-74 EB		
Scope of Work	This overhead cantilever is being replaced on a new drilled shaft foundation.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
70100315	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	EACH	1.00
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	3.00
72000300	SIGN PANEL - TYPE 3	SQFT	120.00
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	92.00
73301840	OVERHEAD SIGN STRUCTURE WALKWAY, CANTILEVER, TYPE A	FOOT	21.00
73302170	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE II-C-A (36" X 5'-6")	FOOT	27.00
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	9.50
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00

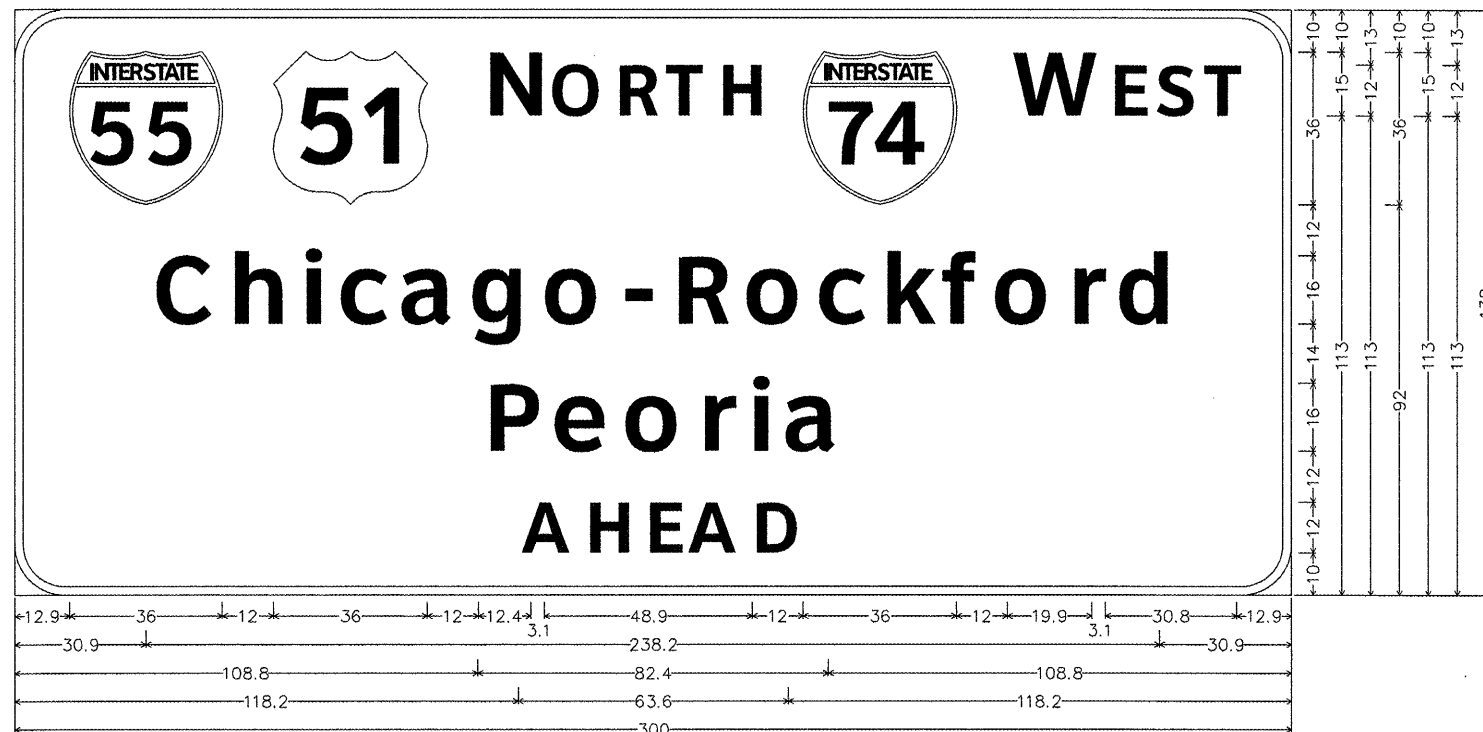
Prop. fdn. depths and elev. take into account a future profile adjustment of 1.5'. No changes to fdn. depths or top elev. will be allowed.

Location No.	5-13		
Structure No.	5 S 057 U055 L001.70		
County / Route	MCLEAN CO. - SB Bus Loop 55 / Vets Pkwy - between Fox Creek Rd & Morris Ave		
Scope of Work	This overhead sign truss is to be removed & replaced with a breakaway ground mount.		
CODE NUMBER	PAY ITEM	UNIT	QUANTITY
63200310	GUARDRAIL REMOVAL	FOOT	387.00
70100315	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	EACH	1.00
72000300	SIGN PANEL - TYPE 3	SQFT	59.50
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	333.50
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	521.25
73400100	CONCRETE FOUNDATIONS	CUYD	1.40
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	1.00
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	2.00
84500120	REMOVAL OF ELECTRICAL SERVICE INSTALLATION	EACH	1.00

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

5-09A

5 S 057 I074 L134.10 - LEFT SIGN

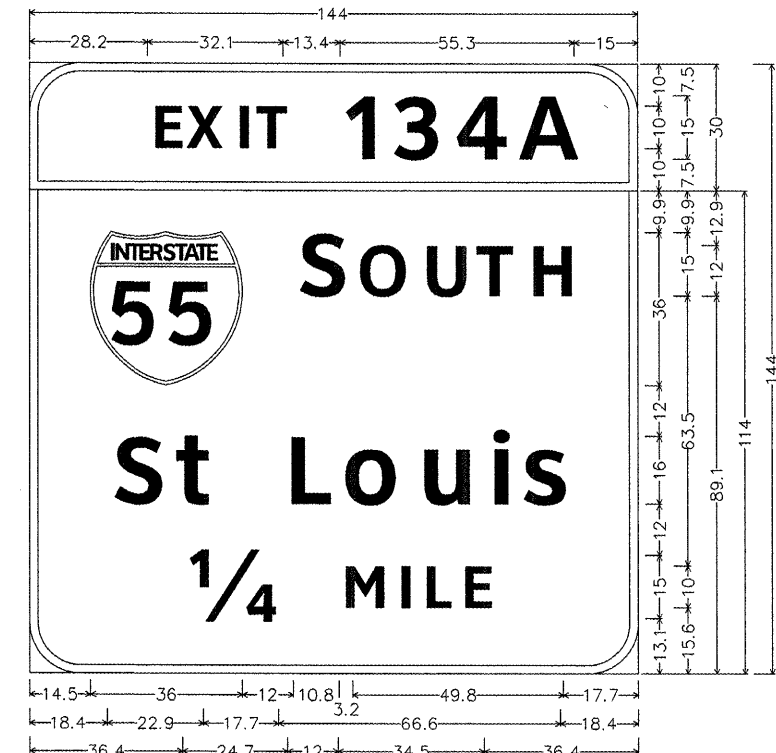


12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; [W EST] ClearviewHwy-5-W; [Chicago-Rockford] ClearviewHwy-5-W; [Peoria] ClearviewHwy-5-W; [AHEAD] ClearviewHwy-5-W;
 Table of letter and object lefts.

Ⓢ	Ⓢ	N	O	R	T	H	Ⓢ	W	E	S	T					
12.9	60.9	108.9	124.4	139.9	151.8	164.1	185.3	233.3	256.3	267.1	278.4					
C	h	i	c	a	g	o	-	R	o	c	k	f	o	r	d	257.5
30.9	48.8	65.7	74.5	89.0	105.3	122.4	140.4	153.0	169.8	187.0	202.3	216.5	228.3	246.1	257.5	
P	e	o	r	i	a	d										
108.8	124.8	141.3	159.1	170.8	179.3											
A	H	E	A	D												
118.2	132.9	147.0	157.4	172.1												

5-09B

5 S 057 I074 L134.10 - MIDDLE SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 134A] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [S OUTH] ClearviewHwy-5-W; [St Louis] ClearviewHwy-5-W;
 [1/4 MILE] ClearviewHwy-5-W;
 Table of letter and object lefts.

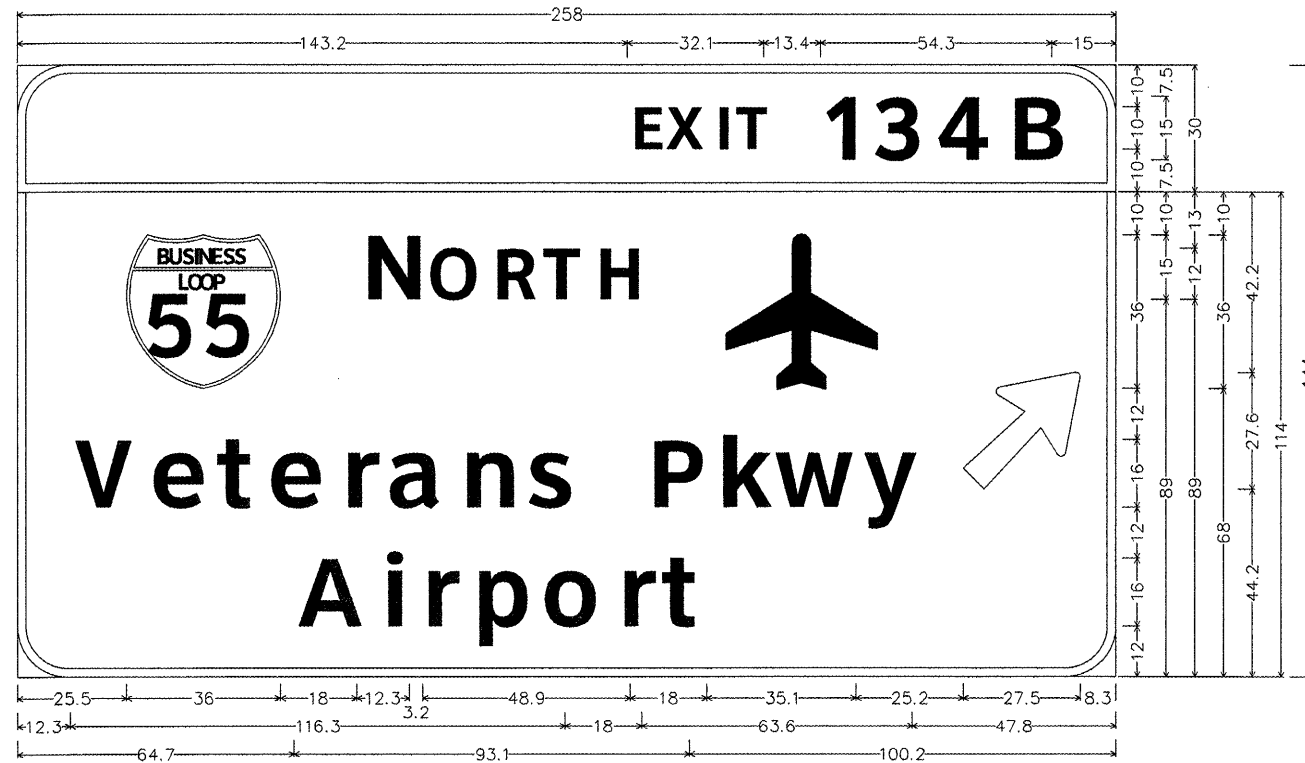
E	X	I	T	1	3	4	A
28.2	36.7	48.1	53.0	73.7	85.1	99.8	114.9
Ⓢ	S	O	U	T	H		
14.5	62.5	76.9	92.0	104.8	117.1		
S	t	L	o	u	i	s	
18.4	33.4	59.0	72.7	90.5	107.1	115.3	
1/4	M	I	L	E			
36.4	73.1	86.2	92.2	101.3			

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGNING DETAILS - MCLEAN COUNTY SW SPAGHETTI BOWL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
es:\ps_wor\p\dot\ceerlockjd\0266557.D	46179-sht-Sign_Details.dgn	DRAWN -	REVISED -			•	••	Various	178	61	
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -			ILLINOIS FED. AID PROJECT					

5-09C

5 S 057 I074 L134.10 - RIGHT SIGN

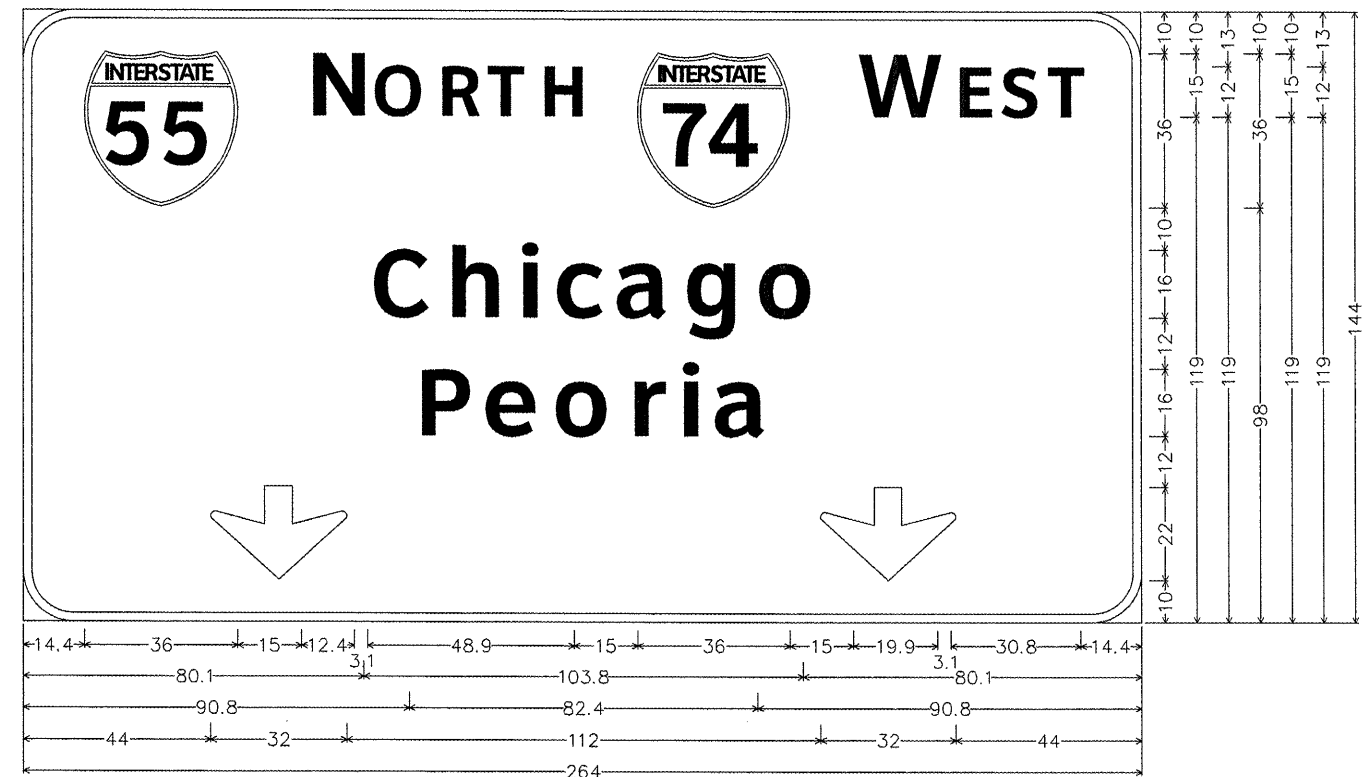


12.0" Radius, 2.0" Border, White on Green;
 [EXIT 134B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; Symbol RA010; [Veterans Pkwy] ClearviewHwy-5-W; [Airport] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°;
 Table of letter and object lefts.

E	X	I	T	1	3	4	B				
143.2	151.7	163.1	168.1	188.7	200.1	214.8	231.6				
N	O	R	T	H	4						
25.5	79.5	95.0	110.5	122.4	134.7	161.9	222.2				
V	e	t	e	r	a	n	s	P	k	w	y
12.3	29.7	45.3	57.3	74.5	85.5	102.5	118.4	146.6	163.1	176.9	197.8
A	i	r	p	o	r	t					
64.7	83.9	93.3	105.4	121.7	139.5	149.9					

5-10A

5 S 057 I055 R156.2 - LEFT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; [W EST] ClearviewHwy-5-W; [Chicago] ClearviewHwy-5-W; [Peoria] ClearviewHwy-5-W;
 Down Arrow 22.0" 270°; Down Arrow 22.0" 270°;
 Table of letter and object lefts.

N	O	R	T	H	W	E	S	T		
14.4	65.4	80.9	96.4	108.3	120.6	144.8	195.8	218.8	229.6	240.9
C	h	i	c	a	g	o				
80.1	98.0	114.8	123.6	138.1	154.5	171.5				
P	e	o	r	i	a					
90.8	106.8	123.3	141.1	152.8	161.3					
↓	↓									
44.0	188.0									

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
c:\pwork\pwork\ceerlockjd\0266957\0266957.dgn	46179-sht-Sign_Details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

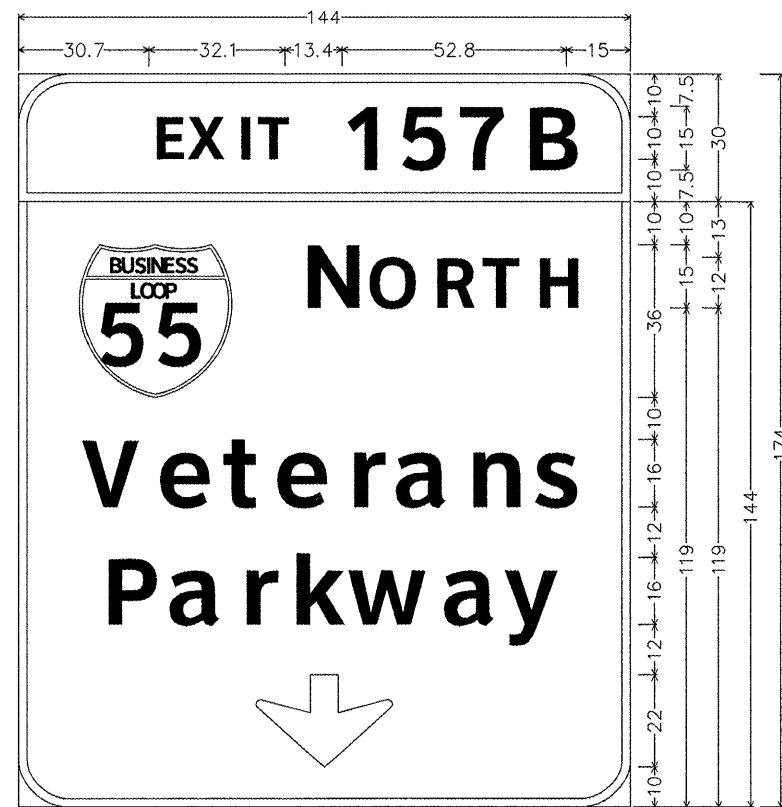
**SIGNING DETAILS - MCLEAN COUNTY
SW SPAGHETTI BOWL**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	**	Various	178	62
CONTRACT NO. 46179			ILLINOIS FED. AID PROJECT	

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06

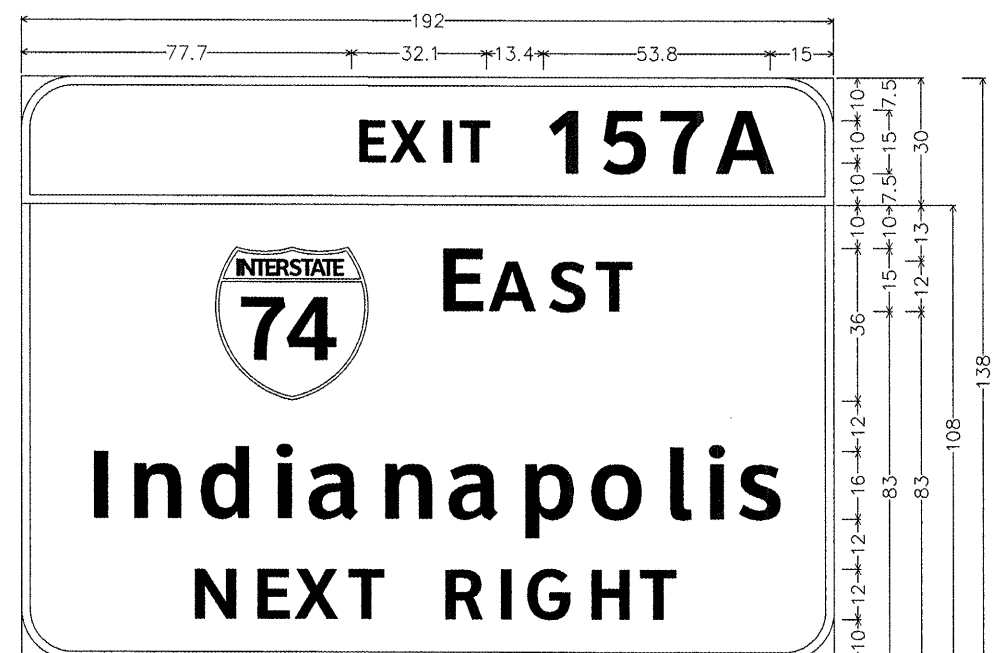
5-10B
5 S 057 I055 R156.2 - MIDDLE SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 157B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; [Veterans] ClearviewHwy-5-W;
 [Parkway] ClearviewHwy-5-W; Down Arrow 22.0" 270°;
 Table of letter and object lefts.

E	X	I	T	1	5	7	B
30.7	39.3	50.7	55.6	76.2	88.2	102.6	117.6
N	O	R	T	H			
14.3	65.3	80.8	96.3	108.2	120.5		
V	e	t	e	r	a	n	s
13.8	31.3	46.8	58.8	76.0	87.1	104.0	120.0
P	a	r	k	w	a	y	
18.2	33.8	50.8	62.7	76.5	98.4	113.4	
↓							
56.0							

5-10C
5 S 057 I055 R156.2 - RIGHT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [EXIT 157A] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [E AST] ClearviewHwy-5-W; [Indianapolis] ClearviewHwy-5-W;
 [NEXT RIGHT] ClearviewHwy-5-W;
 Table of letter and object lefts.

E	X	I	T	1	5	7	A				
77.7	86.2	97.6	102.6	123.2	135.2	149.5	162.9				
E	A	S	T								
45.6	96.6	109.4	123.2	134.5							
I	n	d	i	a	n	a	p	o	i	s	
14.0	23.4	40.0	57.2	65.7	82.7	98.9	115.9	132.2	150.1	159.5	167.8
N	E	X	T	R	I	G	H	T			
38.4	53.1	63.4	75.8	97.7	110.8	117.5	132.2	144.9			

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
01\pvc\work\pvd\dot\ceerlockjd\0266557\0546179-shit-Sign_Details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - MCLEAN COUNTY
SW SPAGHETTI BOWL

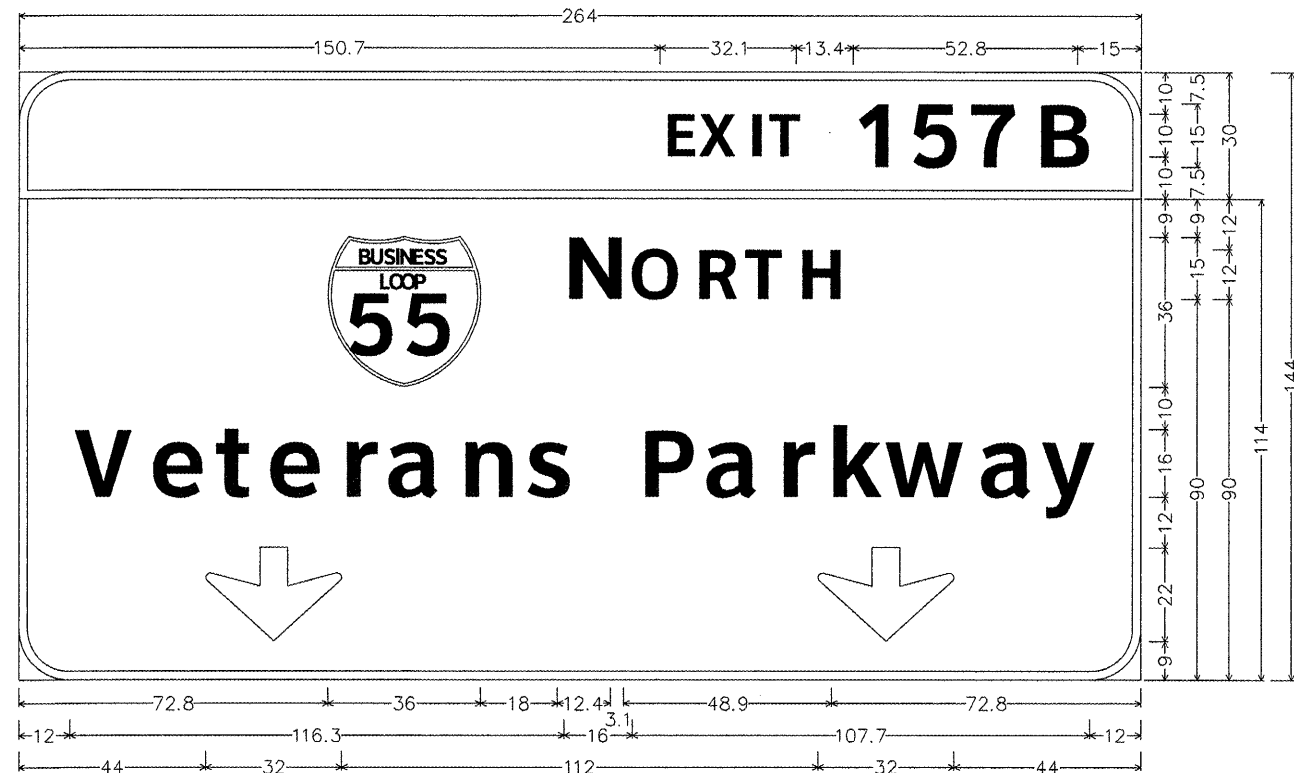
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	178	63
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

*VARIOUS
 **D-5 OVD SIN STR REPL 2012-06

5-11A

5 S 057 U055 R000.20 - LEFT SIGN

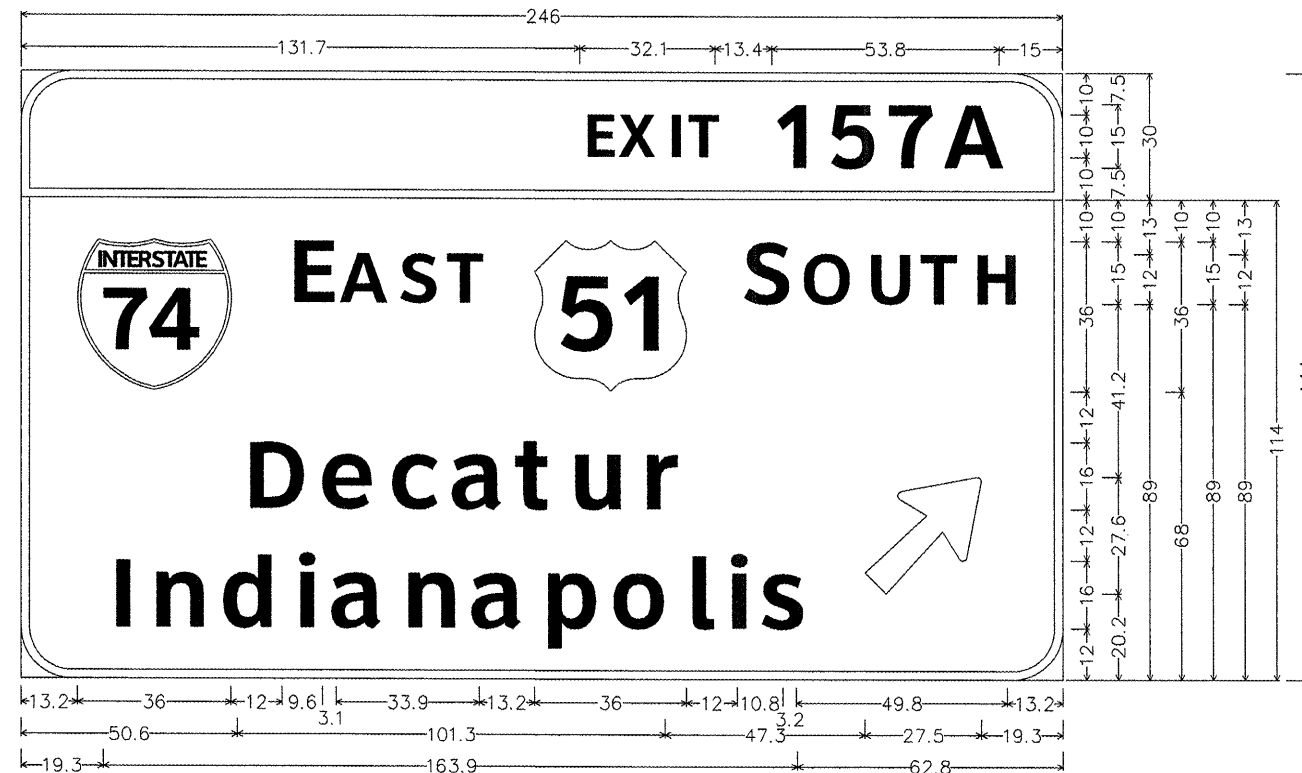


12.0" Radius, 2.0" Border, White on Green;
 [EXIT 157B] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; [Veterans] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W; Down Arrow 22.0" 270;
 Down Arrow 22.0" 270;
 Table of letter and object lefts.

E	X	I	T	1	5	7	B							
150.7	159.3	170.7	175.6	196.2	208.2	222.6	237.6							
Ⓢ	N	O	R	T	H									
72.8	126.8	142.3	157.8	169.7	182.0									
V	e	t	e	r	a	n	s	P	a	r	k	w	a	y
12.0	29.4	45.0	57.0	74.2	85.2	102.2	118.1	144.3	160.0	177.0	188.9	202.6	224.5	239.5
↙	↘													
44.0	188.0													

5-11B

5 S 057 U055 R000.20 - RIGHT SIGN

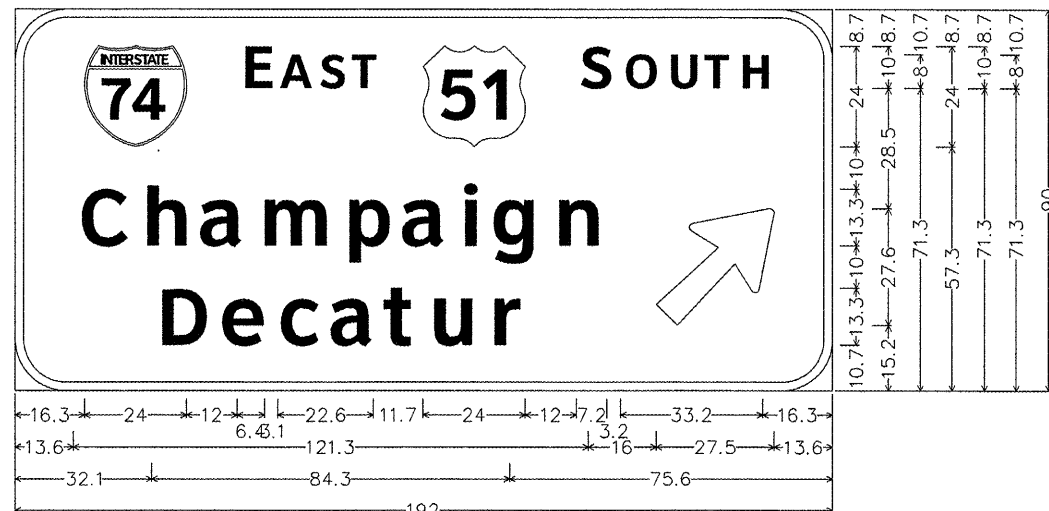


12.0" Radius, 2.0" Border, White on Green;
 [EXIT 157A] ClearviewHwy-5-W;
 12.0" Radius, 2.0" Border, White on Green;
 [E AST] ClearviewHwy-5-W; [S OUTH] ClearviewHwy-5-W; [Decatur] ClearviewHwy-5-W;
 [Indianapolis] ClearviewHwy-5-W; Arrow 160 - 35.0" 45;
 Table of letter and object lefts.

E	X	I	T	1	5	7	A										
131.7	140.2	151.6	156.6	177.2	189.2	203.5	216.9										
Ⓢ	E	A	S	T	Ⓢ	S	O	U	T	H							
13.2	61.2	73.9	87.8	99.1	121.0	169.0	183.0	198.4	211.3	223.6							
D	e	c	a	t	u	r	I	n	d	i	a	n	a	p	o	i	s
50.6	68.5	85.1	99.5	114.9	127.5	144.5	159.2										
↖	↗																
19.3	28.7	45.2	62.5	71.0	88.0	104.1	121.1	137.5	155.3	164.8	173.0						

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGNING DETAILS - MCLEAN COUNTY SW SPAGHETTI BOWL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLLOT SCALE = 48.0000' / in.	CHECKED -	REVISIED -	REVISIED -			CONTRACT NO. 46179					
PLLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					

5-12
5 C 057 U055 L000.40

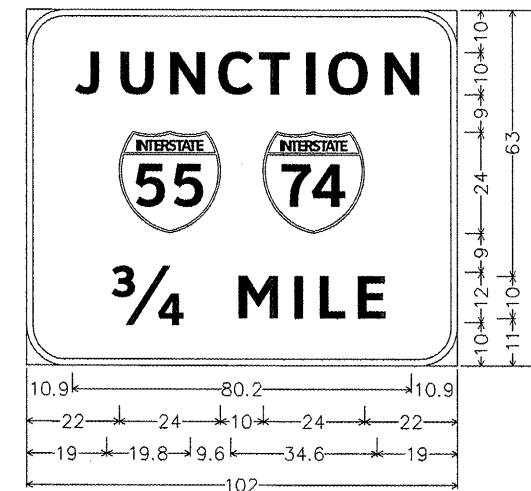


12.0" Radius, 2.0" Border, White on Green;
 [E AST] ClearviewHwy-5-W; [S OUTH] ClearviewHwy-5-W; [Champaign] ClearviewHwy-5-W;
 [Decatur] ClearviewHwy-5-W; Arrow 160 - 35.0" 45};

Table of letter and object lefts.

①	E	A	S	T	②	S	O	U	T	H
16.3	52.3	61.8	71.1	78.6	96.1	132.1	142.5	152.8	161.4	169.6
C	h	a	m	p	a	i	g	n	?	
13.6	28.5	42.0	56.2	76.3	89.6	103.5	110.9	125.6	150.9	
D	e	c	a	t	u	r				
32.1	47.0	60.8	72.8	85.6	96.2	110.3				

5-13
5 S 057 U055 L001.70



9.0" Radius, 1.5" Border, White on Green;
 [JUNCTION] ClearviewHwy-5-W;
 [? MILE] ClearviewHwy-5-W;
 Table of letter and object lefts.

J	U	N	C	T	I	O	N
10.9	20.4	32.2	44.0	54.2	64.4	70.0	82.9
③	④						
22.0	56.0						
?	M	I	L	E			
19.0	48.4	61.6	67.5	76.6			

FILE NAME =	USER NAME = cseerlockjd	DESIGNED - JAL	REVISED -
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	PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - MCLEAN COUNTY
SW SPAGHETTI BOWL

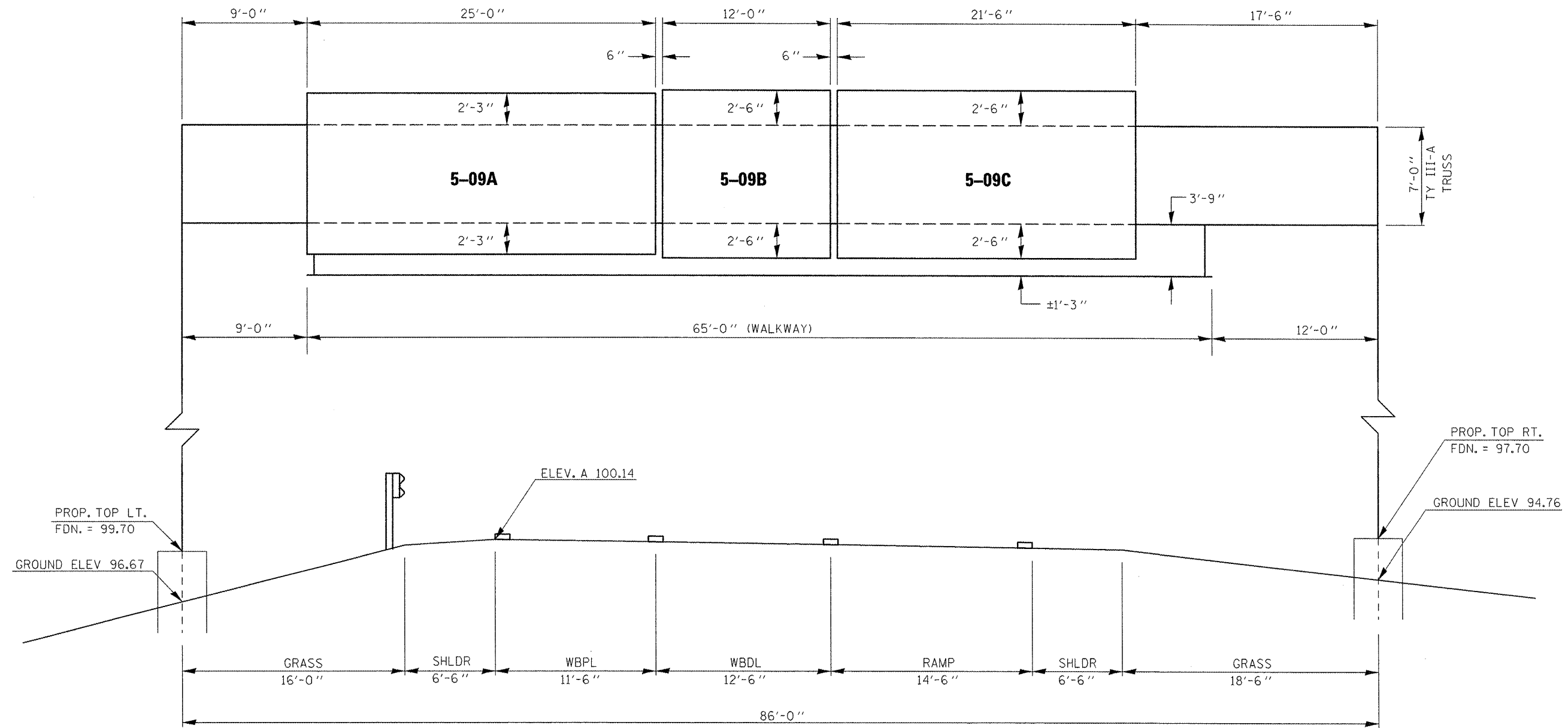
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	65
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06

SIGN TRUSS MOUNTING DETAIL

5 S 057 I074 L134.10



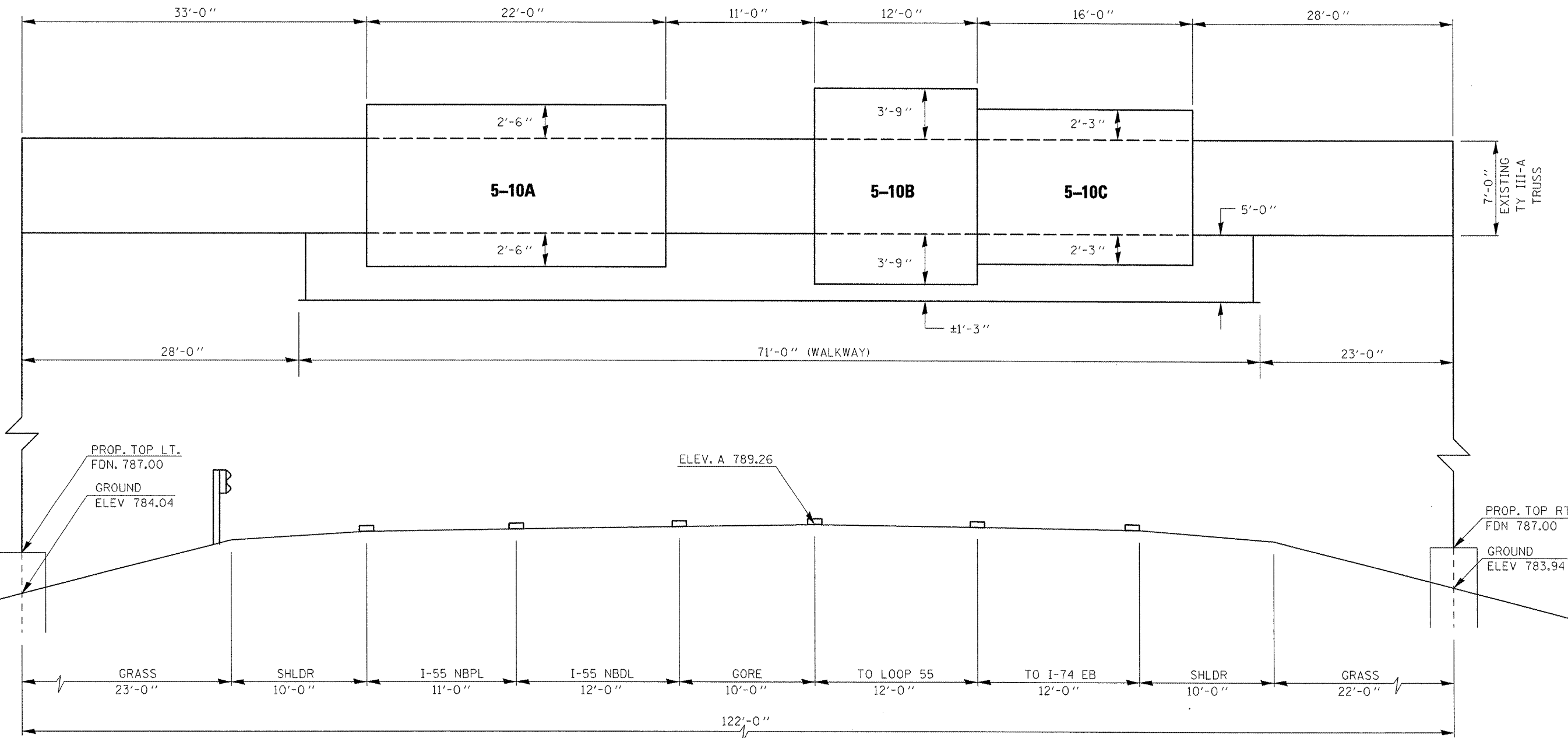
TEMP. BENCHMARK = CHIS. "X" ON SE ANCHOR BOLT OF EAST LEG OF RT. FDN. = 96.22 (FROM 1973 PLANS)

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlookjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN TRUSS MOUNTING DETAILS MCLEAN COUNTY - SW SPAGHETTI BOWL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT SCALE = 40.0000" / 1"		CHECKED -	REVISED -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE:	SHEET NO. 1 OF 24 SHEETS		STA. TO STA.			

SIGN TRUSS MOUNTING DETAIL

5 S 057 I055 R156.20



TEMP. BENCHMARK = CHIS. SQUARE ON SW CORNER OF SOUTH LEG OF RT. FDN. = 786.05 (FROM 1973 PLANS)

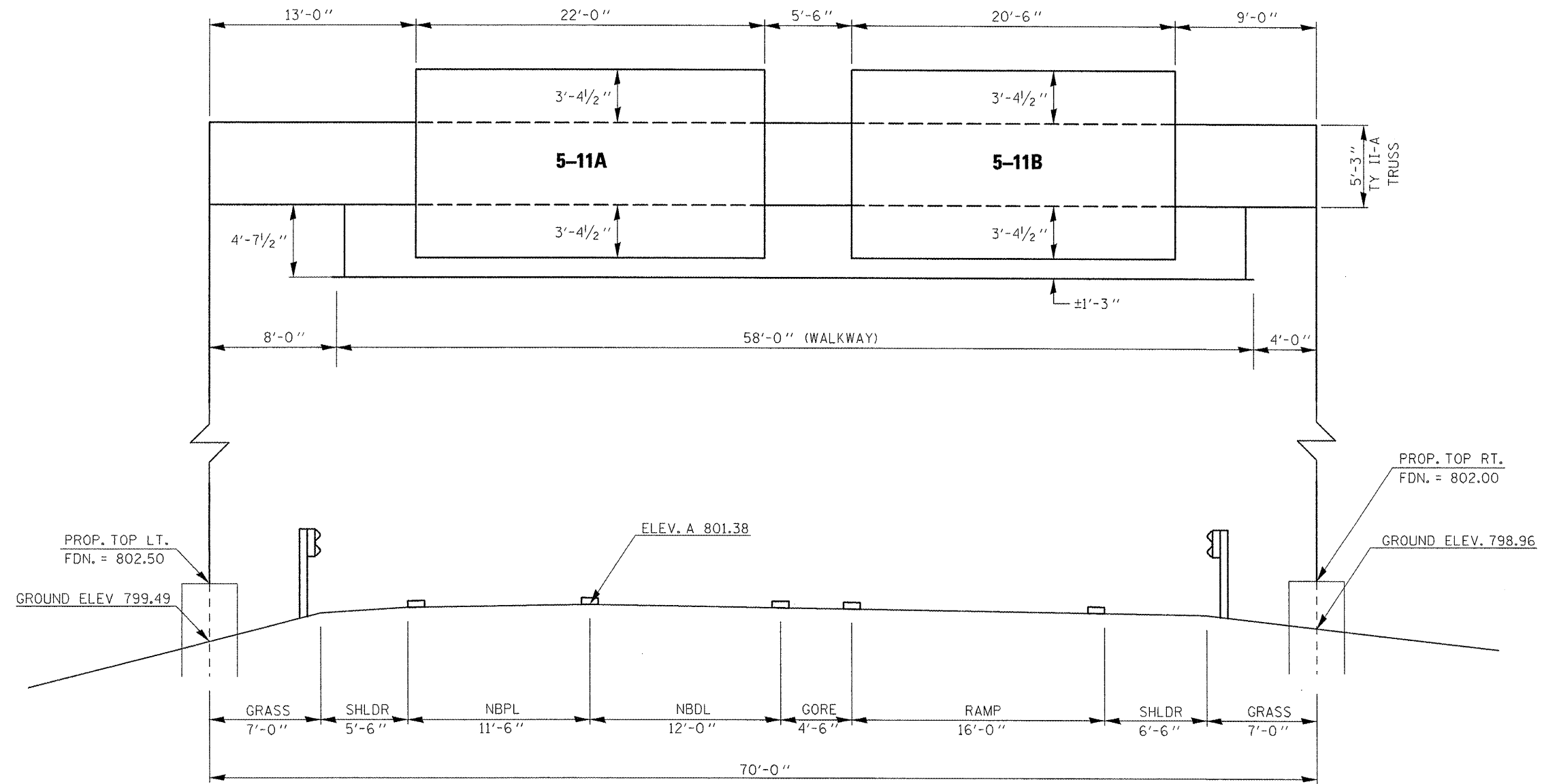
•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN TRUSS MOUNTING DETAILS MCLEAN COUNTY - SW SPAGHETTI BOWL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
es:\pwwork\pwwork\ceerlockjd\0266557-046179-sht-details.dgn	46179-sht-details.dgn	DRAWN -	REVISED -			•	••	Various	178	67	
PLOT SCALE = 40.0000' / 1" =	CHECKED -	REVISD -	REVISD -			CONTRACT NO. 46179					
PLOT DATE = 10/7/2011	DATE = 04/26/11	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					

SCALE: SHEET NO. 2 OF 24 SHEETS STA. TO STA.

SIGN TRUSS MOUNTING DETAIL

5 S 057 U055 R000.20



TEMP. BENCHMARK = CHIS. SQUARE ON SW CORNER OF RT. FDN. = 803.00 (FROM 1965 PLANS)

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = oserlockjd	DESIGNED - JAL	REVISED -
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		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

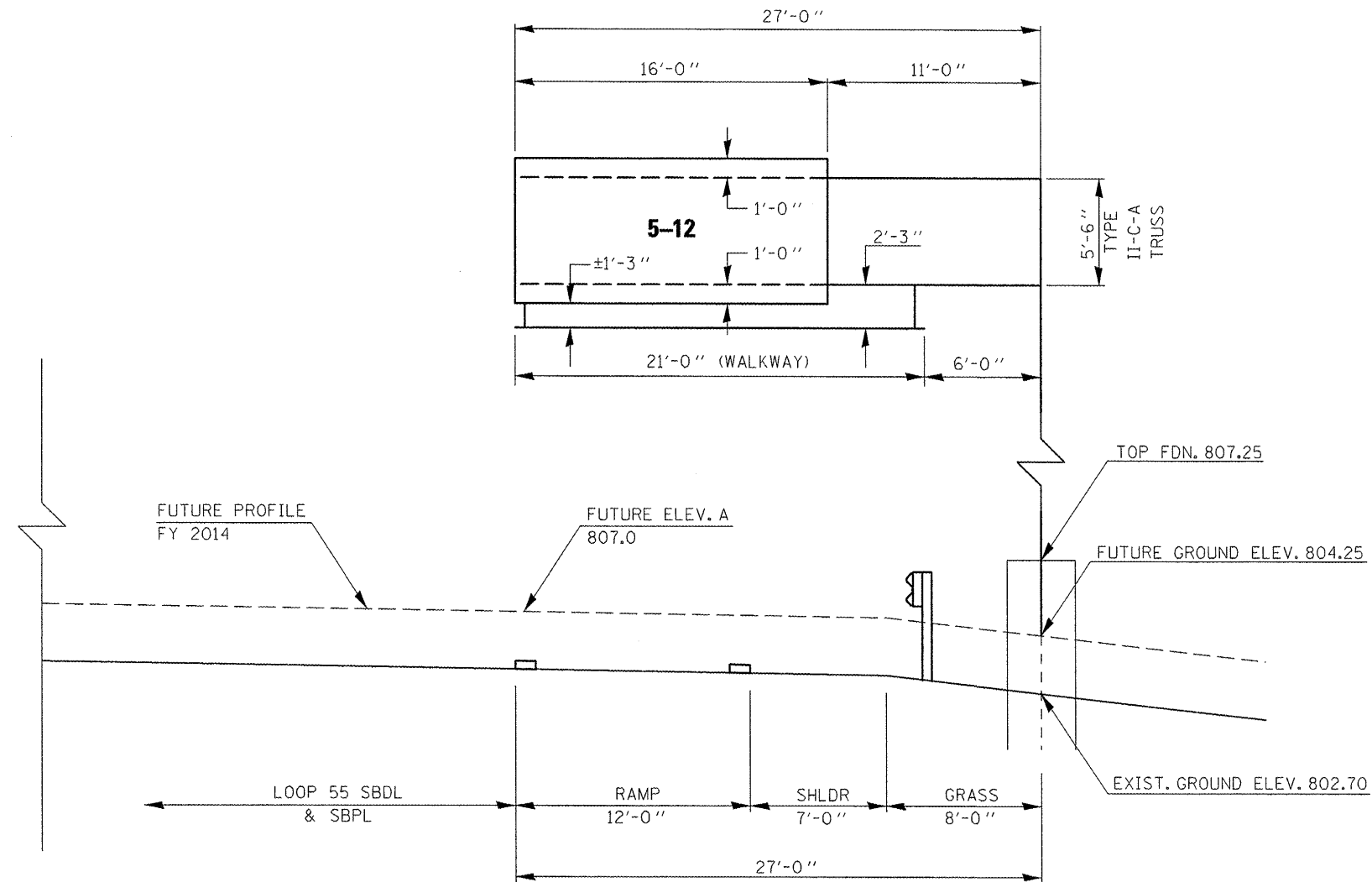
**SIGN TRUSS MOUNTING DETAILS
 MCLEAN COUNTY - SW SPAGHETTI BOWL**

SCALE: SHEET NO. 1 OF 24 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	68
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

SIGN TRUSS MOUNTING DETAIL

5 C 057 U055 L000.40



BENCHMARK 4848-1 = CHIS. SQUARE ON SE WINGWALL OF BRIDGE 057-0059 = 809.67
 TBM = CHIS. "X" ON SE ANCHOR BOLT OF EXISTING TRUSS = 803.49

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
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	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

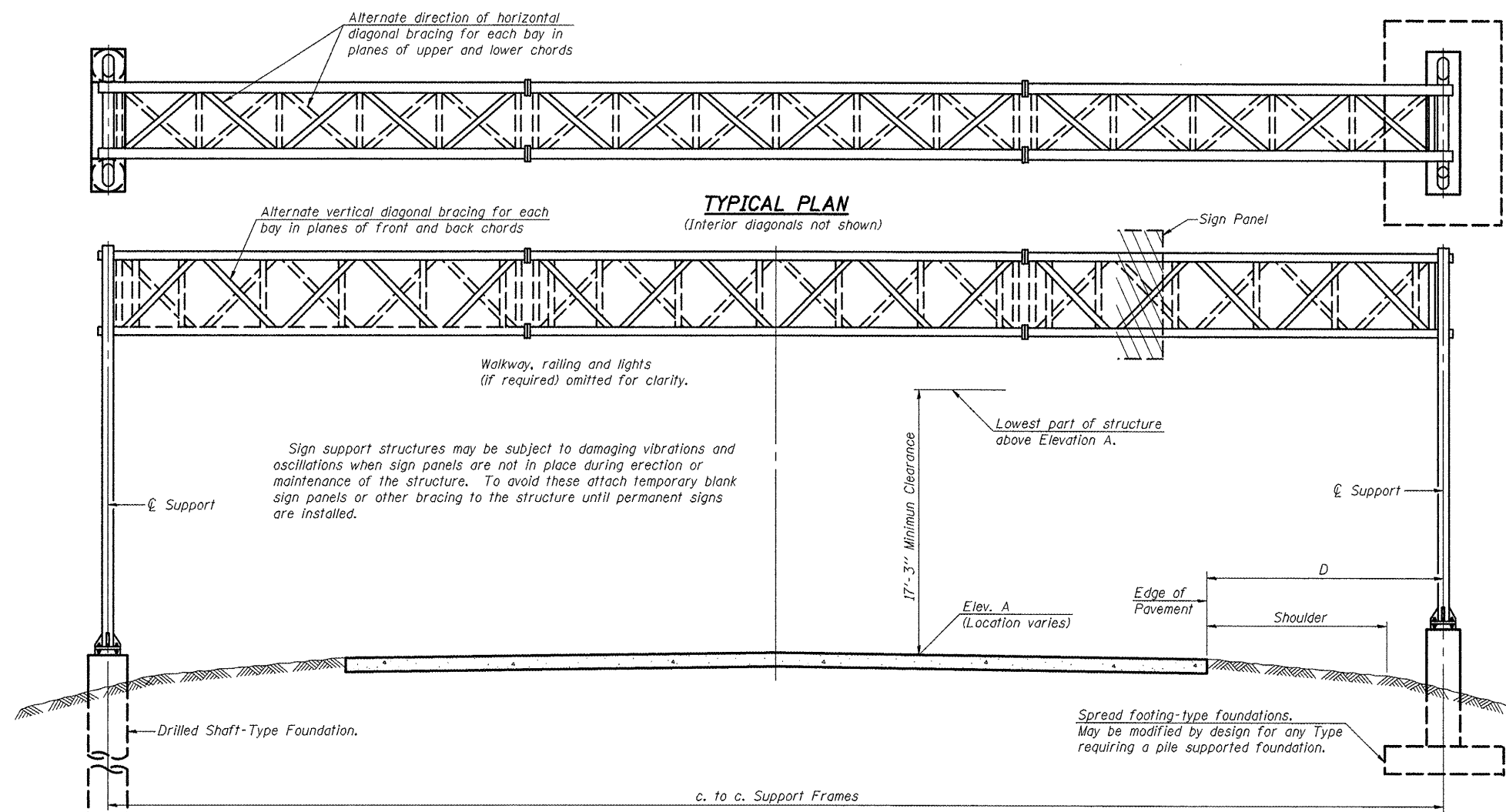
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SIGN TRUSS MOUNTING DETAILS
 MCLEAN COUNTY - SW SPAGHETTI BOWL**

SCALE: SHEET NO. 2 OF 24 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	69
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06



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) 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.

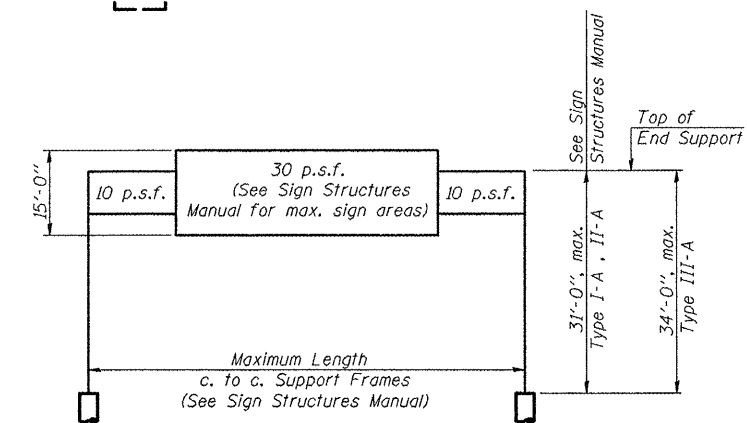
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

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

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
5 S 057 1074 L134.10	647+84	III-A	86'-0"	100.14	***	12'-0"	689.5
5 S 057 1055 R156.20	645+76	III-A Reuse existing truss	122'-0"	789.26	***	14'-6"	622.0
5 S 057 U055 R000.20	71+67	II-A	70'-0"	801.38	***	12'-0"	510.0

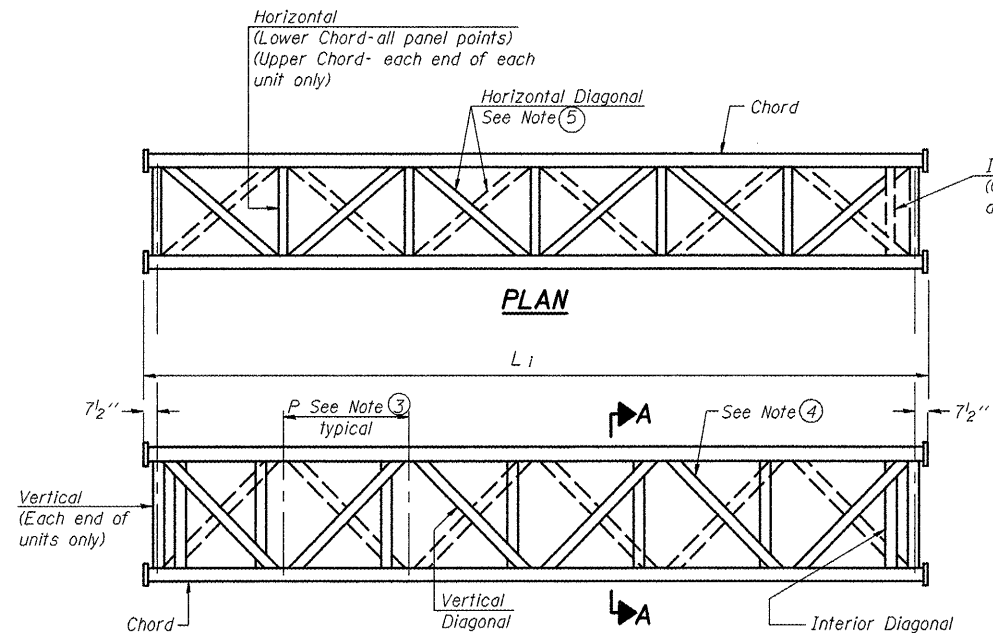


DESIGN WIND LOADING DIAGRAM
 Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

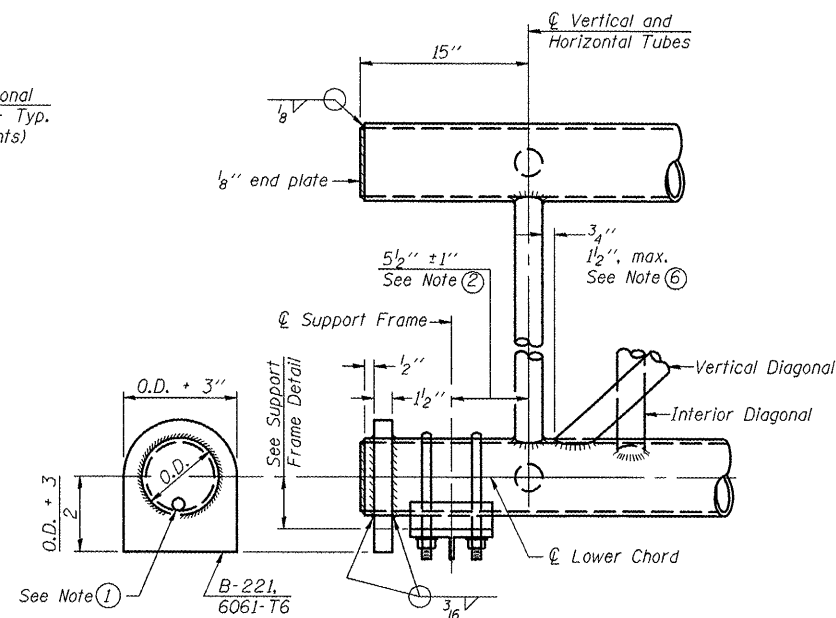
** Looking upstation for structures with signs both sides.
 *** See Sign Truss Mounting Details
 **** End support height based on 15'-0" sign height or tallest sign whichever is greater per OS-A-6 & OS4-A-8a
 * If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

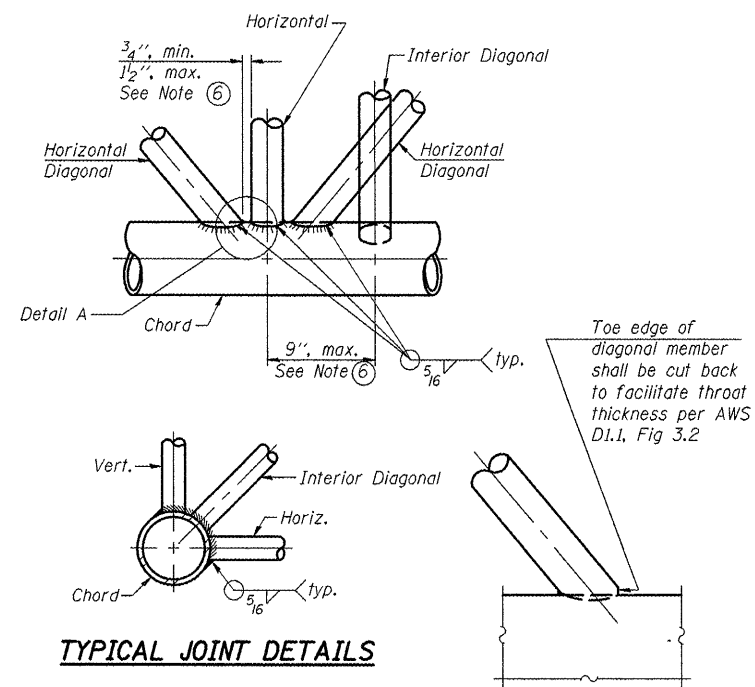
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	



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

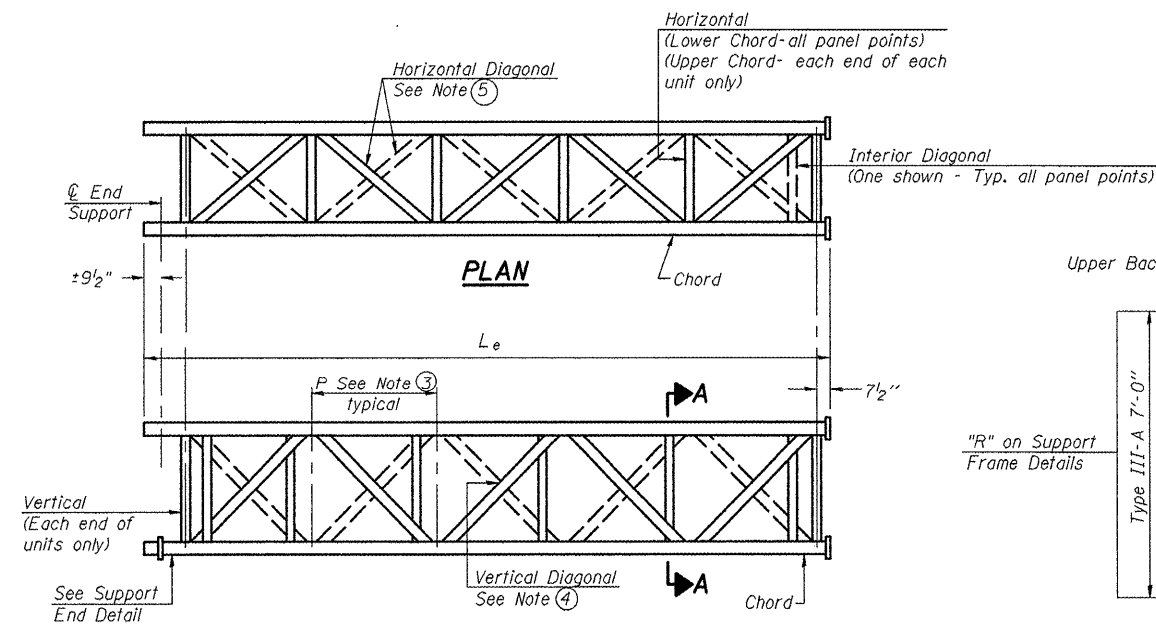


SUPPORT END DETAIL FOR EXTERIOR UNIT

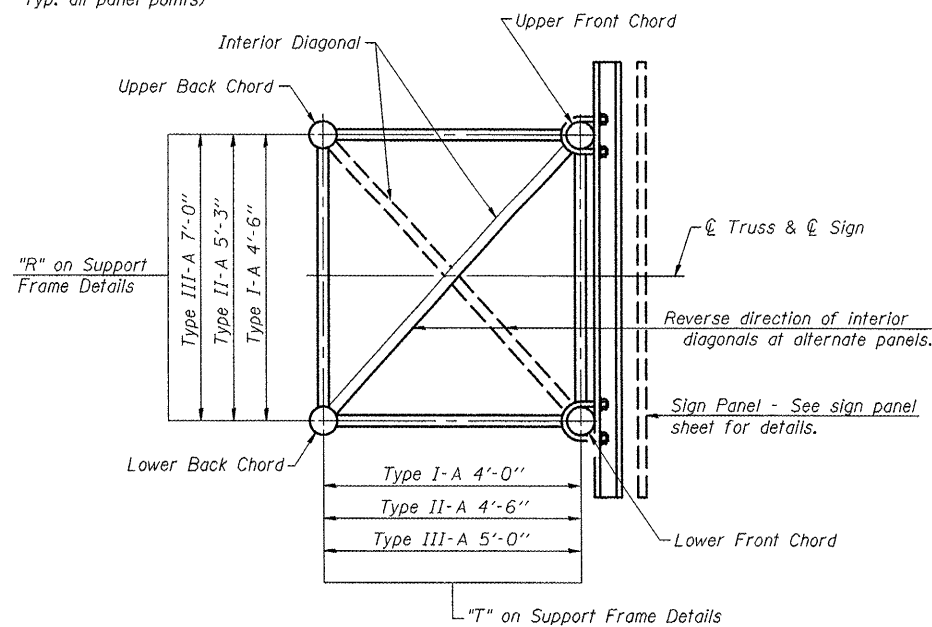


TYPICAL JOINT DETAILS

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. 1/2" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by $\pm 1"$ 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 3/4" minimum to 1 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.

OS-A-2 1-20-11

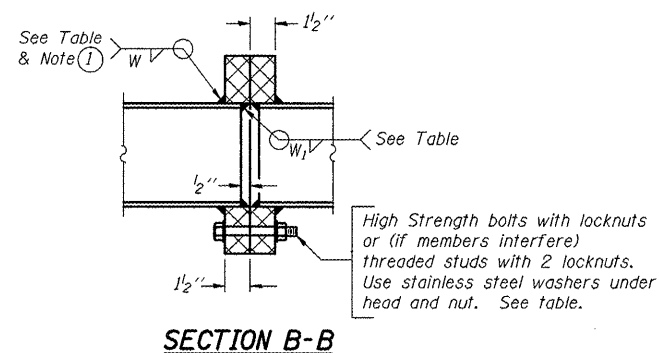
FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 10/7/2011	DATE = 04/26/11	CHECKED -	REVISED -			CONTRACT NO. 46179					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

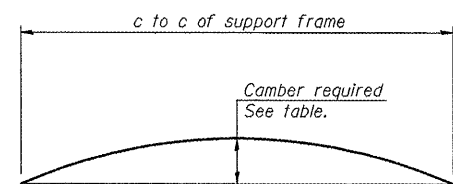
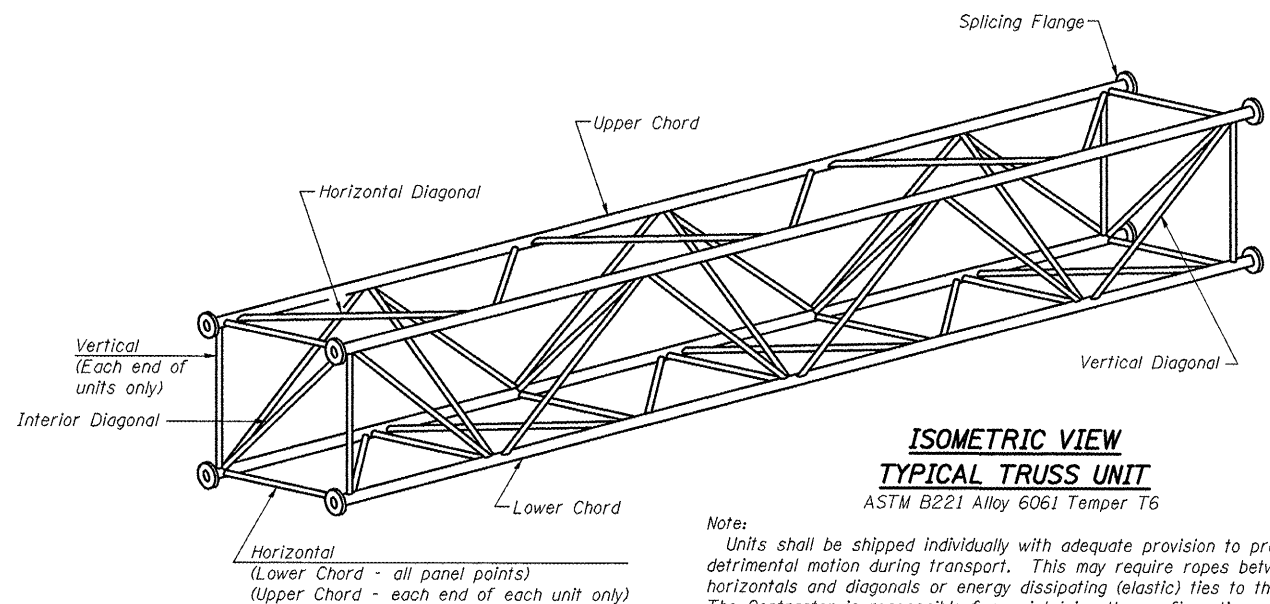
SCALE: SHEET NO. 4 OF 24 SHEETS STA. TO STA.

TRUSS UNIT TABLE

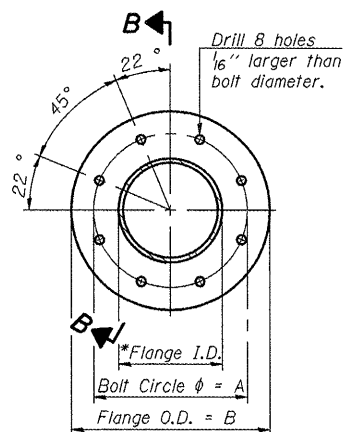
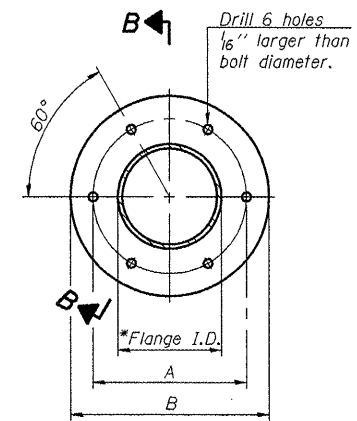
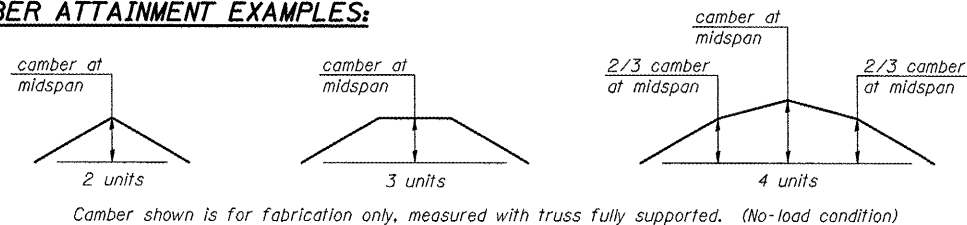
Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L _e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes			
															No./Splice	Dia.	W	W ₁	A	B
5 S 057 1074 L134.10	647+84	III-A	5	27'-8 1/2"	5'-2"	1	6	32'-3"	5'-2"	7"	5/16"	3 1/4"	5/16"	1 1/2"	6	1"	7/16"	5/16"	11 1/2"	15"
5 S 057 1055 R156.20	645+76	III-A	RE-USE EXISTING TRUSS											7" (EXISTING)	3 1/4" (EXISTING)					
5 S 057 U055 R000.20	71+67	II-A	7	35'-8 1/2"	4'-10"	0	-	-	-	5 1/2"	5/16"	3"	5/16"	1 1/2"	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 ATTAINMENT EXAMPLES:



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".

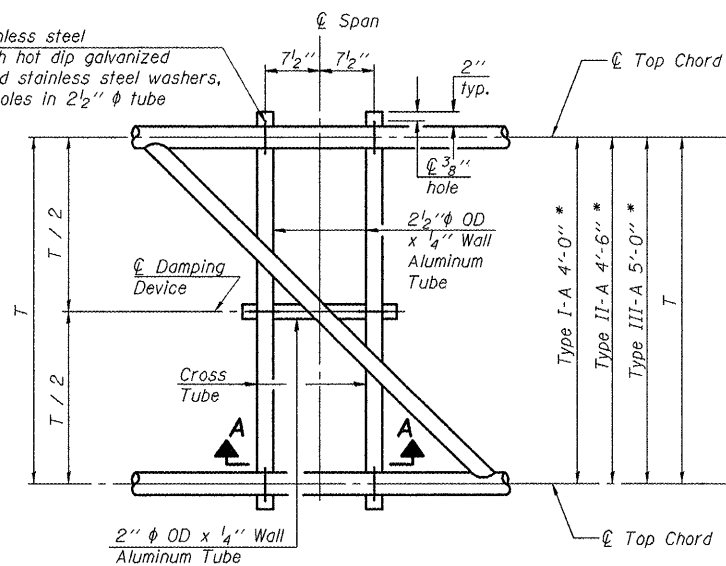
OS4-A-2

1-20-11

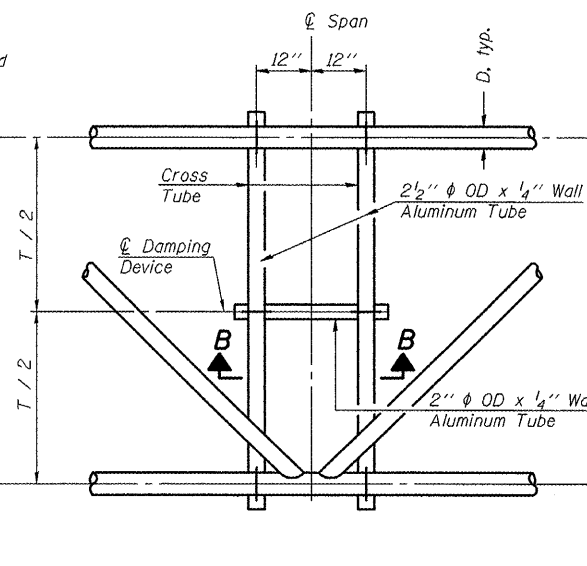
FILE NAME =	USER NAME = ceerlook_jd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS FOR TRUSS TYPES I-A, II-A AND III-A	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pwork\pwidot\ceerlook_jd\0266557\0266179-sht-details.dgn	PLOT SCALE = 40.0000' / 1"	DRAWN -	REVISED -			•	**	Various	178	72	
PLOT DATE = 10/7/2011	DATE = 04/26/11	CHECKED -	REVISED -			SCALE:	SHEET NO. 5 OF 24 SHEETS	STA.	TO STA.	CONTRACT NO. 46179	
										ILLINOIS FED. AID PROJECT	

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

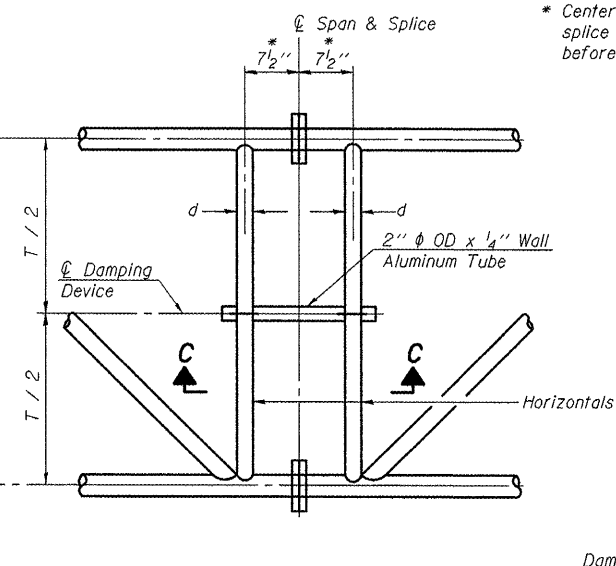
5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in 2 1/2" φ tube



PLAN DETAIL "A"
Span between Panel Points



PLAN DETAIL "B"
Span at Panel Point



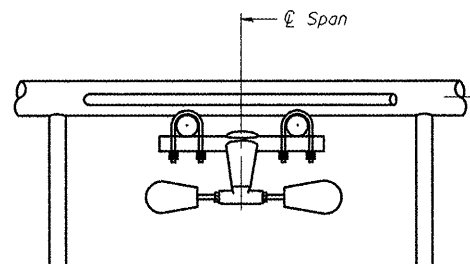
PLAN DETAIL "C"
Span at Chord Splice

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

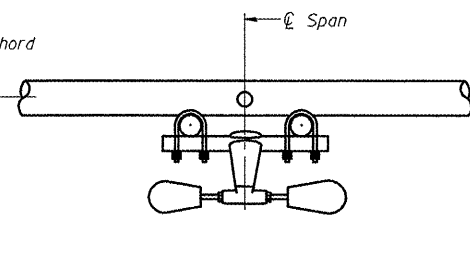
NOTES

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

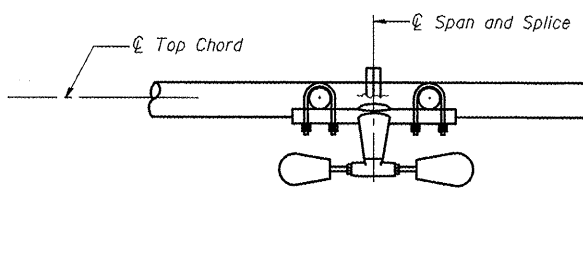
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061
temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

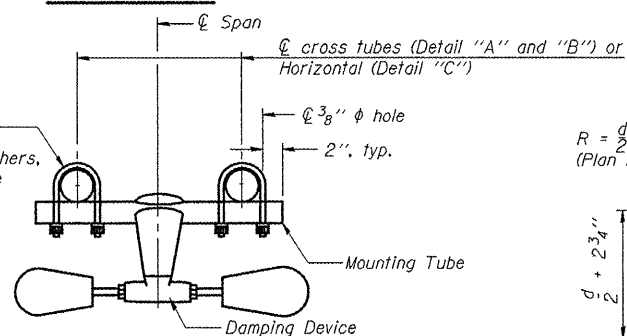


SECTION B-B

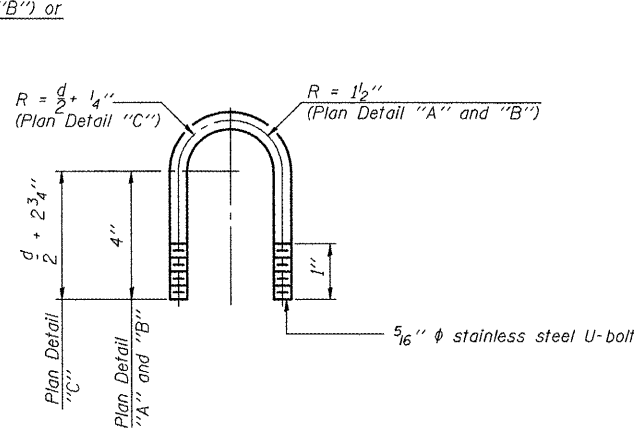


SECTION C-C

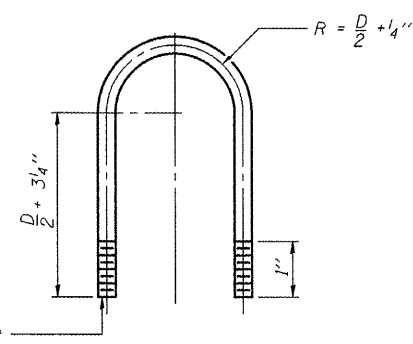
5/16" φ stainless steel
U-bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" φ holes in mounting tube



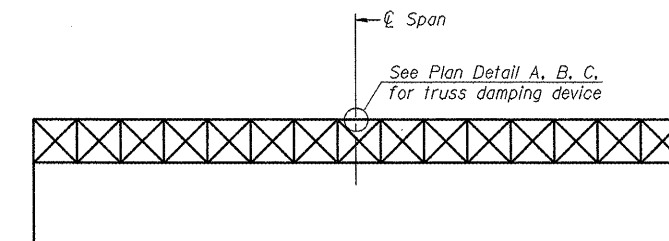
**TRUSS DAMPING
DEVICE CONNECTION DETAIL**
(Typical)



**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

OS-A-D

1-20-11

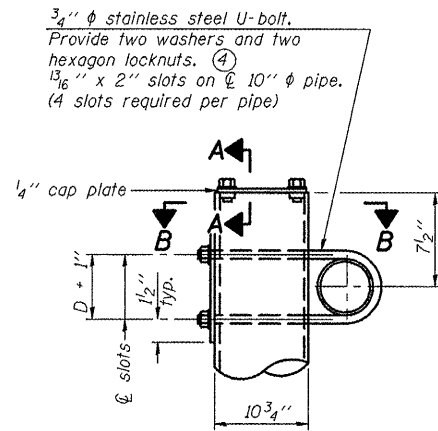
FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
en:\pr_work\pwidot\ceerlockjd\0266557\0	46179-sht-detail.dgn	DRAWN -	REVISED -
	PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

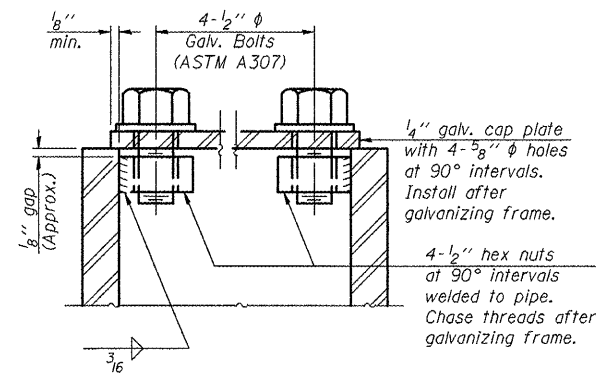
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET NO. 6 OF 24 SHEETS STA. TO STA.

•VARIOUS COUNTIES •D-5 OVD SIN STR REPL 2012-06				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	73
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

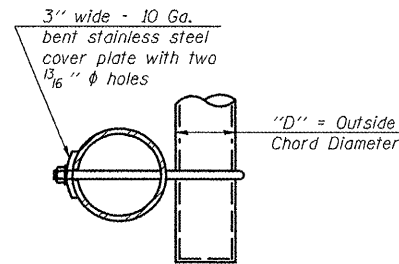


DETAIL A

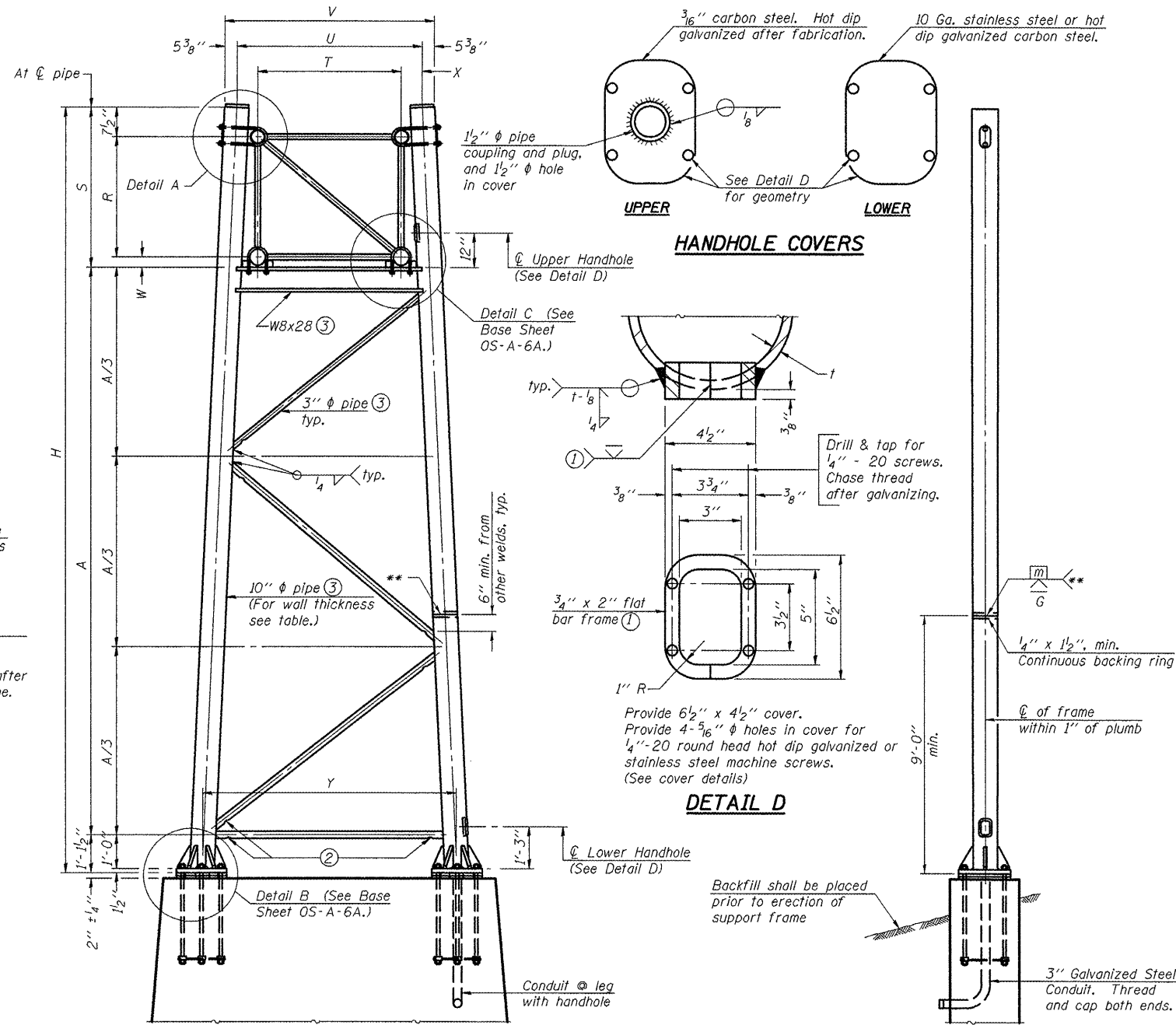


SECTION A-A

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).

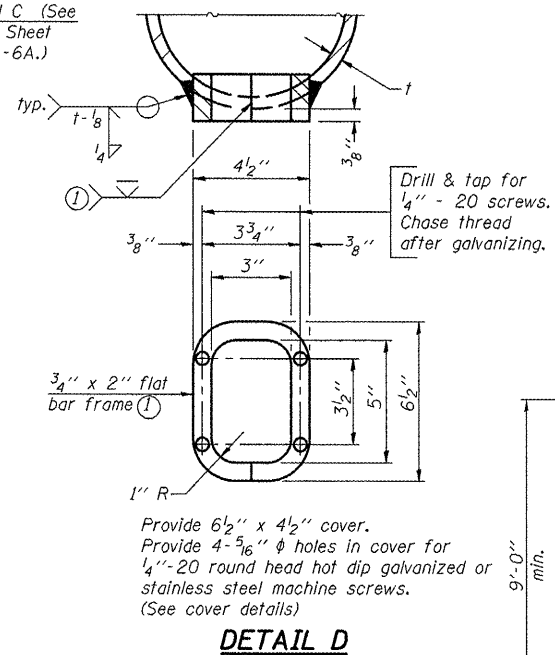
SIDE ELEVATION

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	5'-3"	6'-3 1/4"	4'-6"	6'-1"	6'-11 3/4"	4 3/4"	9 1/2"	8'-3"

10" Ø 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.

HANDHOLE COVERS



DETAIL D

END ELEVATION

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H ⑥	A
		Left	Right				
5 S 057 U055 R000.20	71+67	x		II-A	0.365(Std.)	28'-10 3/4"	21'-6"
			x		0.365(Std.)	29'-4 3/4"	22'-0"

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 µin or less.
- 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.
- 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.

OS-A-6

1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
46179-shft-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

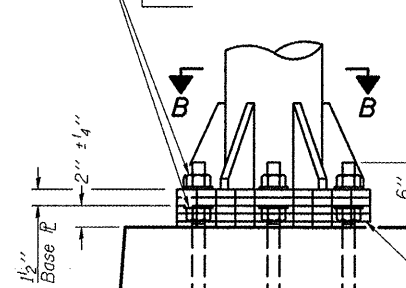
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Vartous	178	74
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 7 OF 24 SHEETS STA. TO STA.

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

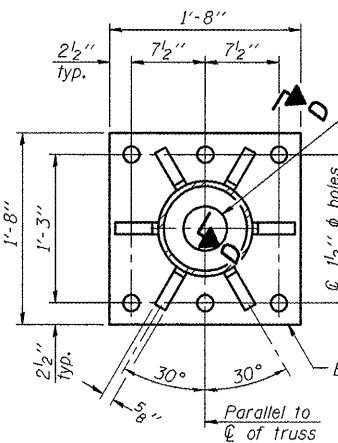
Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



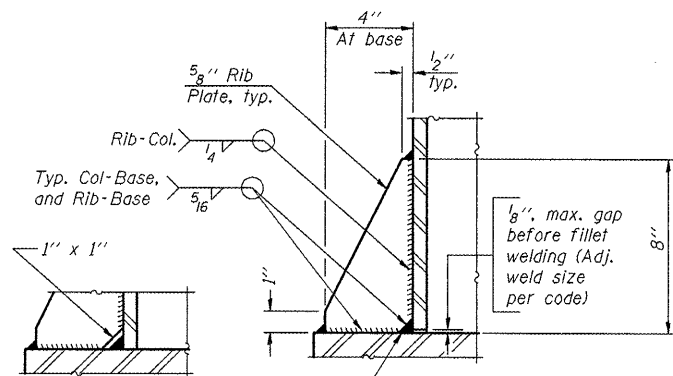
DETAIL B

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.



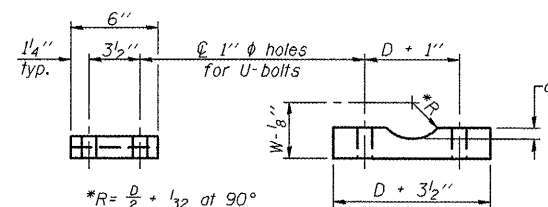
SECTION B-B



SECTION D-D

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

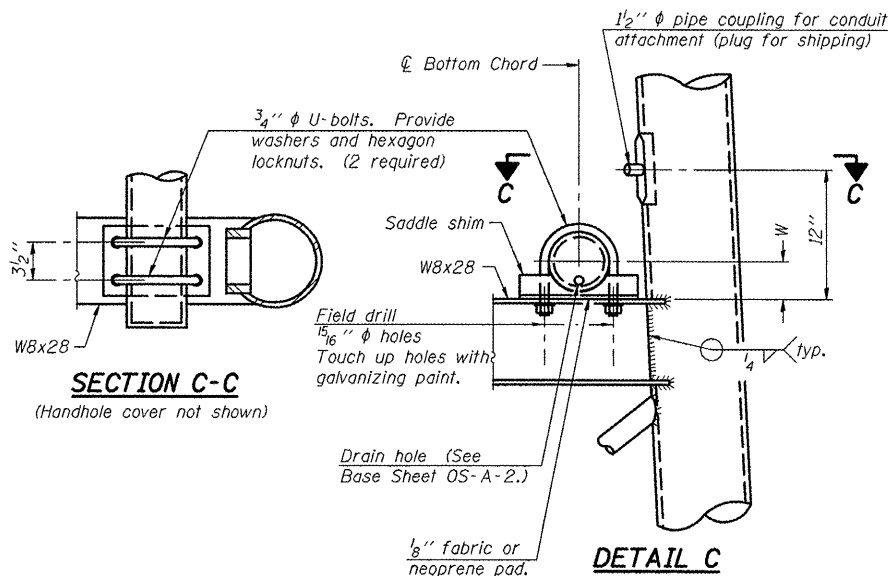
No snip req'd. at rib inside corner if placed before col. to base plate welding.



SADDLE SHIM DETAIL

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

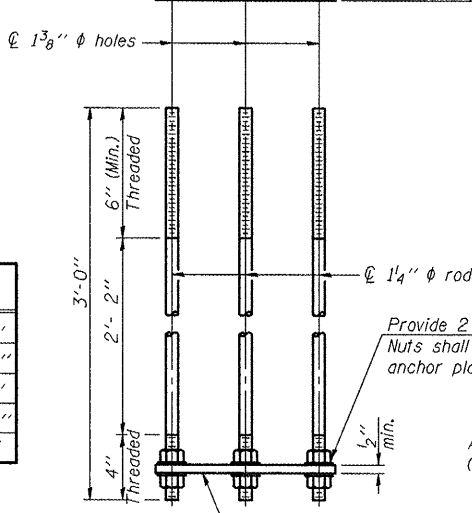
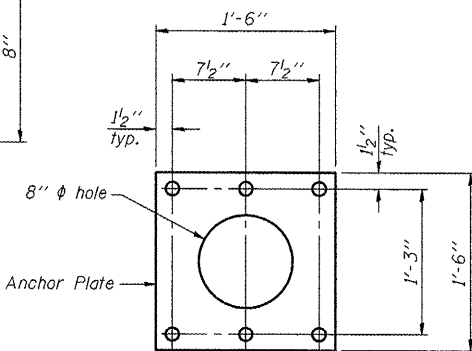
Truss Chord Nominal Dia.	a
5"	3 3/4"
5 1/2"	13 1/16"
6"	7 7/8"
6 1/2"	15 1/16"
7"	1"



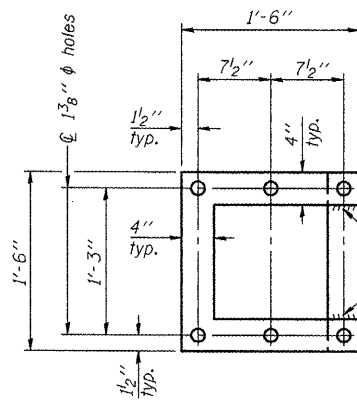
SECTION C-C

(Handhole cover not shown)

DETAIL C



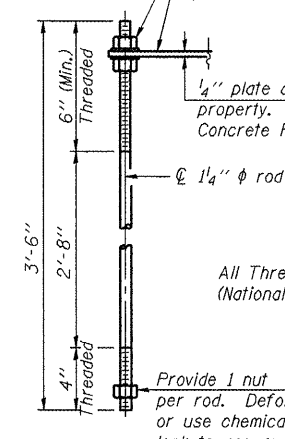
ANCHOR ROD DETAIL
Spread Footing Foundation



POSITIONING PLATE(S)

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

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



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.

10" PIPE SUPPORT FRAME DETAILS

OS-A-6A

1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
46179-sht-deta1.s.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

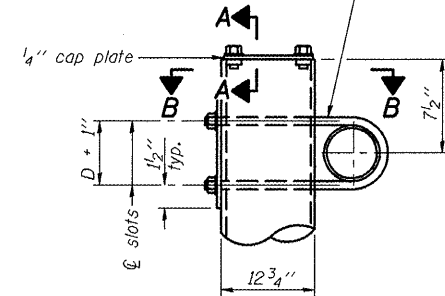
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS - ALUMINUM TRUSS

SCALE: SHEET NO. 8 OF 24 SHEETS STA. TO STA.

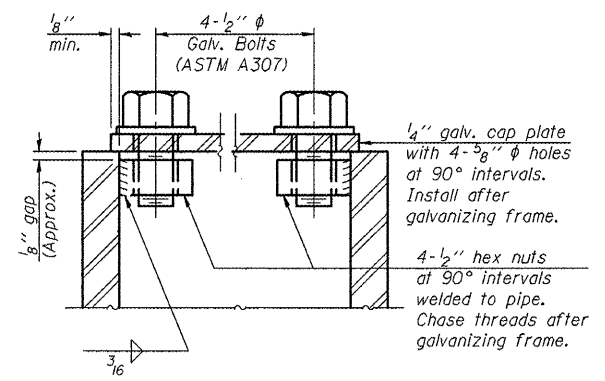
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	75
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

3/4" ϕ stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 1/8" x 2" slots on ϕ 12" ϕ pipe.
(4 slots required per pipe)

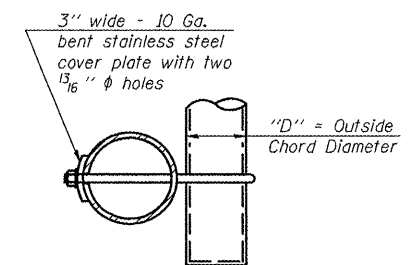


DETAIL A

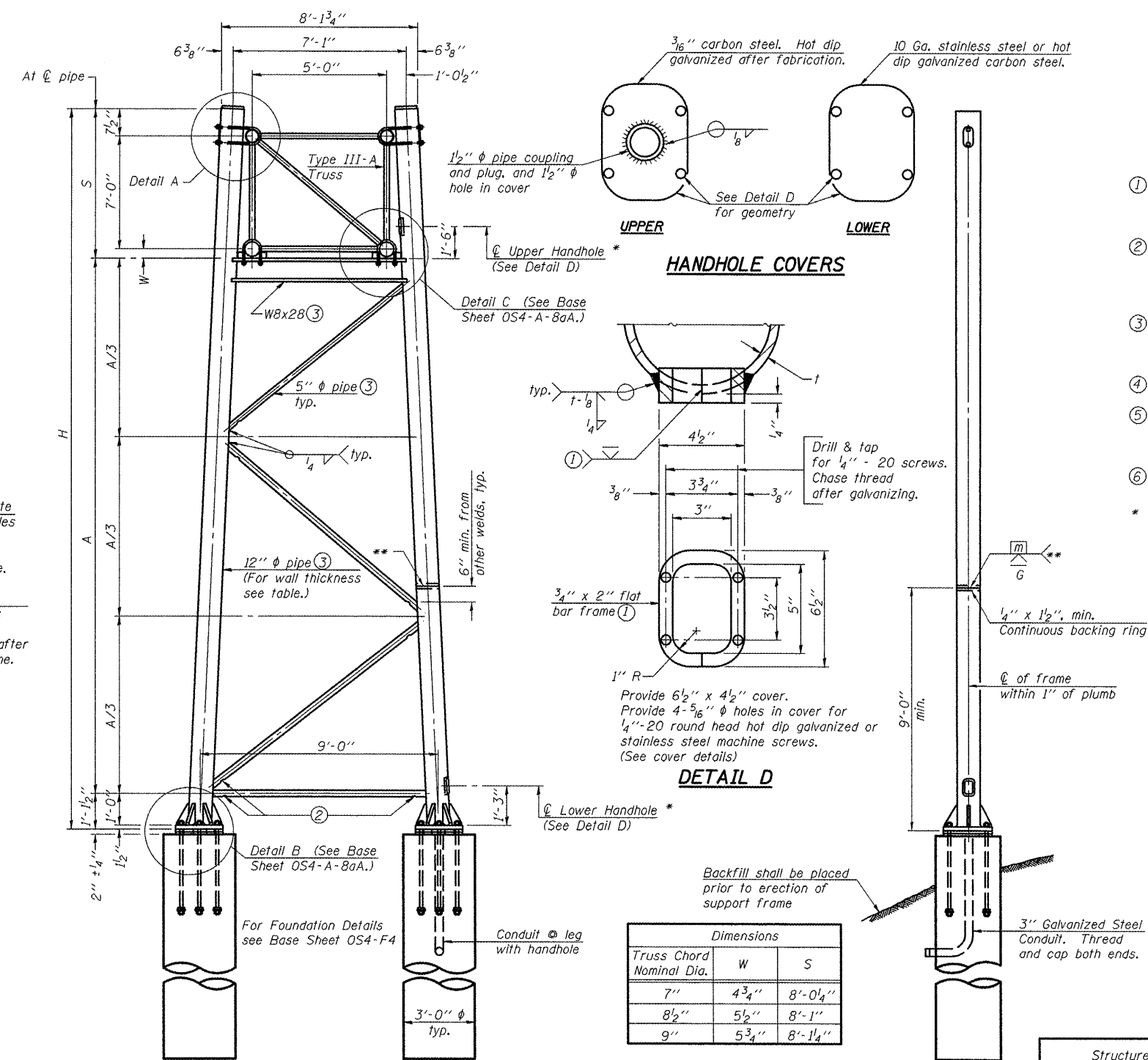


SECTION A-A

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



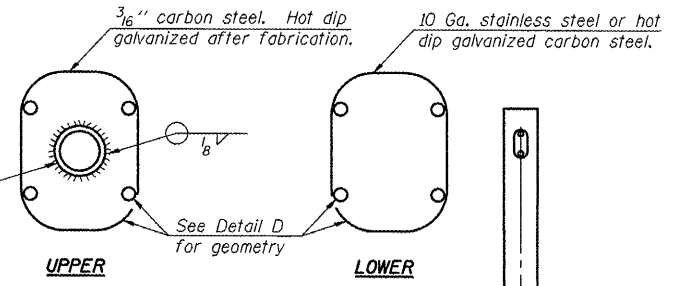
SECTION B-B



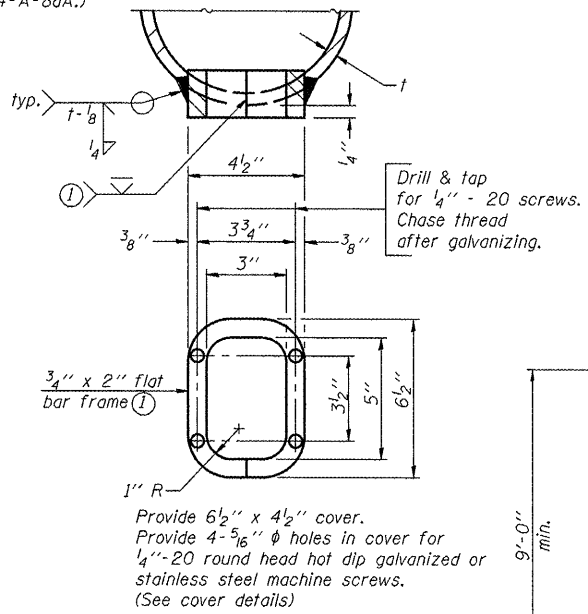
SIDE ELEVATION

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.



HANDHOLE COVERS



DETAIL D

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"

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

- 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 in or less.
- 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.
- 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.

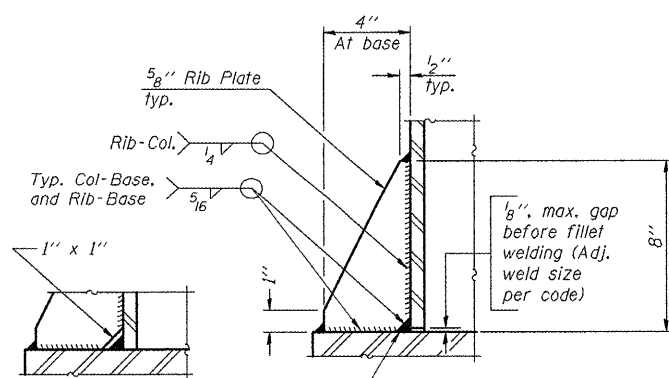
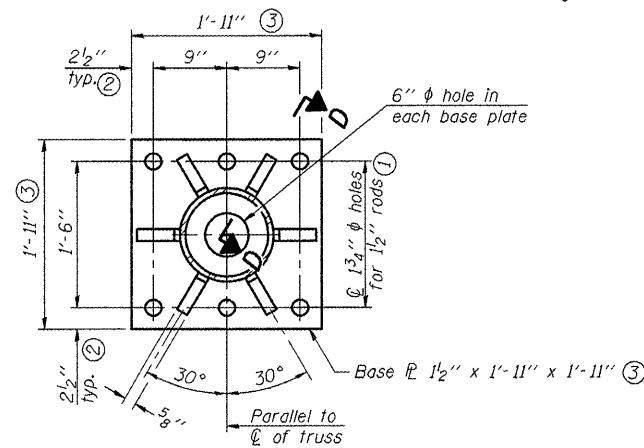
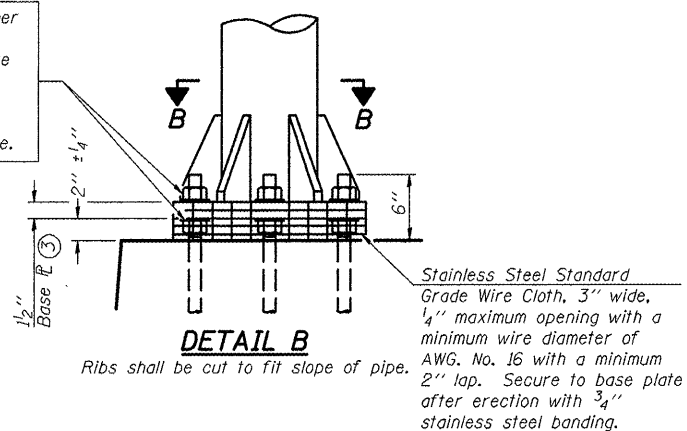
* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
5 S 057 1074 L134.10	647+84	x		0.33	31'-1 3/4"	22'-0"
			x	0.33	33'-1 3/4"	24'-0"
5 S 057 1055 R156.20	645+76	x	x	0.33	33'-1 3/4"	24'-0"

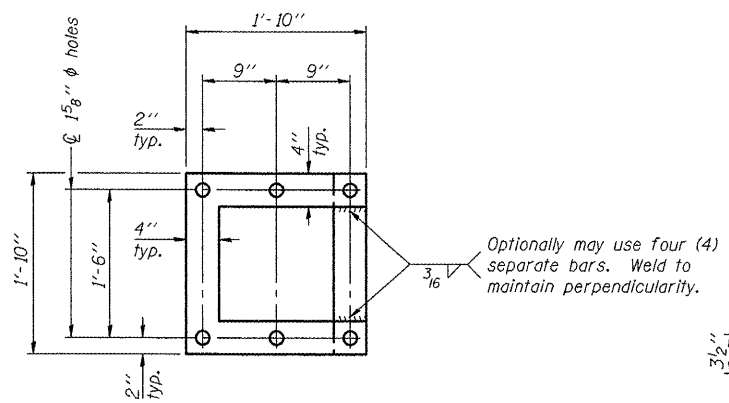
OS4-A-8a 1-20-11

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

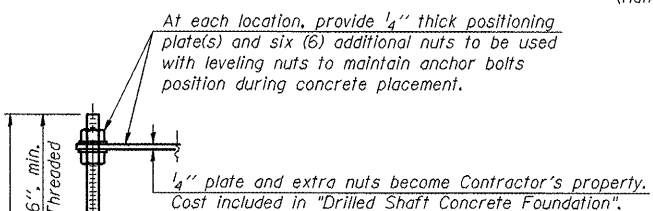
Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



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



POSITIONING PLATE(S)



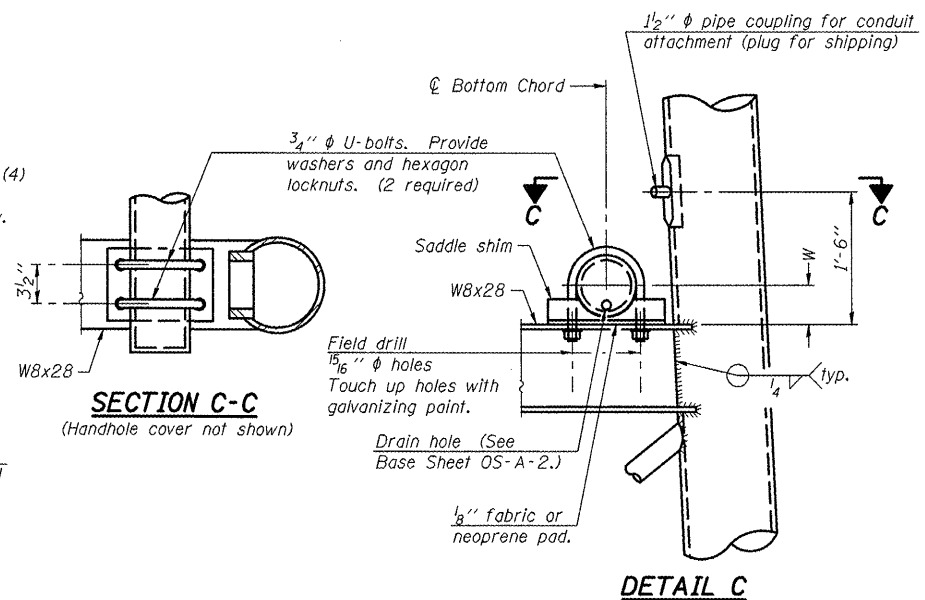
ANCHOR ROD DETAIL

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

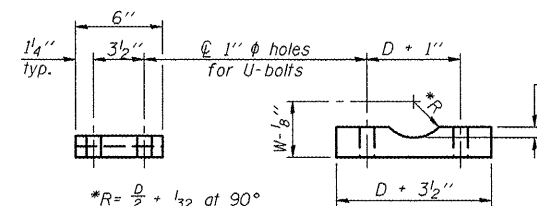
**TYPE III-A TRUSS
12" ϕ PIPE SUPPORT FRAME DETAILS**

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 ϕ 1 5/8" x 1'-11 1/2" x 1'-11 1/2"



SECTION C-C
(Handhole cover not shown)



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

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

OS4-A-8aA 1-20-11

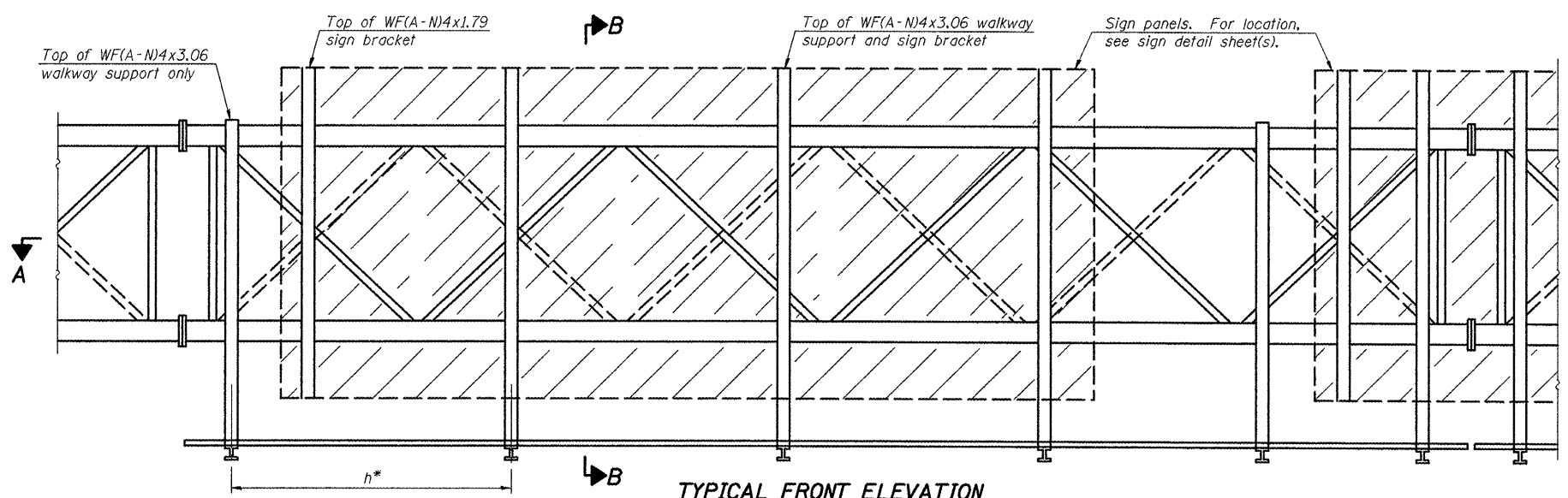
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PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

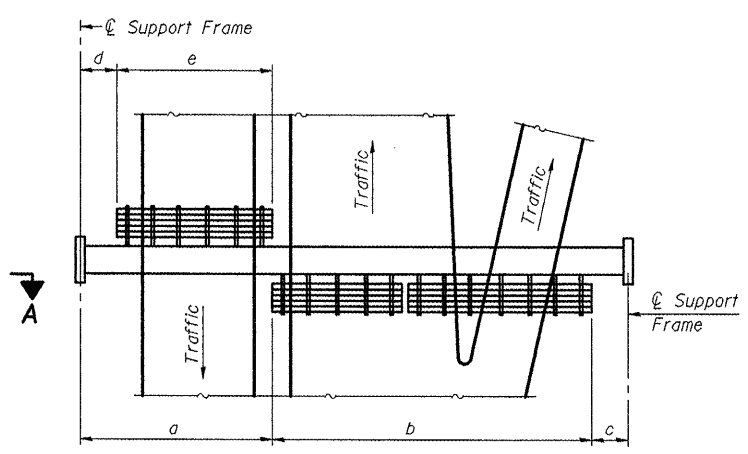
OVERHEAD SIGN STRUCTURES SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE:	SHEET NO. 10 OF 24 SHEETS	STA.	TO STA.	Various	178	77

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

ILLINOIS FED. AID PROJECT
CONTRACT NO. 46179



TYPICAL FRONT ELEVATION
 With lights and handrail omitted for clarity.
 For Section B-B, see Base Sheet OS-A-10.



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

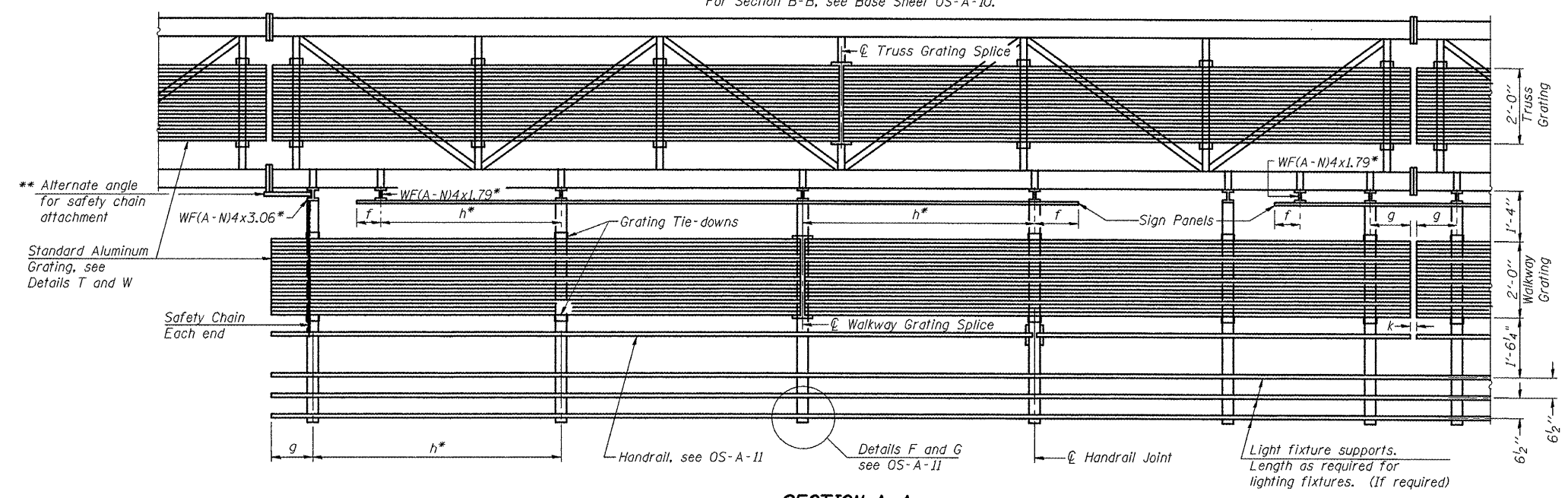
BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

- Notes:
- Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
 - f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 - g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
 - h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
 - k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
 For Handrail Details see Base Sheet OS-A-11.



SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Handrail joints, grating, and light support splices placed as needed.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths
5 S 057 1074 L134.10	647+84	9'-0"	65'-0"	12'-0"	—	—	65'-0"
5 S 057 1055 R156.20	645+76	28'-0"	71'-0"	23'-0"	—	—	71'-0"
5 S 057 U055 R000.20	71+67	8'-0"	58'-0"	4'-0"	—	—	58'-0"
See also "Sign Truss Mounting Details" Sheets 66 - 68							

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Walkway and Truss Grating width dimensions are nominal and may vary ±1/2" based on available standard widths.

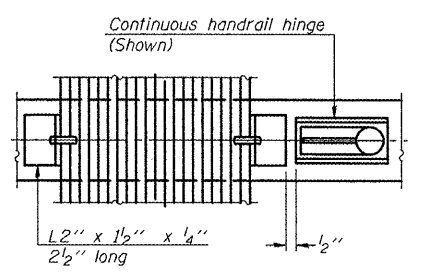
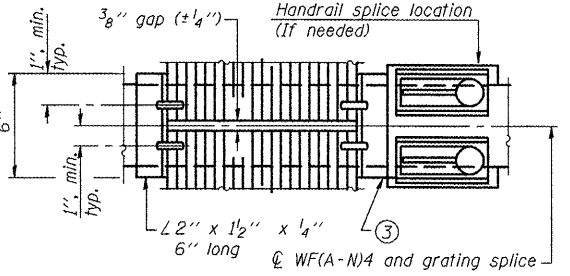
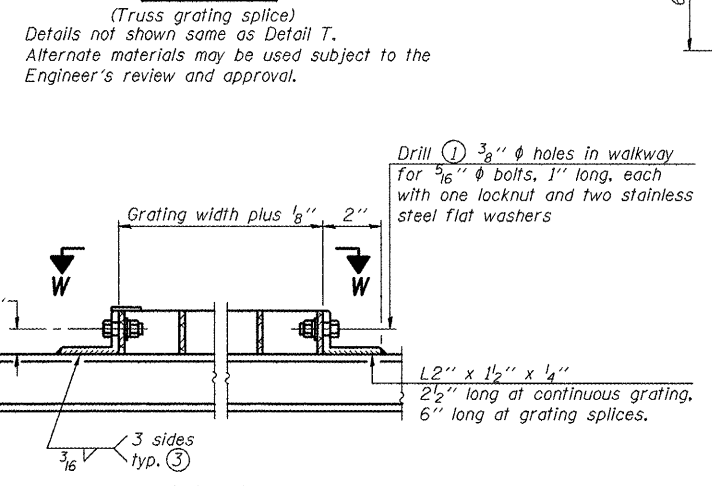
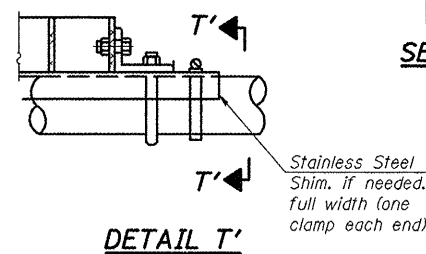
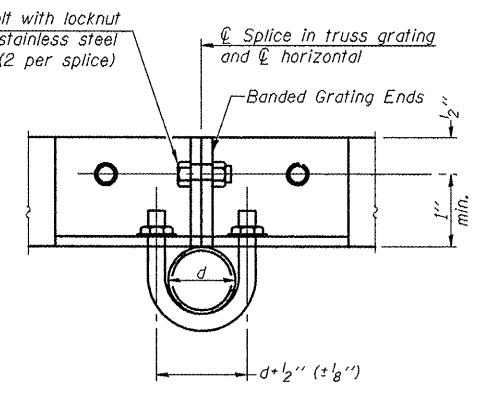
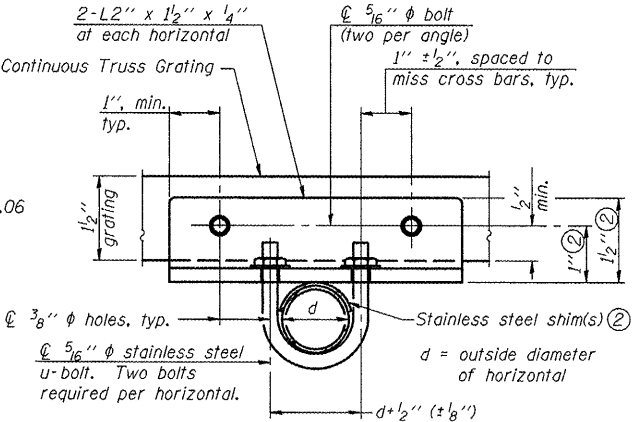
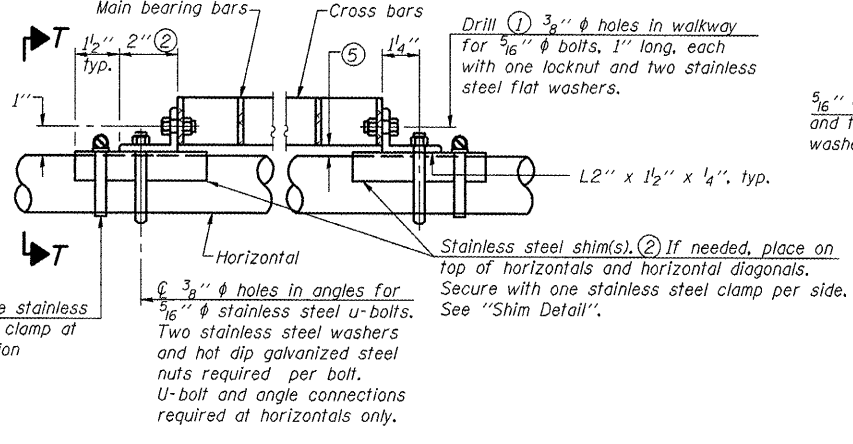
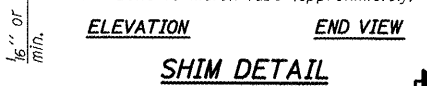
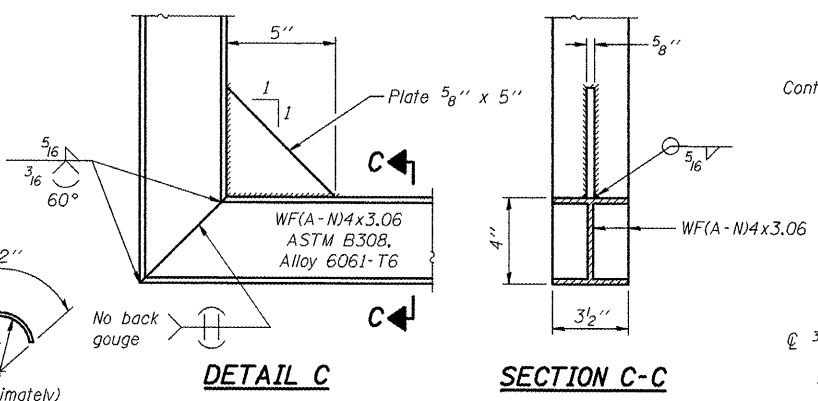
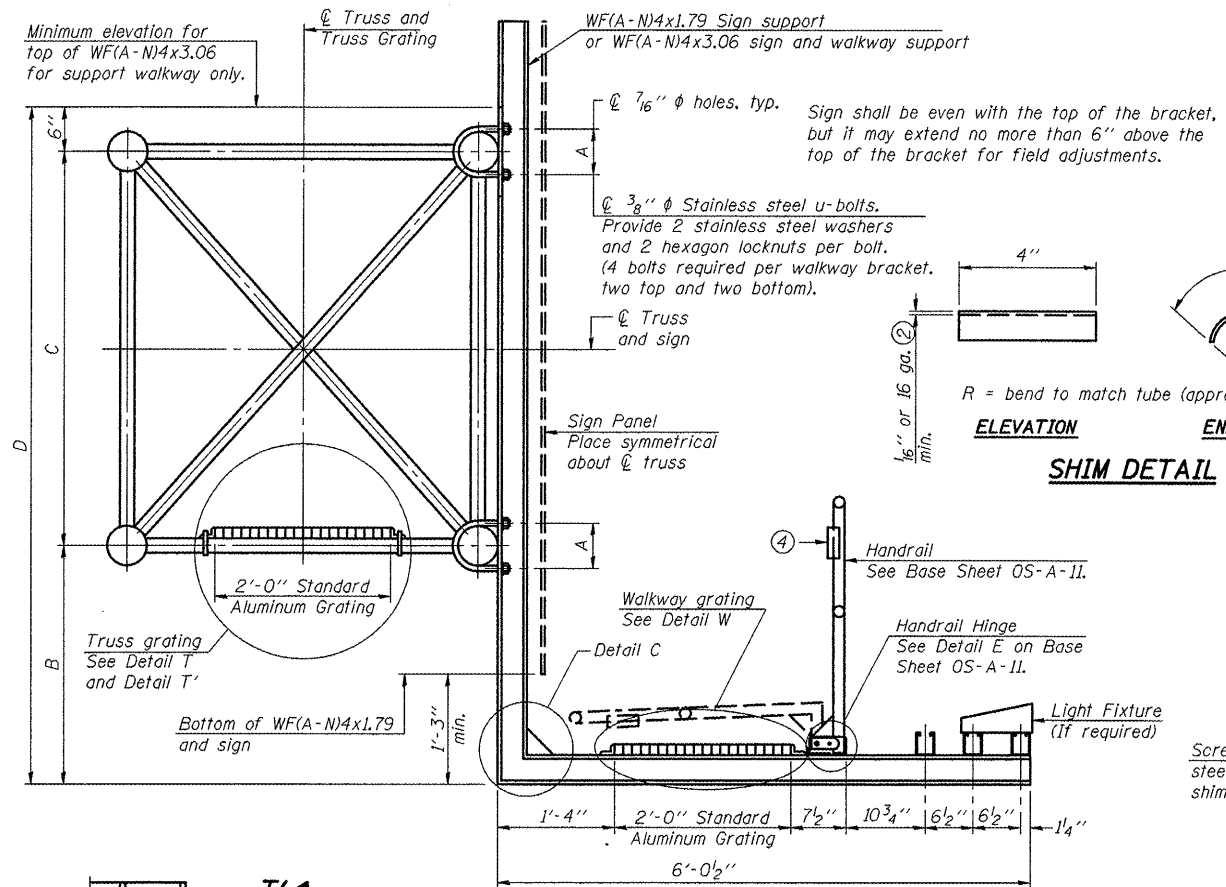
OS-A-9

1-20-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES ALUMINUM WALKWAY DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pwork\pwork\ceerlockjd\0266557\0546179-sht-details.dgn	PLOT SCALE = 48.0000' / 1" =	DRAWN -	REVISED -			•	**	Various	178	78	
PLOT DATE = 10/7/2011	DATE = 04/26/11	CHECKED -	REVISED -			CONTRACT NO. 46179					
		DATE = 04/26/11	REVISED -			ILLINOIS FED. AID PROJECT					

•VARIOUS COUNTIES
 ••D-5 OVD SIN STR REPL 2012-06

SCALE: SHEET NO. 11 OF 24 SHEETS STA. TO STA.



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:
 Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- ① Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- ② Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- ③ If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- ④ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- ⑥ Based on actual height of tallest sign given on OS-A-1.

Structure Number	Station	A	⑥ B	C	⑥ D*
5 S 057 1074 L134.10	647+84		3'-9"	7'-0"	11'-3" & VAR
5 S 057 1055 R156.20	645+76		5'-0"	7'-0" (EXISTING)	12'-6" & VAR
5 S 057 U055 R000.20	71+67		4'-7 1/2"	5'-3"	10'-4 1/2" & VAR

* See also "Sign Truss Mounting Details" Sheets 66-68 for the information needed to determine the variable walkway support & sign support lengths.

OS-A-10

1-20-11

FILE NAME =	USER NAME = ceerlookjd	DESIGNED - JAL	REVISED -
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

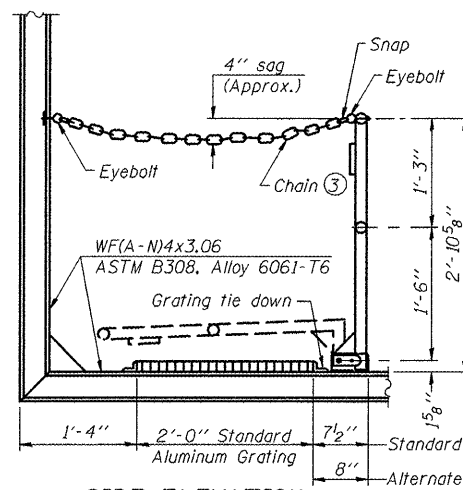
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALUMINUM SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SCALE: SHEET NO. 12 OF 24 SHEETS STA. TO STA.

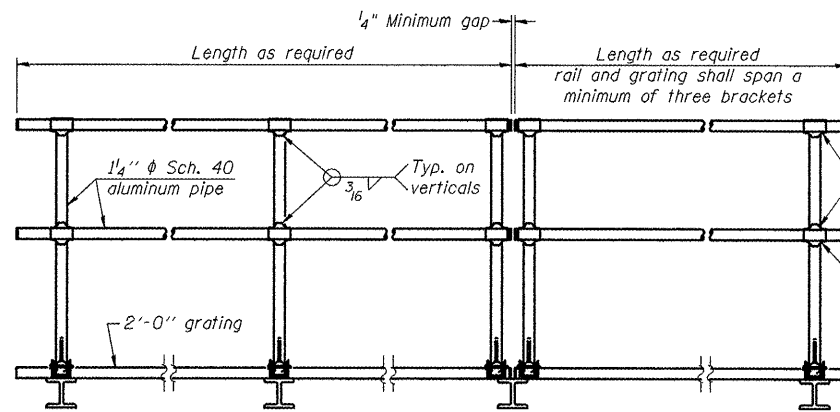
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Various	178	79
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06



SIDE ELEVATION

(Showing safety chain w/o sign)

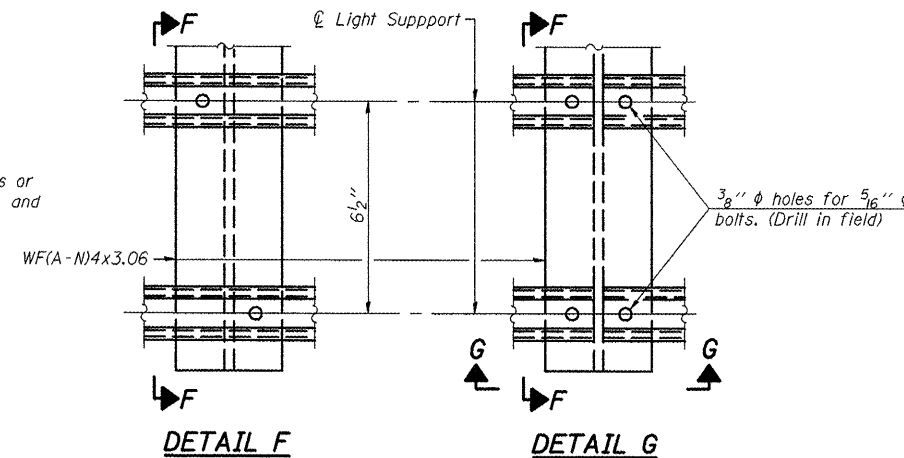


FRONT ELEVATION

HANDRAIL DETAILS

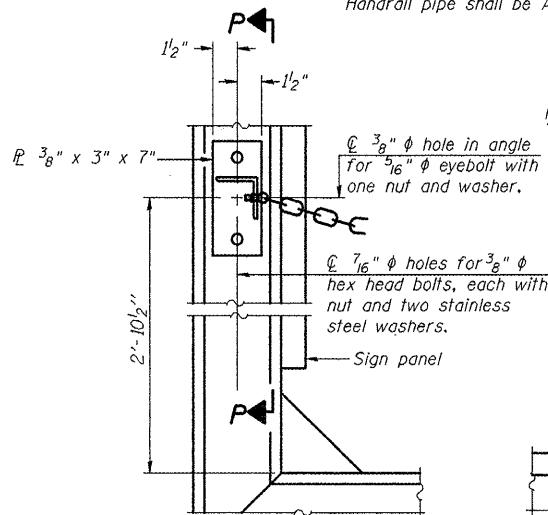
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

- Install standard force-fit end caps or weld 1/2" end plates with 1/2" c.f.w. and grind smooth. (All rail ends)
- Horizontal handrail member shall be continuous thru fitting. Provide 1/16" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/6" holes on top rail at ends only.)



DETAIL F

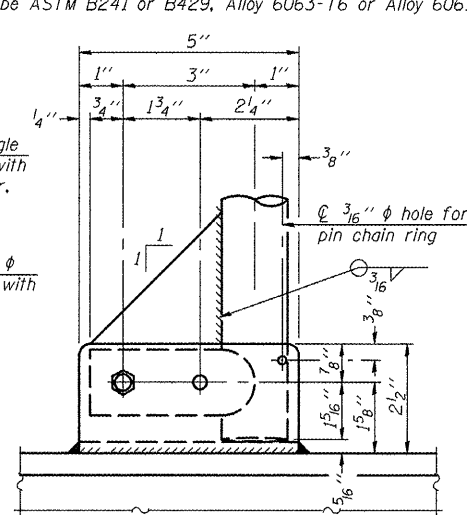
DETAIL G



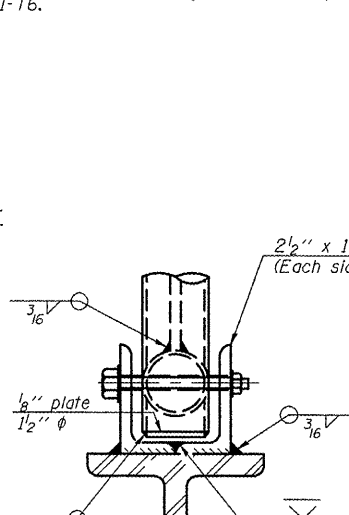
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

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

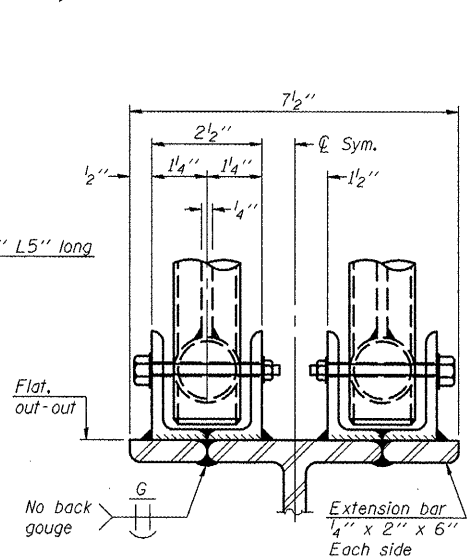


SIDE ELEVATION

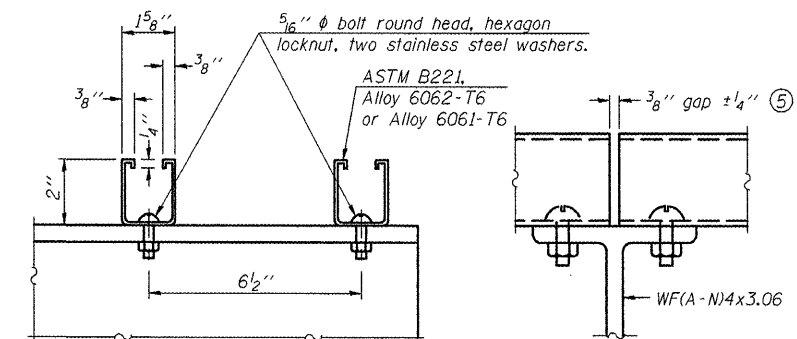


FRONT ELEVATION

See "Elevation" at right for dimensions.



ELEVATION AT HANDRAIL JOINT

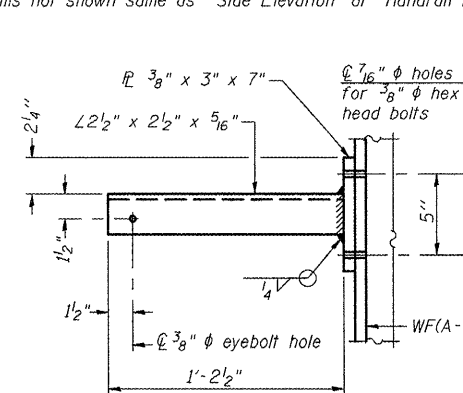


SECTION F-F

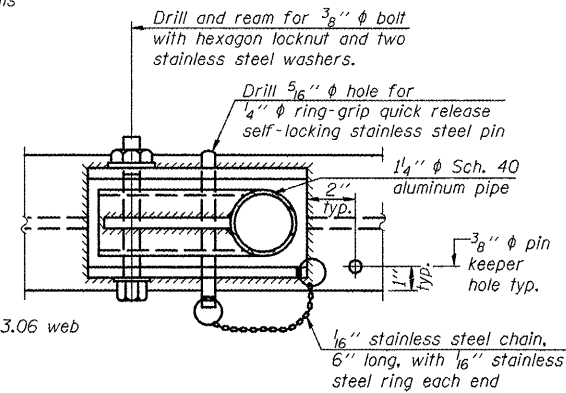
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

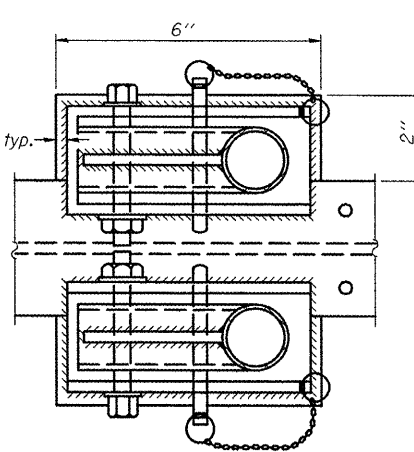
- Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



SECTION P-P

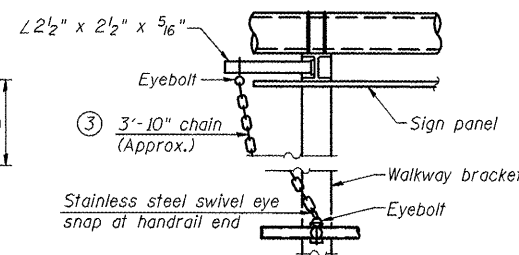


PLAN DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"

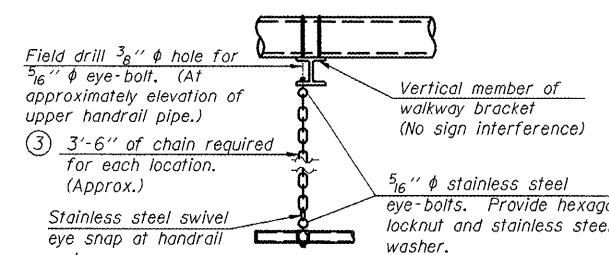


ALTERNATE SAFETY CHAIN ATTACHMENT

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

- 3'-10" Type 304L stainless steel chain, approximately 12 links per foot.

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



SAFETY CHAIN

One required for each end of each walkway.

OS-A-11

1-20-11

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		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

SCALE: SHEET NO. 13 OF 24 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	178	80
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

VARIOUS COUNTIES
D-5 OVD SIN STR REPL 2012-06

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.

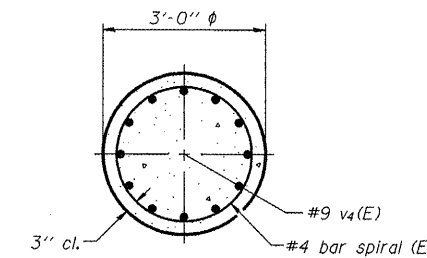
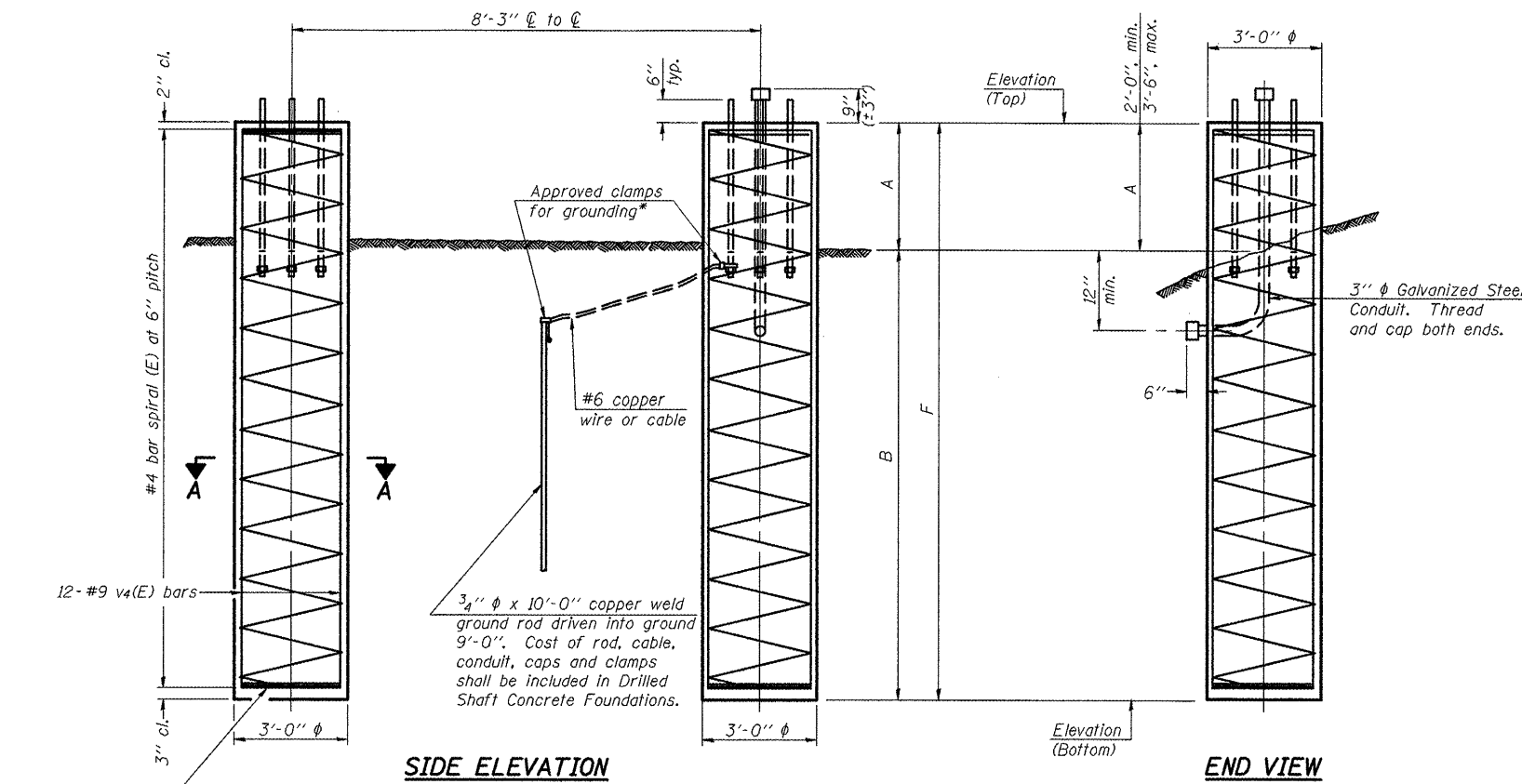
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District 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.

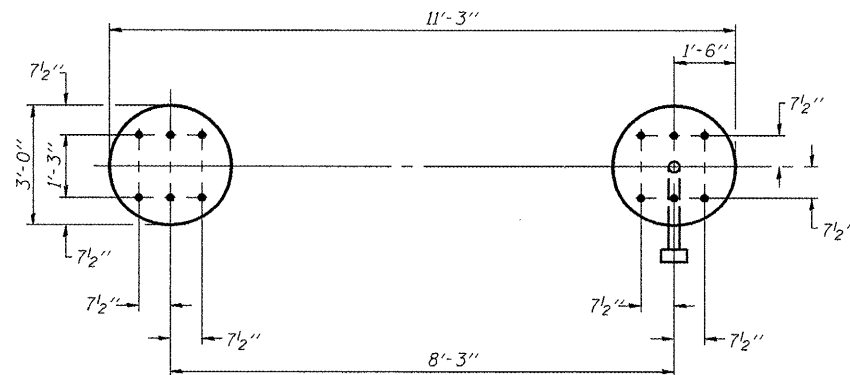
Concrete shall be placed monolithically, without construction joints.

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



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.

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

Structure Number	Station	Left Foundation			Right Foundation			Class DS Concrete (Cu. Yds.)				
		Elevation Top	Elevation Bottom	F	Elevation Top	Elevation Bottom	F					
5 S 057 U055 R000.20	71+67	802.50	782.00	3'-0"	17'-6"	20'-6"	802.00	781.50	3'-0"	17'-6"	20'-6"	21.5

OS4-F3

1-20-11

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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

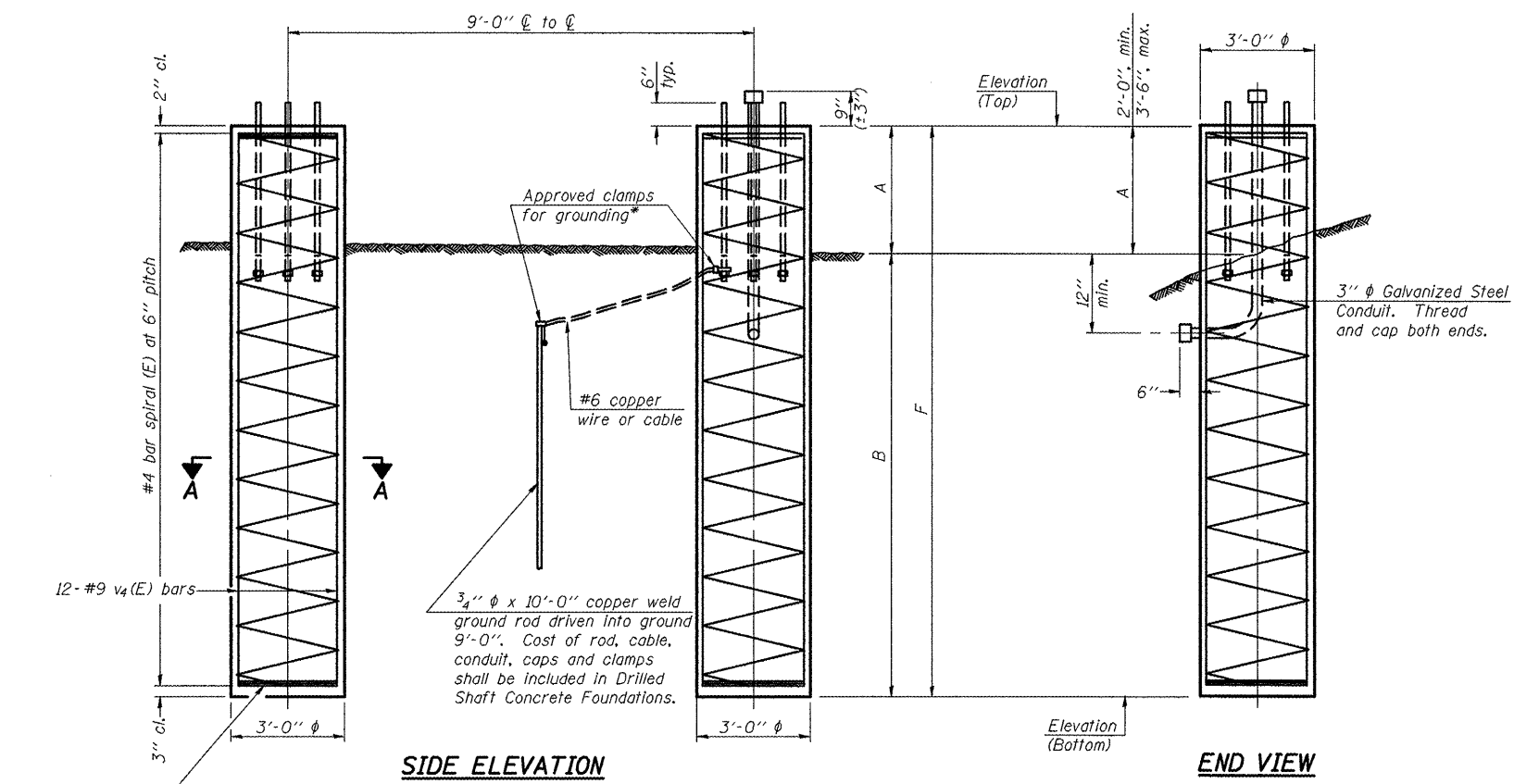
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SCALE: SHEET NO. 14 OF 24 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	81
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

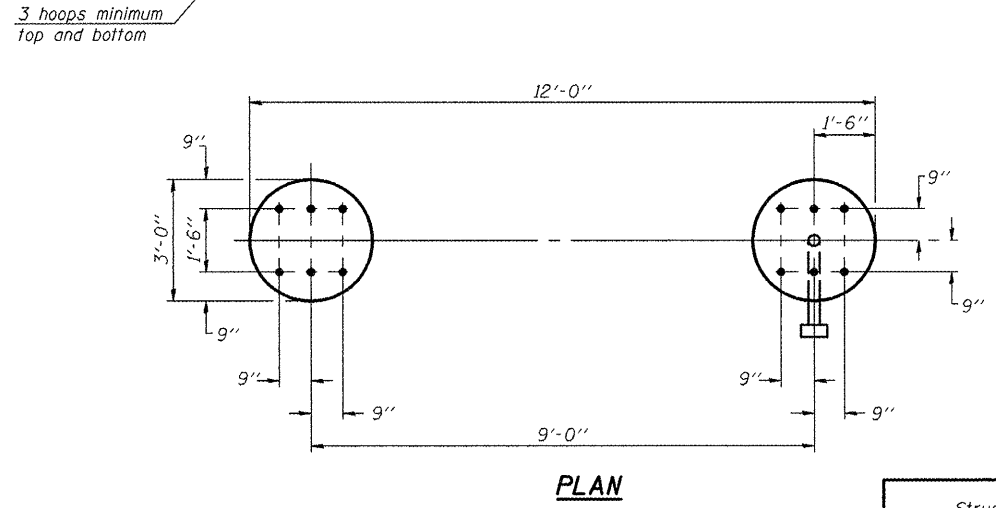
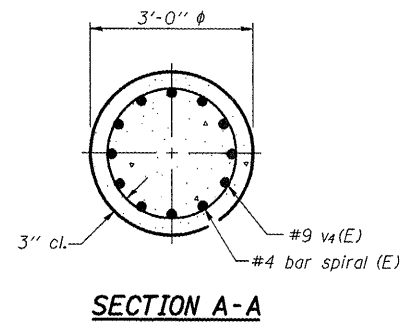
•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



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.



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 12" Ø SUPPORT FRAME
TYPE III-A TRUSS**

Structure Number	Station	Left Foundation			Right Foundation			Class DS Concrete (Cu. Yds.)				
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top		Elevation Bottom	A	B	F
5 S 057 1074 L134.10	647+84	99.70	78.70	3'-0"	18'-0"	21'-0"	97.70	76.70	3'-0"	18'-0"	21'-0"	22.0
5 S 057 1055 R156.20	645+76	787.00	765.00	3'-0"	19'-0"	22'-0"	787.00	765.00	3'-0"	19'-0"	22'-0"	23.0

OS4-F4 1-20-11

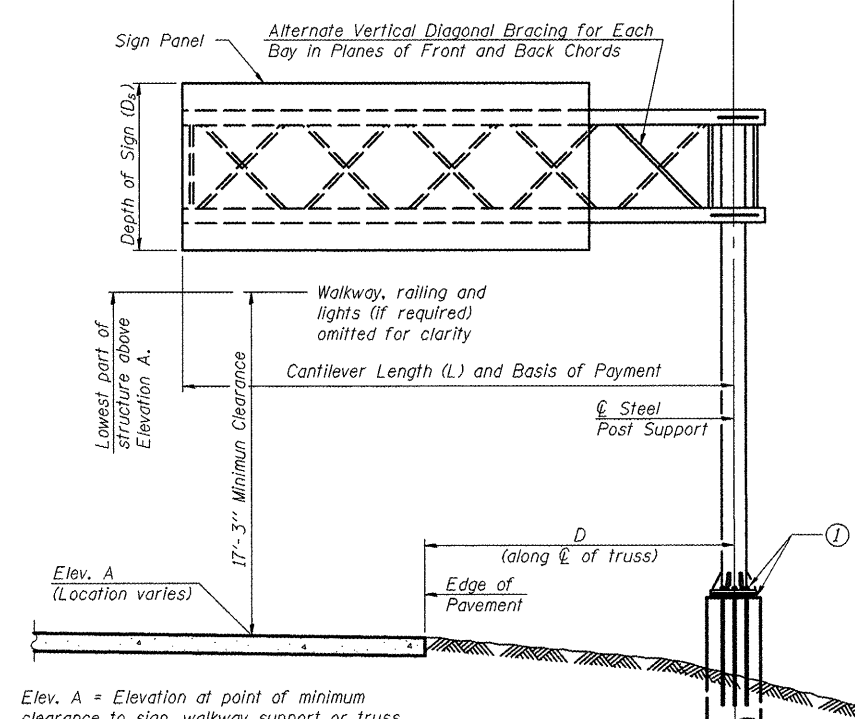
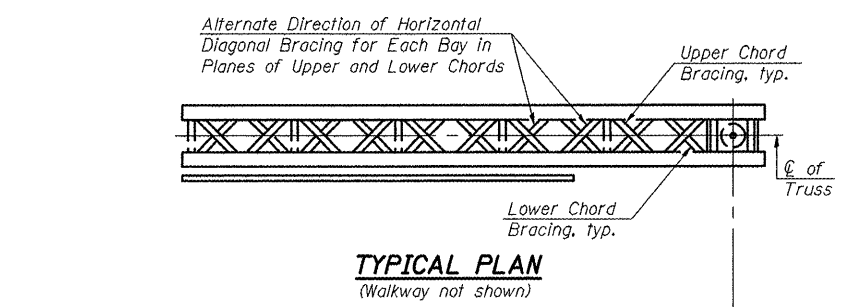
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		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			178	82
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 15 OF 24 SHEETS STA. TO STA.



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

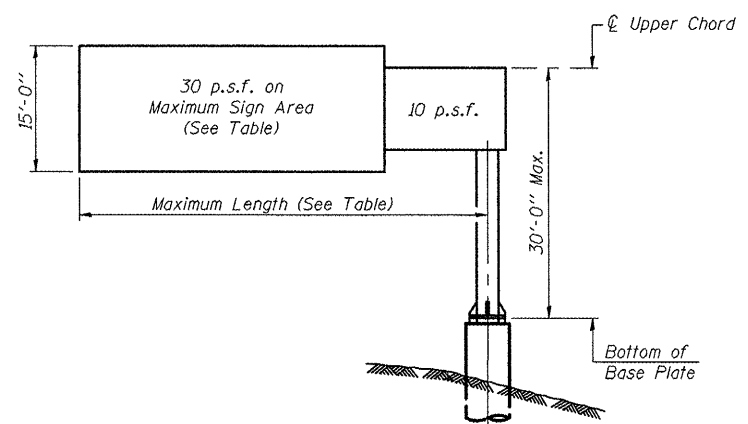
TYPICAL ELEVATION
Looking in Direction of Traffic

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	Ds ***	Total Sign Area
5 C 057 U055 L000.40	60+19	II-C-A	27'-0"	807.0 (Future Profile Adj.)	**	7'-6"	120.0

** See Sign Truss Mounting Details
*** Support post heights based on 15'-0" sign height per OSC-A-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
fc = 3,500 p.s.i.
fy = 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 of 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.

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.	

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

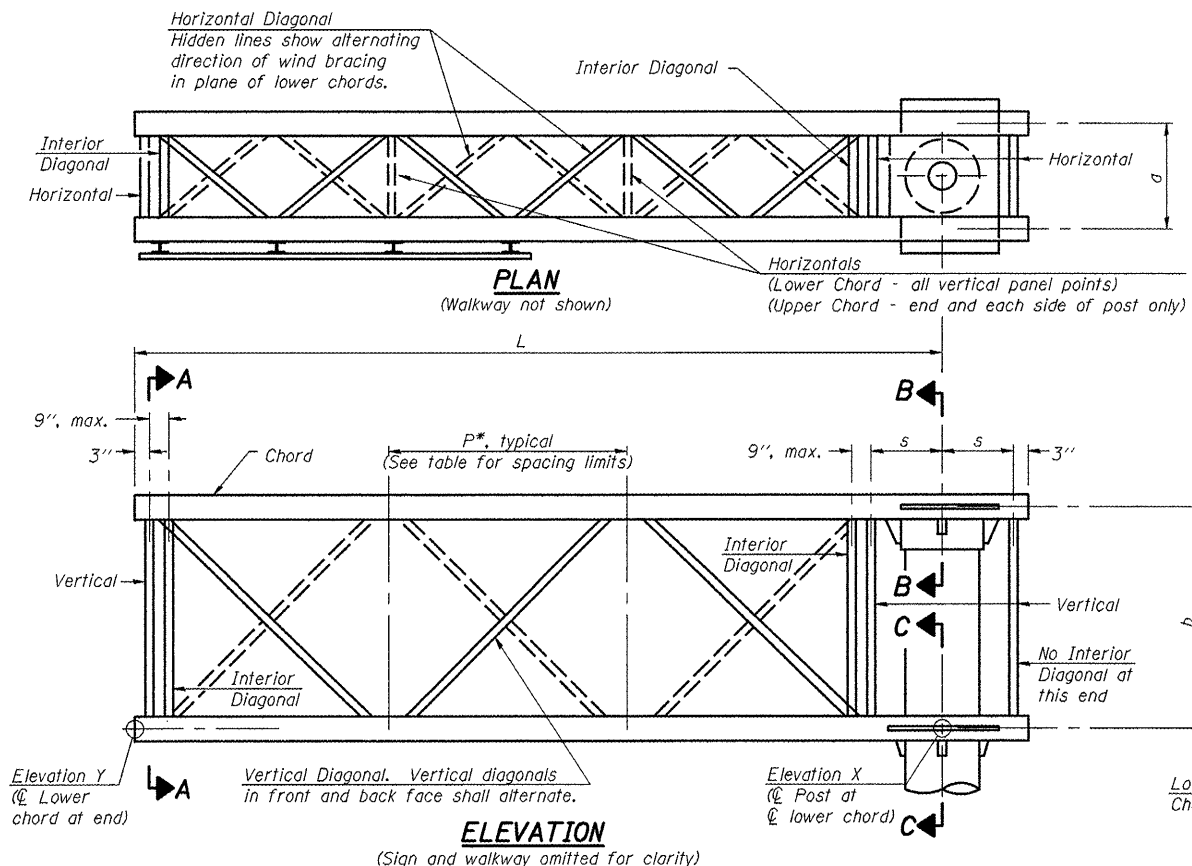
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		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	83
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

OSC-A-1 9-15-11



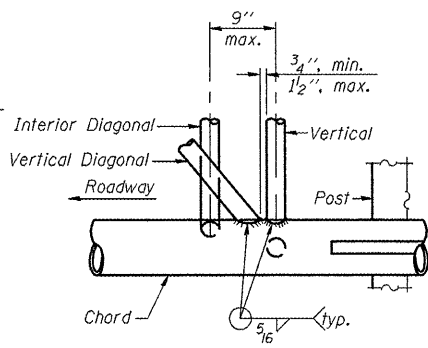
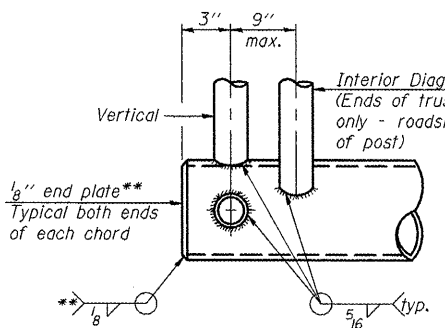
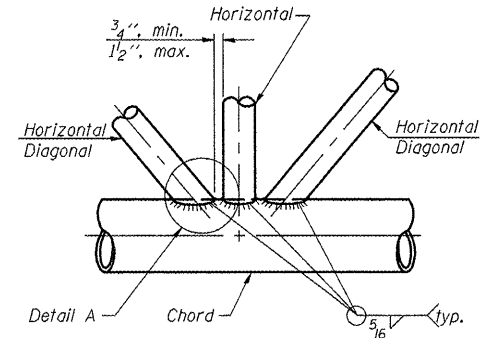
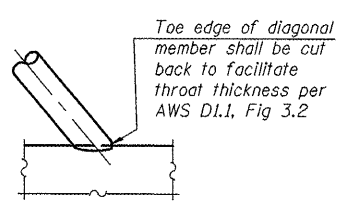
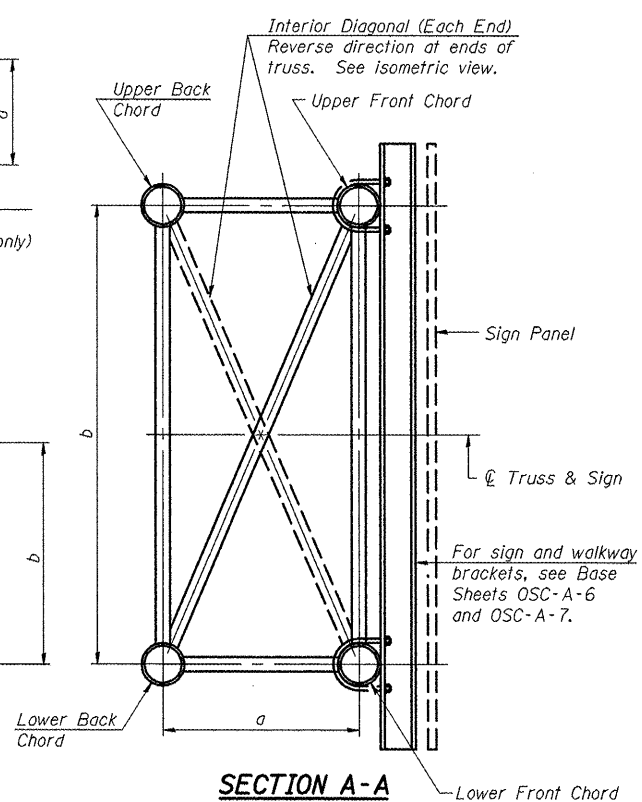
Note: There are twice as many horizontal diagonals as there are vertical diagonals.

TRUSS UNIT TABLE

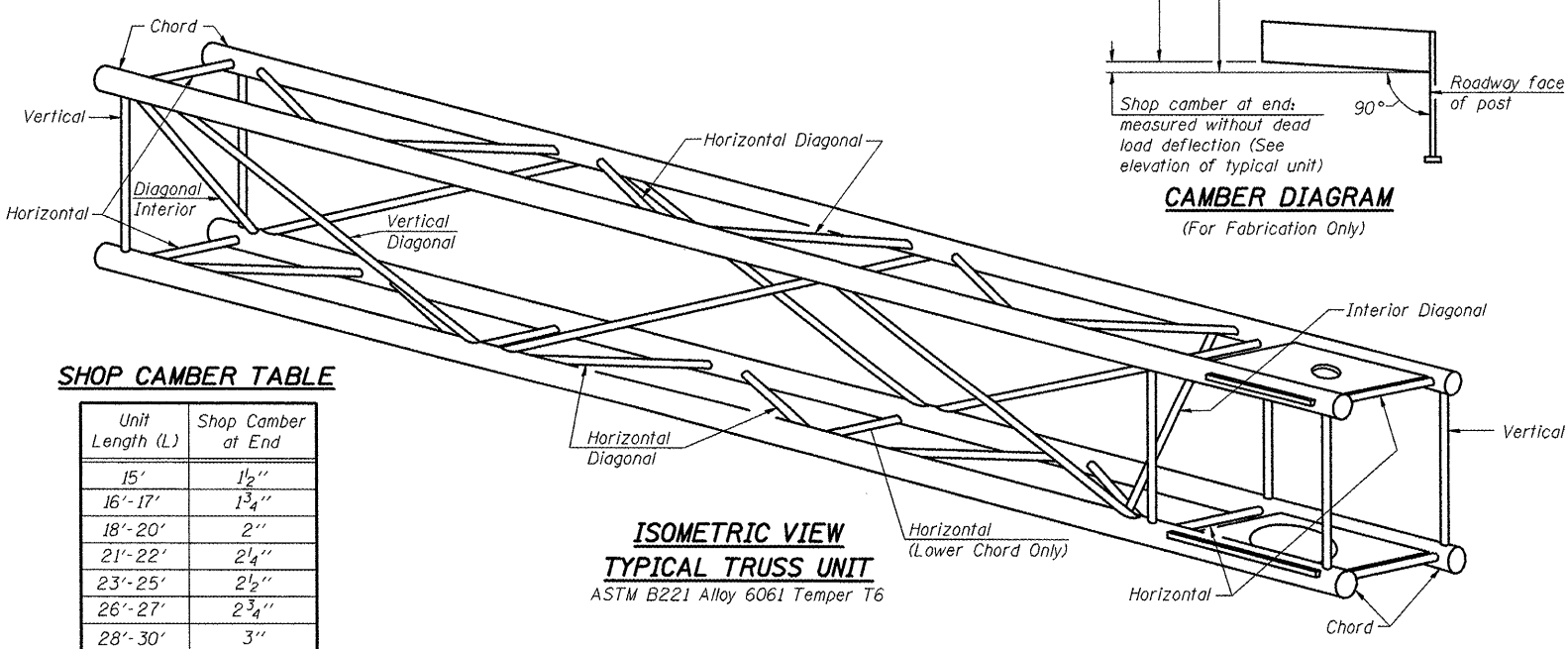
Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals	
					O.D.	Wall	O.D.	Wall
I-C-A	24"	54"	16"	36" min. to 48" max.	5"	5/16"	2 1/2"	5/16"
II-C-A	36"	66"	21"	42" min. to 54" max.	6 1/2"	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)*
5 C 057 U055 L000.40	60+19	II-C-A	27'-0"	6	4'-2"

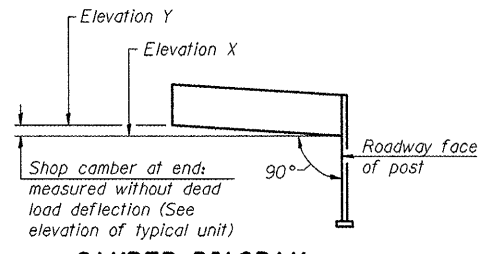


** Contractor may alternatively use standard aluminum drive-fit cap to close ends.

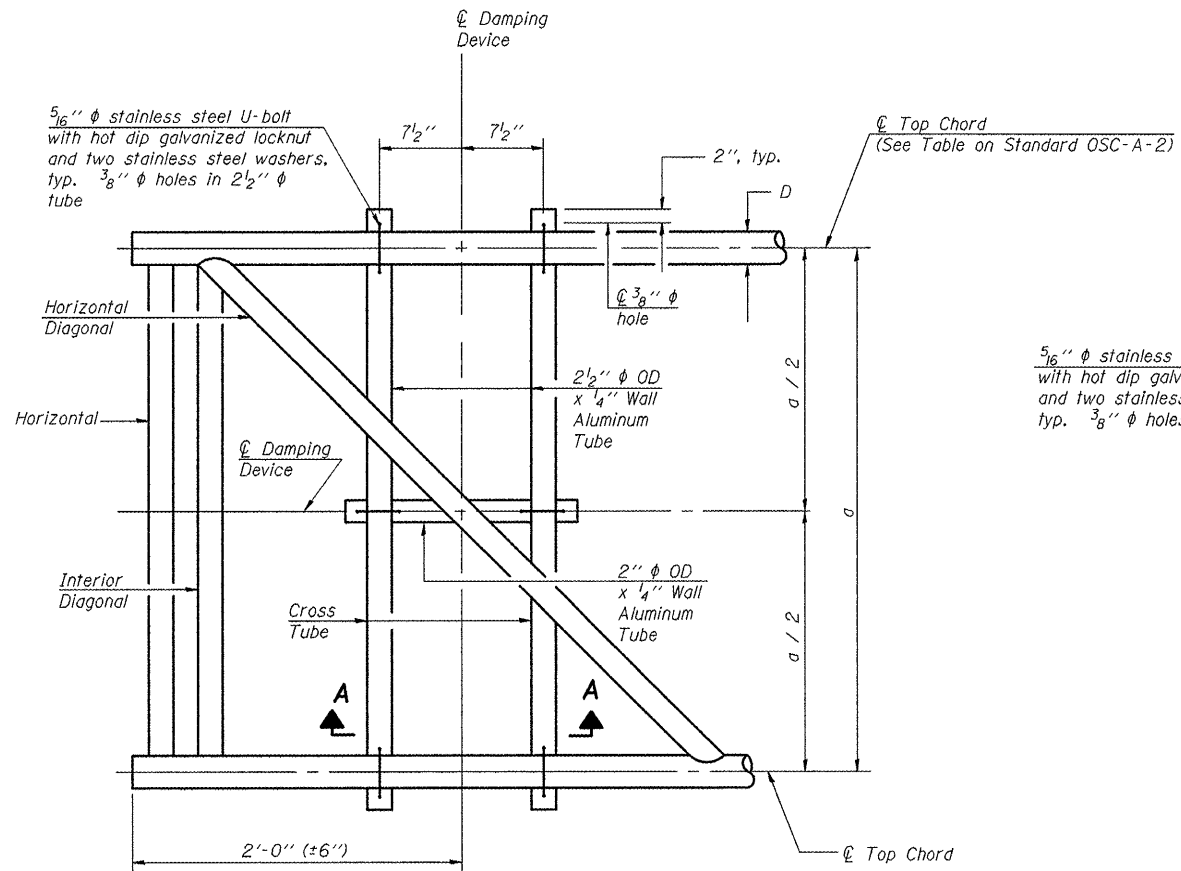


SHOP CAMBER TABLE

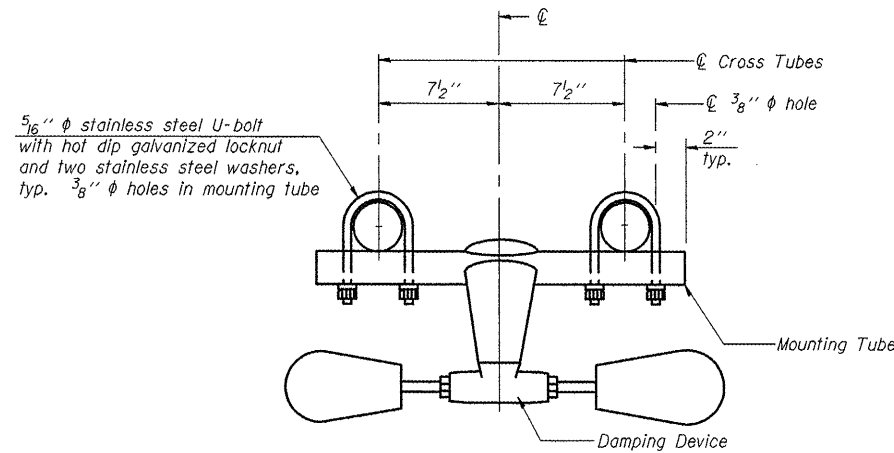
Unit Length (L)	Shop Camber at End
15'	1 1/2"
16'-17'	1 3/4"
18'-20'	2"
21'-22'	2 1/4"
23'-25'	2 1/2"
26'-27'	2 3/4"
28'-30'	3"
31'-32'	3 1/4"
33'-35'	3 1/2"
36'-37'	4"
38'-40'	4 1/2"



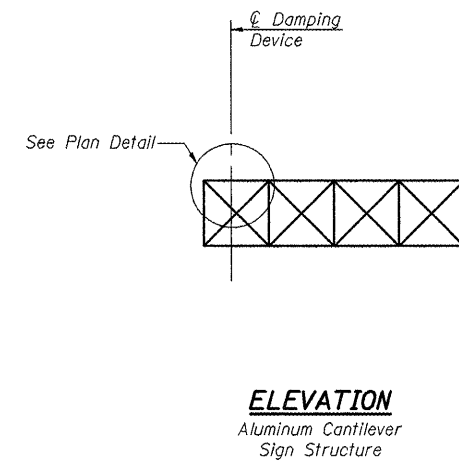
OSC-A-2 9-15-11



PLAN DETAIL



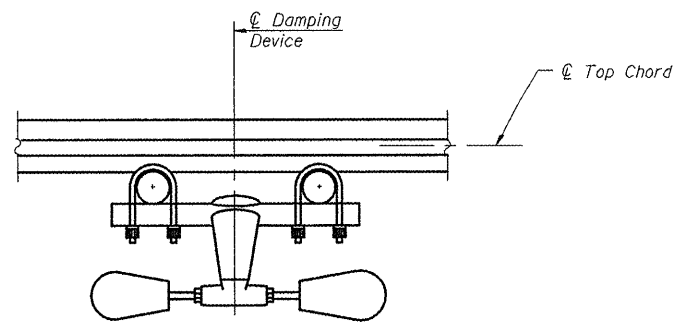
TRUSS DAMPING DEVICE CONNECTION DETAIL



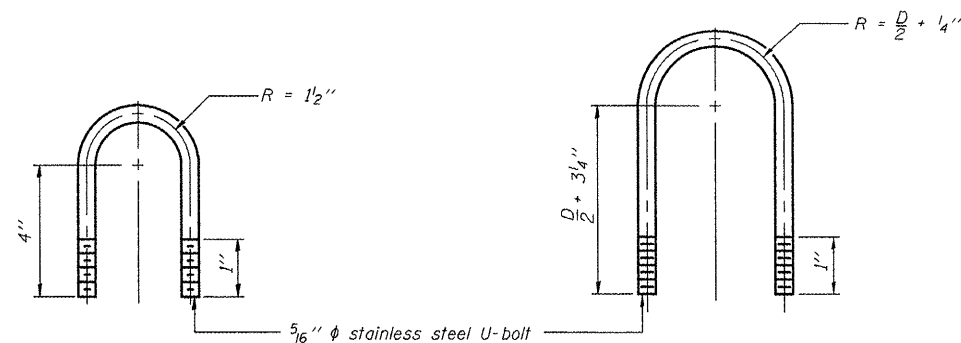
ELEVATION
Aluminum Cantilever Sign Structure

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

9-15-11

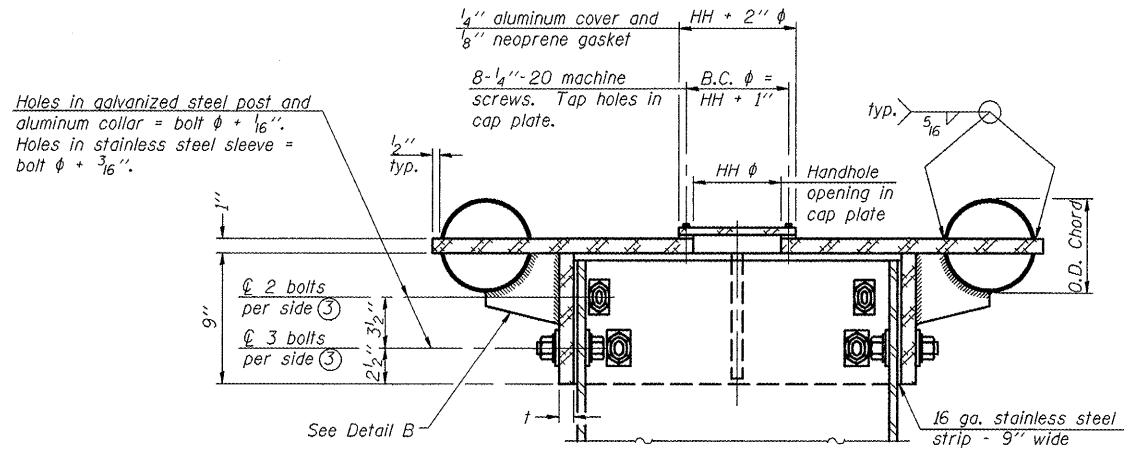
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PLOT SCALE = 48,0000 ' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE
DAMPING DEVICE

SCALE: SHEET NO. 18 OF 24 SHEETS STA. TO STA.

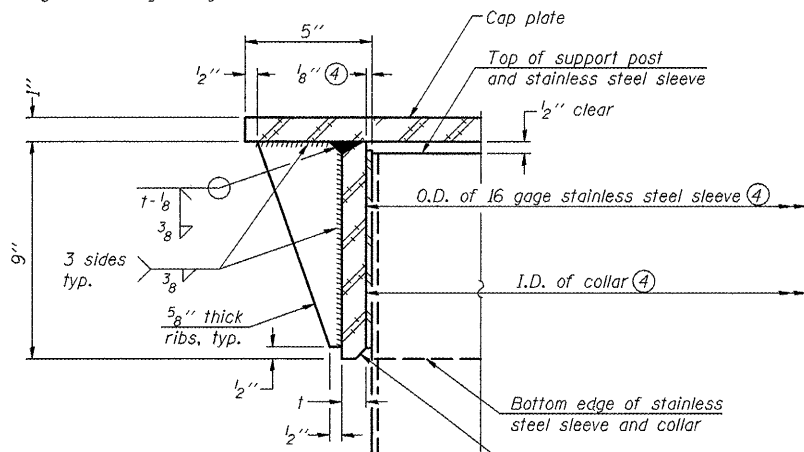
•VARIOUS COUNTIES			
••D-5 OVD SIN STR REPL 2012-06			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
•	••	Various	178
			SHEET NO. 85
CONTRACT NO. 46179			
ILLINOIS FED. AID PROJECT			



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.

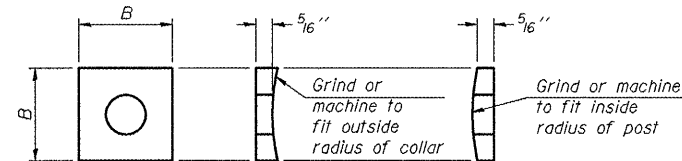
SECTION B-B

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



DETAIL A
(Two locations)

3/16" - 45° chamfer on inside of collar to facilitate field assembly



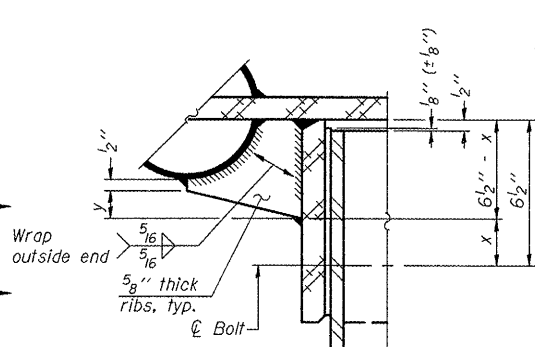
CONTOURED WASHERS

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

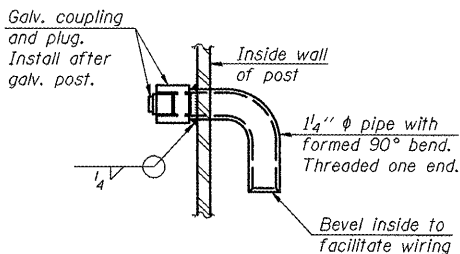
Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1/2" long at 6" cts. along top edge and at 1/4" opening.

1/4" (+1/8") opening

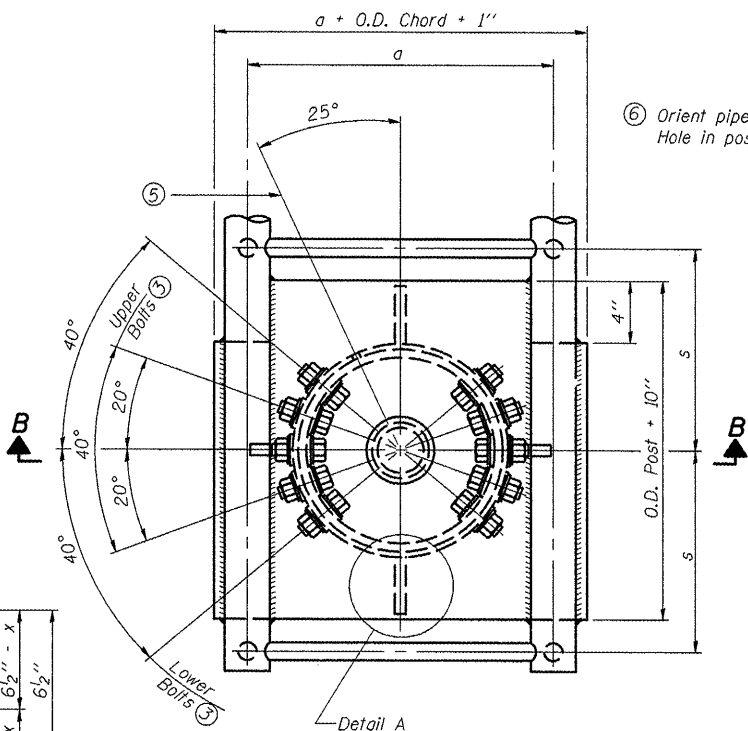


DETAIL B

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

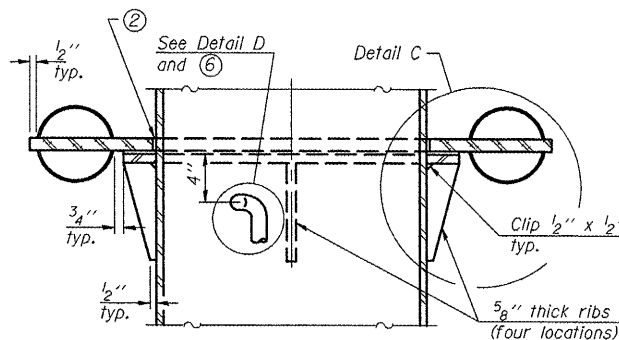


DETAIL D



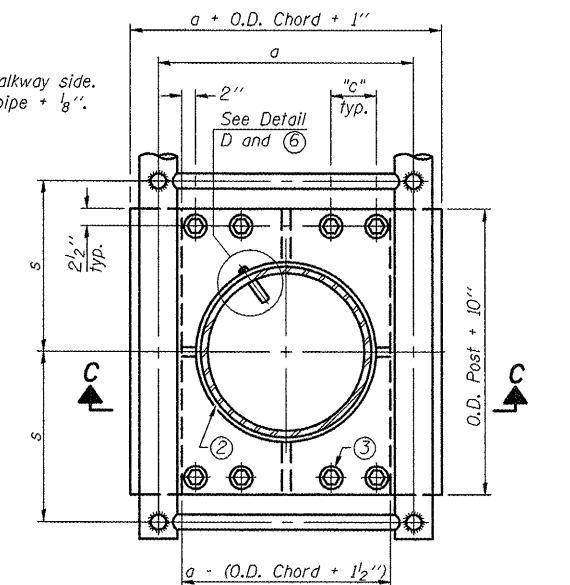
PLAN VIEW - TOP OF COLUMN

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



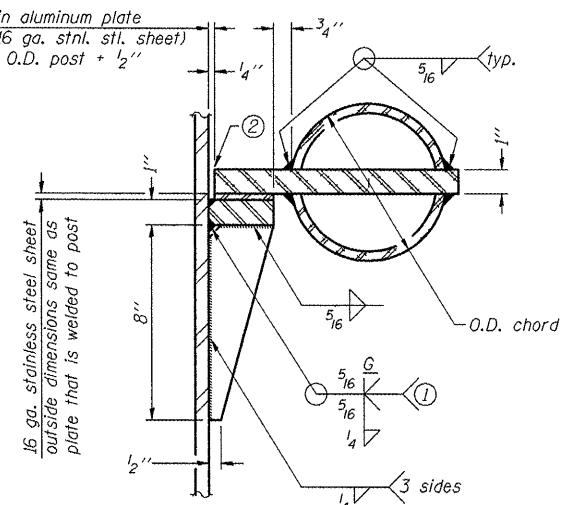
SECTION C-C

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



SECTION THRU POST ABOVE LOWER CHORDS

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



DETAIL C

- 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

9-15-11

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06

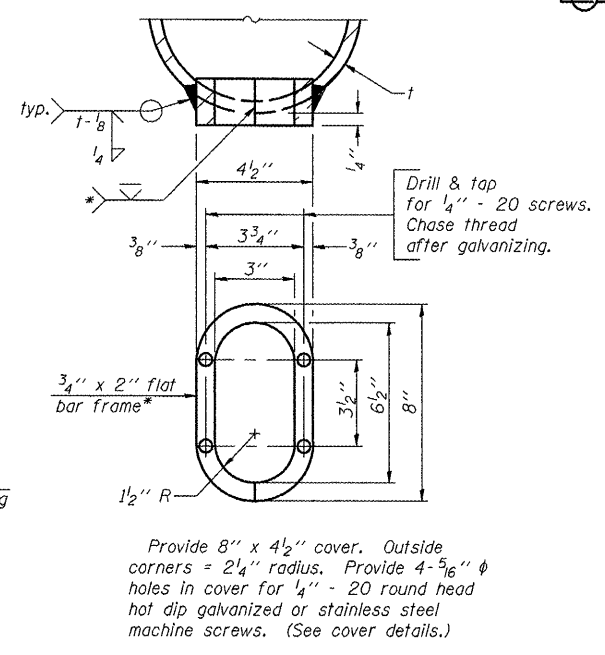
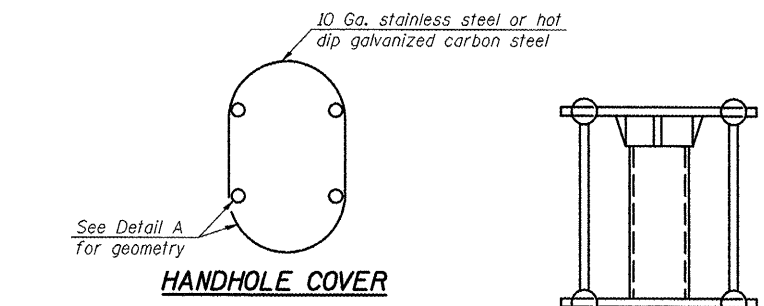
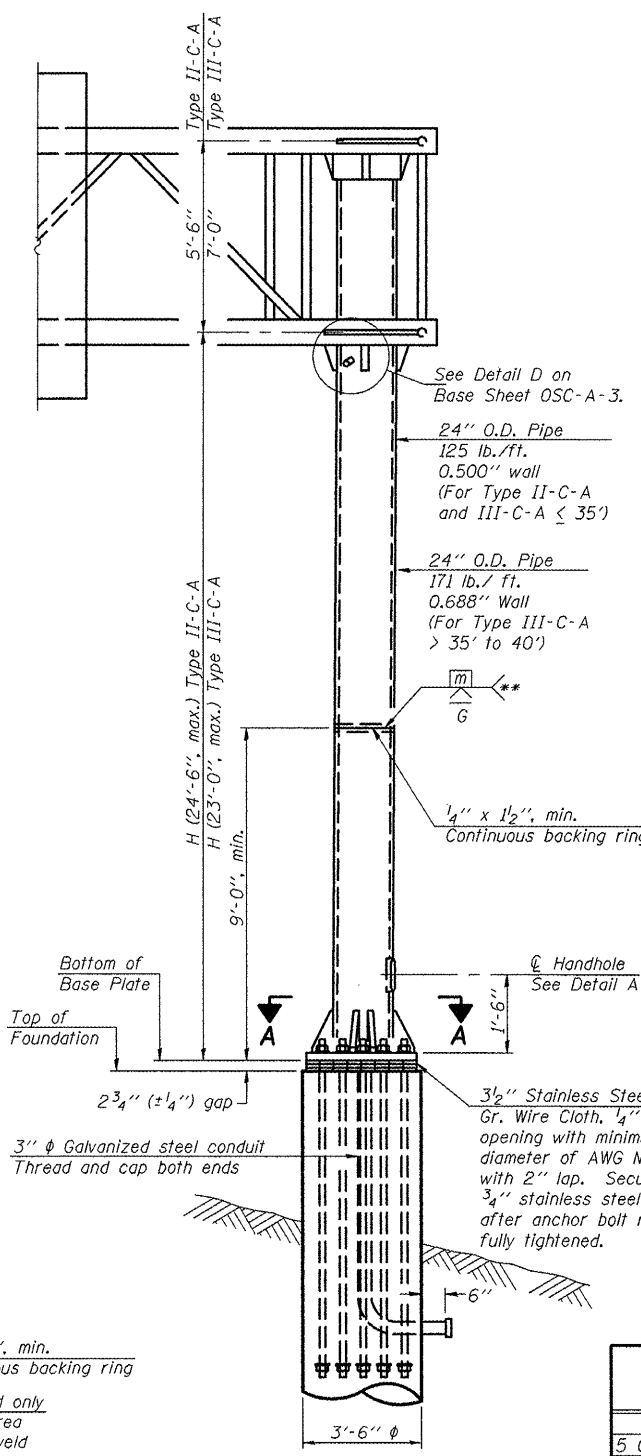
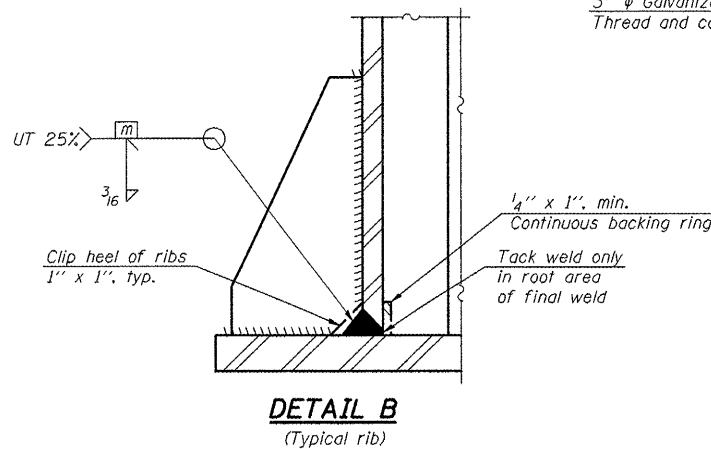
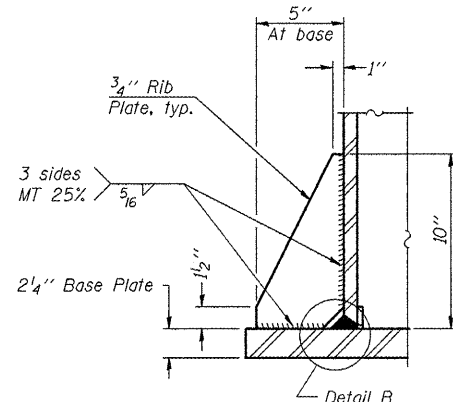
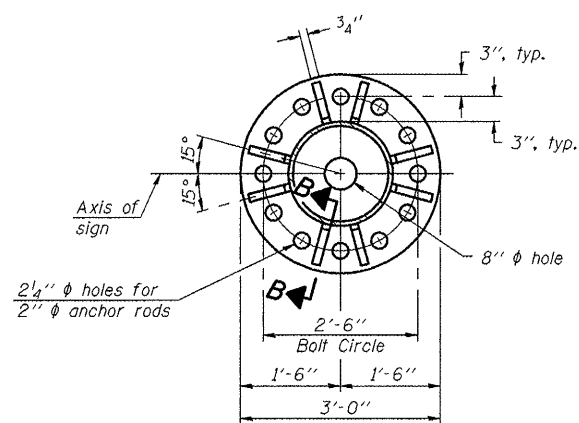
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46179-shr-detailed.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET NO. 19 OF 24 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	86
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

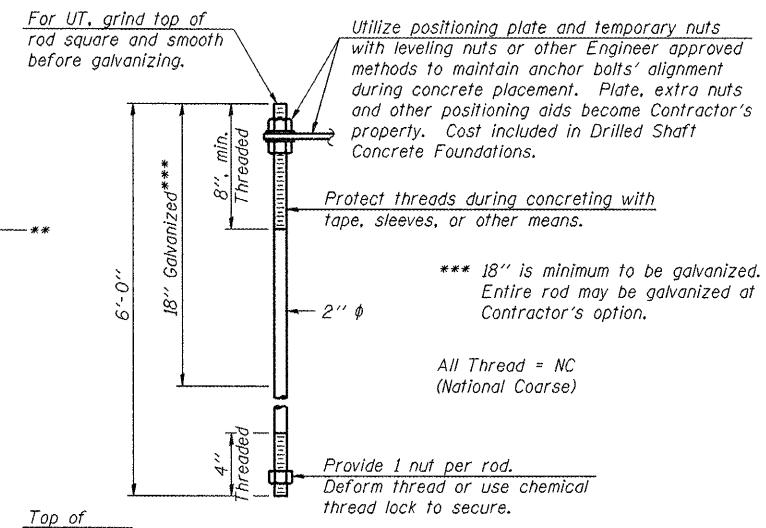
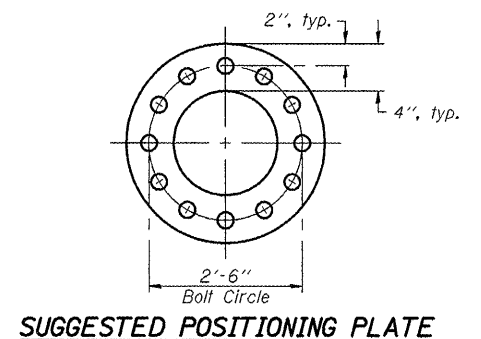
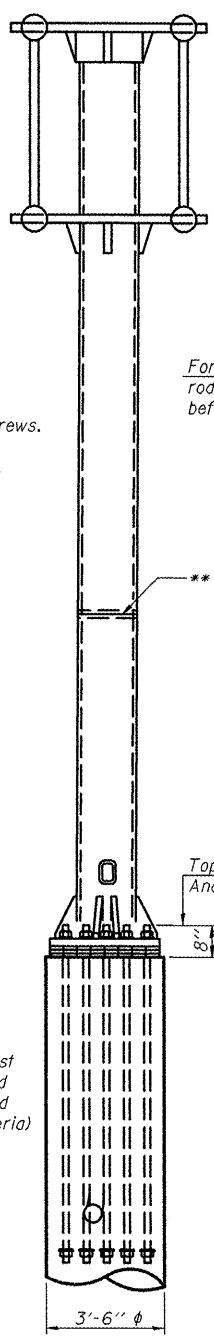


* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

** 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.

Structure Number	Station	H
5 C 057 U055 L000.40	60+19	23'-0"

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



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 9-15-11

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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

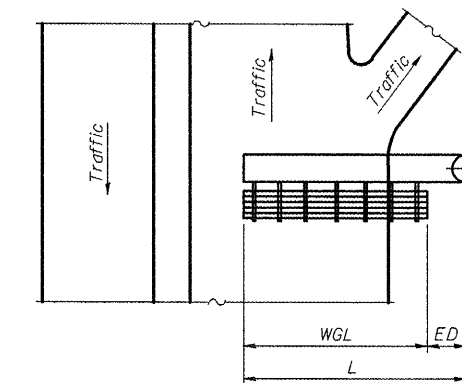
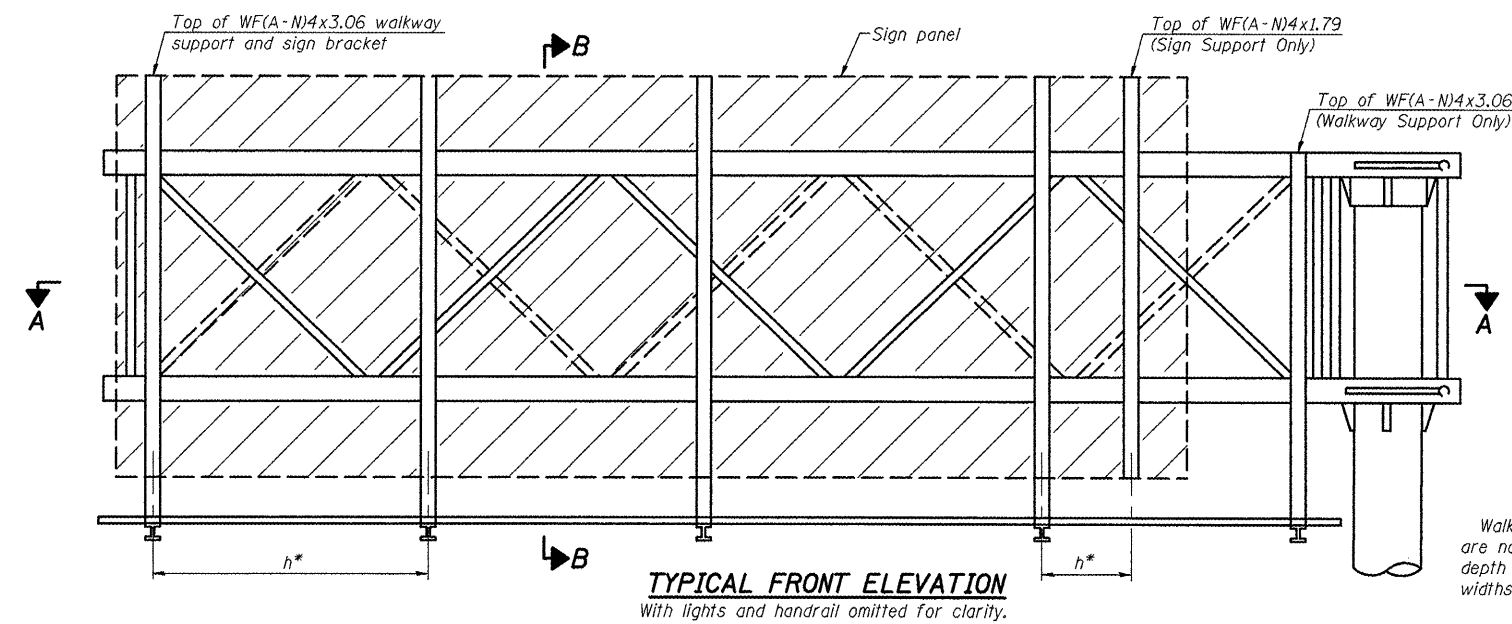
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: SHEET NO. 20 OF 24 SHEETS STA. TO STA.

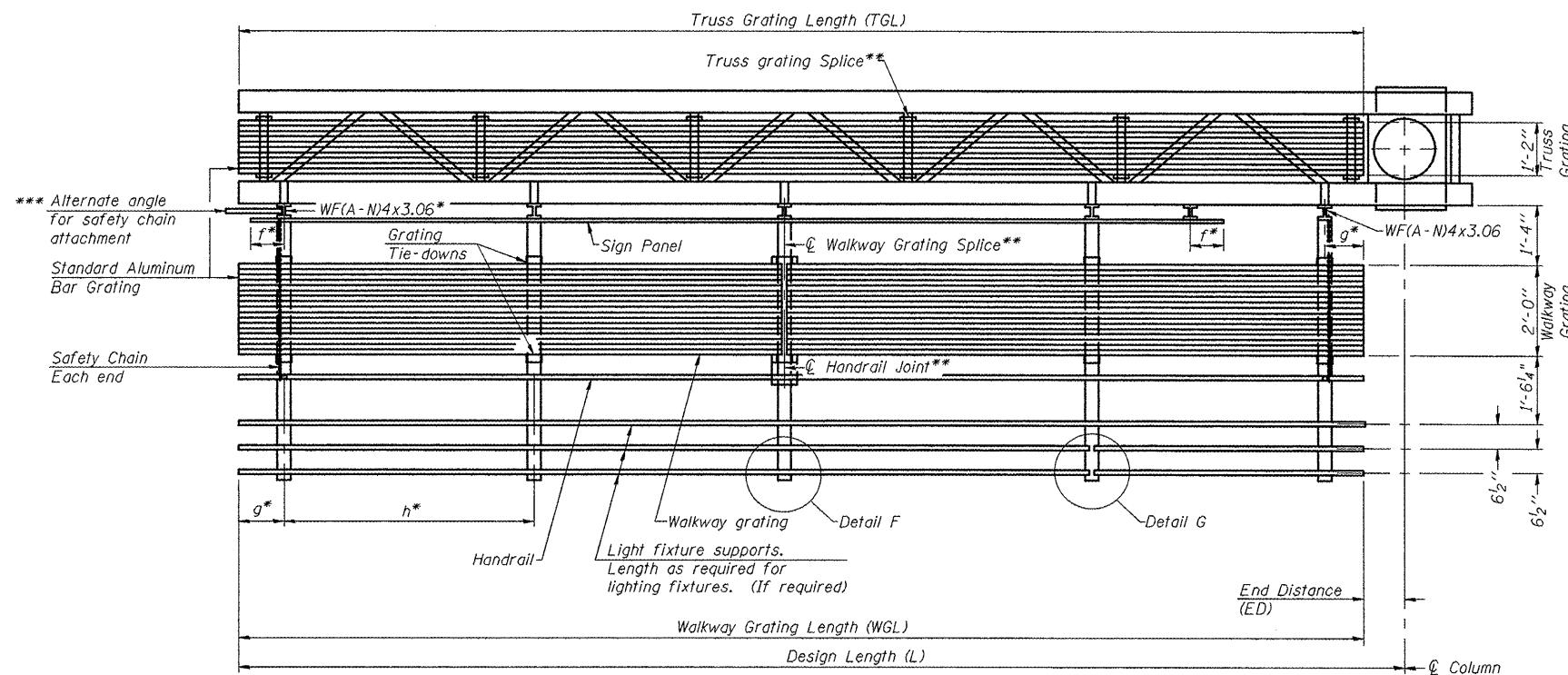
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	87
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



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

Walkway and truss grating dimensions are nominal and may vary (width ± 1/2", depth ± 1/2") based on available standard widths.



SECTION A-A

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

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

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

Structure Number	Station	WGL	ED	TGL
5 C 057 U055 L000.40	60+19	21'-0"	6'-0"	25'-6"

Notes:
* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:
f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to center of nearest bracket)
h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
*** If walkway bracket at safety chain location is behind sign, add angle to bracket. See alternate safety chain attachment on base sheet OSC-A-8.
For details of sign placement, sign/walkway brackets, truss and walkway gratings, grating splices and Section B-B, see Base Sheet OSC-A-7.
For details of handrail, handrail joint, safety chain and Details F and G, see Base Sheet OSC-A-8.

BRACKET TABLE

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

OSC-A-6

9-15-11

FILE NAME =	USER NAME = ceeerlockjd	DESIGNED - JAL	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 04/26/11	REVISED -

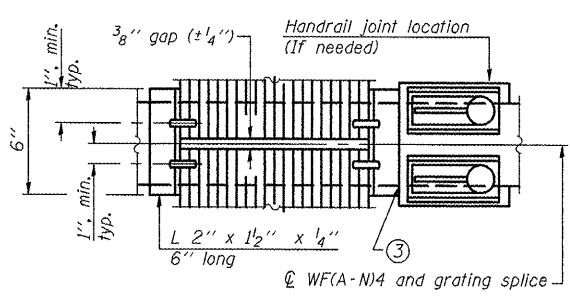
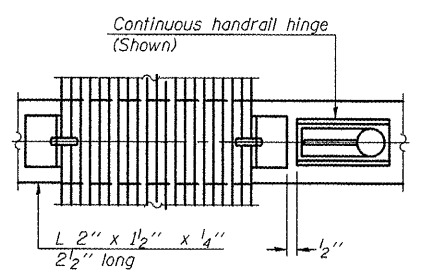
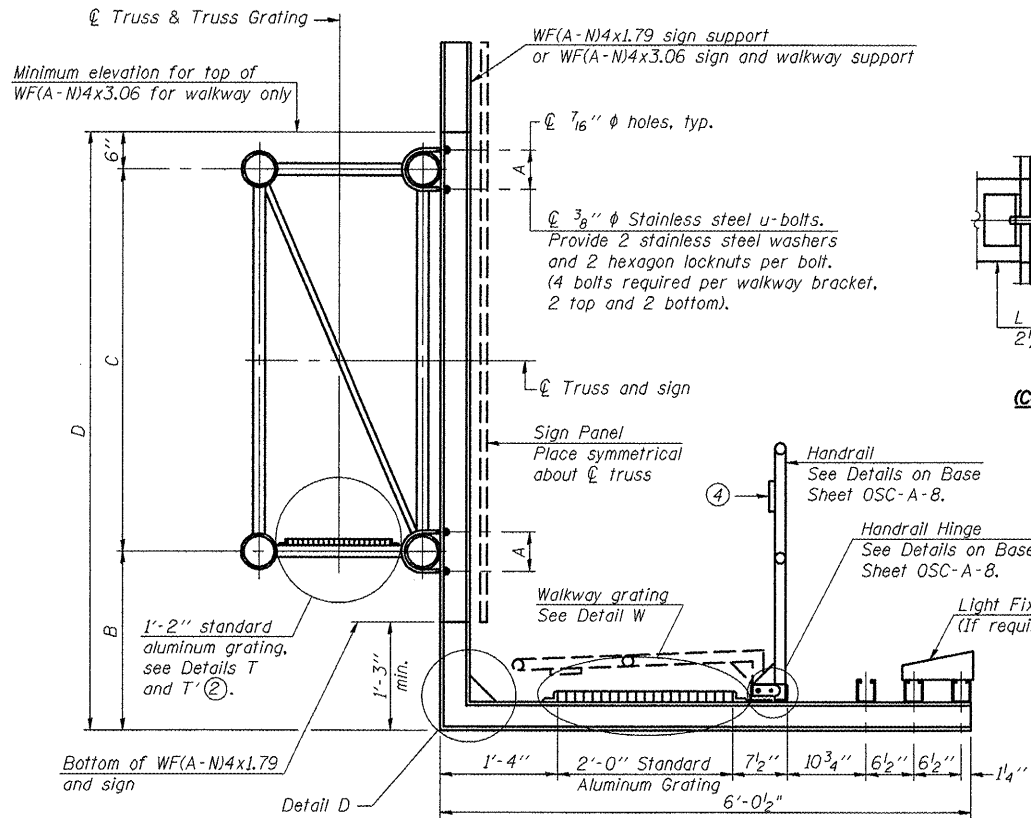
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			178	88
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

*VARIOUS COUNTIES
**D-5 OVD SIN STR REPL 2012-06

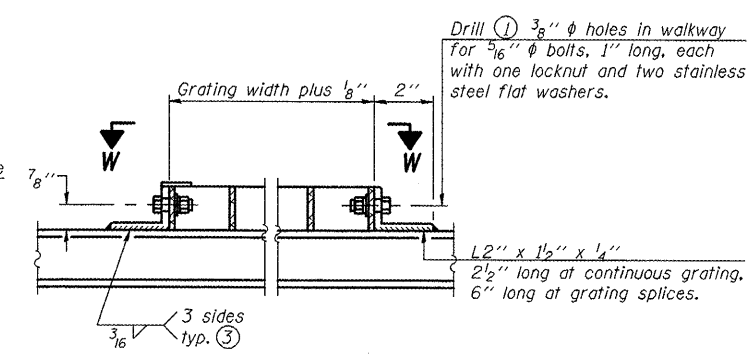
SCALE: SHEET NO. 21 OF 24 SHEETS STA. TO STA.



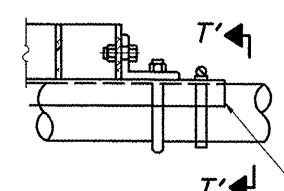
(CONTINUOUS WALKWAY GRATING)

SECTION W-W

(AT WALKWAY GRATING SPLICE)

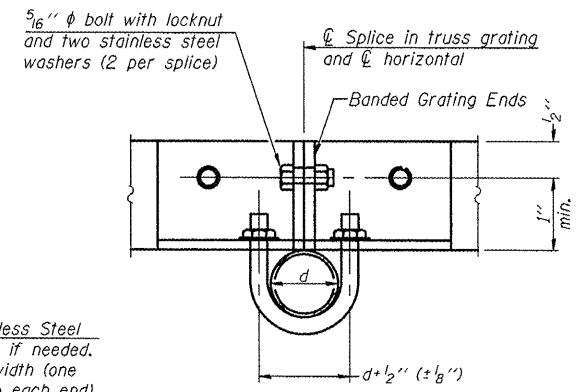


DETAIL W (Walkway grating)

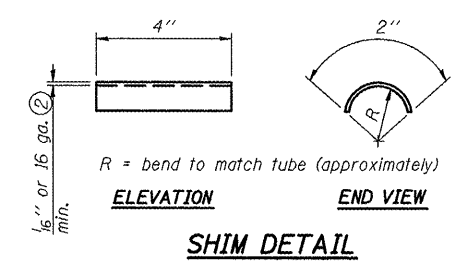


DETAIL T' (Truss grating splice)

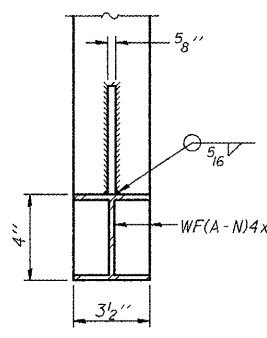
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SECTION T'-T'

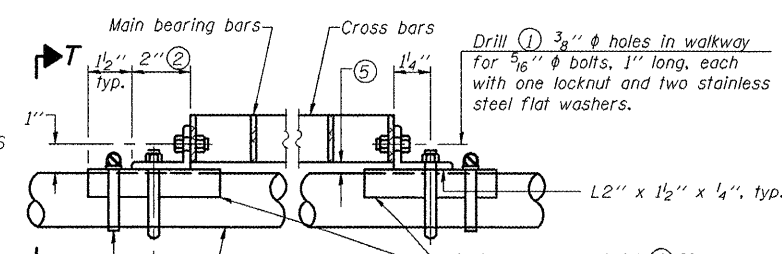


SHIM DETAIL



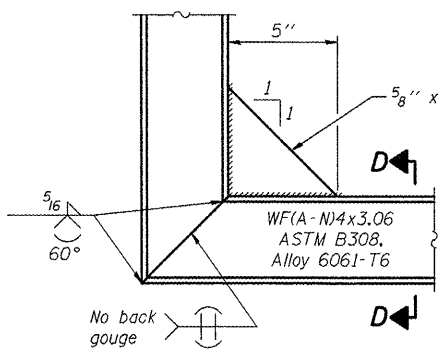
SECTION B-B

Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

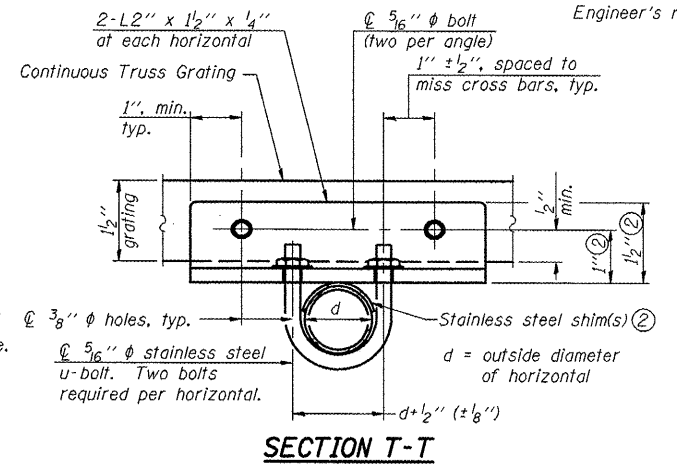


SECTION D-D

Screw type stainless steel tube clamp at shim location



DETAIL T (Continuous Truss grating)



SECTION T-T

Structure Number	Station	A	⑥ B	C	⑥ D*
5 C 057 U055 L000.40	60+19		2'-3"	5'-6"	8'-3" & VAR.
*See also "Sign Truss Mounting Details" Sheet 69 for the information needed to determine the variable walkway support and sign support lengths.					

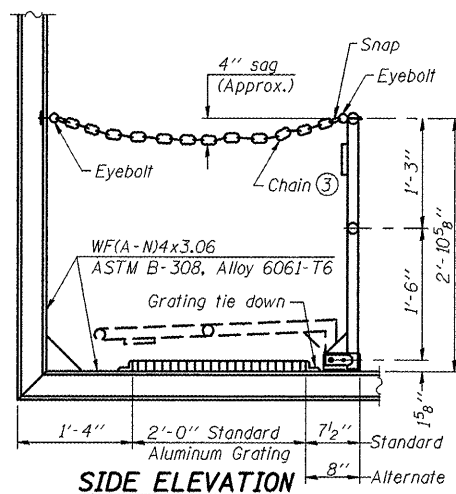
SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
Cross bars (CB) shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

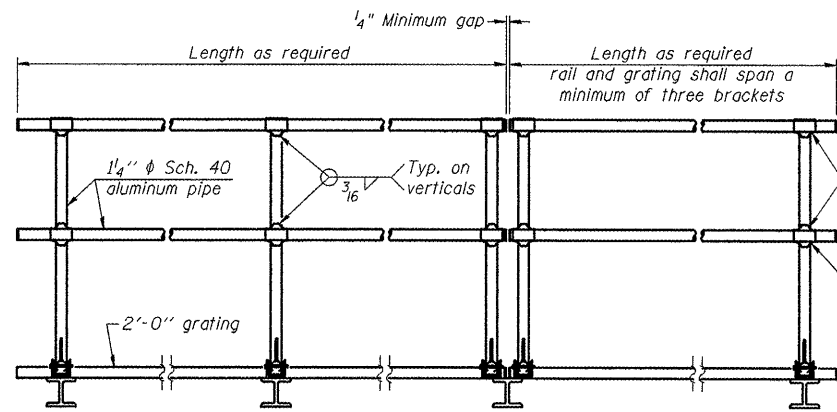
OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:
Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OSC-A-8.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.
- Based on actual sign height. D_s given on OSC-A-1.



SIDE ELEVATION
(Showing Safety Chain W/O Sign)

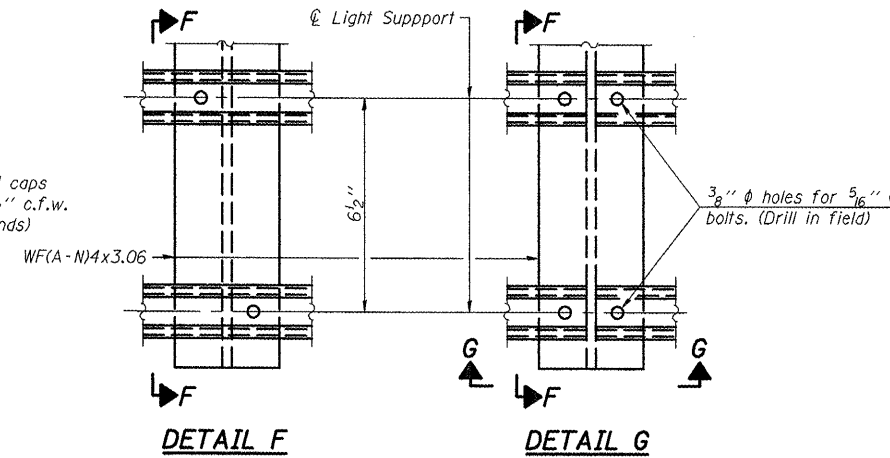


FRONT ELEVATION

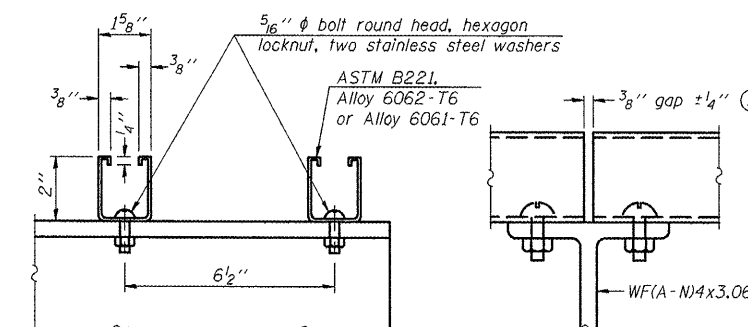
HANDRAIL DETAILS

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

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

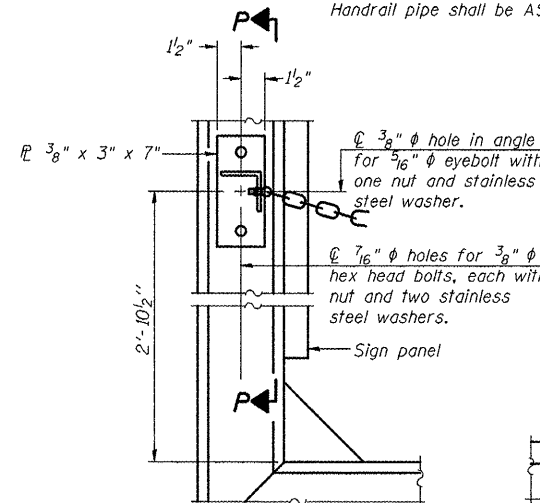


DETAIL F **DETAIL G**

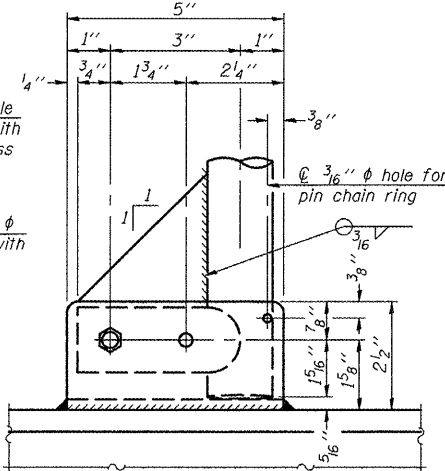


SECTION F-F **SECTION G-G**
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

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

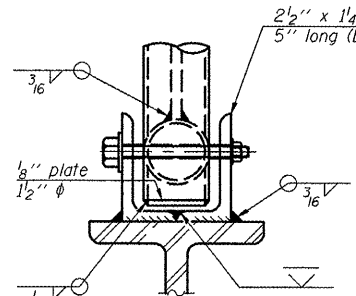


ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



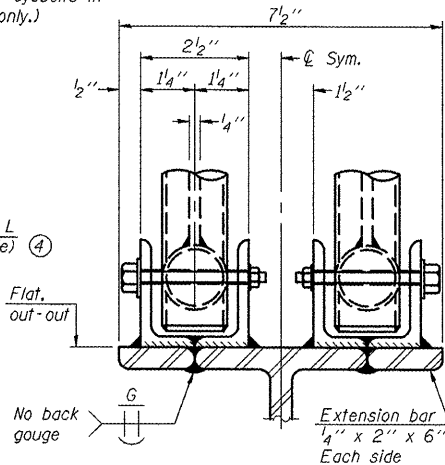
SIDE ELEVATION

Drill and ream for 3/8" bolt with two hexagon locknuts and two stainless steel washers.

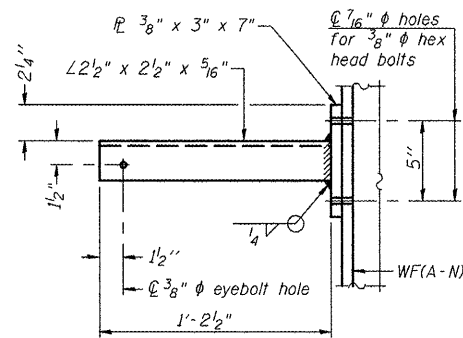


FRONT ELEVATION

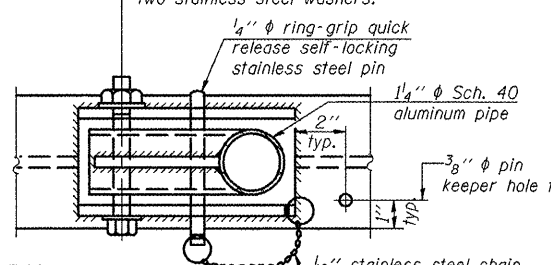
Details not shown same as "ELEVATION" at right.



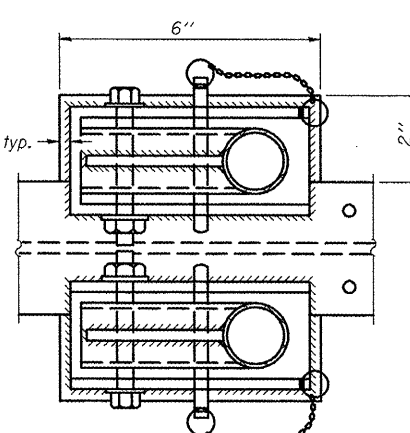
ELEVATION AT HANDRAIL JOINT ④
Details not shown same as "FRONT ELEVATION"



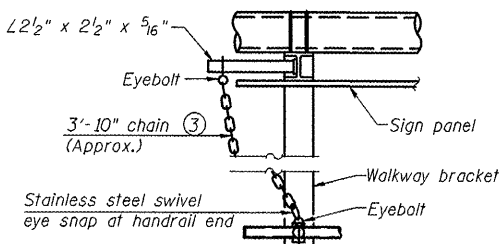
SECTION P-P



PLAN
DETAIL E HANDRAIL HINGE

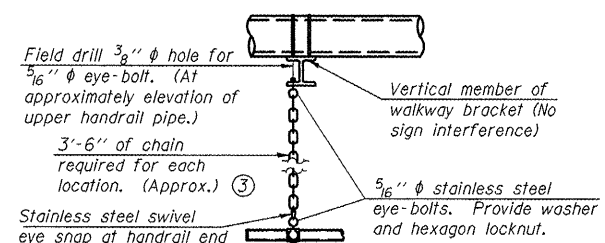


PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



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

- ③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



SAFETY CHAIN
One required for each end of each walkway.

OSC-A-8

9-15-11

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
cr:\pwork\pwork\ceerlockjd\0266557\046179-shd-detailed.dgn		DRAWN -	REVISED -
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PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

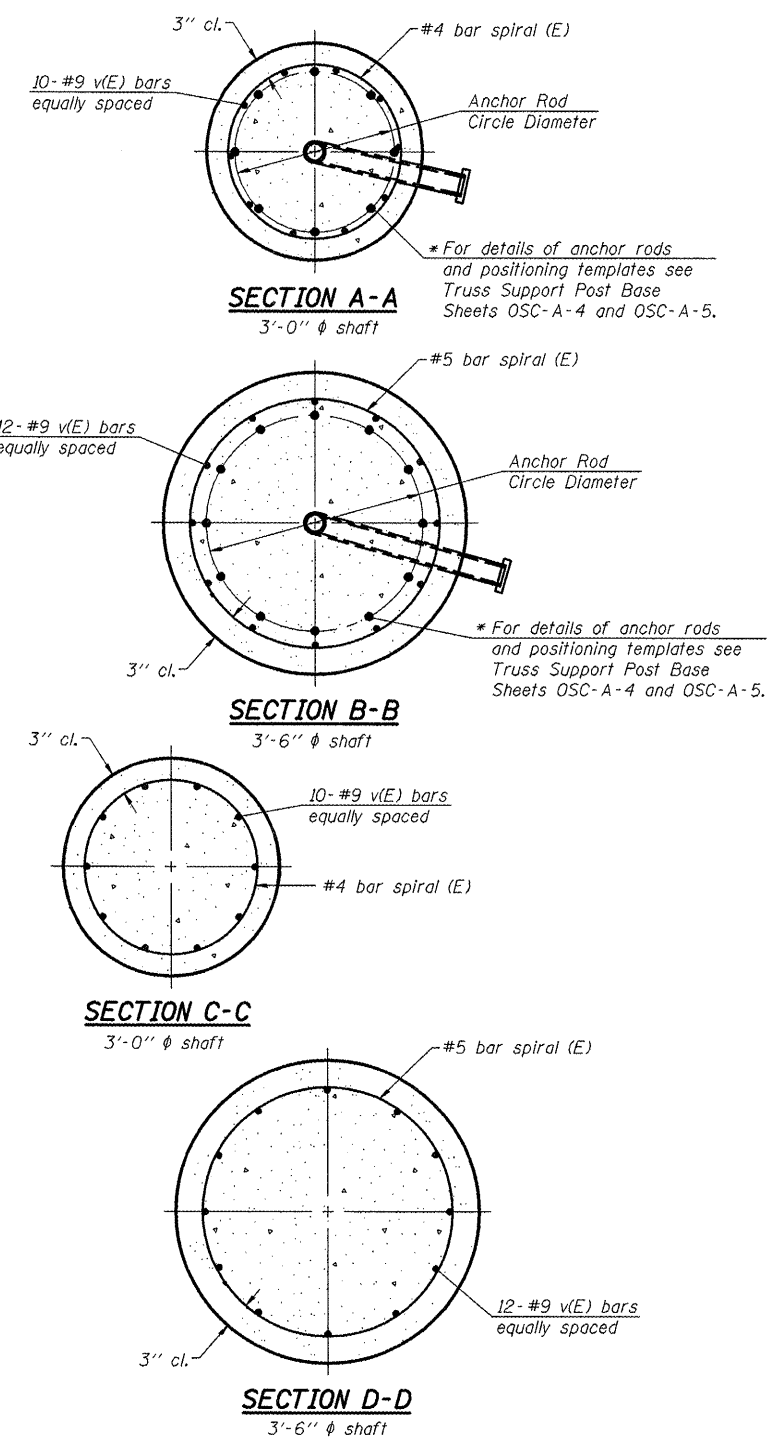
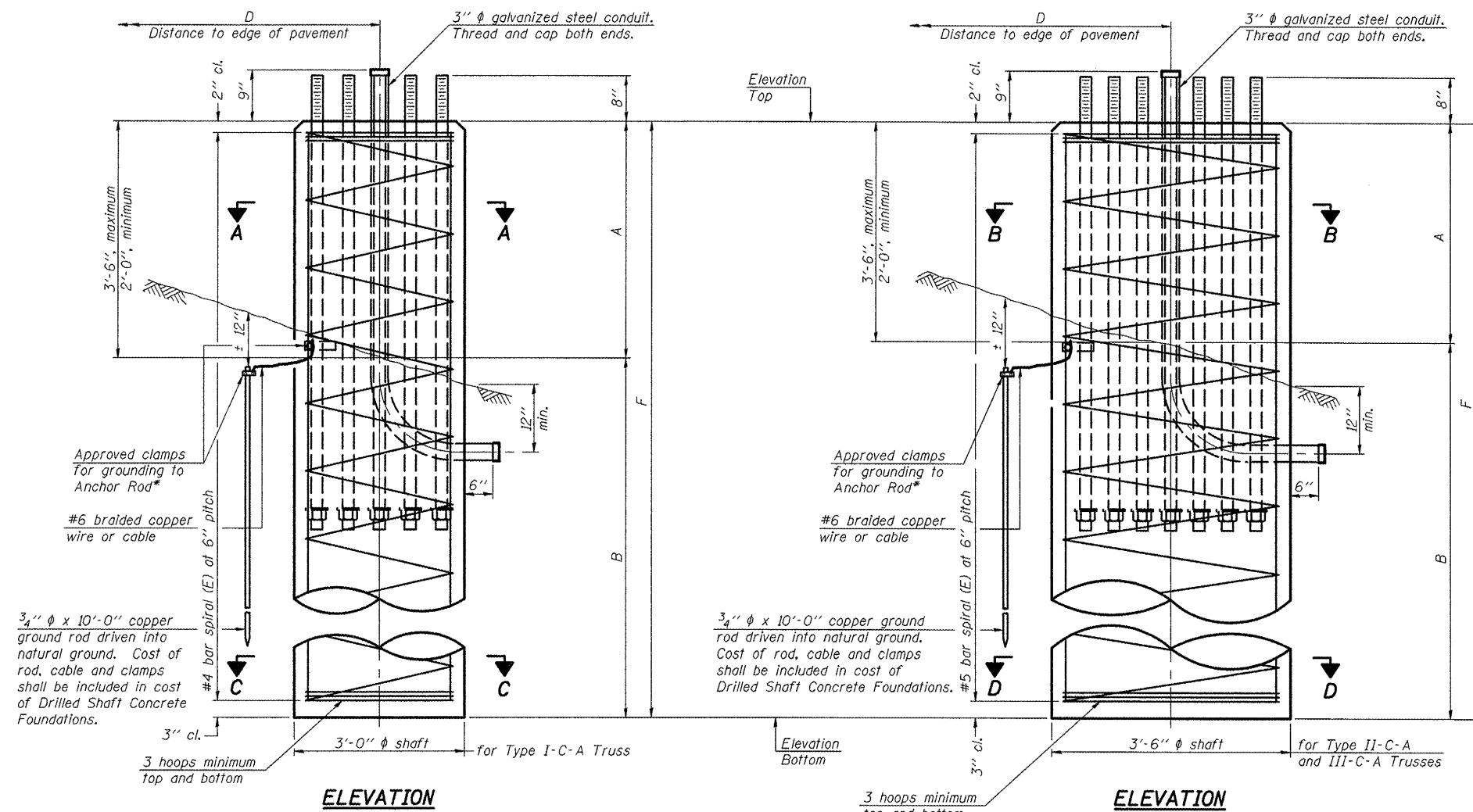
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES - HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST

SCALE: SHEET NO. 23 OF 24 SHEETS STA. TO STA.

•VARIOUS COUNTIES				
•D-5 OVD SIN STR REPL 2012-06				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	90
			CONTRACT NO. 46179	
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 (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".

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 Rod 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

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
5 C 057 U055 L000.40	60+19	II-C-A	3'-6"	807.25	780.75		4'-6"	22'-0"	26'-6"	9.5
							(Currently, but will be 3'-0" after profile adj. in FY 2014)			

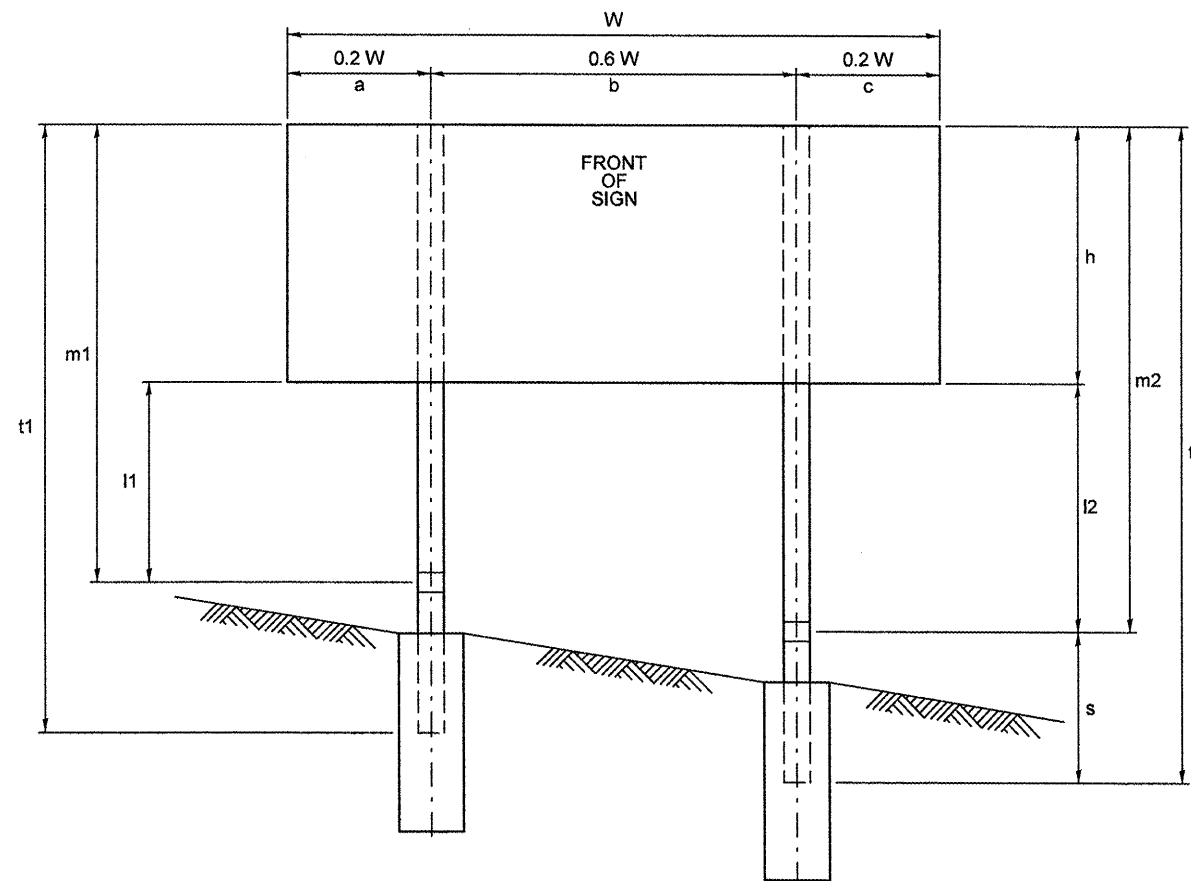
OSC-A-9 9-15-11

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER SIGN STRUCTURES - DRILLED SHAFT ALUMINUM TRUSS & STEEL POST	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ce:\pwwork\pwwork\ceerlockjd\08266557\0846179-shr-detail.dgn	DRAWN -	REVISED -	•			**	Various	178	91	
PLOT SCALE = 40.0000' / 1"	CHECKED -	REVISED -								
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -								
					SCALE:	SHEET NO. 24 OF 24 SHEETS	STA. TO STA.	CONTRACT NO. 46179 ILLINOIS FED. AID PROJECT		

BREAK AWAY GROUND MOUNT SIGNAGE LAYOUT MCLEAN COUNTY – SW SPAGHETTI BOWL

Location No.	Structure No.	Mounting OFFSET	Mounting HEIGHT	Sign Size W x h ft	Sign Width W ft	0.2W a ft	0.6W b ft	0.2W c ft	Clear Height CH ft	Sign Height h ft	leg 1 l1 ft	leg2 l2 ft	main post 1 m1 ft	main post 2 m2 ft	stub post s ft	Total post 1 t1 ft	Total post 2 t2 ft	Post Type	Nominal wt. lbs/ft	Total Weight (both posts) lbs	Total Concrete cu. yds.
5-13	5 S 057 U055 L001.70	Center sign between the existing water and sanitary sewer utilities in the grassy backslope between the frontage road and Loop 55 SB. This will put the near edge of the sign approximately 25.25' from the white stripe.	The shortest post (leg 2) on the backslope shall be 7.0' from the top of foundation to the bottom of the sign. This will result in a mounting height above the white stripe / EOP to the bottom of the sign of approximately 9'.	8.5' x 7.0'	8.5	1.7	5.1	1.7	8.75	7.0	8.75	7.00	15.75	14.0	2.5	18.25	16.5	W6 x 15	15.0	521.25	1.40
Proposed breakaway ground mount shall be moved 20' south of existing overhead truss. Existing truss is approximately at Sta. 361+10. Proposed breakaway ground mount is to be at 360+90.																					



CH = Clear Height = the greater of l1 or l2

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ct:\pw\work\pwidot\ceerlockjd\0266557\0	46179-shit-details.dgn	DRAWN -	REVISED -
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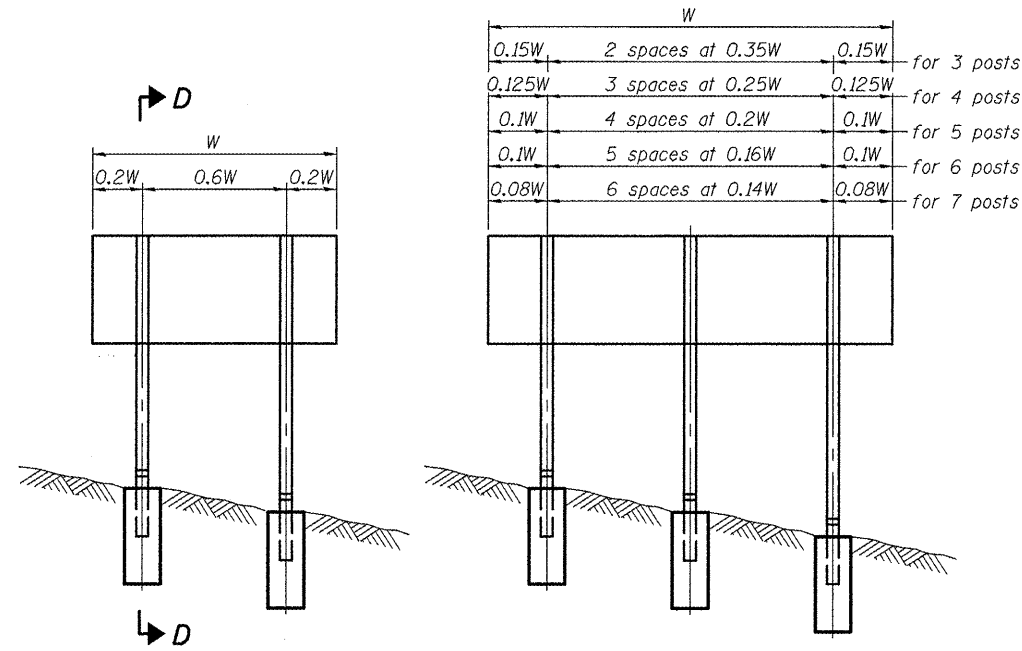
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BREAK AWAY GROUND MOUNT SIGNAGE LAYOUT
MCLEAN COUNTY – SW SPAGHETTI BOWL**

SCALE: SHEET NO. 12 OF 12 SHEETS STA. TO STA.

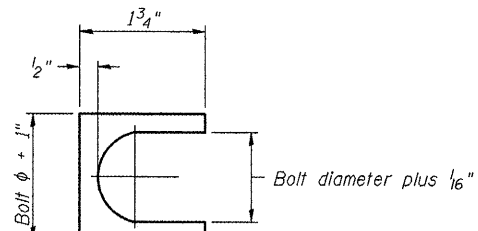
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	**	Various	178	92
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
••D-5 OVD SIN STR REPL 2012-06



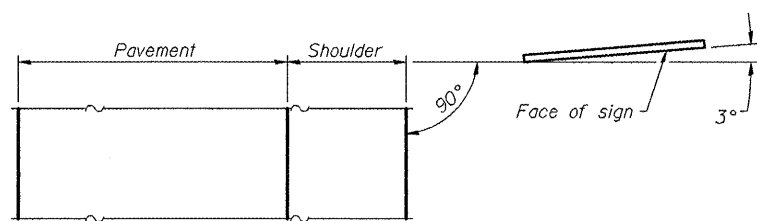
ELEVATION

Post Spacing	Number of Spaces	Post Width	Number of Posts
0.15W	2 spaces at 0.35W	0.15W	for 3 posts
0.125W	3 spaces at 0.25W	0.125W	for 4 posts
0.1W	4 spaces at 0.2W	0.1W	for 5 posts
0.1W	5 spaces at 0.16W	0.1W	for 6 posts
0.08W	6 spaces at 0.14W	0.08W	for 7 posts

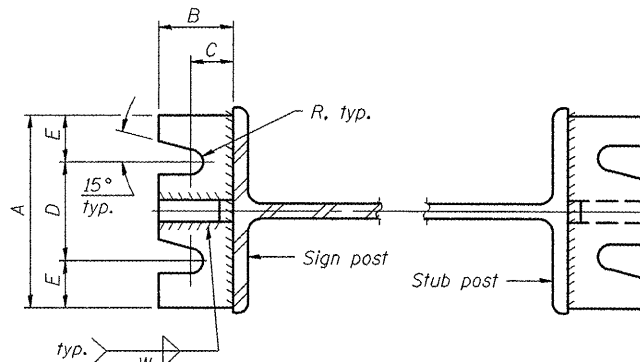


SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.



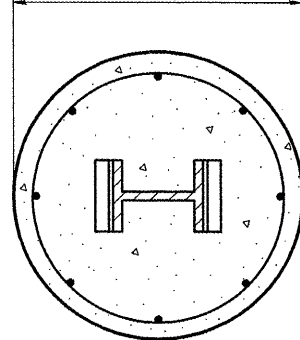
LOCATION SKETCH



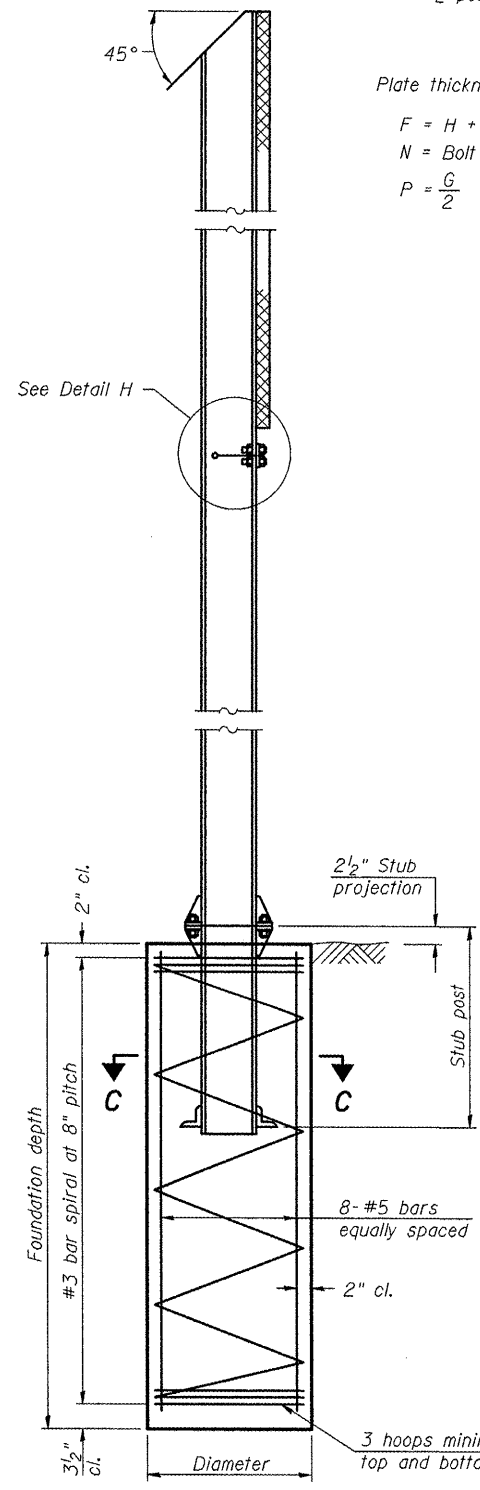
SECTION A-A

SECTION B-B

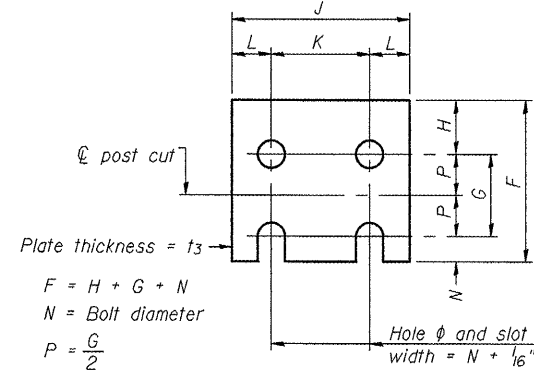
(See table for dimensions.)



SECTION C-C



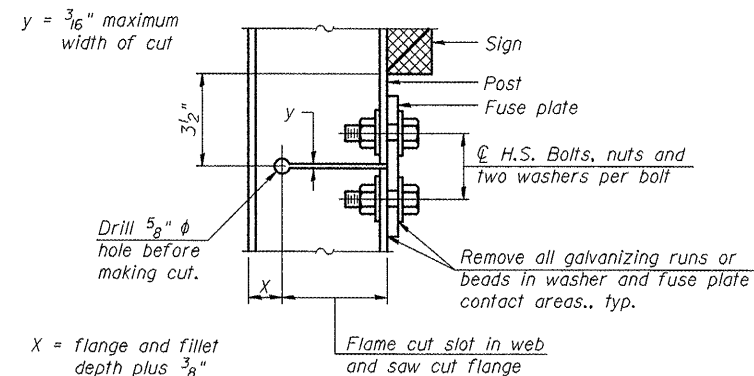
SECTION D-D



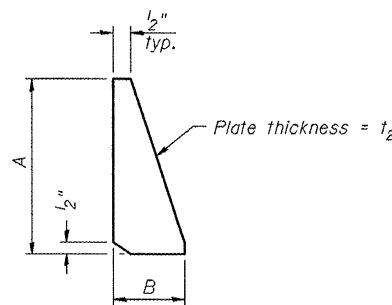
FUSE PLATE DETAIL

(Install with notches down.)

N = Bolt Diameter	G	H
1/2"	2"	1 1/8"
5/8"	2 1/4"	1 1/4"
3/4"	2 1/2"	1 3/8"
7/8"	2 3/4"	1 1/2"
1"	3"	1 5/8"
1 1/8"	3 1/4"	1 3/4"
1 1/4"	3 1/2"	1 7/8"



DETAIL H



STIFFENER PLATE DETAIL

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:
 Structural steel - 20,000 p.s.i.
 Reinforcing steel - 20,000 p.s.i.
 Concrete - 1,400 p.s.i.
 Footing soil pressure - 2,000 p.s.f.

After fabrication, the post, fuse plate and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.

Work this sheet with Base Sheet BAW-A-2.
 •VARIOUS COUNTIES
 •D-5 OVD SIN STR REPL 2012-06

BAW-A-1

1-20-11

(Sheet 1 of 2)

FILE NAME =	USER NAME = ceerlock_jd	DESIGNED - JAL	REVISED -
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	PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BREAK-AWAY WIDE FLANGE
 STEEL SIGN POST DETAILS

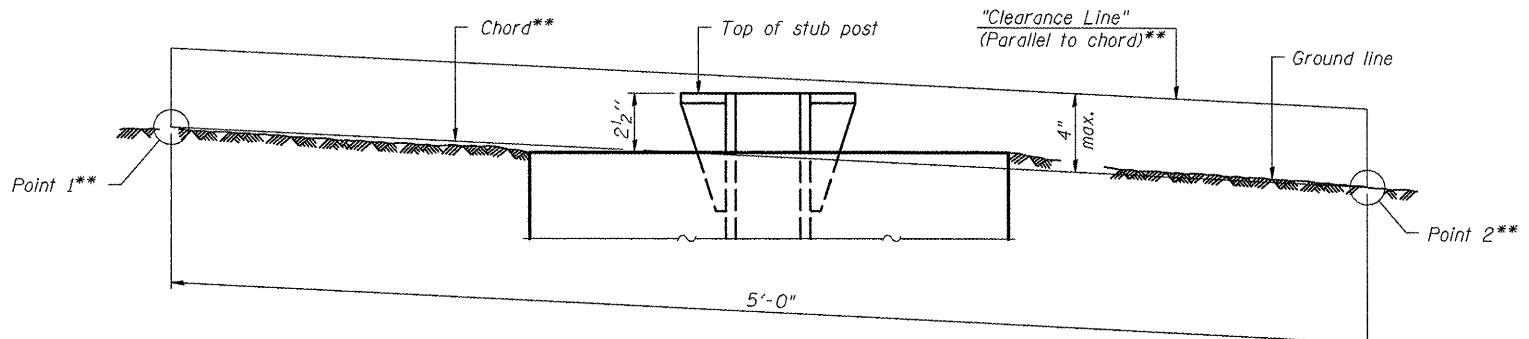
SCALE: SHEET NO. 12 OF 12 SHEETS STA. TO STA.

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	Various	178	93
			CONTRACT NO. 46179	
ILLINOIS FED. AID PROJECT				

POST	CONCRETE FOUNDATION TABLE								POST TO STUB POST CONNECTION DATA								FUSE PLATE DATA					
	Foundation			Reinforcement			Stub Post Length	POST TO STUB POST CONNECTION DATA					FUSE PLATE DATA									
	Diameter	* Minimum Depth	Concrete (1) cu. yds.)	Vertical Bars Length	Bar Spirals Diameter	Length		lbs. (2)	Bolt Size	A	B	C	D	E	t ₁	t ₂	R	W	J	K	L	t ₃
W6x9	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-3"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1 1/4"	4"	2 1/4"	7/8"	1/4"
W6x15	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	5/8" x 3 1/4"	6"	2 1/4"	1 1/4"	3 1/2"	1 1/4"	3/4"	1/2"	1 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/8"
W8x18	2'-0"	6'-0"	0.70	5'-9"	1'-8 1/2"	79'-0"	78	2'-6"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 1/4"	2 3/4"	1 1/4"	3/8"
W10x22	2'-6"	6'-6"	1.18	6'-3"	2'-2 1/2"	105'-0"	92	3'-0"	3/4" x 3 3/4"	6"	2 1/2"	1 3/8"	3 1/4"	1 3/8"	1"	1/2"	1 3/2"	5/16"	5 3/4"	2 3/4"	1 1/2"	1/2"
W10x26	2'-6"	7'-0"	1.27	6'-9"	2'-2 1/2"	112'-0"	98	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	5 3/4"	2 3/4"	1 1/2"	5/8"
W12x26	2'-6"	7'-9"	1.41	7'-6"	2'-2 1/2"	119'-0"	107	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	6 1/2"	3 1/2"	1 1/2"	5/8"
W14x30	3'-0"	7'-3"	1.90	7'-0"	2'-8 1/2"	145'-0"	113	3'-0"	7/8" x 4"	7"	2 3/4"	1 1/2"	4"	1 1/2"	1"	3/4"	5/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W14x38	3'-0"	8'-0"	2.09	7'-9"	2'-8 1/2"	153'-0"	122	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	17/32"	3/8"	6 3/4"	3 1/2"	1 5/8"	1/2"
W16x45	3'-0"	8'-6"	2.23	8'-3"	2'-8 1/2"	162'-0"	130	3'-6"	1" x 4 1/2"	7 1/2"	3"	1 3/4"	4"	1 3/4"	1 1/4"	3/4"	17/32"	3/8"	7"	3 1/2"	1 3/4"	1/2"

*Dimensional changes required for varying site conditions shall be approved by the Engineer.

POST	FUSE PLATE BOLT SIZE																				
	Sign Height																				
	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"
W6x9	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	1/2" x 1 1/2"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W6x15	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---	---
W8x18	1/2" x 1 3/4"	1/2" x 1 3/4"	1/2" x 1 3/4"	5/8" x 2"	5/8" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	3/4" x 2"	---	---	---	---	---	---	---	---	---	---	---
W10x22	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---	---	---	---	---	---	---	---
W10x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---	---
W12x26	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	---	---	---	---	---	---
W14x30	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2"	5/8" x 2"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	3/4" x 2 1/4"	---	---	---	---
W14x38	1/2" x 2"	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"
W16x45	---	1/2" x 2"	1/2" x 2"	5/8" x 2 1/4"	5/8" x 2 1/4"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"	3/4" x 2 1/2"



**ELEVATION
GROUND LINE & STUB POST**

** For all "Point 1" and "Point 2" locations, "Clearance Line" must be at or above top of stub post.

- ① Quantity includes all concrete necessary for one foundation.
- ② Includes reinforcement bars and spiral hooping for one foundation.

Note: All necessary excavation or drilling, backfilling, disposal of material, formwork, and furnishing and placing all materials including Class DS Concrete and reinforcing steel shall be included in the pay item for "Concrete Foundations".

BAW-A-2

1-20-11

(Sheet 2 of 2)

•VARIOUS COUNTIES
•D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlock_jd	DESIGNED - JAL	REVISED -
ce:\pwwork\pwwid\ceerlock_jd\0266557\046179-sht-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / 1"		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BREAK-AWAY WIDE FLANGE
STEEL SIGN POST TABLES**

SCALE: SHEET NO. 12 OF 12 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	**	Various	178	94
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

Date 3/23/11

ROUTE FAI 74 DESCRIPTION I-74WB - Sign Truss at Exit 134B (55 Buss NB) LOGGED BY CNA
SECTION Sign Structure LOCATION NW, SEC. 20, TWP. 23N, RNG. 2E, 3rd PM GPS:
COUNTY McLean DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 S 057 1074 L134.10
Station 648+00
BORING NO. 1 Sign Truss
Station 648+07
Offset 116.1 ft Lt.
Ground Surface Elev. 97.7 ft

Table with columns for Depth (ft), Diameter (in), Blow Count (blows/ft), and Soil Description. Includes soil types like Gray Clay Loam Till, Gray Mottled Silty Clay, Brown Mottled Silty Clay, etc.

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available. The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) 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)



SOIL BORING LOG

Date 3/24/11

ROUTE FAI 55 DESCRIPTION I-55 NB - Approx. 0.5 Miles West of I-74 LOGGED BY CNA
SECTION Sign Structure LOCATION NE, SEC. 19, TWP. 23N, RNG. 2E, 3rd PM GPS:
COUNTY McLean DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 S 057 1055 R156.2
Station 646+00
BORING NO. 1 Sign Truss
Station 646+08
Offset 120.0 ft Rt.
Ground Surface Elev. 788.4 ft

Table with columns for Depth (ft), Diameter (in), Blow Count (blows/ft), and Soil Description. Includes soil types like Brown Sand Loam with Small Gravel, Brown Mottled Silty Clay, etc.

An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available. The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) 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)

Form with fields for FILE NAME, USER NAME, DESIGNED, REVISED, DRAWN, CHECKED, DATE, PLOT SCALE, PLOT DATE, 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., CONTRACT NO. 46179, ILLINOIS FED. AID PROJECT



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/24/11

ROUTE FAI 55 DESCRIPTION I-55 NB - Approx. .25 Miles West of I-74 at Off Ramp to Exit 157A LOGGED BY CNA

SECTION Sign Structure LOCATION NE, SEC. 19, TWP. 23N, RNG. 2E, 3rd PM GPS:

COUNTY McLean DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 S 057 U055
Station R000.20
71+27

BORING NO. 1 Sign Truss
Station 71+04
Offset 5.0 ft *North of Exist.
Ground Surface Elev. 799.8 ft (ft) (/6") (tsf) (%)

Soil Description	Depth (ft)	Penetration (6")	UCS (tsf)	SPT (blows)	Soil Description	Depth (ft)	Penetration (6")	UCS (tsf)	SPT (blows)
Gray to Gray/Black Mixed Silt Clay Loam (Embankment)	0-3				Blue/Gray Mottled Clay (continued)	0-2			
	3-6		3.5	21		2-4		1.2	29
	6-7		S			4-4		B	
	7-7.8					774.8	-25		
	7.8-790.8				*NOTE: Boring taken 23' East and 5' North of Existing South Foundation. End of Boring				
Brown to Gray Mixed Clay Loam (Embankment)	790.8-797		1.5	11					
	797-798		E						
	798-799								
	799-800		2.3	22					
	800-803		B						
	803-780.3								
	780.3-780.8		3.5	26					
Blue/Gray Mottled Clay	780.8-788		B						

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An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
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
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/23/11

ROUTE Veterans Parkway DESCRIPTION Sign Truss- Approx 900' West of Morris Avenue LOGGED BY CNA

SECTION Sign Structure LOCATION NE, SEC. 17, TWP. 23N, RNG. 2E, 3rd PM GPS:

COUNTY McLean DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 5 S 057 U055 L001.7
Station 361+10

BORING NO. 1 Sign Truss
Station 361+27
Offset
Ground Surface Elev. 97.2 ft (ft) (/6") (tsf) (%)

Soil Description	Depth (ft)	Penetration (6")	UCS (tsf)	SPT (blows)	Soil Description	Depth (ft)	Penetration (6")	UCS (tsf)	SPT (blows)
Brown Dirty Gravel (Shoulder Stone)	0-96.2				Gray Clay Loam Till (continued)	0-2			
Brown Clay Loam Till	96.2-97.2					2-4		1.6	15
						4-5		B	
						72.2	-25		
	91.2-91.7				*NOTE: Elevation Based off an assumed BM Elevation of 100.0' at Top of Existing Left Foundation. Boring taken 17' West and 5' South of Existing Left Foundation. End of Boring				
Gray Clay Loam Till	91.7-92.2								
	92.2-93		1.6	13					
	93-94		B						
	94-95								
	95-96		1.0	15					
	96-97		B						
	97-98								
	98-99		1.4	14					
	99-100		B						
	100-101								
	101-102		1.4	13					
	102-103		B						
	103-104								
	104-105		1.6	14					
	105-106		B						
	106-107								
	107-108		1.2	13					
	108-109		B						

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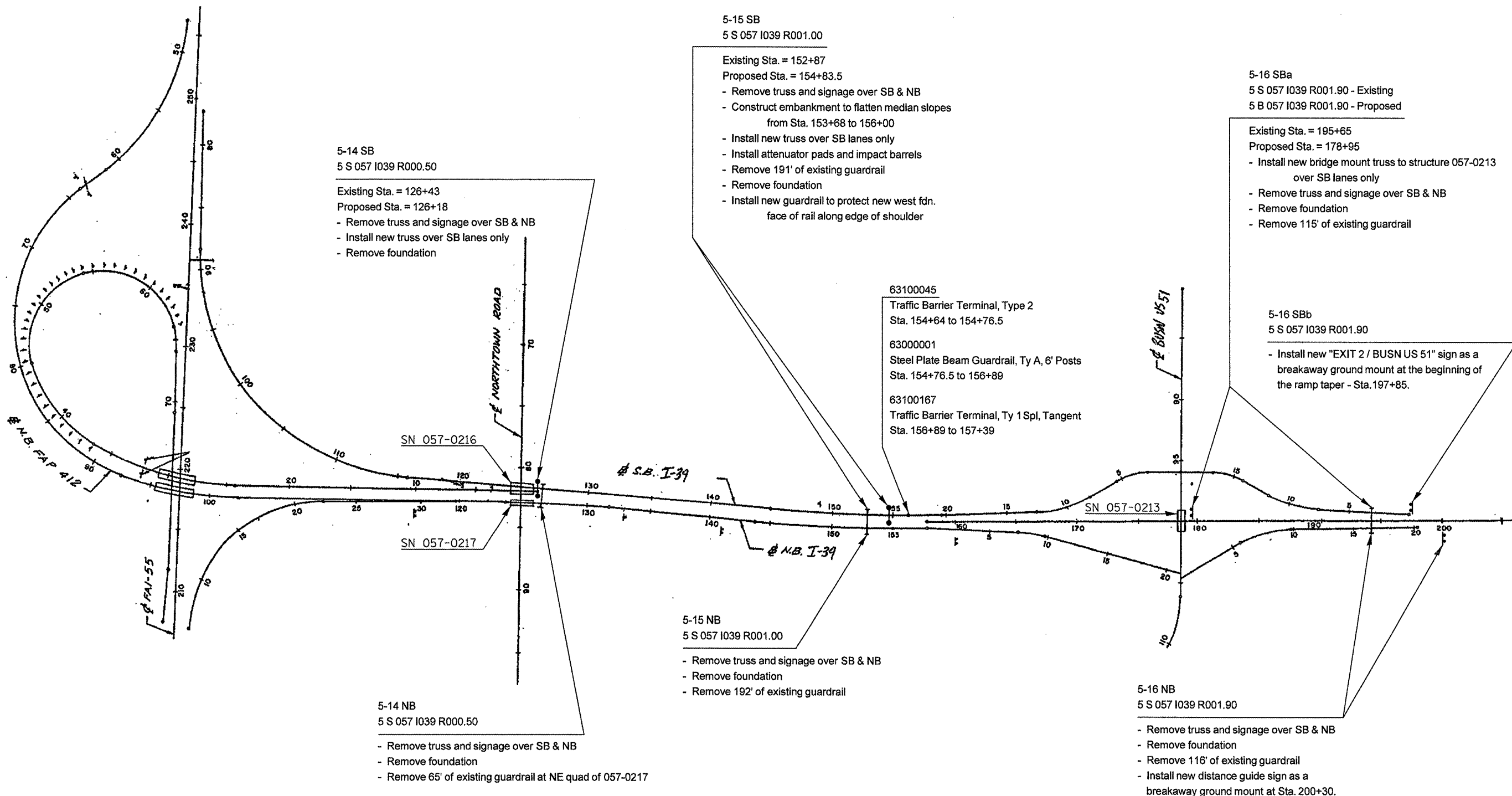
An assumed centerline elevation of 100.00 and station of 10+00 is used when this information is not available.
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N Value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

FILE NAME =	USER NAME = ceer-look_jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT DATE = 10/7/2011	DATE -	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 46179			
								ILLINOIS FED. AID PROJECT			

•VARIOUS COUNTIES
••0-5 OVD SIN STR REPL 2012-06

MCLEAN COUNTY - I-39 OVERVIEW OF PROPOSED WORK



FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
ca:\pwwork\pwwork\ceerlockjd\0266557\046179-sht-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/7/2011		DATE - 04/26/11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MCLEAN COUNTY - I-39
OVERVIEW OF PROPOSED WORK**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	Various	178	97
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS COUNTIES
**D-5 OVD SIN STR REPL 2012-06

SCHEDULE OF QUANTITIES

MCLEAN COUNTY - I-39 - INDIVIDUAL LOCATIONS

SHEET 1 OF 2

Location No.	5-14 SB			
Structure No.	5 S 057 I039 R000.50			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 0.5 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations over the SB lanes only.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	481.00	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	550.00	
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	74.00	
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	52.00	
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	21.50	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00	
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00	

Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.
Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-15 SB			
Structure No.	5 S 057 I039 R001.00			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 1.0 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations over the SB lanes only.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
20400800	FURNISHED EXCAVATION	CUYD	269.00	
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	212.50	
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.00	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	1.00	
63200310	GUARDRAIL REMOVAL	FOOT	191.00	
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.00	
64301090	ATTENUATOR BASE	SQYD	102.00	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	407.00	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	518.75	
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	71.00	
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	48.00	
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	27.00	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	5.00	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1.00	
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00	

Note: new end supports are included in the cost of OVERHEAD SIGN STRUCTURE - SPAN per Section 733 of the Std. Specs.
Proposed fdn. depths and elev. take into account the future profile after I-39 reconstruction. No changes to fdn. depths or top elev. will be allowed.
6 day (3 days + 3 days) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (5S057I039R000.50)

Location No.	5-14 NB			
Structure No.	5 S 057 I039 R000.50			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 0.5 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations over the SB lanes only.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
63200310	GUARDRAIL REMOVAL	FOOT	65.00	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	257.25	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	6.00	

Pay Item for CMS is for the advanced interstate notice only. CMS shown on Standards are included in the cost of the Standard.

Location No.	5-15 NB			
Structure No.	5 S 057 I039 R001.00			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 1.0 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced on new drilled shaft foundations over the SB lanes only.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
63200310	GUARDRAIL REMOVAL	FOOT	192.00	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	275.00	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	

6 day (3 days + 3 days) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (5S057I039R000.50)

• VARIOUS
•• D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceer-lock_jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES MCLEAN COUNTY - I-39 - INDIVIDUAL LOCATIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
cehpw-work\pwwdot\ceer-lock_jd\0266557-D	46179-ahv-schedule.dgn	DRAWN -	REVISED -			•	**	Various	178	98	
	PLOT SCALE = 40,0000' / 1" =	CHECKED -	REVISED -			CONTRACT NO. 46179					
	PLOT DATE = 10/27/2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

SCHEDULE OF QUANTITIES
MCLEAN COUNTY – I-39 – INDIVIDUAL LOCATIONS

SHEET 2 OF 2

Location No.	5-16 SBa			
Exist. Structure No.	5 S 057 I039 R001.90			
Prop. Structure No.	5 B 057 I039 R001.90			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 1.9 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced with a SB bridge mounted sign truss on structure 057-0213 AND a SB ground mount AND a NB ground mount.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
63200310	GUARDRAIL REMOVAL	FOOT	115.00	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	293.25	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	643.75	
73304000	OVERHEAD SIGN STRUCTURE - BRIDGE MOUNTED	FOOT	32.50	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	
X8040310	ELECTRICAL SERVICE DISCONNECT	EACH	1.00	
6 day (3 days + 3 days) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (5S057I039R000.50)				

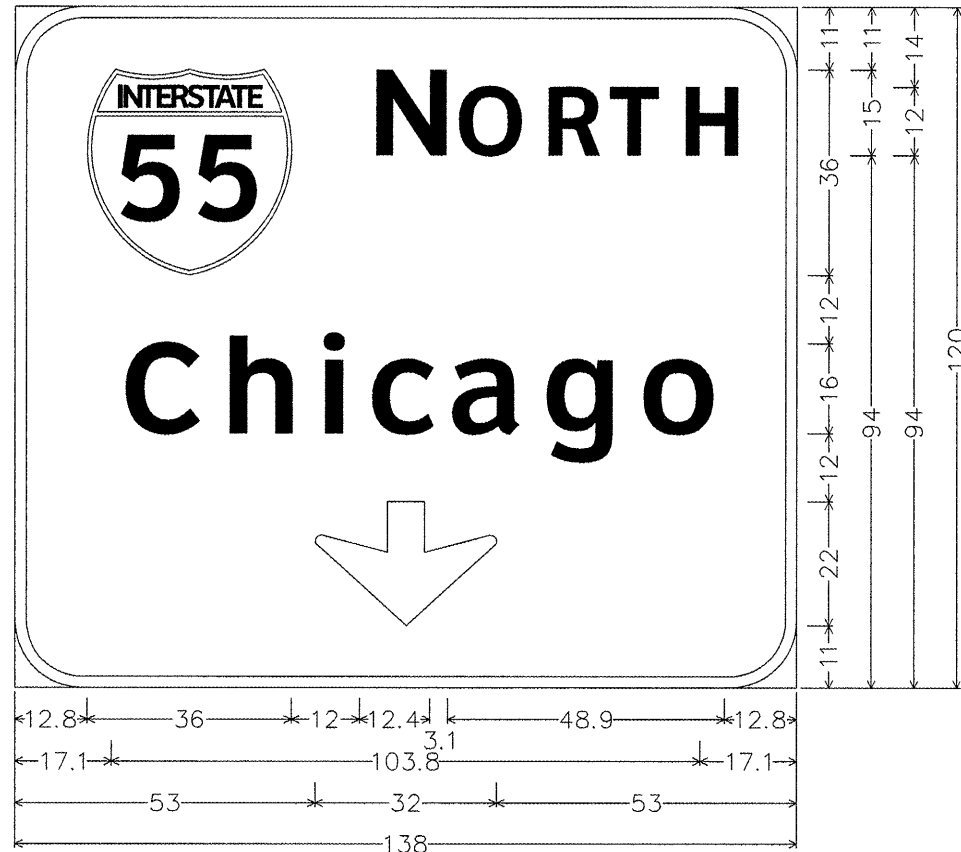
Location No.	5-16 NB			
Exist. Structure No.	5 S 057 I039 R001.90			
Prop. Structure No.	N/A - Ground Mount Distance Guide sign NB at Sta. 200+30			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 1.9 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced with a SB bridge mounted sign truss on structure 057-0213 AND a SB ground mount AND a NB ground mount.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
63200310	GUARDRAIL REMOVAL	FOOT	116.00	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	133.00	
72400330	REMOVE SIGN PANEL - TYPE 3	SQFT	153.75	
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	1468.50	
73400100	CONCRETE FOUNDATIONS	CUYD	3.54	
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	0.50	
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	1.00	
6 day (3 days + 3 days) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (5S057I039R000.50)				

Location No.	5-16 SBb			
Exist. Structure No.	5 S 057 I039 R001.90			
Prop. Structure No.	N/A - Ground Mount Exit 2 BUSN 51 sign SB at start of ramp taper - Sta. 197+85			
County / Route	MCLEAN CO. - I-39 over SB & NB lanes - 1.9 mi. North of I-55			
Scope of Work	This overhead sign structure is being replaced with a SB bridge mounted sign truss on structure 057-0213 AND a SB ground mount AND a NB ground mount.			
CODE NUMBER	PAY ITEM	UNIT	QUANTITY	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1.00	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1.00	
72000300	SIGN PANEL - TYPE 3	SQFT	246.00	
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	3097.00	
73400100	CONCRETE FOUNDATIONS	CUYD	6.27	
6 day (3 days + 3 days) advanced notice with CMS for all of I-39 covered under 5-14 SB & 5-14 NB (5S057I039R000.50)				

- VARIOUS
- D-5 OVD SIN STR REPL 2012-06

FILE NAME =	USER NAME = ceerlockjd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES MCLEAN COUNTY – I-39 – INDIVIDUAL LOCATIONS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw_work\pwidot\ceerlockjd\0266557\046179-sht-schedule.dgn	PLOT SCALE = 40.0000' / in.	DRAWN -	REVISED -			•	••	Various	178	99	
PLOT DATE = 10/7/2011	DATE -	CHECKED -	REVISED -			SCALE: N/A	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 46179	
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

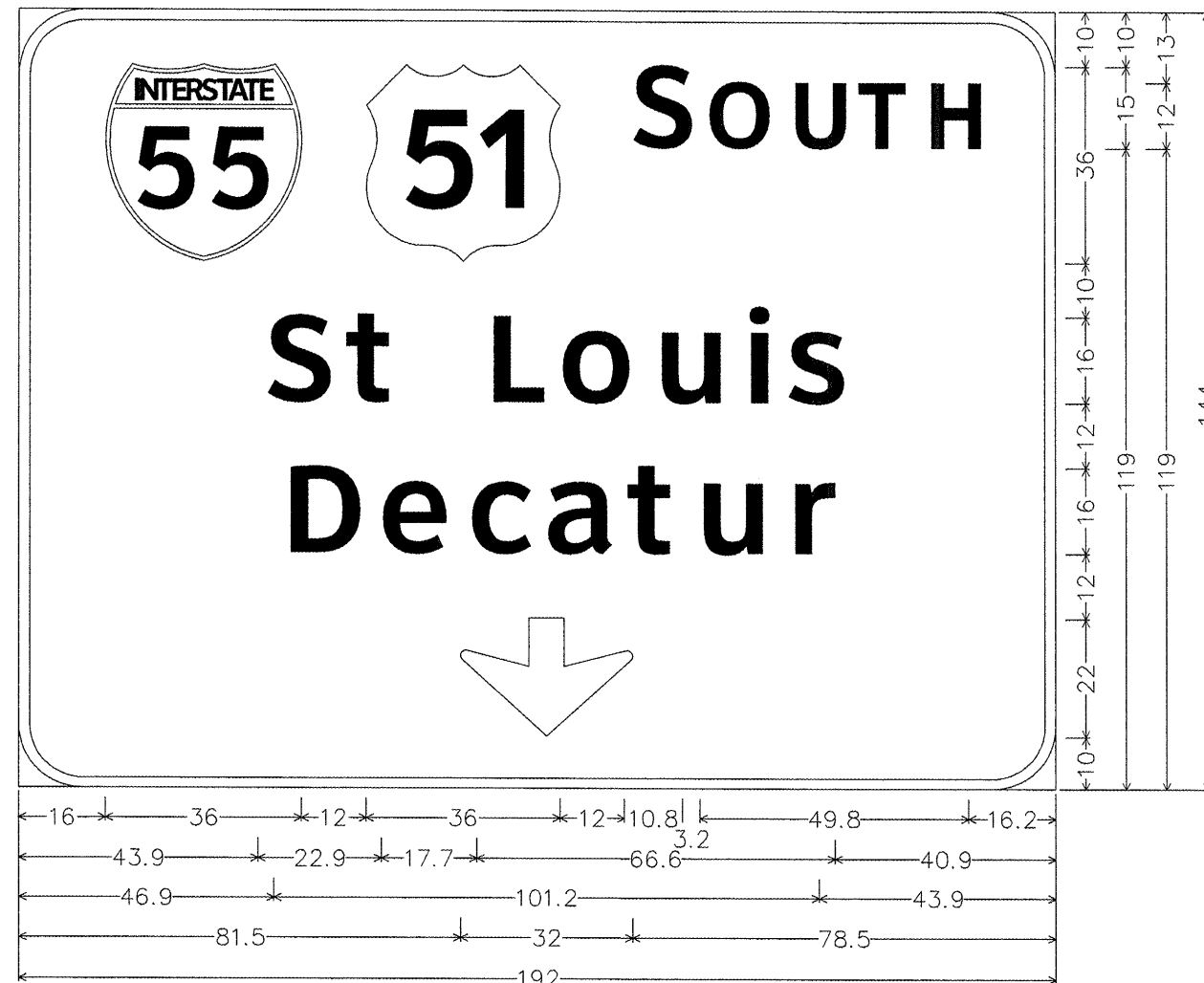
5-14 SB-A
5 S 057 I039 R000.50 - LEFT SIGN



12.0" Radius, 2.0" Border, White on Green;
 [N ORTH] ClearviewHwy-5-W; [Chicago] ClearviewHwy-5-W;
 Down Arrow 22.0" 270{;
 Table of letter and object lefts.

55	N	O	R	T	H	
12.8	60.8	76.3	91.8	103.7	116.0	
C	h	i	c	a	g	o
17.1	35.0	51.8	60.6	75.1	91.5	108.5
↓						
53.0						

5-14 SB-B
5 S 057 I039 R000.50 - MIDDLE SIGN



12.0" Radius, 2.0" Border, White on Green;
 [S OUTH] ClearviewHwy-5-W; [St Louis] ClearviewHwy-5-W; [Decatur] ClearviewHwy-5-W;
 Down Arrow 22.0" 270{;
 Table of letter and object lefts.

55	51	S	O	U	T	H
16.0	64.0	112.0	126.0	141.5	154.3	166.6
S	t	L	o	u	i	s
43.9	58.9	84.5	98.2	116.0	132.6	140.8
D	e	c	a	t	u	r
46.9	64.8	81.3	95.8	111.1	123.8	140.8
↓						
81.5						

FILE NAME =	USER NAME = ceerlockjd	DESIGNED - JAL	REVISED -
c:\p\work\p\widot\ceerlockjd\40266557.D	46179-sht-Sign_Details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED -	REVISOR -	REVISOR -
PLOT DATE = 10/7/2011	DATE - 04/26/11	REVISOR -	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING DETAILS - MCLEAN COUNTY
I-39

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	**	Various	178	100
CONTRACT NO. 46179				
ILLINOIS FED. AID PROJECT				

•VARIOUS
 ••D-5 OVD SIN STR REPL 2012-06