06-13-14 LETTING ITEM 002

INDEX OF SHEETS

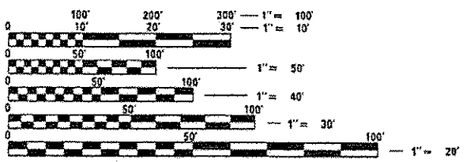
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3 - 5	SUMMARY OF QUANTITIES
6	SCHEDULE OF QUANTITIES
7 - 12	ROADWAY PLAN DETAILS
13- 19	SIGN PANEL REPORTS
20- 41	STRUCTURAL PLANS
42- 45	SOIL BORING LOGS

LIST OF STATE STANDARDS

STD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
630001-10	STEEL PLATE BEAM GUARDRAIL
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM EDGE OF PAVEMENT
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701400-07	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-08	LANE CLOSURE, FREEWAY / EXPRESSWAY
701406-08	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-08	LANE CLOSURE, MULTILANE, AT ENTRANCE RAMP OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701421-06	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >= 45 MPH TO 55 MPH
701428	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701456-03	PARTIAL EXIT RAMP CLOSURE FREEWAY /EXPRESSWAY
701901-03	TRAFFIC CONTROL DEVICES

PREPARED BY:

CIORBA GROUP | Consulting Engineers
5507 N. Cumberland Avenue, Suite 402, Chicago, Illinois 60656
Phone: 773.775.4009 • Fax: 773 775 4014 • www.ciorba.com
JOSEPH J. HOSANNA, JR., S.E.



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

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

STRUCTURAL ENGINEER: MAHMOUD ETEMADI

CONTRACT NO. 46288

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

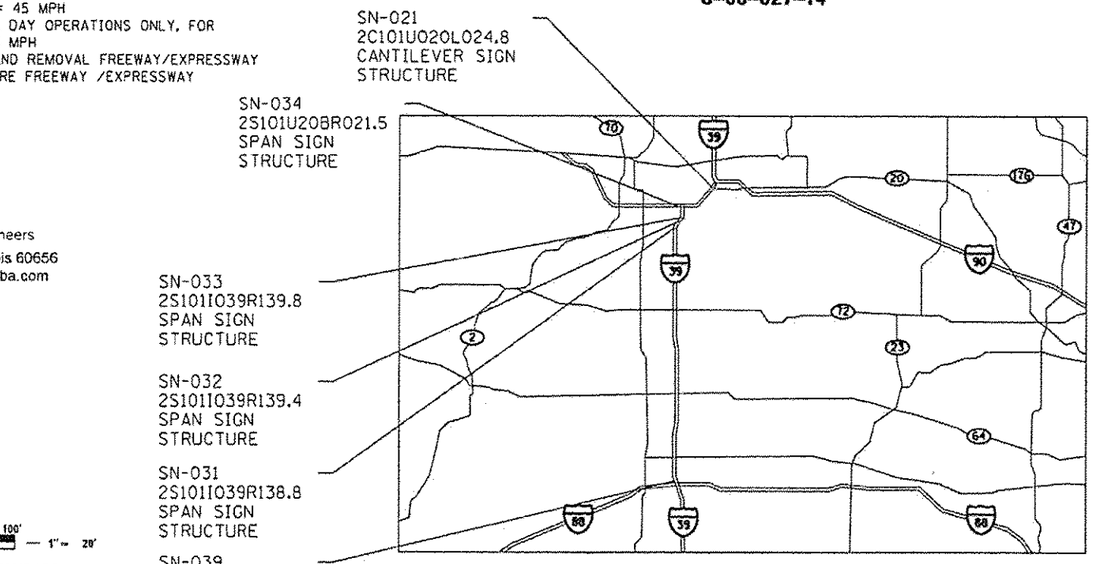
FAI ROUTE 39 (I-39)
SECTION: D-2 OVD SIN STR REPL 14-27
PROJECT: SIGN STRUCTURE REPLACEMENT
VARIOUS COUNTIES

C-60-027-14

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	45	1
	ILLINOIS	CONTRACT NO. 46288		

* D-2 OVD SIN STR REPL 14-27 ** VARIOUS

LOCATION OF SECTION INDICATED THUS: –



TRAFFIC DATA:

SN-021
2C101U020L024.8
HARRISON AVE.
M.P. 24.8
ADT (2013) = 39,600

SN-033
2S101I039R139.8
I-39
M.P. 139.8
ADT (2013) = 33,100

SN-031
2S101I039R138.8
I-39
M.P. 138.8
ADT (2013) = 29,300

SN-034
2S101U20BR021.5
US 20
M.P. 21.5
ADT (2013) = 34,800

SN-032
2S101I039R139.4
I-39
M.P. 139.4
ADT (2013) = 33,100

SN-039
2S071I039L118.7
I-39
M.P. 118.7
ADT (2013) = 31,100

STATE OF ILLINOIS
LICENSED STRUCTURAL ENGINEER
JOSEPH J. HOSANNA JR.
081-004854
DATE: 01/31/2014
SEAL EXPIRES: 11/30/2014

JOSEPH P. ATTANASEO
062-060315
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
DATE: 01/31/2014
SEAL EXPIRES: 11/30/2015

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 25 20 14
Justin Nevius
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Acting Engineer of Operations
May 9 20 14
John D. Baranzelli P.E. /bz
acting ENGINEER OF DESIGN AND ENVIRONMENT
May 9 20 14
Omer Osman, P.E. /bz
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY FURNISHED BASED UPON THE UNIT BID PRICE FOR THE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBERS OF JULIE:

NONE

IDOT IS NOT A MEMBER OF JULIE. IF YOU ARE NEAR ANY OVERHEAD LIGHTING, INTERSECTION LIGHTING, FIBER OPTIC OR TRAFFIC SIGNALS, CONTACT THE IDOT TRAFFIC OFFICE AT 815/284-5469 AT LEAST 48 HOURS PRIOR TO WORK.

ALL SURPLUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60. SEE SPECIAL PROVISIONS.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

ALL DISTURBED AREAS DUE TO THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE GRADED AND SEEDED AS DIRECTED BY THE ENGINEER. NOMINAL QUANTITIES FOR SEEDING, EROSION CONTROL BLANKET, AND FERTILIZERS HAVE BEEN PROVIDED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CONSTRUCTION ACTIVITIES AND LANE CLOSURES WITH ADJACENT CONTRACTS.

COMMITMENTS

ALL EXISTING SOILS OR EMBANKMENTS DISTURBED OR EXCAVATED DUE TO THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL REMAIN ON SITE AND SHALL BE DISPOSED OF WITHIN THE LIMITS OF THE STATE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.

100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY (100% STATE)	CONSTRUCTION CODE: ROADWAY 0021 RURAL	CONSTRUCTION CODE: MINOR STRUCTURES 0040 RURAL
25000300	SEEDING, CLASS 3	ACRE	0.75	0.75	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	68	68	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	68	68	
25100630	EROSION CONTROL BLANKET	SQ YD	3,630	3,630	
28000305	TEMPORARY DITCH CHECKS	FOOT	200	200	
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	92.3		92.3
* 63000017	STEEL PLATE BEAM GUARDRAIL, TYPE D, 6 FOOT POSTS	FOOT	300.0	300.0	
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	7	7	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	63	63	
67100100	MOBILIZATION	L SUM	1	1	
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	10	10	
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	1	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	6	6	

14

*Specialty Items

ENGINEERING CONSULTANT						
Ciorba Group, Inc. CONSULTING ENGINEERS	USER NAME = jottonoseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SUMMARY OF QUANTITIES	F.A.I. RTE.: VAR. / SECTION: * / COUNTY: ** / TOTAL SHEETS: 45 / SHEET NO.: 3
	PLOT SCALE = 100.0000 ' / in.	DRAWN - JPA	REVISED -		SCALE: N.T.S.	• D-2 OVD SIN STR REPL 14-27 / CONTRACT NO. 46288
	PLOT DATE = 1/31/2014	CHECKED - MJL	REVISED -		SHEET NO. 1 OF 3 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT
		DATE - 1/31/2014	REVISED -			

** WINNEBAGO & OGLE

CODE NO.	ITEM	UNIT	100% STATE TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0021 RURAL	MINOR STRUCTURES 0040 RURAL
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1	
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1	1	
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	13,000	13,000	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4,334	4,334	
72000200	SIGN PANEL - TYPE 2	SQ FT	45	45	
72000300	SIGN PANEL - TYPE 3	SQ FT	2,690	2,690	
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	484		484
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	140		140
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	288.25		288.25
73302210	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (36" X 7'-0")	FOOT	40		40
73400100	CONCRETE FOUNDATIONS	CU YD	149.6		149.6
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	38.3		38.3
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	5	5	

14

ENGINEERING CONSULTANT Ciorba Group, Inc. CONSULTING ENGINEERS	USER NAME = jattanasso PLOT SCALE = 100.0000 ' / in. PLOT DATE = 1/31/2014	DESIGNED - JPA DRAWN - JPA CHECKED - MJL DATE - 1/31/2014	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE REPLACEMENT
SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 2 OF 3 SHEETS | STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	45	4
* D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
		ILLINOIS FED. AID PROJECT		

** WINNEBAGO & OGLE

100% STATE

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0021 RURAL	CONSTRUCTION CODE MINOR STRUCTURES 0040 RURAL
	73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1	1	
	73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	11	11	
*	78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	FOOT	1,300	1,300	
	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	132	132	
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	32	32	
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	436	436	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	132	132	
	X7010410	SPEED DISPLAY TRAILER	CAL MO	1	1	
	X0325265	REMOVE ELECTRIC SERVICE	EACH	6	6	

* Specialty Items

Rev.

ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS	USER NAME = jattanasso	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SUMMARY OF QUANTITIES
	PLOT SCALE = 100.0000 '/ in.	DRAWN - JPA	REVISED -		SCALE: N.T.S.
	PLOT DATE = 1/31/2014	CHECKED - MJL	REVISED -		SHEET NO. 3 OF 3 SHEETS STA. TO STA.
		DATE - 1/31/2014	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	**	45	5

* D-2 OVD SIN STR REPL 14-27 — CONTRACT NO. 46288

ILLINOIS FED. AID PROJECT

** WINNEBAGO & OGLE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	LOCATION					
				SN-021	SN-031	SN-032	SN-033	SN-034	SN-039
				2C101U020L024.8	2S101I039R138.8	2S101I039R139.4	2S101I039R139.8	2S101U20BR021.5	2S071I039L118.7
25000300	SEEDING, CLASS 3	ACRE	0.75	0.10	0.13	0.13	0.13	0.13	0.13
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	68	10.5	11.5	11.5	11.5	11.5	11.5
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	68	10.5	11.5	11.5	11.5	11.5	11.5
25100630	EROSION CONTROL BLANKET	SQ YD	3,630	484	629	629	629	629	629
28000305	TEMPORARY DITCH CHECKS	FOOT	200	20	40	40	40	40	20
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	92.3	0	92.3	0	0	0	0
63000017	STEEL PLATE BEAM GUARDRAIL, TYPE D, 6 FOOT POSTS	FOOT	300	0	175	50	25	25	25
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	7	0	2	2	1	1	1
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	0	2	0	0	0	0
63200310	GUARDRAIL REMOVAL	FOOT	62.5	0	0	25	12.5	12.5	12.5
67100100	MOBILIZATION	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	10	0	3	3	0	2	2
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	6	2	0	0	2	1	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.17	0.17	0.17	0.17	0.17	0.17
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	13,000	0	3,900	3,900	0	2,600	2,600
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4,334	0	1,300	1,300	0	867	867
72000200	SIGN PANEL - TYPE 2	SQ FT	45	0	15	15	15	0	0
72000300	SIGN PANEL - TYPE 3	SQ FT	2,690	270	480	505	505	390	540
73300200	OVERHEAD SIGN STRUCTURE - SPAN, TYPE II-A (4'-6" X 5'-3")	FOOT	484	0	112	123	0	119	130
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	140	0	0	0	140	0	0
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	288.25	26.5	39	39	60.25	63.25	60.25
73302210	OVERHEAD SIGN STRUCTURE - CANTILEVER, TYPE III-C-A (36" X 7'-0")	FOOT	40	40	0	0	0	0	0
73400100	CONCRETE FOUNDATIONS	CU YD	149.6	0	36.7	38.1	0	35.8	39.0
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	38.3	12.3	26	0	0	0	0
73600100	REMOVE OVERHEAD SIGN STRUCTURE - SPAN	EACH	5	0	1	1	1	1	1
73600200	REMOVE OVERHEAD SIGN STRUCTURE - CANTILEVER	EACH	1	1	0	0	0	0	0
73700300	REMOVE CONCRETE FOUNDATION - OVERHEAD	EACH	11	1	2	2	2	2	2
78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	FOOT	1,300	0	325	325	0	325	325
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	132	0	33	33	0	33	33
78200410	GUARDRAIL MARKERS, TYPE A	EACH	32	8	8	4	4	4	4
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	0	2	0	0	0	0
78300100	PAVEMENT MARKING REMOVAL	SQ FT	436	0	109	109	0	109	109
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	132	0	33	33	0	33	33
X0325265	REMOVE ELECTRIC SERVICE	EACH	6	1	1	1	1	1	1

N:\PROJ\00220680.00\00220680.01\Design\Misc. Sheets\00220680.00-schedule01.dgn

ENGINEERING CONSULTANT
Ciorba Group, Inc.
CONSULTING ENGINEERS
8507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel 773.775.4049 Fax 773.775.4014
Email chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	
	DRAWN - JPA	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - MJL	REVISED -	
PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

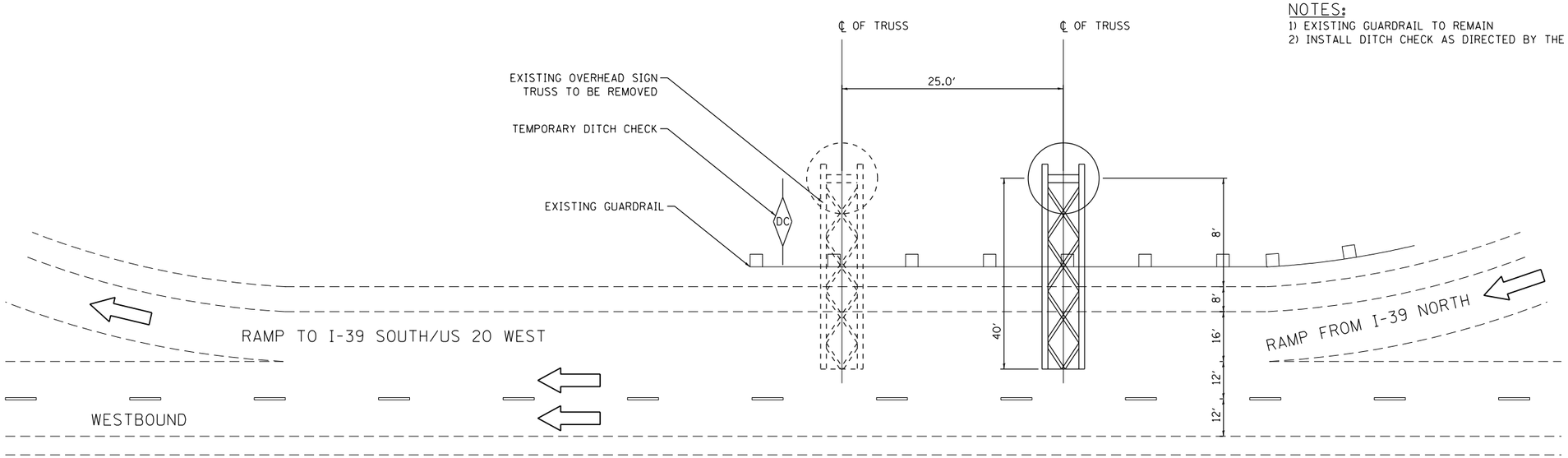
SIGN STRUCTURE REPLACEMENT
SCHEDULE OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	6
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

NOTES:
1) EXISTING GUARDRAIL TO REMAIN
2) INSTALL DITCH CHECK AS DIRECTED BY THE ENGINEER



N

2

SN-021
2C101U020L024.8

0 20' 40'
GRAPHIC SCALE

N:\PROJ\00220880.00\00220880.01\Design\Details\00220880.00-details01-RdwyPln.dgn

ENGINEERING CONSULTANT
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402
Chicago, Illinois 60656
Tel: 773.775.4009 Fax 773.775.4014
E-mail:chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - JPA	REVISED -
	DRAWN - JPA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

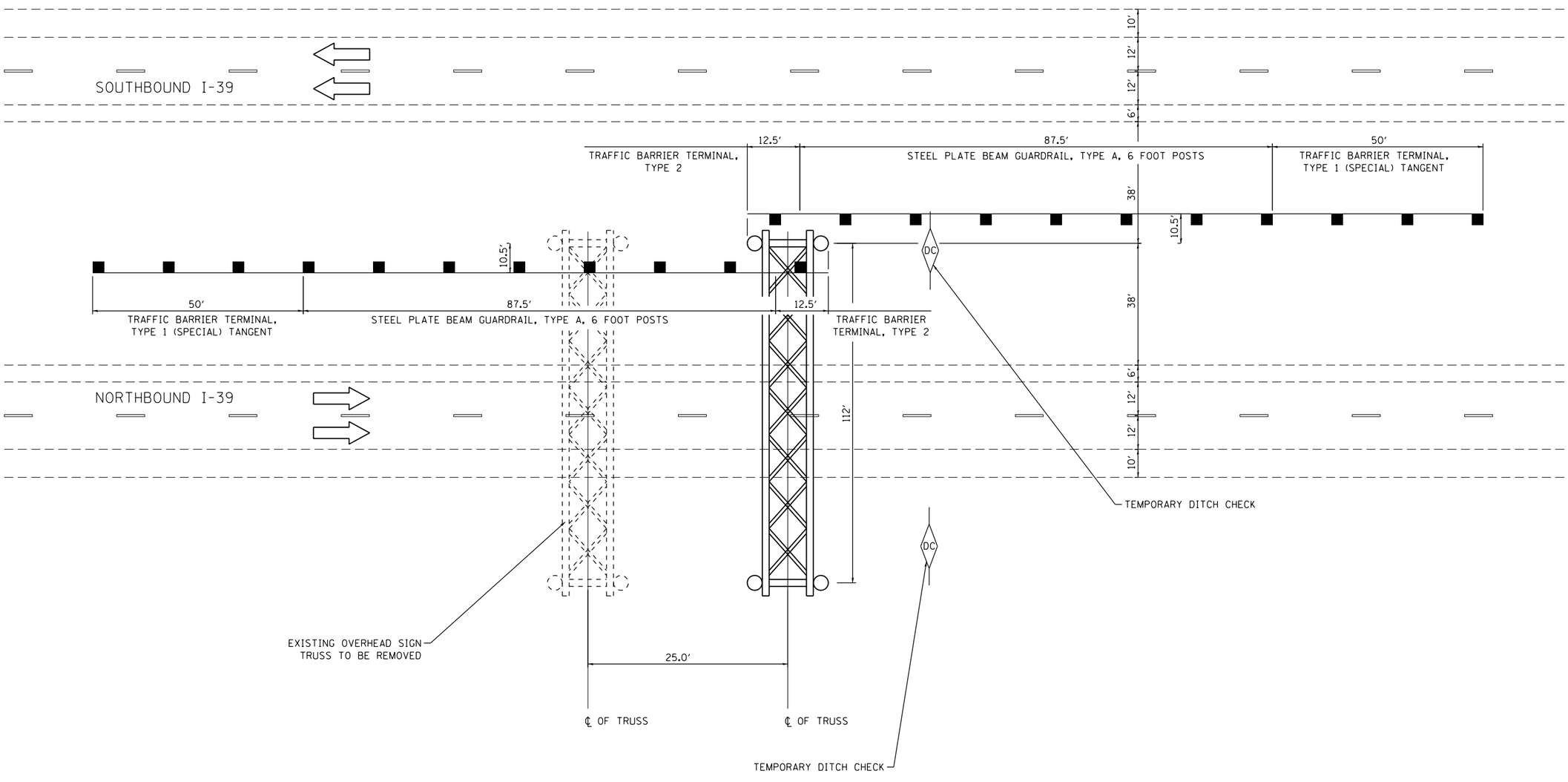
SIGN STRUCTURE REPLACEMENT
ROADWAY PLAN DETAIL – SN–021

SCALE: N.T.S. | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	7
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

NOTES:
1) INSTALL PROPOSED SOUTHBOUND AND NORTHBOUND GUARDRAIL AND TERMINAL SECTIONS AS SHOWN BELOW
2) INSTALL TEMPORARY DITCH CHECKS AS DIRECTED BY THE ENGINEER



SN-031
2S101I039R138.8

GRAPHIC SCALE 0 20' 40'

N:\PROJ\00220080.00\00220080.01\Design\Details\00220080.00-detail02_RdwyPln.dgn

ENGINEERING CONSULTANT	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -
Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 E-mail chicago@ciorba.com		DRAWN - JPA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE REPLACEMENT
ROADWAY PLAN DETAIL – SN–031

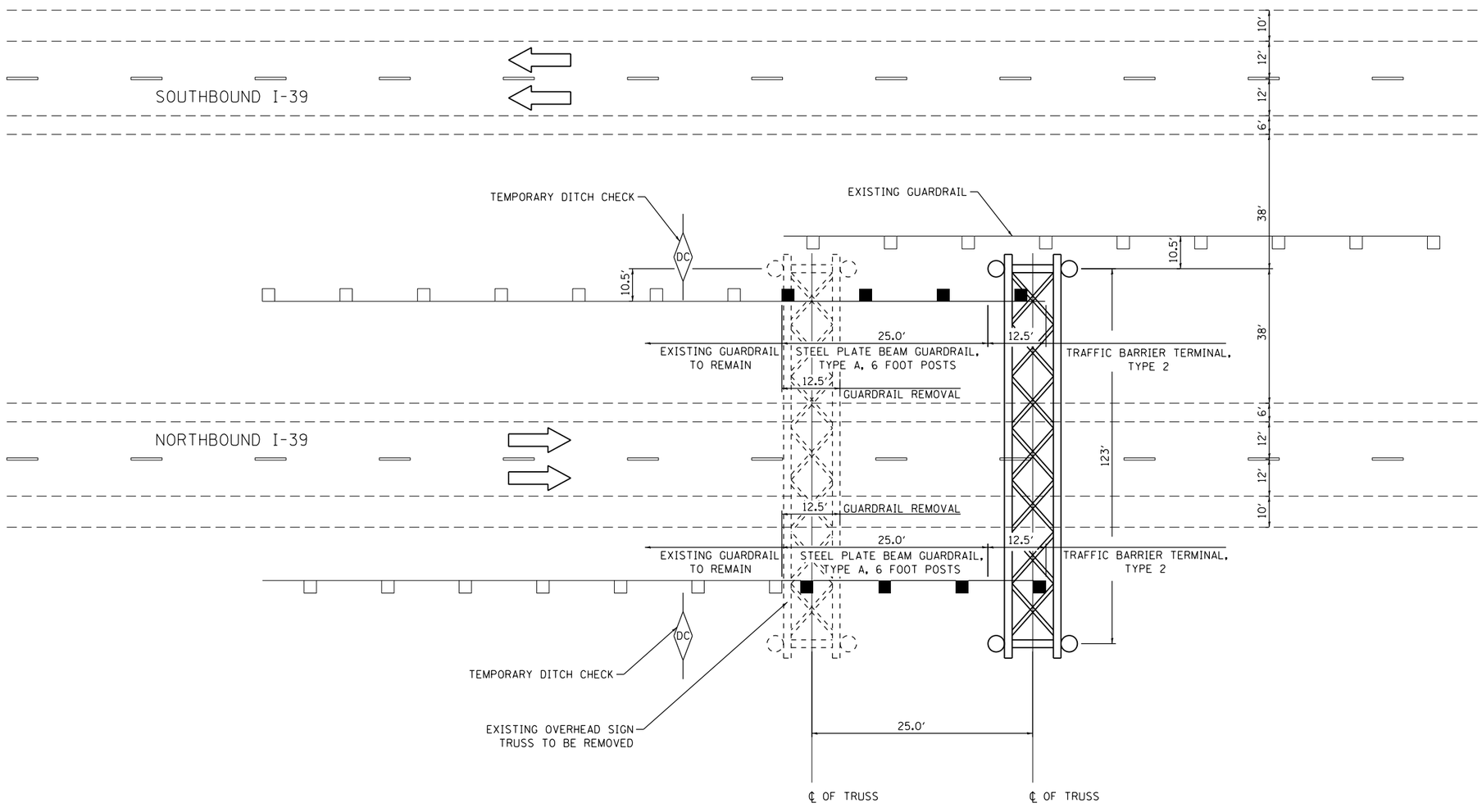
SCALE: N.T.S. | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	8
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE

NOTES:

1) REMOVE EXISTING TYPE 2 TERMINAL SECTIONS FOR NORTHBOUND INSIDE AND OUTSIDE GUARDRAIL RUNS
2) INSTALL 25 FT OF GUARDRAIL ATTACHING TO EXISTING GUARDRAIL FOR NORTHBOUND INSIDE AND OUTSIDE GUARDRAIL RUNS
3) INSTALL TYPE 2 TERMINAL SECTIONS TO PROPOSED NORTHBOUND INSIDE AND OUTSIDE GUARDRAIL
4) EXISTING SOUTHBOUND INSIDE GUARDRAIL TO REMAIN
5) INSTALL TEMPORARY DITCH CHECKS AS DIRECTED BY THE ENGINEER



SN-032
2S101I039R139.4

0 20' 40'
GRAPHIC SCALE

N:\PROJ\00220080.00\00220080.01\Design\Details\00220080.00-detail-d3_RdwyPln.dgn

ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT ROADWAY PLAN DETAIL – SN–032
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		

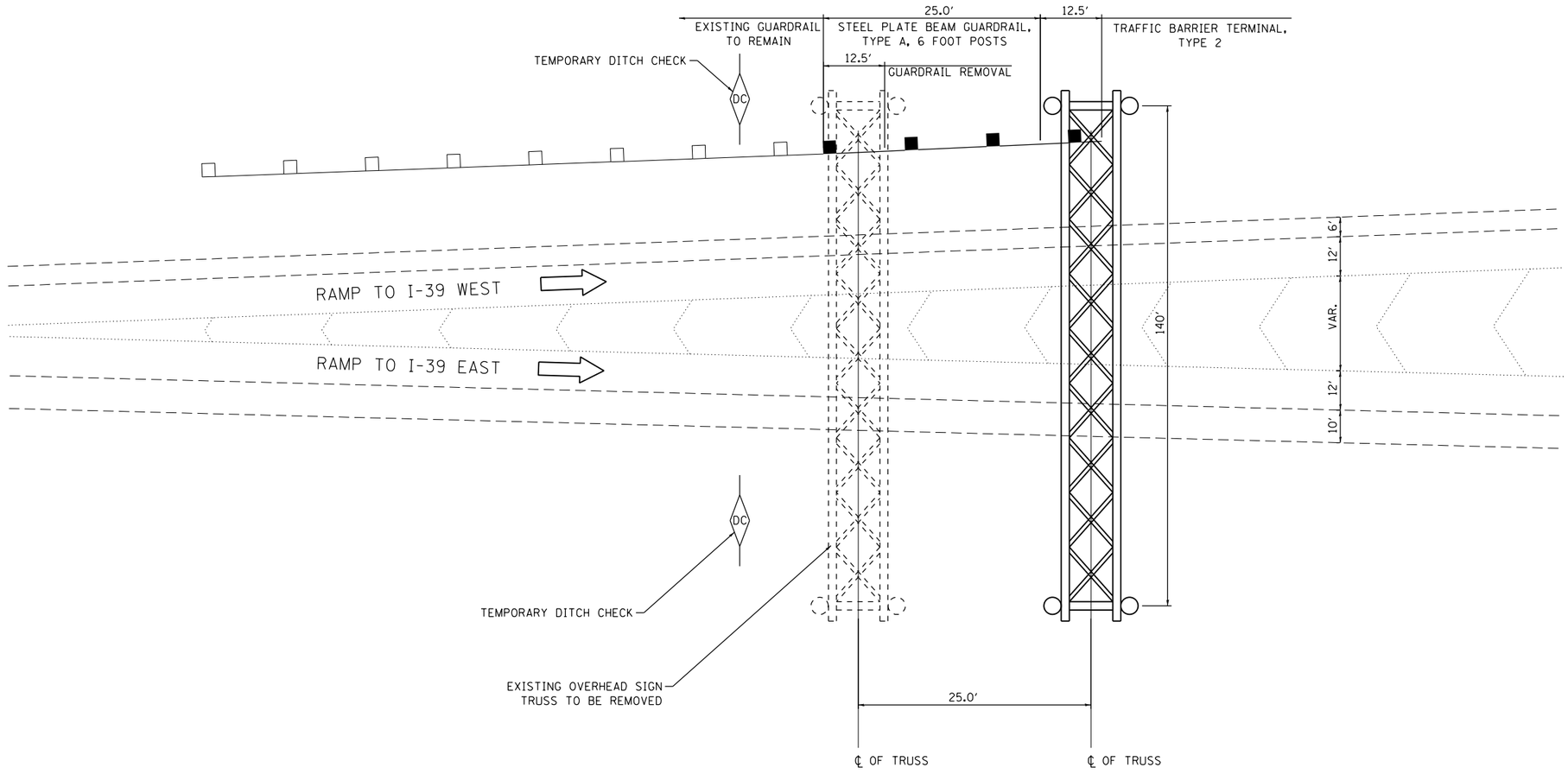
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	9
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

NOTES:

1) REMOVE EXISTING TYPE 2 TERMINAL SECTION FOR NORTHBOUND INSIDE GUARDRAIL RUN
2) INSTALL 25 FT OF GUARDRAIL ATTACHING TO EXISTING GUARDRAIL FOR NORTHBOUND INSIDE GUARDRAIL RUN
3) INSTALL TYPE 2 TERMINAL SECTION TO PROPOSED NORTHBOUND INSIDE GUARDRAIL
4) INSTALL TEMPORARY DTICH CHECKS AS DIRECTED BY THE ENGINEER

N



SN-033
2S101I039R139.8

0 20' 40'
GRAPHIC SCALE

N:\PROJ\00220080.00\00220080.01\Design\Details\00220080.00-details04_RdwyPln.dgn

ENGINEERING CONSULTANT	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -
Ciorba Group, Inc. CONSULTING ENGINEERS 2507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email:chicago@ciorba.com		DRAWN - JPA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE REPLACEMENT
ROADWAY PLAN DETAIL – SN–033

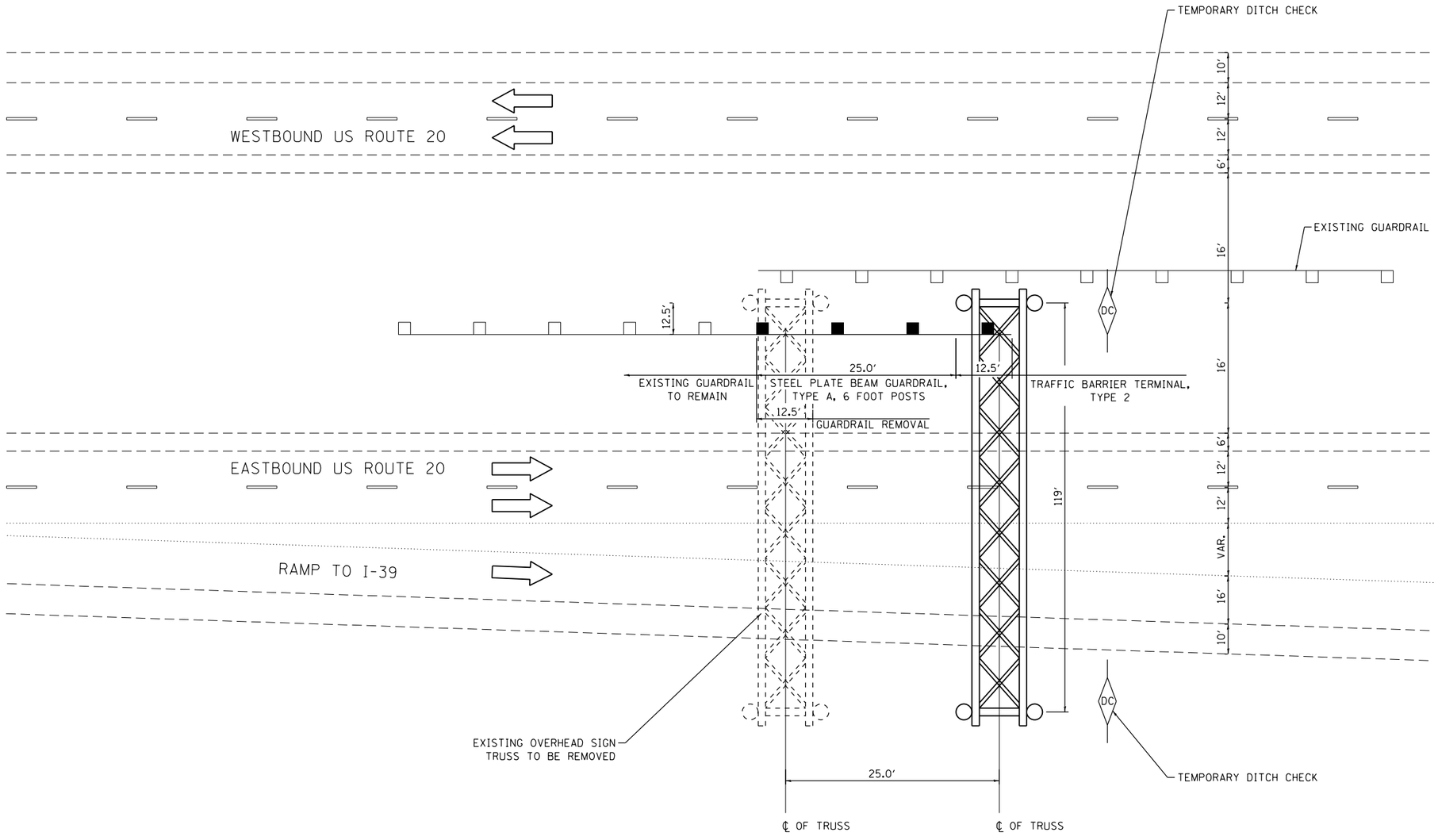
SCALE: N.T.S. | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	10
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

NOTES:
1) REMOVE EXISTING TYPE 2 TERMINAL SECTION FOR EASTBOUND INSIDE GUARDRAIL RUN
2) INSTALL 25 FT OF GUARDRAIL ATTACHING TO EXISTING GUARDRAIL FOR EASTBOUND INSIDE GUARDRAIL RUN
3) INSTALL TYPE 2 TERMINAL SECTION TO PROPOSED EASTBOUND INSIDE GUARDRAIL
4) EXISTING WESTBOUND INSIDE GUARDRAIL TO REMAIN
5) INSTALL TEMPORARY DITCH CHECKS AS DIRECTED BY THE ENGINEER

N



SN-034
2S101U20BR021.5

0 20' 40'
GRAPHIC SCALE

N:\PROJ\00220880.00\00220880.01\Design\Details\00220880.00-details05_RdwyPln.dgn

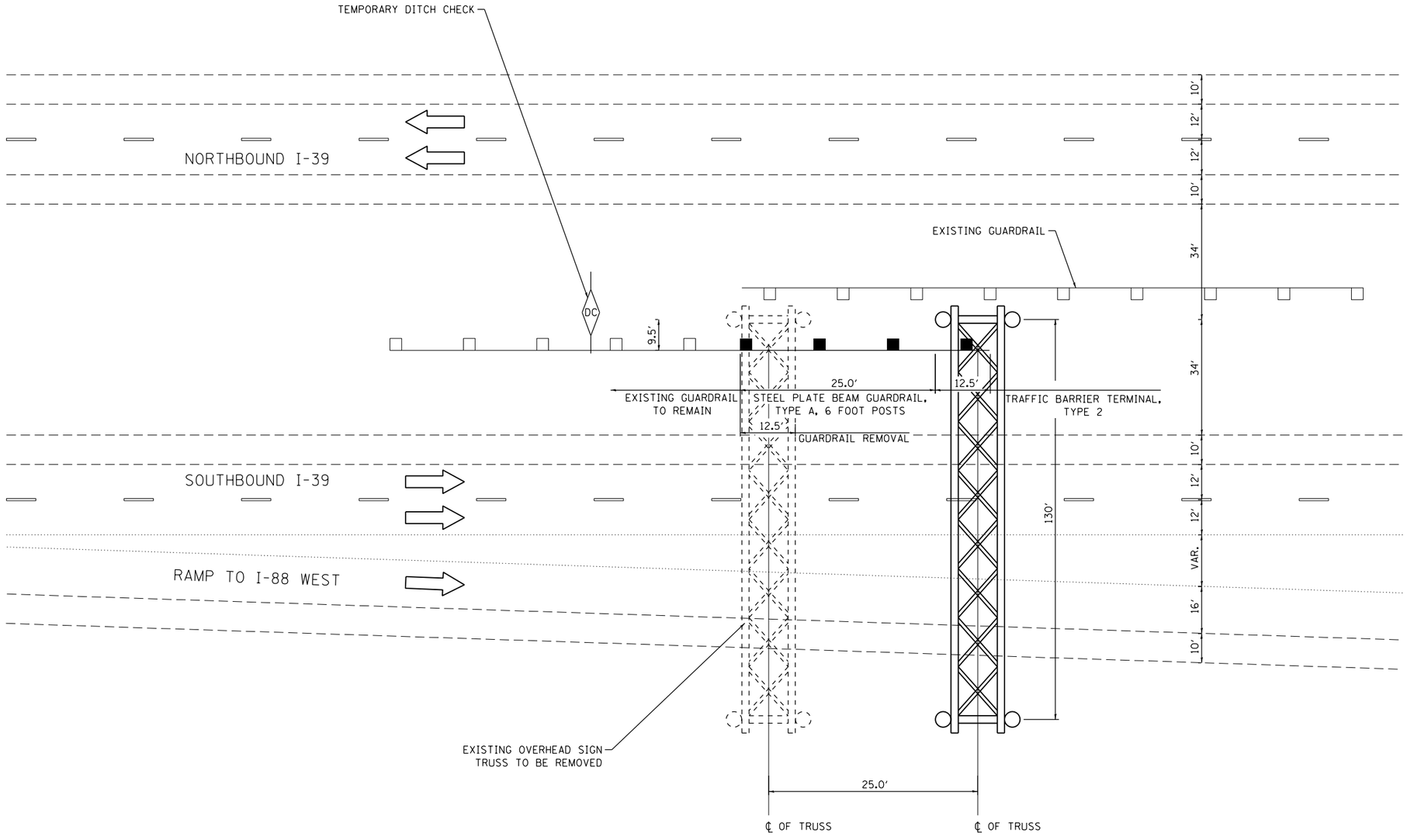
ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS 2507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 E-mail:chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT ROADWAY PLAN DETAIL – SN–034
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	11
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

NOTES:

1) REMOVE EXISTING TYPE 2 TERMINAL SECTION FOR SOUTHBOUND INSIDE GUARDRAIL RUN
2) INSTALL 25 FT OF GUARDRAIL ATTACHING TO EXISTING GUARDRAIL FOR SOUTHBOUND INSIDE GUARDRAIL RUN
3) INSTALL TYPE 2 TERMINAL SECTION TO PROPOSED SOUTHBOUND INSIDE GUARDRAIL
4) EXISTING NORTHBOUND INSIDE GUARDRAIL TO REMAIN
5) INSTALL TEMPORARY DITCH CHECK AS DIRECTED BY THE ENGINEER



SN-039
2S071I039L118.7

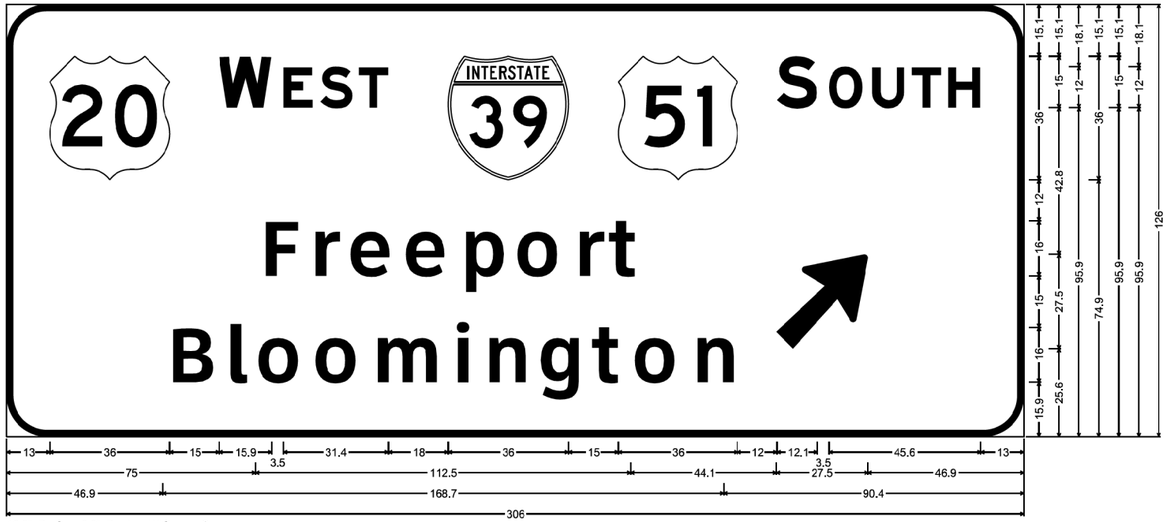
0 20' 40'
GRAPHIC SCALE

N:\PROJ\00220080.00\00220080.01\Design\Details\00220080.00-details06_RdwyPln.dgn

ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS 8501 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel: 773.775.4009 Fax: 773.775.4014 E-mail:chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT ROADWAY PLAN DETAIL – SN–039
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MJL	REVISED -		
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		SCALE: N.T.S. | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	12
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE



12.0" Radius, 2.0" Border, White on Green;
[W EST] E Mod 2K; [S OUTH] E Mod 2K; [Freeport] ClearviewHwy-5-W; [Bloomington] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°;
Table of letter and object lefts.

13.0	W 64.0	E 83.4	S 94.4	T 105.9	132.8	183.8	S 231.8	O 247.4	U 260.4	T 272.3	H 283.3
F 75.0	r 89.9	e 101.3	e 117.8	p 135.0	o 151.4	r 169.2	t 179.6	231.6			
B 46.9	l 64.4	o 73.6	o 90.8	m 108.6	i 132.5	n 142.0	g 158.4	t 174.5	o 186.5	n 204.4	

SN-021
2C101U020L024.8

N:\PROJ\02220880.00\02220880.01\Design\Spring_Signing\02220880.00-SignReports01_SN-021.dgn

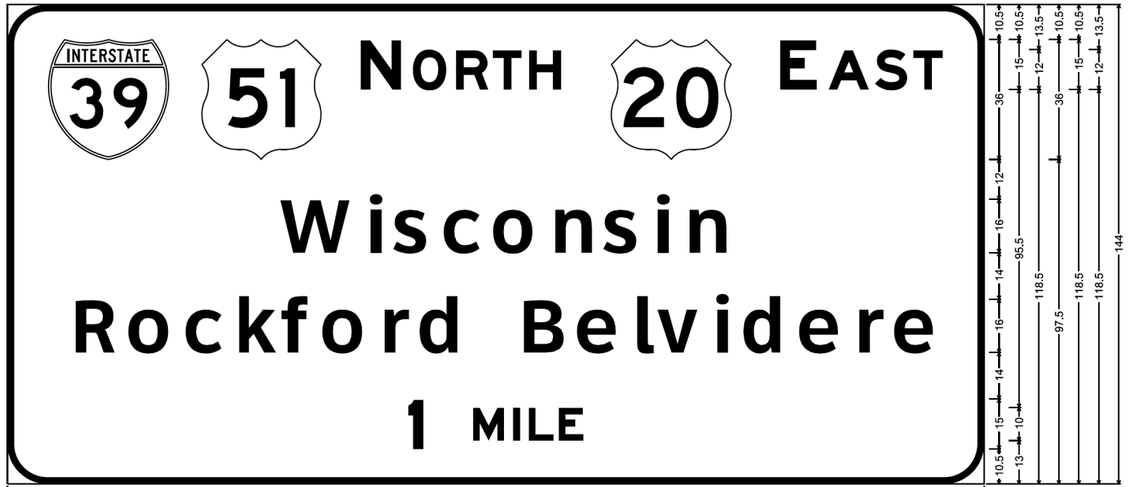
ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SIGN PANEL REPORT – SN-021
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -		
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	13
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS	FED. AID PROJECT			

•• WINNEBAGO & OGLE

3.0" Radius, 1.3" Border, 0.8" Indent, Black on Yellow;
[LEFT] E 2K;
12.0" Radius, 2.0" Border, White on Green;
[W EST] E Mod 2K; Symbol RA010; [Rockford] ClearviewHwy-5-W; [Freeport] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E Mod 2K; Down Arrow 22.0" 270°; [ONLY] E Mod 2K;
Table of letter and object lefts.

L 12.3	E 23.3	F 34.7	T 44.7					
20 14.9	W 65.9	E 85.3	S 96.3	T 107.9	✈ 128.7			
R 26.0	o 42.7	c 59.9	k 75.3	f 89.5	o 101.2	r 119.0	d 130.4	
F 27.7	r 42.6	e 54.0	e 70.6	p 87.8	o 104.1	r 121.9	t 132.3	
E 13.6	X 24.2	I 37.2	T 41.7	⇩ 62.6	O 106.6	N 119.6	L 132.6	Y 142.2



12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E Mod 2K; [E AST] E Mod 2K; [Wisconsin] ClearviewHwy-5-W; [Rockford Belvidere] ClearviewHwy-5-W; [1 MILE] E Mod 2K;
Table of letter and object lefts.

39 12.3	51 58.3	N 106.3	O 122.0	R 134.9	T 146.0	H 157.0	20 181.7	E 232.7	A 247.3	S 261.3	T 272.8			
W 80.6	l 106.2	s 114.3	c 129.1	o 143.9	n 161.8	s 177.6	l 192.7	n 202.2						
R 17.4	o 34.1	c 51.3	k 66.7	f 80.9	o 92.6	r 110.4	d 121.8	B 152.3	e 169.2	l 186.4	v 194.4	i 210.5	d 219.2	e 236.2	r 253.4	e 264.8
1 120.6	M 140.1	I 152.2	L 157.0	E 166.0										

SN-031
2S1011039R138.8

N:\PROJ\0220080.00\0220080.01\Design\Signing\0220080.00-SignReports02_SN-031.dgn

ENGINEERING CONSULTANT	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SIGN PANEL REPORT – SN–031	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Clorba Group, Inc. CONSULTING ENGINEERS 6507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@clorba.com		DRAWN - JPA	REVISED -			VAR.	•	••	45	14
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. SHEET NO. 2 OF 7 SHEETS STA. TO STA.	• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -			ILLINOIS	FED. AID PROJECT			

•• WINNEBAGO & OGLE

3.0" Radius, 1.3" Border, 0.8" Indent, Black on Yellow;
[LEFT] E 2K;
12.0" Radius, 2.0" Border, White on Green;
[W EST] E Mod 2K; Symbol RA010; [Rockford] ClearviewHwy-5-W; [Freeport] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E Mod 2K; Down Arrow 22.0" 270°; [ONLY] E Mod 2K;
Table of letter and object lefts.

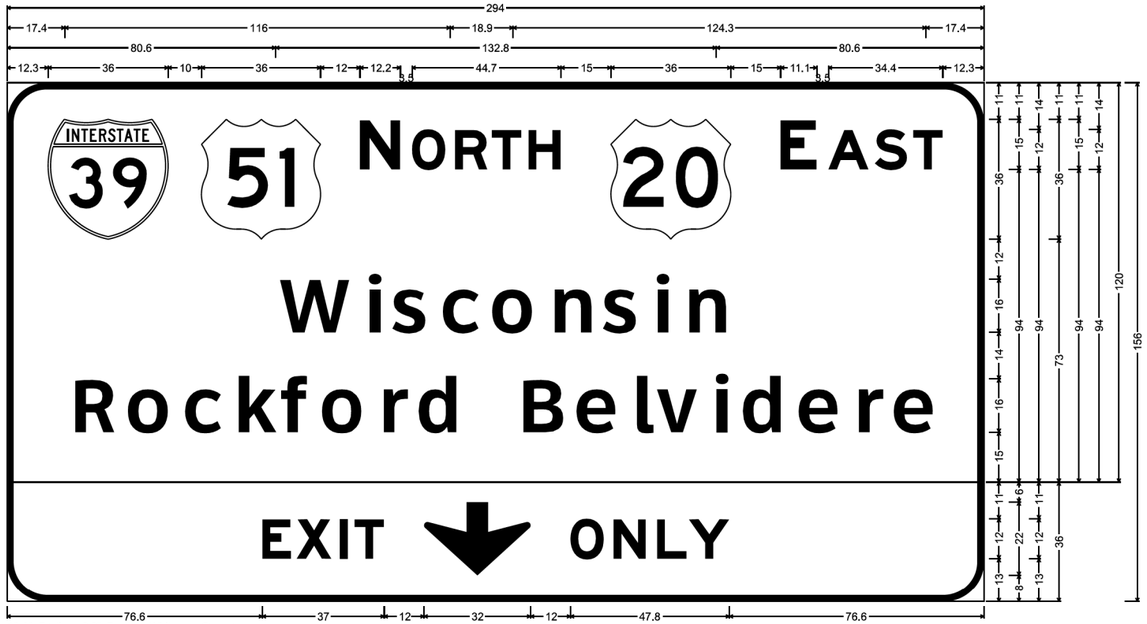
L 12.3	E 23.3	F 34.7	T 44.7

14.9	W 65.9	E 85.3	S 96.3	T 107.9	128.7	

R 26.0	o 42.7	c 59.9	k 75.3	f 89.5	o 101.2	r 119.0	d 130.4	

F 27.7	r 42.6	e 54.0	e 70.6	p 87.8	o 104.1	r 121.9	t 132.3	

E 13.6	X 24.2	I 37.2	T 41.7	62.6	O 106.6	N 119.6	L 132.6	Y 142.2



12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E Mod 2K; [E AST] E Mod 2K; [Wisconsin] ClearviewHwy-5-W; [Rockford Belvidere] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E Mod 2K; Down Arrow 22.0" 270°; [ONLY] E Mod 2K;
Table of letter and object lefts.

12.3	58.3	N 106.3	O 122.0	R 134.9	T 146.0	H 157.0	181.7	E 232.7	A 247.3	S 261.3	T 272.8

W 80.6	i 106.2	s 114.3	c 129.1	o 143.9	n 161.8	s 177.6	i 192.7	n 202.2	

R 17.4	o 34.1	c 51.3	k 66.7	f 80.9	o 92.6	r 110.4	d 121.8	B 152.3	e 169.2	l 186.4	v 194.4	i 210.5	d 219.2	e 236.2	r 253.4	e 264.8					

E 76.6	X 87.2	I 100.2	T 104.7	125.6	O 169.6	N 182.6	L 195.6	Y 205.2	

SN-032
2S101I039R139.4

N:\PROJ\00220080.00\00220080.01\Design\Spring_Signing\00220080.00-SignReports03-SN-032.dgn

ENGINEERING CONSULTANT				
Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel: 773.775.4009 Fax 773.775.4014 Email:chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN - JPA	REVISED -	
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -	
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -	

SIGN STRUCTURE REPLACEMENT
SIGN PANEL REPORT – SN–032

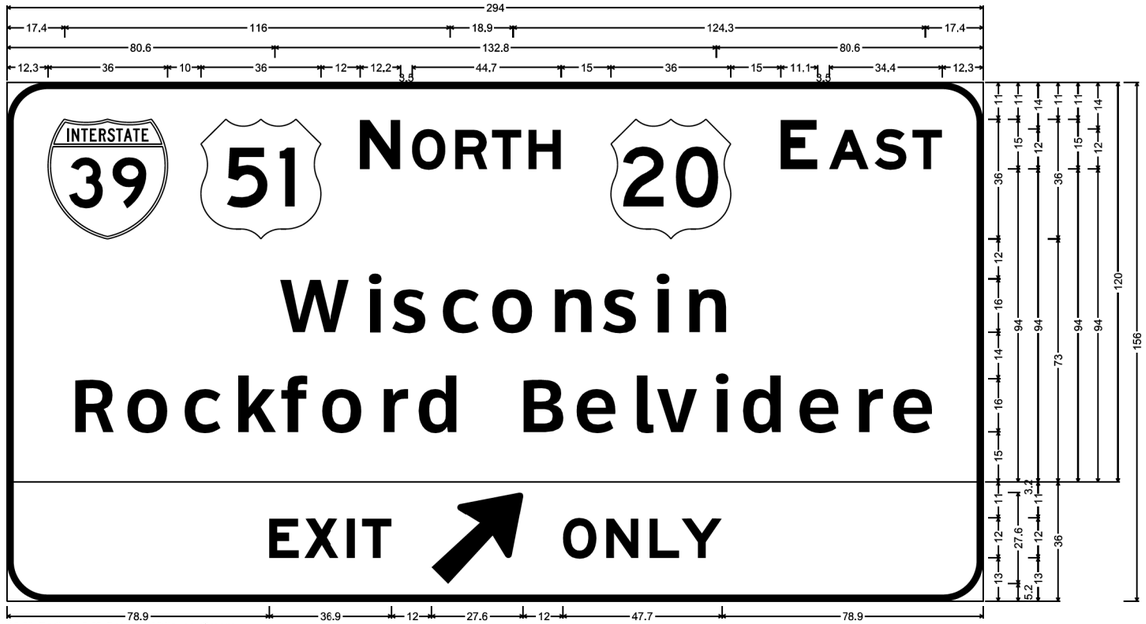
SCALE: N.T.S. | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	15
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

•• WINNEBAGO & OGLE

3.0" Radius, 1.3" Border, 0.8" Indent, Black on Yellow;
[LEFT] E 2K;
12.0" Radius, 2.0" Border, White on Green;
[W EST] E Mod 2K; Symbol RA010; [Rockford] ClearviewHwy-5-W; [Freeport] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E Mod 2K; Down Arrow 22.0" 270°; [ONLY] E Mod 2K;
Table of letter and object lefts.

L 12.3	E 23.3	F 34.7	T 44.7					
W 14.9	W 65.9	E 85.3	S 96.3	T 107.9	128.7			
R 26.0	o 42.7	c 59.9	k 75.3	f 89.5	o 101.2	r 119.0	d 130.4	
F 27.7	r 42.6	e 54.0	e 70.6	p 87.8	o 104.1	r 121.9	t 132.3	
E 13.6	X 24.2	I 37.2	T 41.7	62.6	O 106.6	N 119.6	L 132.6	Y 142.2



12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E Mod 2K; [E AST] E Mod 2K; [Wisconsin] ClearviewHwy-5-W; [Rockford Belvidere] ClearviewHwy-5-W;
12.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] E Mod 2K; Arrow 160 - 35.0° 45°; [ONLY] E Mod 2K;
Table of letter and object lefts.

12.3	58.3	N 106.3	O 122.0	R 134.9	T 146.0	H 157.0	181.7	E 232.7	A 247.3	S 261.3	T 272.8	
W 80.6	i 106.2	s 114.3	c 129.1	o 143.9	n 161.8	s 177.6	i 192.7	n 202.2				
R 17.4	o 34.1	c 51.3	k 66.7	f 80.9	o 92.6	r 110.4	d 121.8	B 152.3	e 169.2	l 186.4	v 194.4	i 210.5	d 219.2	e 236.2	r 253.4	e 264.8
E 78.9	X 89.4	I 102.4	T 107.0	127.8	O 167.4	N 180.3	L 193.4	Y 203.0				

SN-033
2S101I039R139.8

ENGINEERING CONSULTANT	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -
Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com		DRAWN - JPA	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

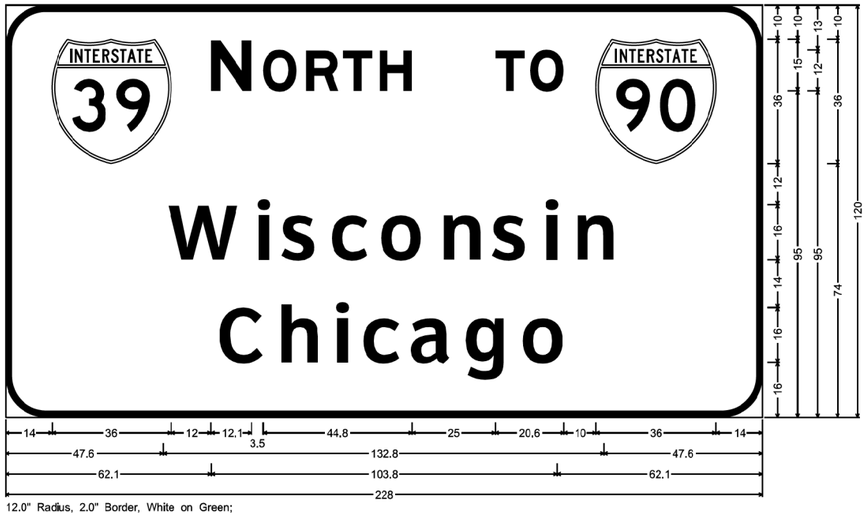
SIGN STRUCTURE REPLACEMENT
SIGN PANEL REPORT – SN–033

SCALE: N.T.S. | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	16
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

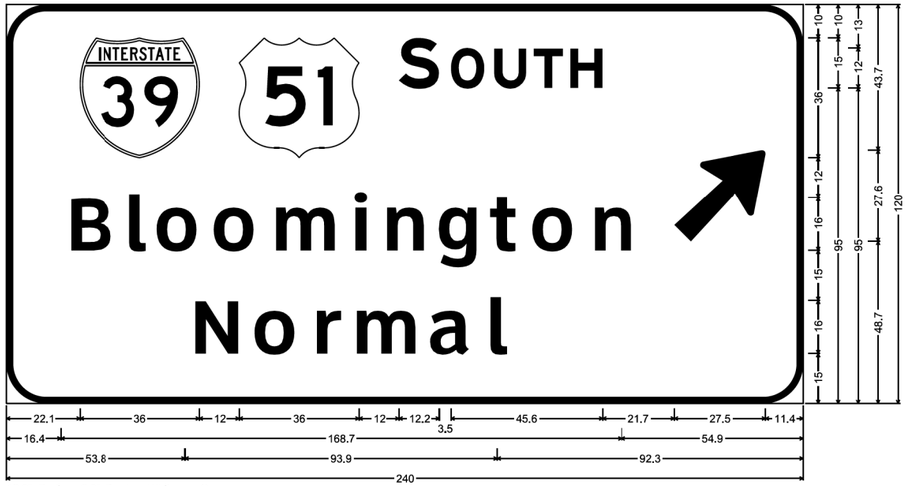
•• WINNEBAGO & OGLE

N:\PROJ\02220880.00\02220880.01\Design\Str-ping_Signing\02220880.00-SignReports04_SN-033.dgn



12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E Mod 2K; [TO] E Mod 2K; [Wisconsin] ClearviewHwy-5-W; [Chicago] ClearviewHwy-5-W;
Table of letter and object lefts.

39	N	O	R	T	H	T	O	39
14.0	62.0	77.6	90.6	101.6	112.7	147.4	157.9	178.0
W	i	s	c	o	n	s	i	n
47.6	73.2	81.3	96.1	110.9	128.8	144.6	159.7	169.2
C	h	i	c	a	g	o		
62.1	80.0	96.8	105.5	120.1	136.4	153.5		



12.0" Radius, 2.0" Border, White on Green;
[S OUTH] E Mod 2K; [Bloomington] ClearviewHwy-5-W; [Normal] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°;
Table of letter and object lefts.

39	51	S	O	U	T	H			
22.1	70.1	118.1	133.8	146.7	158.6	169.6	201.1		
B	l	o	o	m	l	n	g	t	o	n
16.4	33.9	43.1	60.3	78.1	102.0	111.5	127.9	144.0	156.0	173.9
N	o	r	m	a	l				
53.8	72.5	90.3	102.4	125.6	142.5				

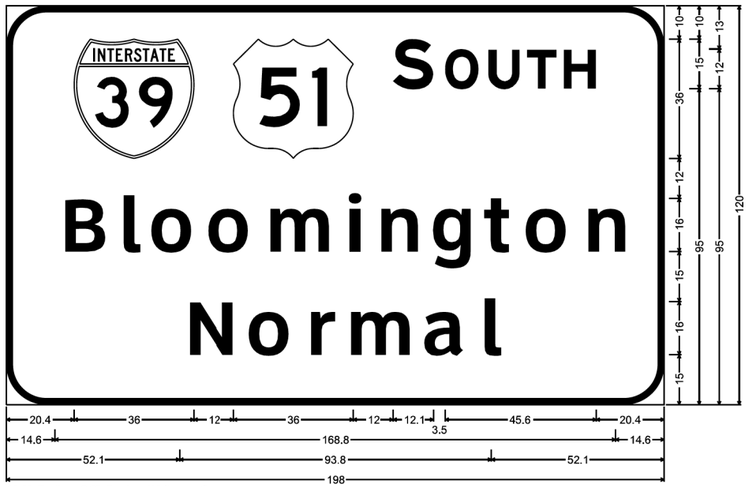
SN-034
2S101U20BR021.5

N:\PROJ\00220080.00\0220080.01\Design\Striping Signing\00220080.00-SignReport85_SN-034.dgn

ENGINEERING CONSULTANT					
Ciorba Group, Inc. CONSULTING ENGINEERS 8507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 E-mail: chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SIGN PANEL REPORT – SN–034
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	17
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

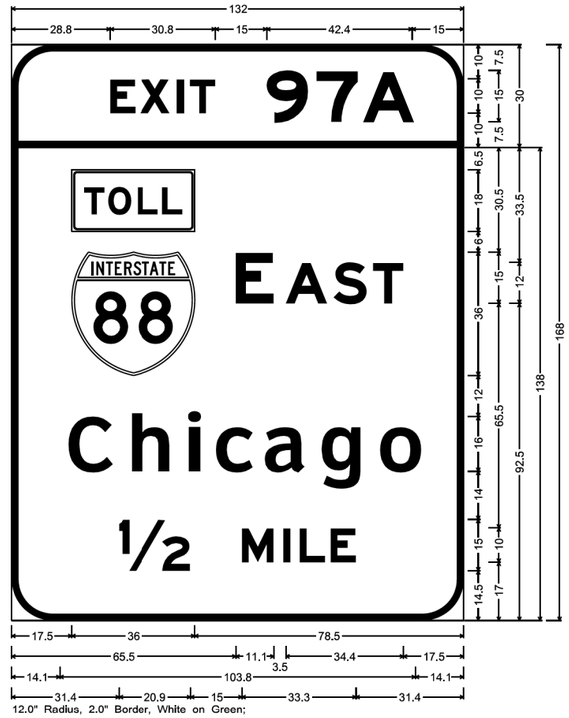


12.0" Radius, 2.0" Border, White on Green;
[S OUTH] E Mod 2K; [Bloomington] ClearviewHwy-5-W; [Normal] ClearviewHwy-5-W;
Table of letter and object lefts.

20.4	68.4	S 116.4	O 132.0	U 145.0	T 156.9	H 167.9

B 14.6	l 32.2	o 41.4	o 58.5	m 76.4	i 100.2	n 109.7	g 126.2	t 142.3	o 154.3	n 172.2

N 52.1	o 70.8	r 88.6	m 100.6	a 123.9	l 140.8	



12.0" Radius, 2.0" Border, White on Green;
[EXIT 97B] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[E AST] E Mod 2K; [Chicago] ClearviewHwy-5-W; [½ MILE] E Mod 2K;
Table of distances between letter and object lefts.

28.8	E 8.8	X 10.8	I 3.8	T 22.4	9 14.5	7 15.8	A 12.1	15.0

17.5	EXIT 36.0	78.5	

17.5	97B 48.0	E 14.6	A 14.0	S 11.5	T 8.9	17.5	

C 14.1	h 17.9	i 16.8	c 8.7	a 14.6	g 16.3	o 17.1	12.4	14.1

31.4	½ 35.9	M 12.1	I 4.8	L 9.0	E 7.4	31.4

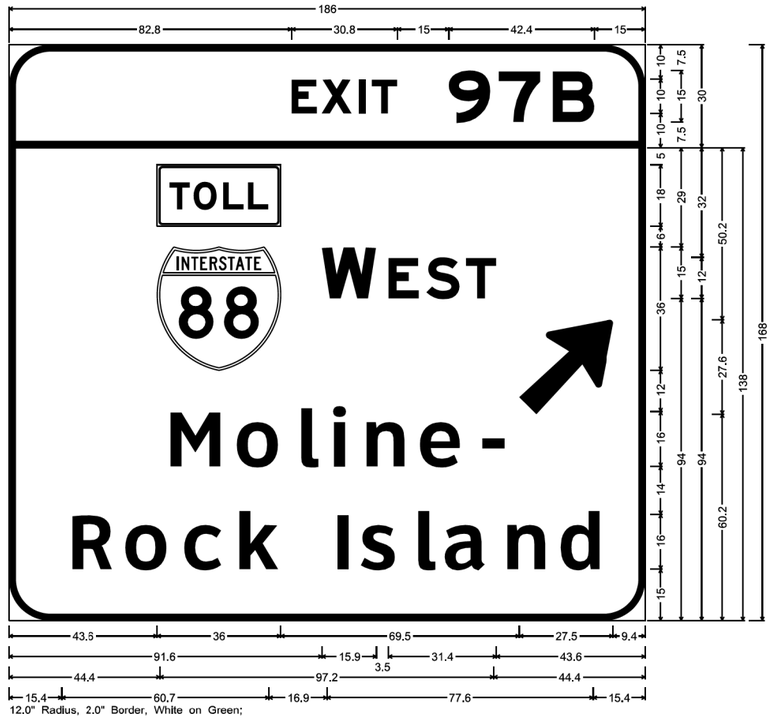
SN-039
2S071I039L118.7

N:\PROJ\02220080.00\02220080.01\Design\Signing\02220080.00-SignReports06_SN-039.dgn

ENGINEERING CONSULTANT					
Clorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 E-mail chicago@clorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN STRUCTURE REPLACEMENT SIGN PANEL REPORT – SN–039
		DRAWN - JPA	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -		SCALE: N.T.S. SHEET NO. 6 OF 7 SHEETS STA. TO STA.
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	18
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

•• WINNEBAGO & OGLE



12.0" Radius, 2.0" Border, White on Green;
[EXIT 97B] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[W EST] E Mod 2K; [Moline-] ClearviewHwy-5-W; [Rock Island] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°;
Table of distances between letter and object lefts.

	E	X	I	T	9	7	B		
82.8	8.8	10.8	3.8	22.4	14.5	15.8	12.1	15.0	

43.6	105.5	27.5	9.4

	W	E	S	T			
43.6	48.0	19.4	11.0	11.5	8.9	43.6	

	M	o	l	i	n	e	-		
44.4	20.2	17.8	9.6	9.5	16.4	17.4	6.3	44.4	

	R	o	c	k	I	s	l	a	n	d	
15.4	16.7	17.2	15.4	28.3	8.2	15.3	9.0	17.0	16.4	11.7	15.4

SN-039
2S071I039L118.7

N:\PROJ\0220080.00\0220080.03\0220080.01\Design\Striping_Signing\0220080.00-SignReports07_SN-039.dgn

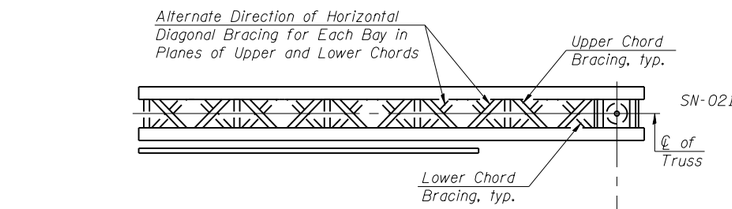
ENGINEERING CONSULTANT				
Clorba Group, Inc. CONSULTING ENGINEERS 6507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@clorba.com	USER NAME = jattanaseo	DESIGNED - JPA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - JPA	REVISED -	
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJL	REVISED -	
	PLOT DATE = 1/31/2014	DATE - 1/31/2014	REVISED -	

SIGN STRUCTURE REPLACEMENT
SIGN PANEL REPORT – SN–039

SCALE: N.T.S. | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

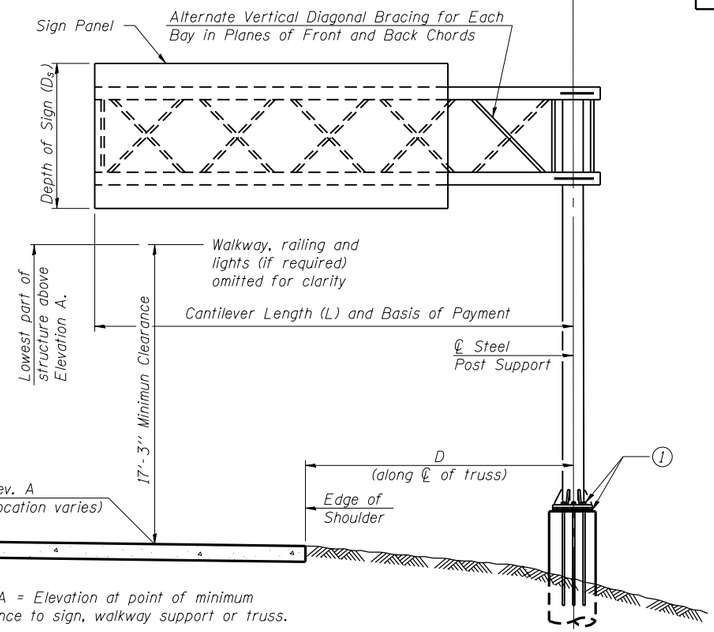
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	19
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE



TYPICAL PLAN
(Walkway not shown)

Structure Number	Station	Design Truss Type	Cantilever Length (L)	Elev. A	Dim. D	D_s	Total Sign Area
2C101U020L024.8		III-C-A	40'-0"	781.13	8' - 0"	10' - 6"	268 Sq.Ft.

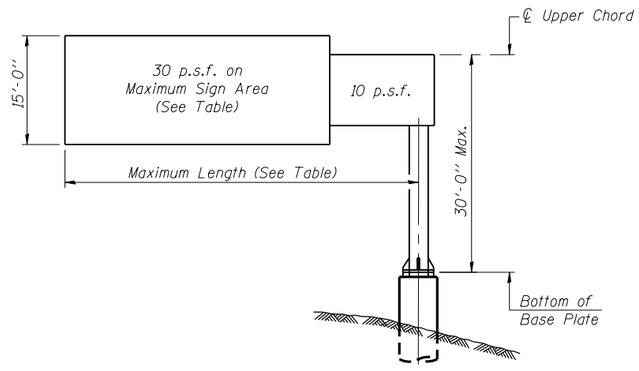


Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

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.

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.
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 Specificiations.

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 Concrete 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	40.0
Overhead Sign Structure Walkway, TypeA	Foot	26.5
Drilled Shaft Concrete Foundations	Cu Yd	12.3

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-021-CN_-_S001.dgn

OSC-A-1 8-21-13

Ciorba Group, Inc.
CONSULTING ENGINEERS
5007 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
Email: chicago@ciorba.com

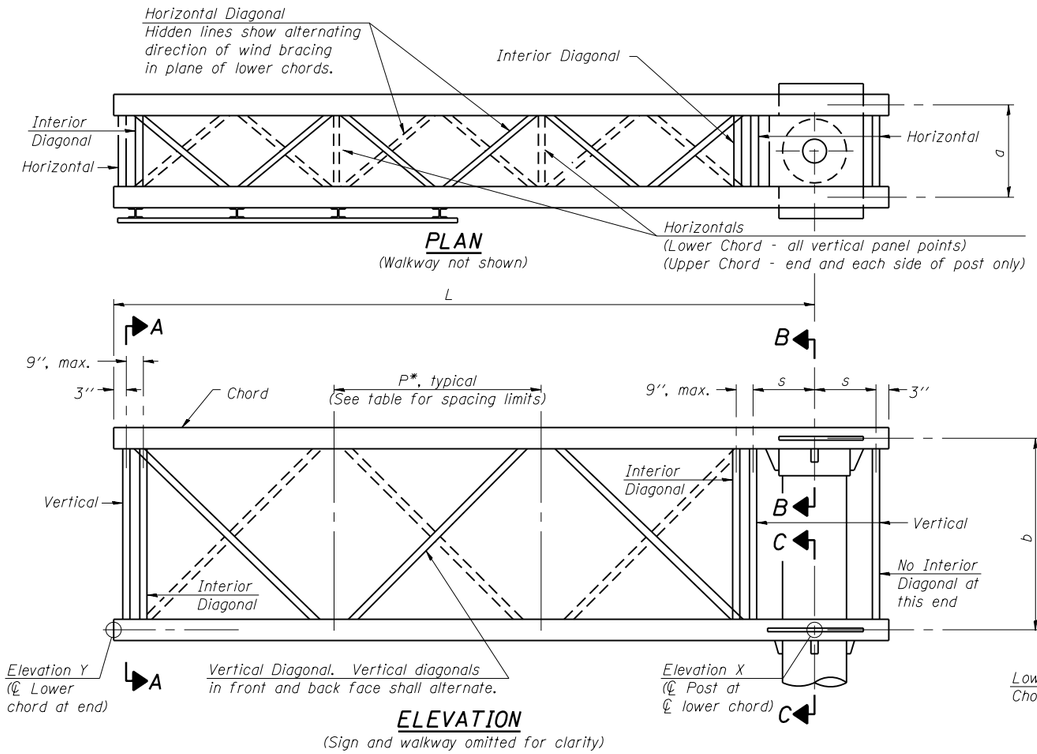
USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

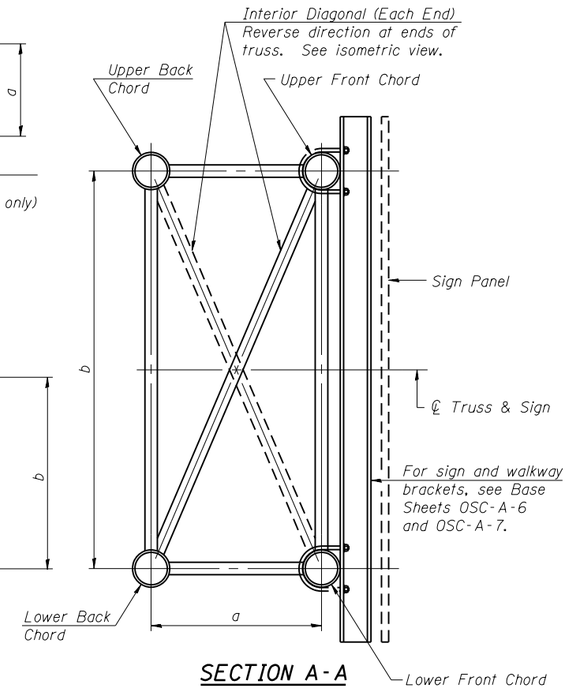
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

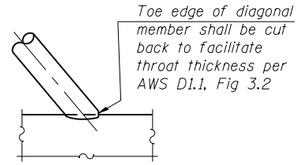
CANTILEVER SIGN STRUCTURES – GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST
SHEET NO. S-1 OF S-26 SHEETS

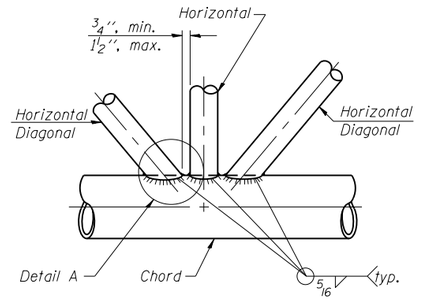
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	20
• D-2 OVD SIN STR REPL 14-27	CONTRACT NO. 46288			
ILLINOIS	FED. AID PROJECT			

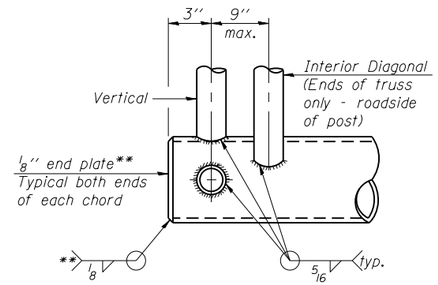
•• WINNEBAGO & OGLE

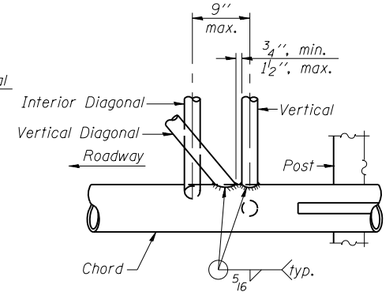


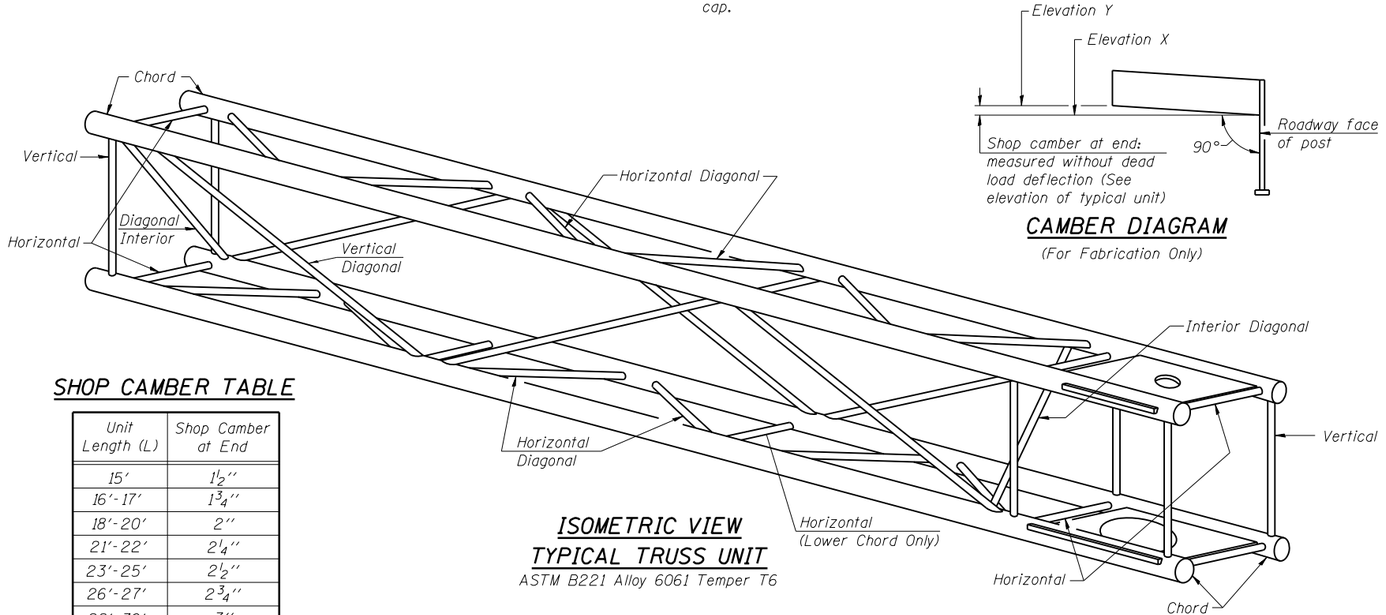












TYPICAL TRUSS UNIT

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

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

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''

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

	Structure Number	Station	Truss Type	Design Length (L)	Number of Panels Per Unit	Panel Length (P)*
SN-021	2C101U020L024.8		III-C-A	40'-0"	8	4'-9"

SHOP CAMBER TABLE

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

OSC-A-2 6-1-12

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel 773.774.4700
Fax 773.774.4704
Email ciMcago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

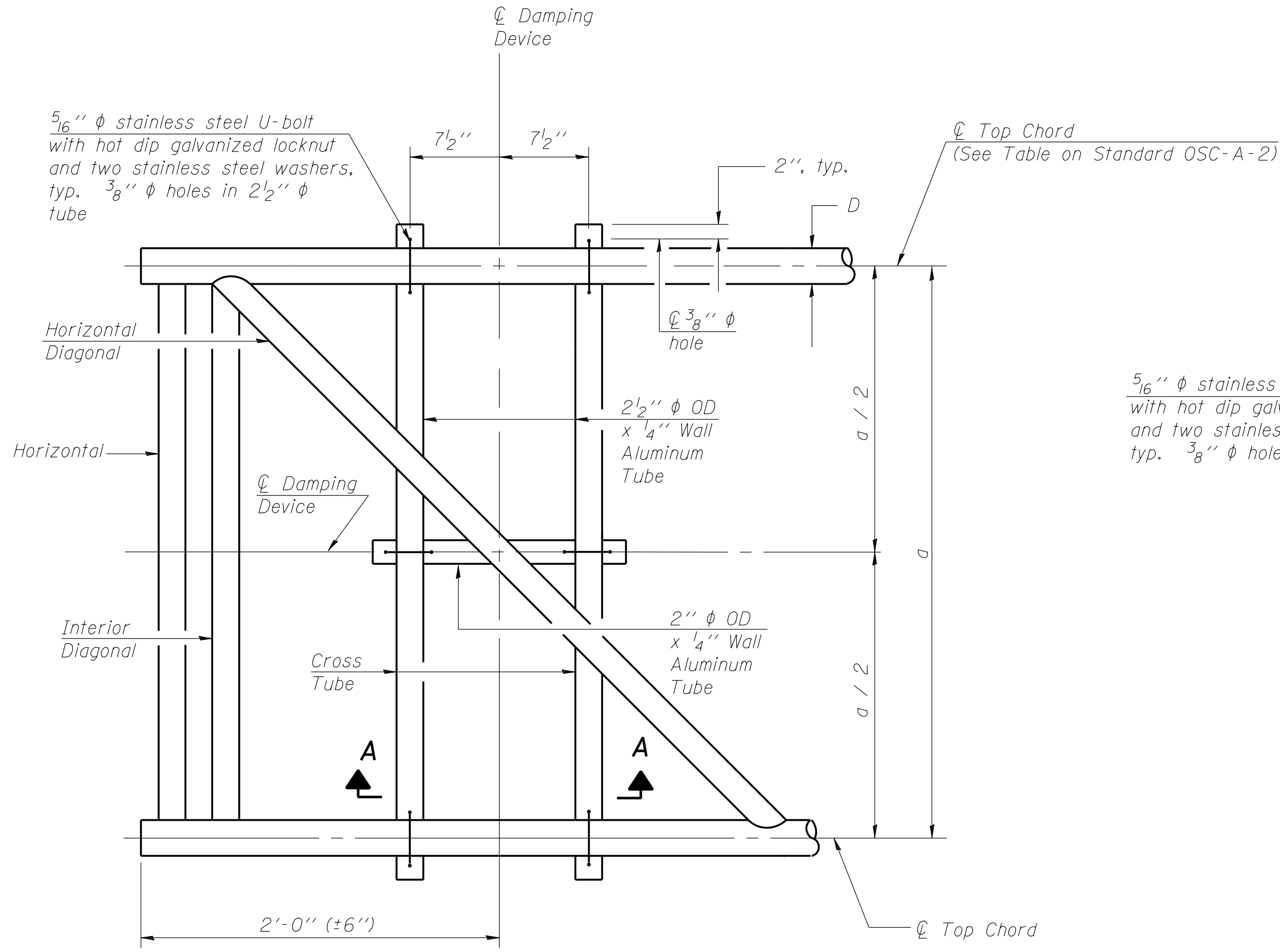
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – TRUSS DETAILS
ALUMINUM TRUSS & STEEL POST
SHEET NO. S-2 OF S-26 SHEETS

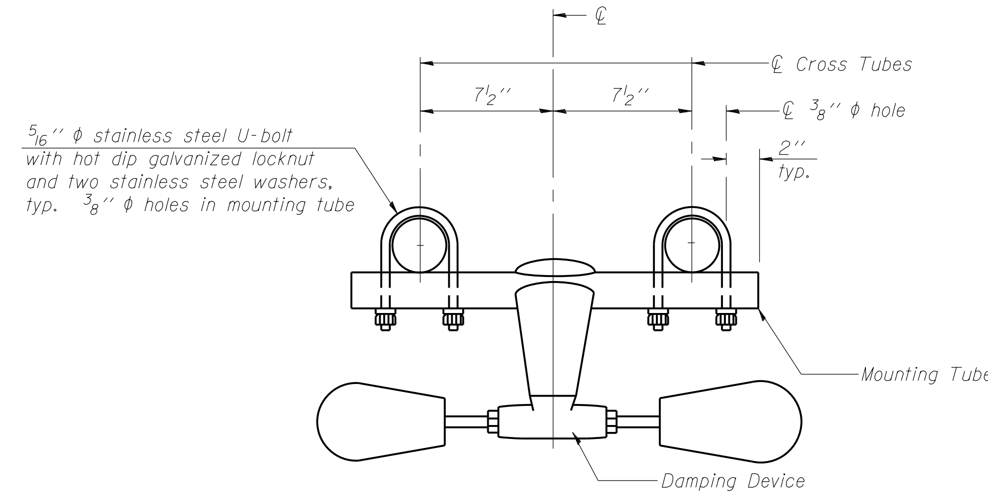
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	21
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

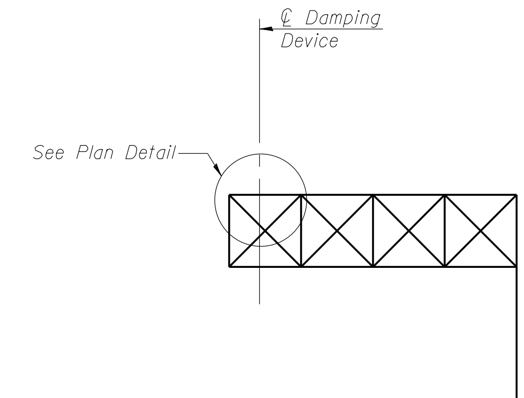
N:\PROJ\00200080.00\00200080.01\Design\Structural\CAD\SN-021-CN_-S002.dgn



PLAN DETAIL



TRUSS DAMPING DEVICE CONNECTION DETAIL



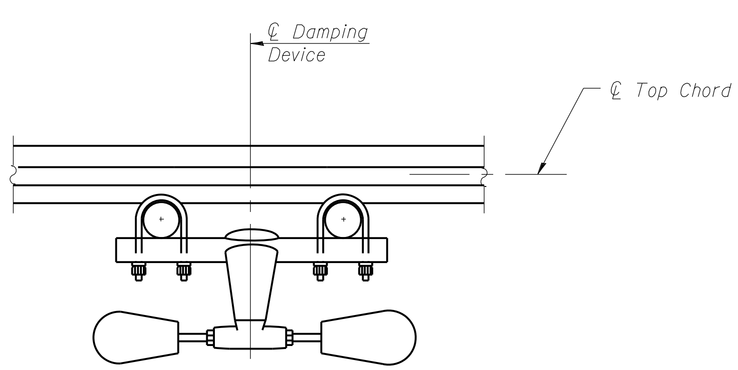
ELEVATION

Aluminum Cantilever Sign Structure

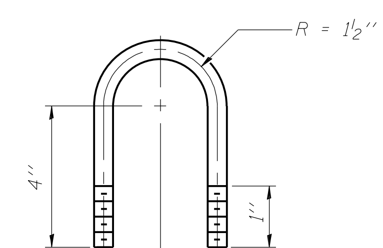
GENERAL NOTES

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

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

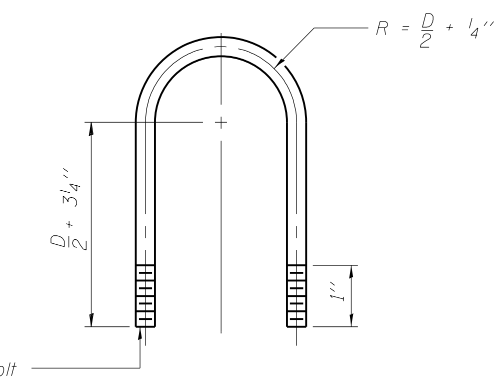


SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL

(Typical)

OSC-A-D 6-1-12

N:\PROJ\00200080.00\00200080.01\Design\Structural\CAD\SN-021-CN_-S003.dgn

Ciorba Group, Inc. CONSULTING ENGINEERS 8507 North Cumberland Avenue Suite 800 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

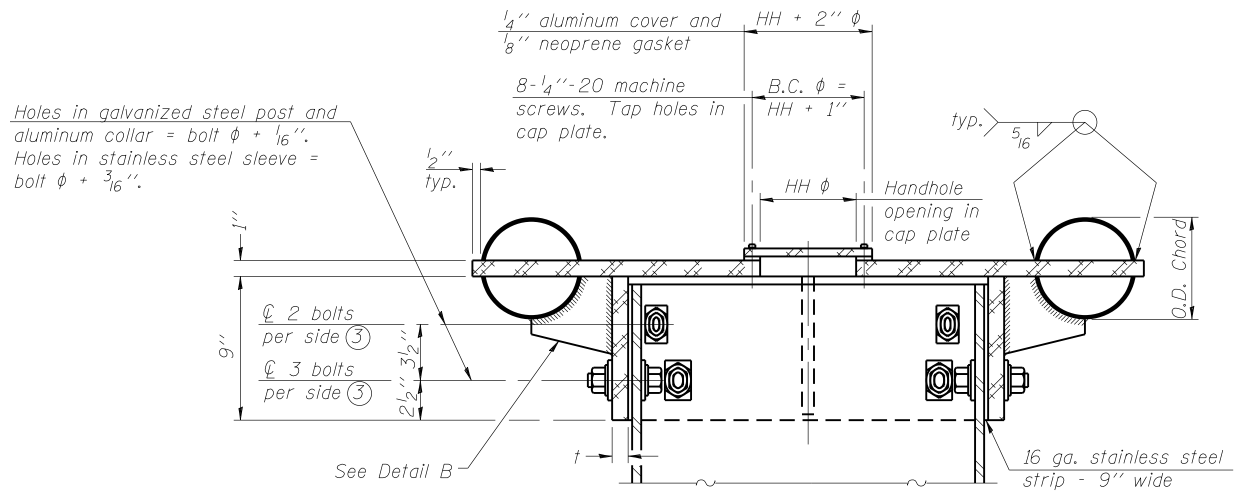
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURE DAMPING DEVICE

SHEET NO. S-3 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	22
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

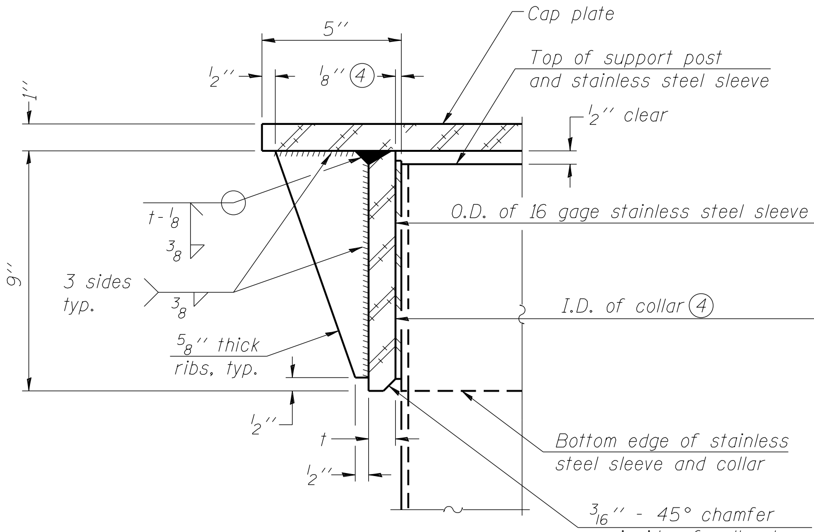
•• WINNEBAGO & OGLE



SECTION B-B

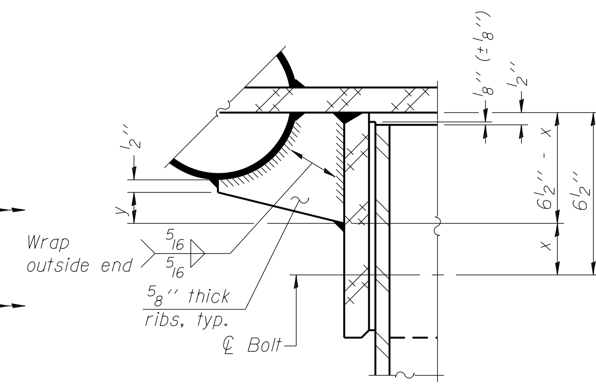
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.

④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus ⅛'' (±⅟16''). Maximum gap between post and collar at any location equals ⅛'' before tightening bolts.



DETAIL A

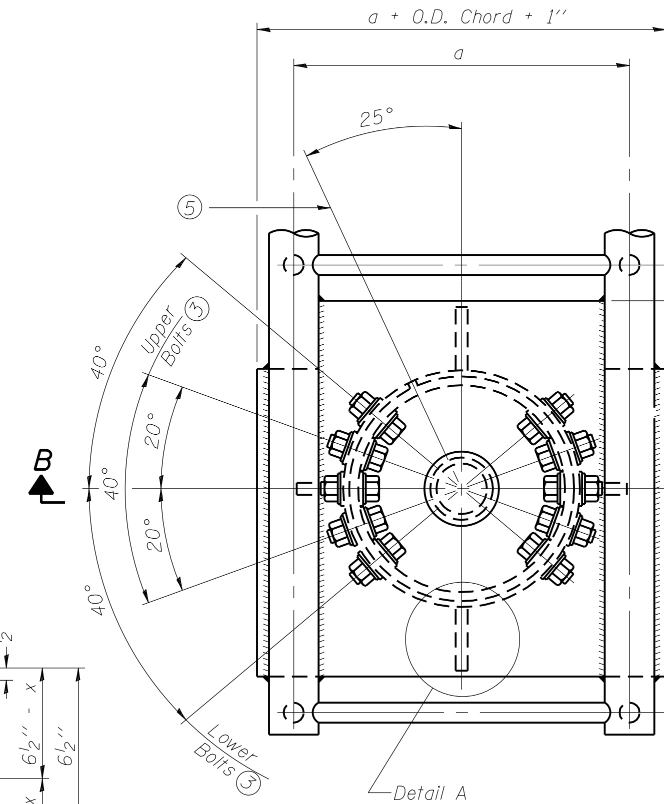
(Two locations)



DETAIL B

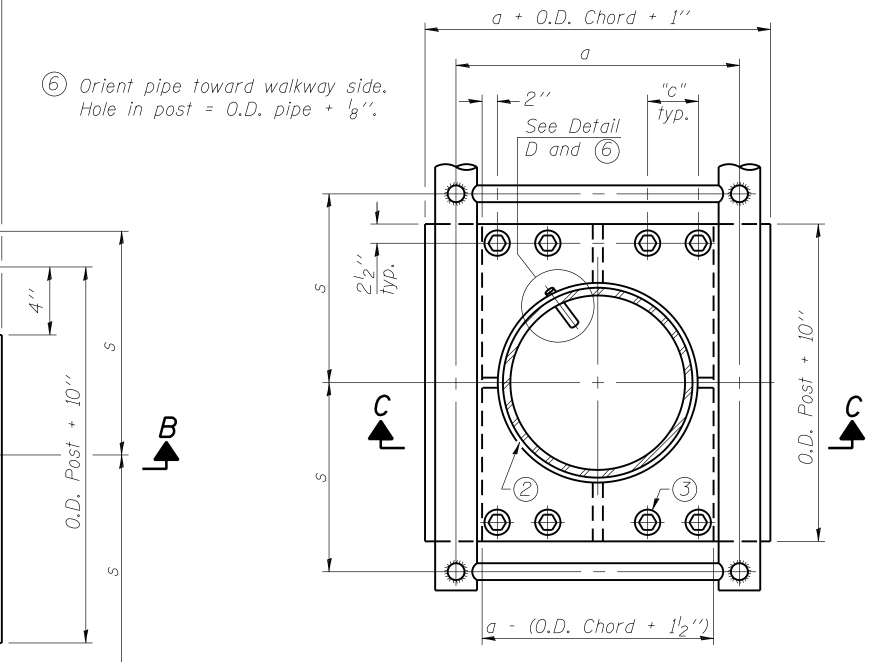
Two locations

(For details not shown, see Detail C)

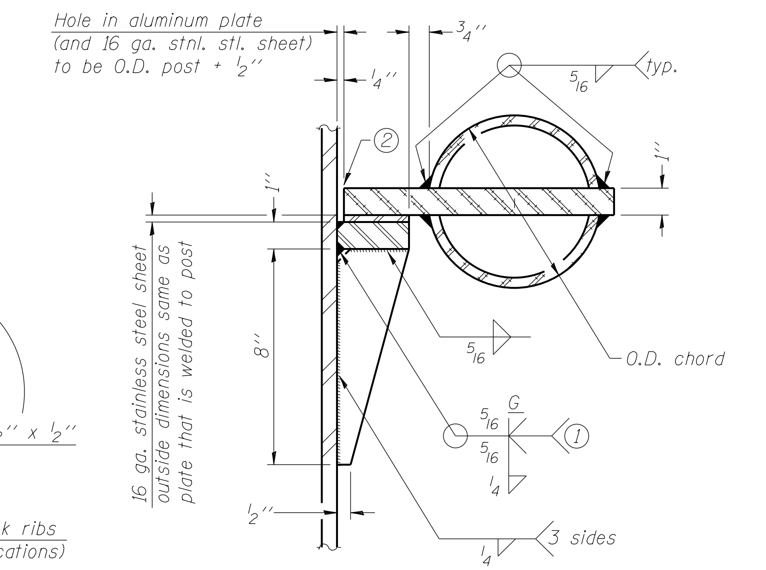


PLAN VIEW - TOP OF COLUMN

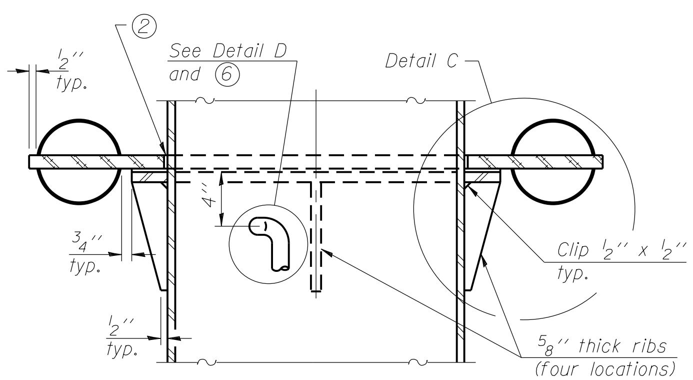
⑤ Optional full penetration weld in collar.
(Two locations maximum....(180° apart)....X-ray or UT 100%)



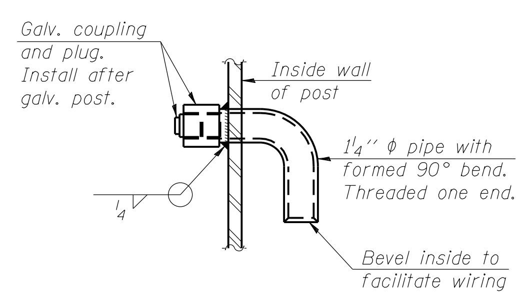
SECTION THRU POST ABOVE LOWER CHORDS



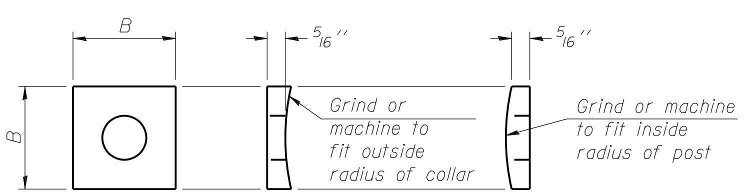
DETAIL C



SECTION C-C

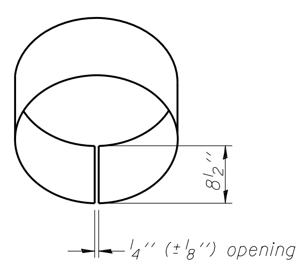


DETAIL D



CONTOURED WASHERS

Bolt Size	Contoured Washers	
	Hole Dia.	B
⅞''	1''	2½''
1''	1⅛''	3''
1¼''	1⅜''	3¼''



DETAIL OF STAINLESS STEEL SLEEVE

Weld to post after galvanizing.
(Prepare post surface to insure tight, uniform fit and allow welding.)
Welds to be 1½'' long at 6'' cts. along top edge and at ¼'' opening.

Truss Type	Post Size	Upper & Lower Connection Bolt Diameter ③	Lower Juncture Bolt Spacing Dimension "c" ③	Opening in Cap Plate "HH"	Collar Thickness (t)	Side Ribs	
						x	y
I-C-A	16'' ϕ (83#/')	⅞''	3¼''	8''	⅝''	1¾''	2¼''
II-C-A	24'' ϕ (125#/')	1''	3½''	12''	⅞''	2''	1¼''
III-C-A (35' max.)	24'' ϕ (125#/')	1¼''	3½''	12''	⅞''	2''	1''
III-C-A (>35' to 40')	24'' ϕ (171#/')	1¼''	3½''	12''	⅞''	2''	1''

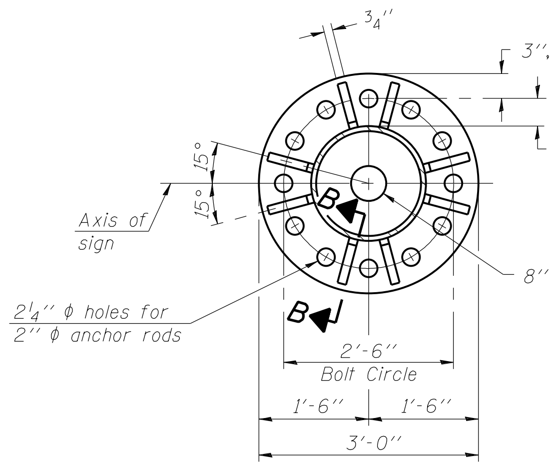
① Grind top if required to fully seat aluminum plate and stainless steel sheet.

② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Cantilever.

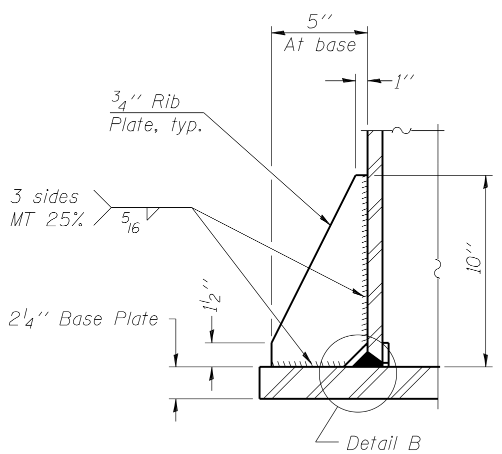
③ Upper and lower connection bolts in collar and bolts at lower chord connection shall be high strength with matching locknuts. Connection bolts shall have 2 stainless steel flat washers each.

OSC-A-3 6-1-12

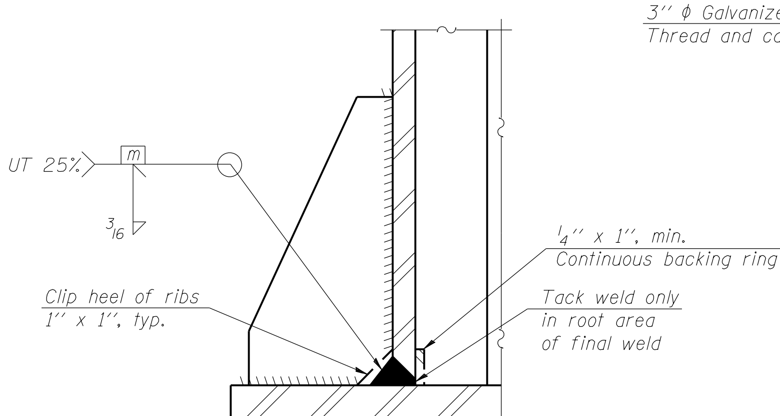
N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-021-CN_-S004.dgn



SECTION A-A

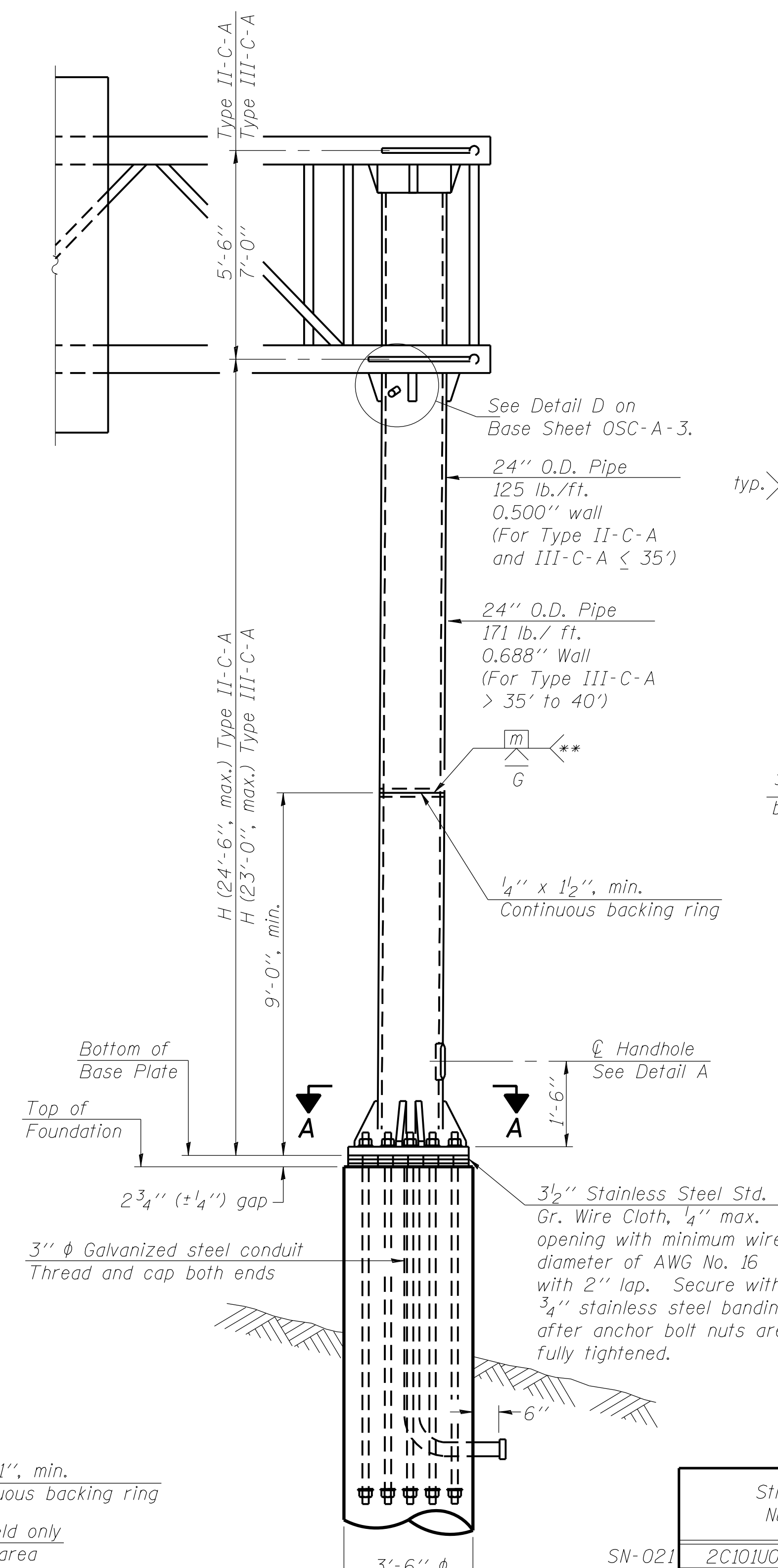


SECTION B-B



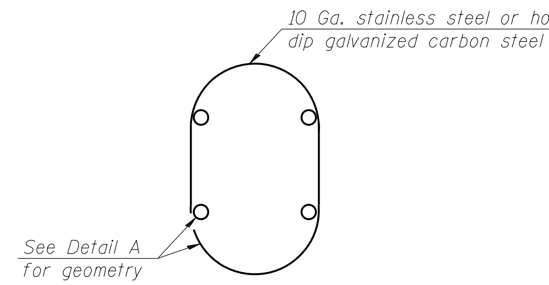
DETAIL B

(Typical rib)

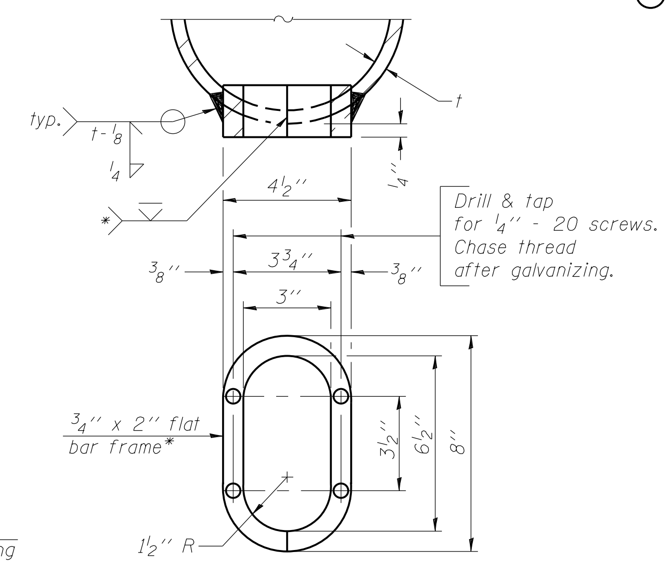


FRONT ELEVATION

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



HANDHOLE COVER

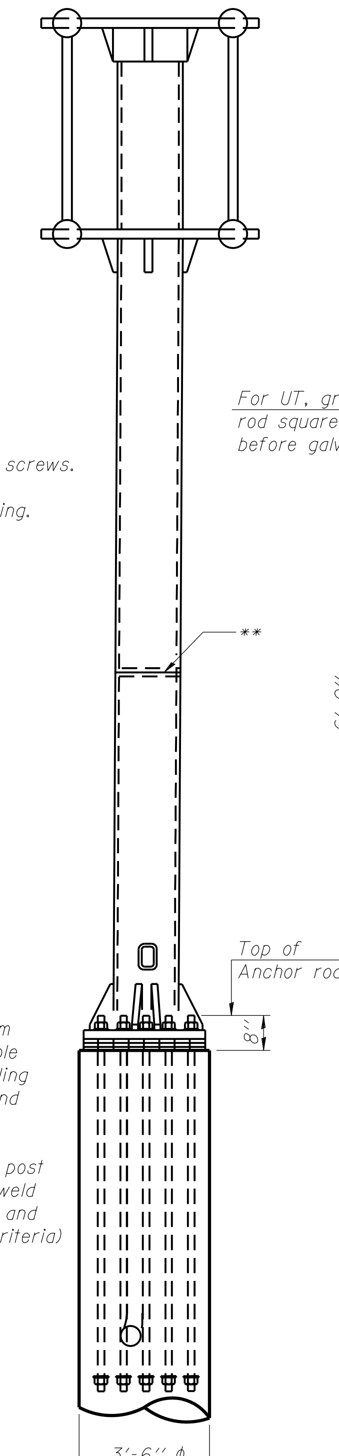


Provide 8'' x 4½'' cover. Outside corners = 2¼'' radius. Provide 4-5/16'' ϕ holes in cover for ¼'' - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

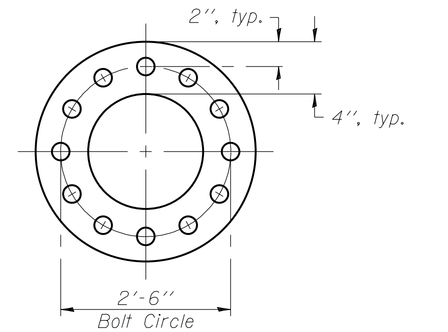
DETAIL A

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

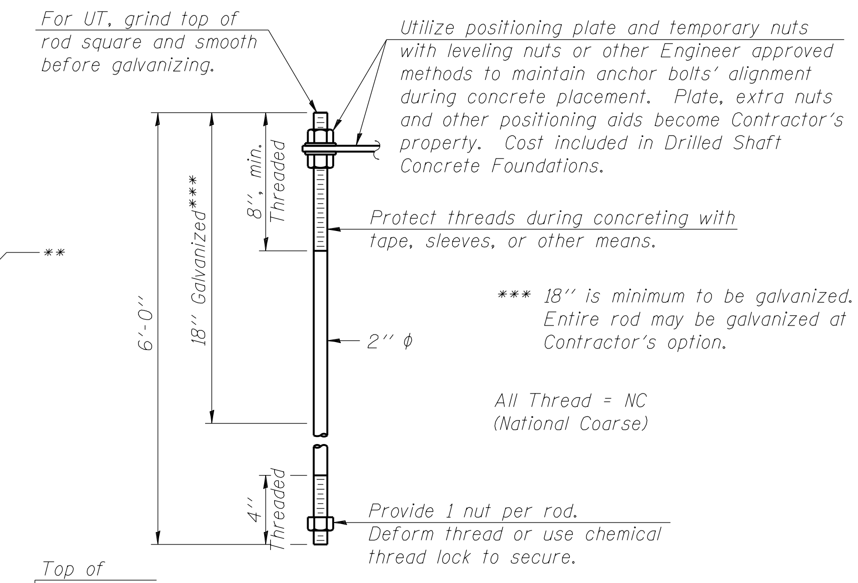
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.



SIDE ELEVATION



SUGGESTED POSITIONING PLATE



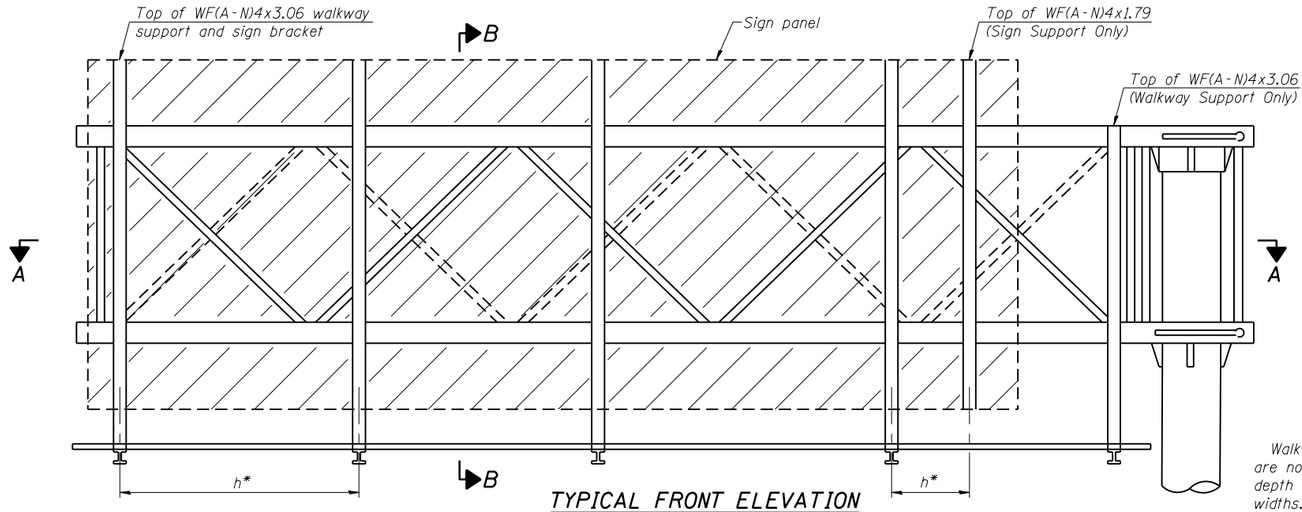
ANCHOR ROD DETAIL

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

	Structure Number	Station	H
SN-021	2C101U020L024.8		22' - 6¼''

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

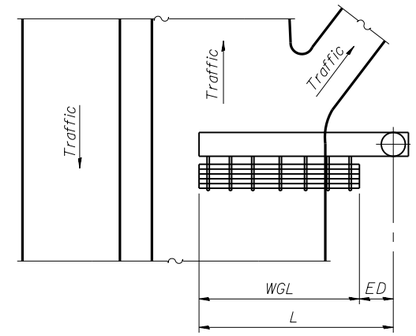
OSC-A-5 6-1-12



TYPICAL FRONT ELEVATION

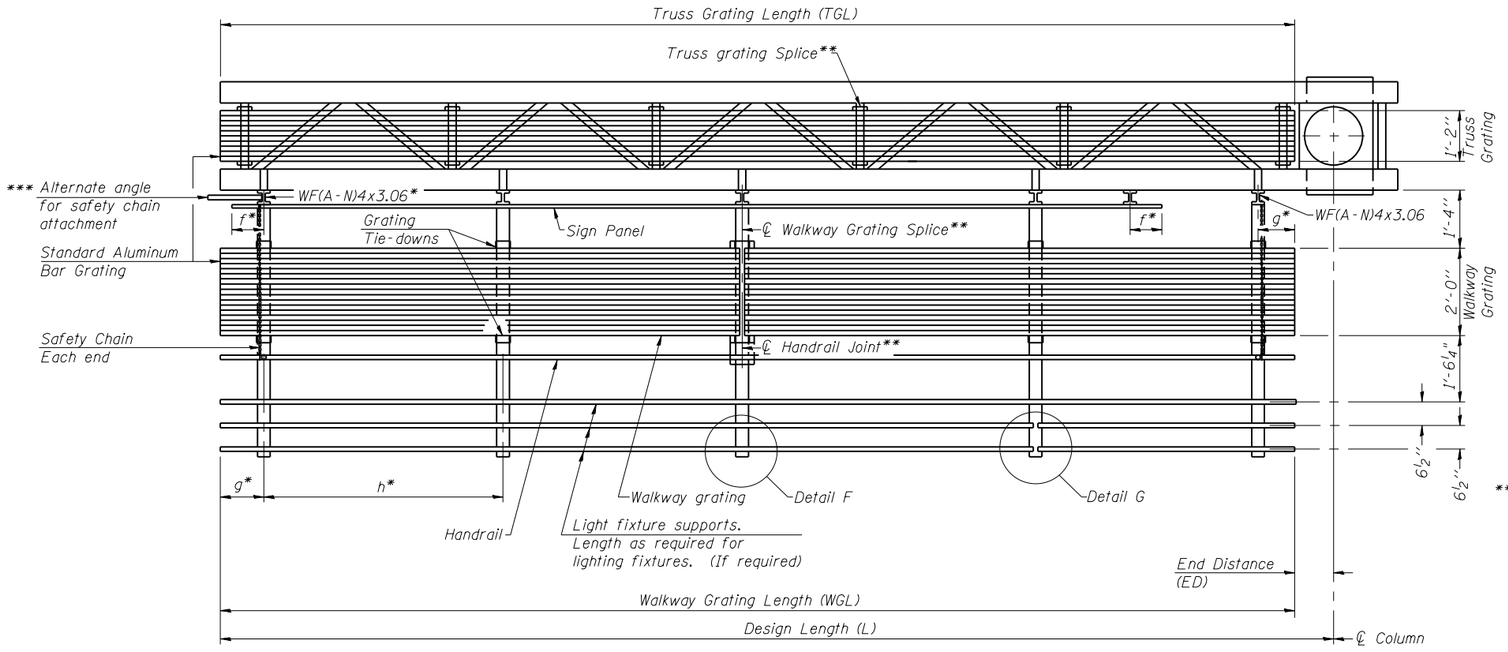
With lights and handrail omitted for clarity.

Walkway and truss grating dimensions are nominal and may vary (width ±½", depth ±$\frac{1}{2}$") 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
SN-021	2C101U020L024.8		26'-6"	13'-6"	38'-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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway to ℄ of nearest bracket)
h = 6'-0" maximum (℄ to ℄ 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

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

OSC-A-6 6-1-12

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-021-CN_-S006.dgn

Ciorba Group, Inc.
CONSULTING ENGINEERS
6007 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel 773.775.4005
Fax 773.775.4014
Email ciorba@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0.2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

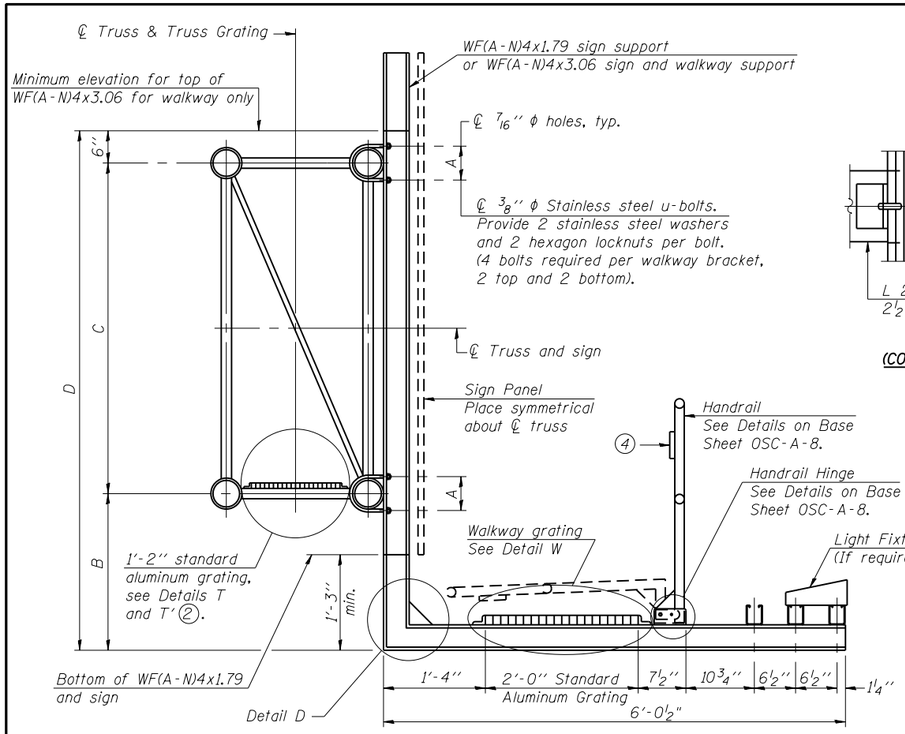
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET NO. S-6 OF S-26 SHEETS

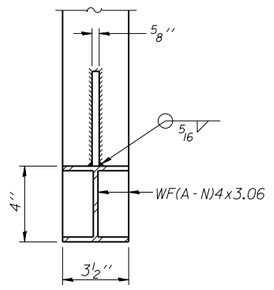
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	25
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

•• WINNEBAGO & OGLE

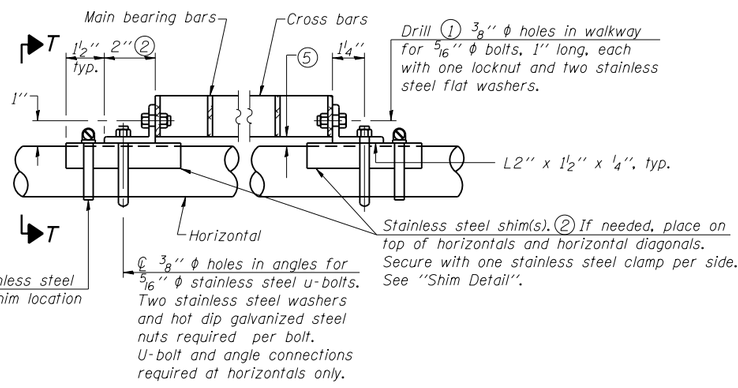


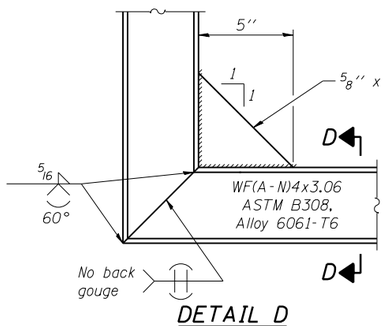
SECTION B-B

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

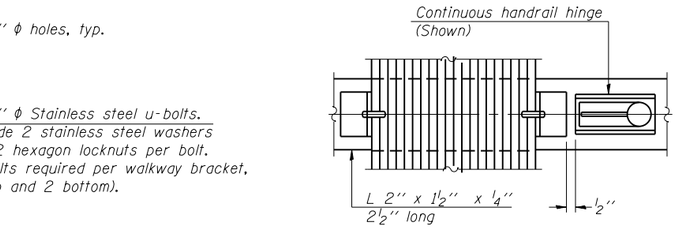




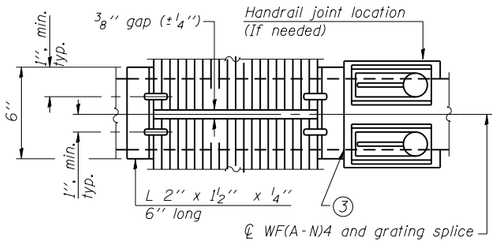
DETAIL D

DETAIL T

(Continuous Truss grating)

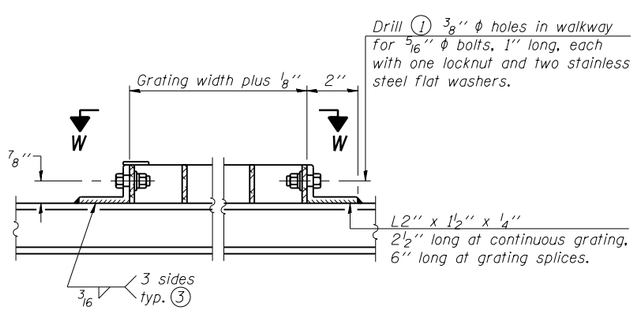


(CONTINUOUS WALKWAY GRATING)



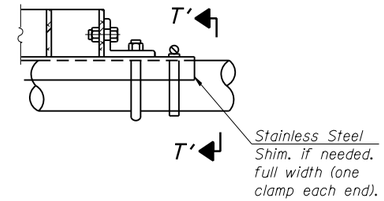
(AT WALKWAY GRATING SPLICE)

SECTION W-W



DETAIL W

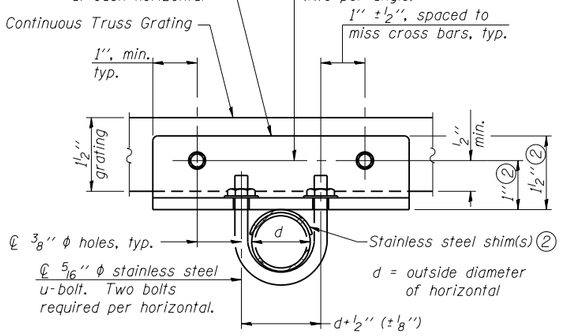
(Walkway grating)



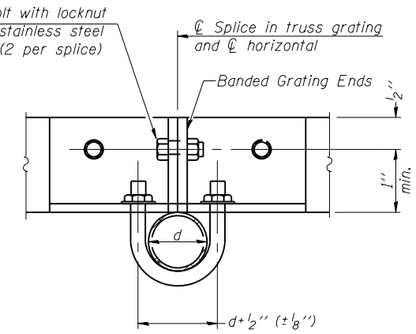
DETAIL T'

(Truss grating splice)

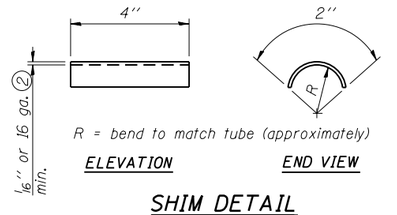
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SECTION T-T



SECTION T'-T'



SHIM DETAIL

Structure Number	Station	A	(6) B	C	(6) D
SN-021 2C101U020L024.8		8 1/2"	3' - 0"	7' - 0"	10' - 6"

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.

(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) ℄ 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.

OSC-A-7 6-1-12

N:\PROJ\00220080.00\0220080.01\Design\Structural\CAD\SN-021-CN_-S007.dgn

Clorba Group, Inc. CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.774.4700
Fax 773.774.4704
Email clrkcago@clorba.com

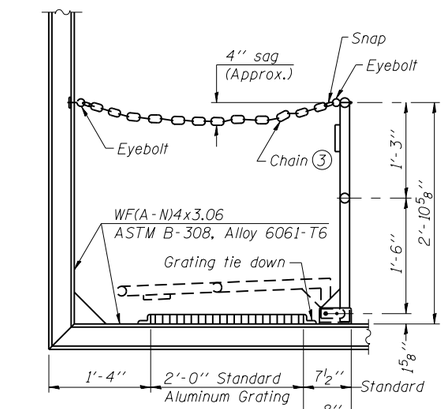
USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER SIGN STRUCTURES – WALKWAY DETAILS
ALUMINUM TRUSS & STEEL POST
SHEET NO. S-7 OF S-26 SHEETS

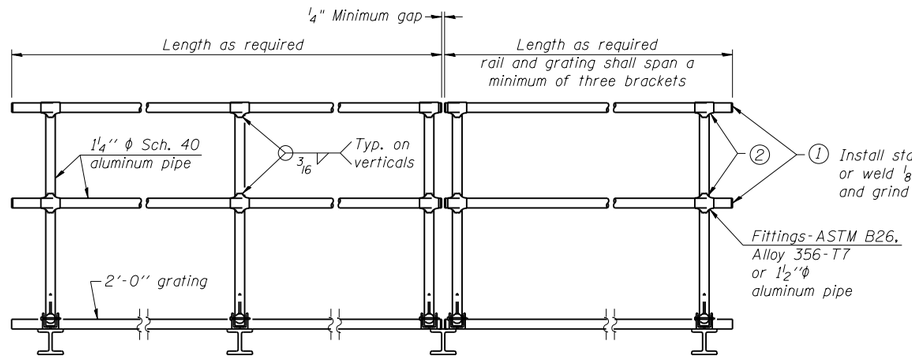
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	26
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE

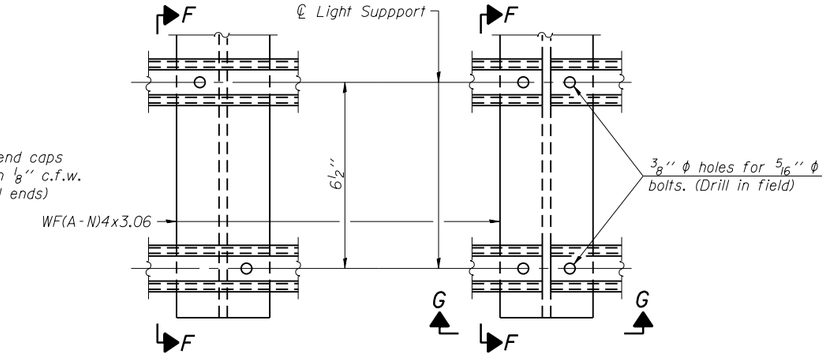


SIDE ELEVATION

(Showing Safety Chain W/O Sign)



FRONT ELEVATION



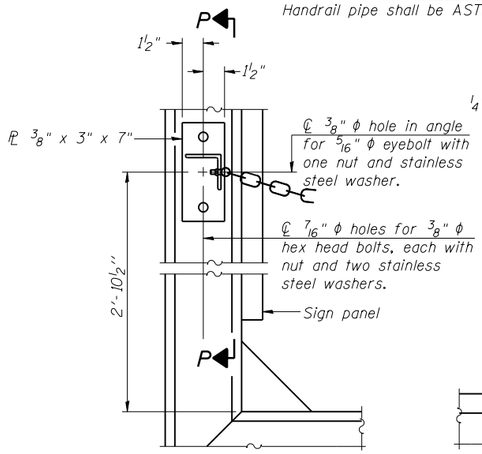
DETAIL F

DETAIL G

HANDRAIL DETAILS

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

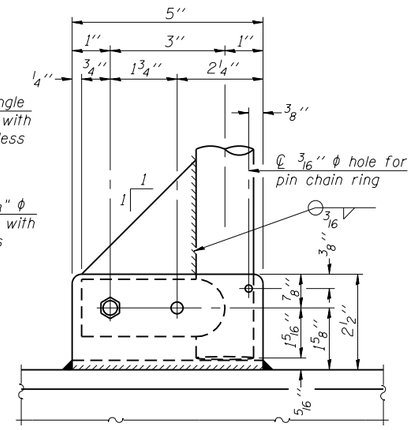
(2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16'' ϕ hole in fitting for 3/8'' ϕ bolt. Field drill 7/16'' ϕ hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16'' eyebolts in 7/16'' ϕ holes on top rail at ends only.)



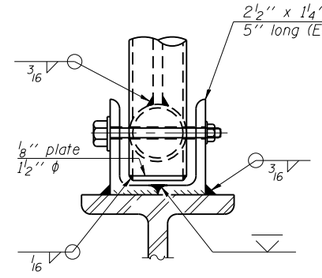
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

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

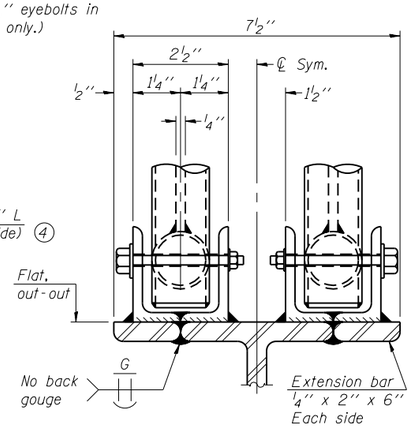


SIDE ELEVATION



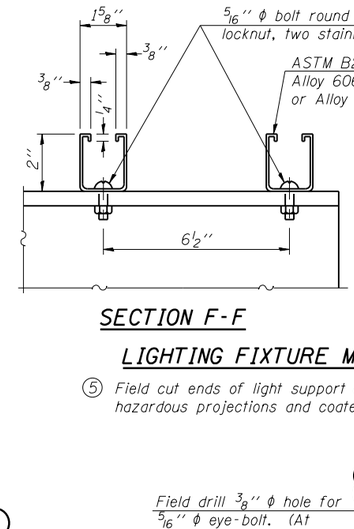
FRONT ELEVATION

Details not shown same as "ELEVATION" at right.



ELEVATION AT HANDRAIL JOINT (4)

Details not shown same as "FRONT ELEVATION"

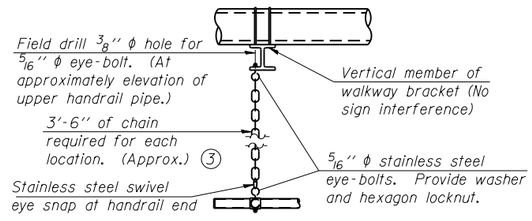


SECTION F-F

SECTION G-G

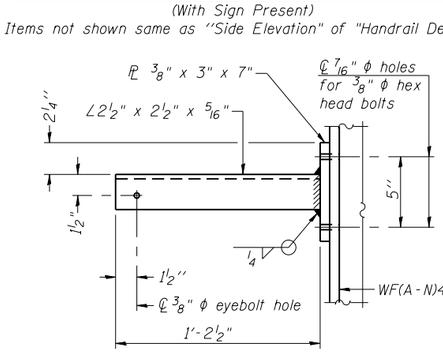
LIGHTING FIXTURE MOUNTS (IF REQUIRED)

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

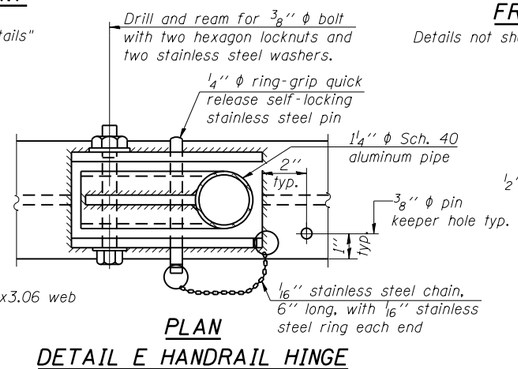


SAFETY CHAIN

One required for each end of each walkway.

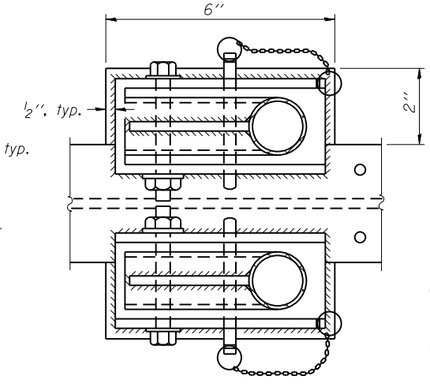


SECTION P-P



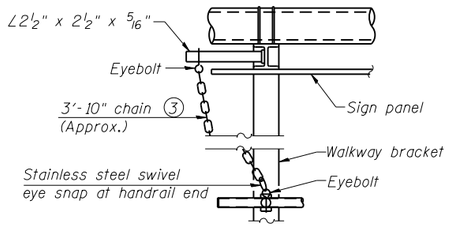
PLAN

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.

OSC-A-8 6-1-12

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-021-CN_-_S008.dgn

Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue Suite 301 Chicago, Illinois 60656 Tel 773.775.4454 Fax 773.775.4014 Email dKlage@ciorba.com	USER NAME = jattanaseo	DESIGNED - NG	REVISED -
		CHECKED - BWS	REVISED -
	PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - RD	REVISED -
	PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

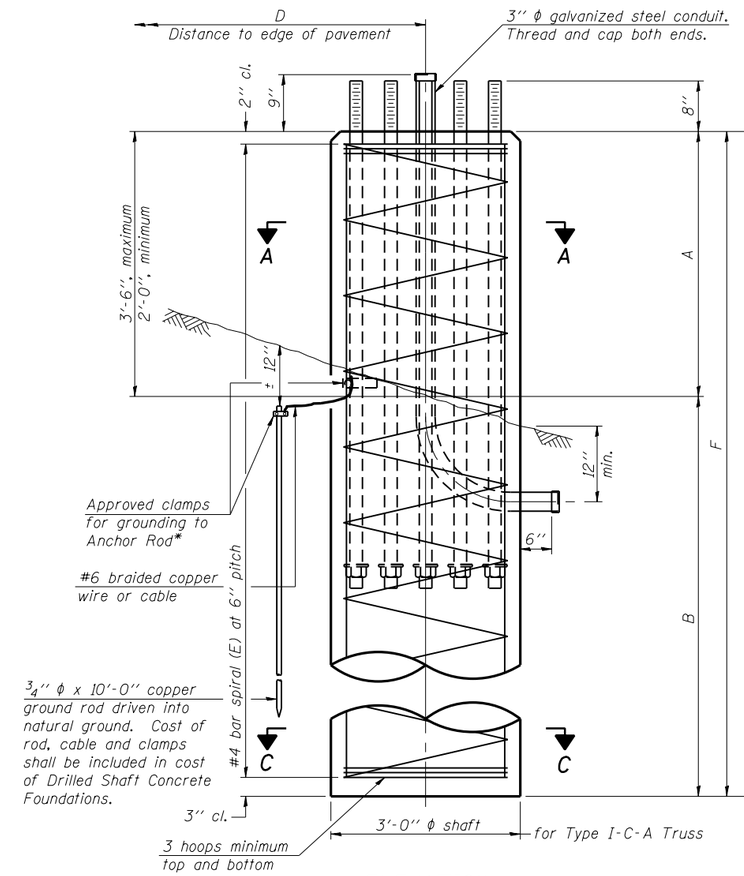
CANTILEVER SIGN STRUCTURES – HANDRAIL DETAILS
ALUMINUM TRUSS & STEEL POST

SHEET NO. S-8 OF S-26 SHEETS

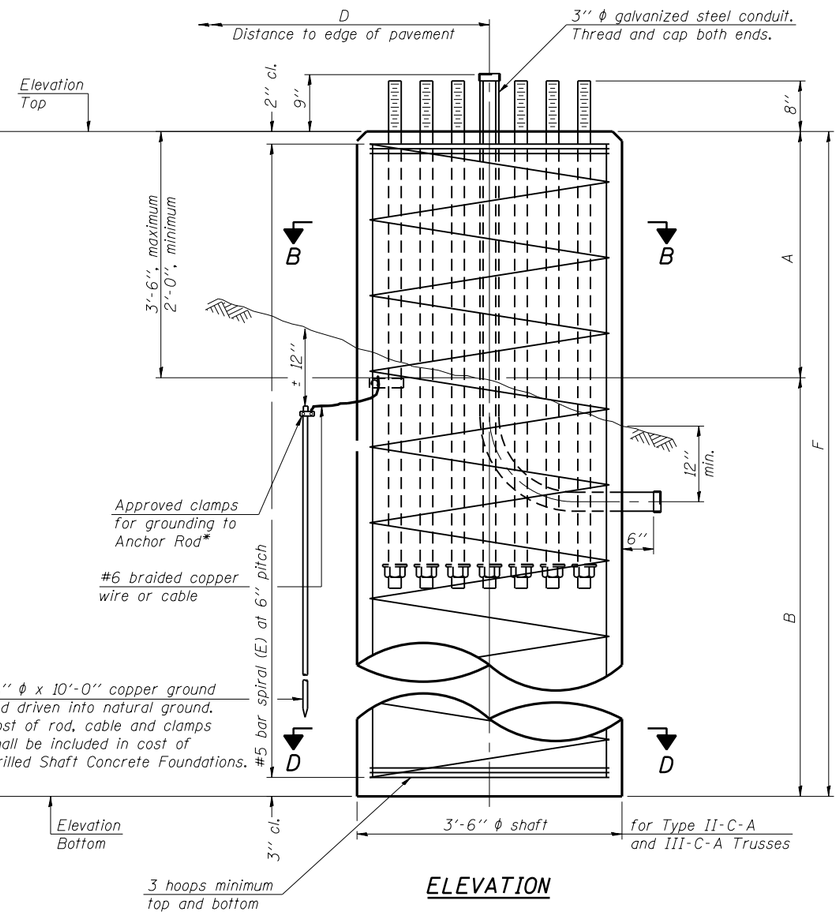
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	27
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

•• WINNEBAGO & OGLE

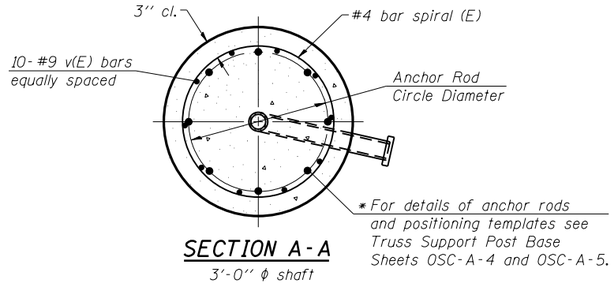
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



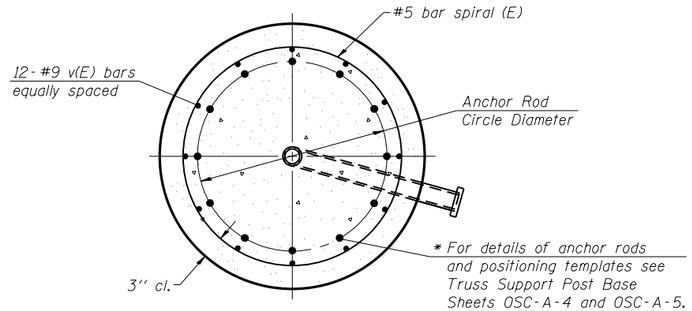
ELEVATION



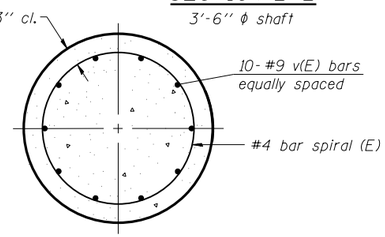
ELEVATION



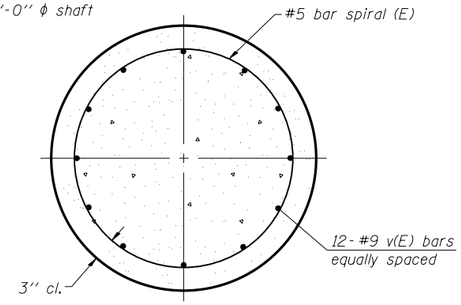
SECTION A-A
3'-0'' ϕ shaft



SECTION B-B
3'-6'' ϕ shaft



SECTION C-C
3'-0'' ϕ shaft



SECTION D-D
3'-6'' ϕ shaft

NOTES:

The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.

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

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in ''Drilled Shaft Concrete Foundation''.

FOUNDATION DESIGN TABLE

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

FOUNDATION DATA TABLE

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class DS Concrete Cubic Yards
SN-021 2C101U020L024.8		III-C-A	3' - 6"	780.88	746.38	2.7 TSF	2' - 6"	32' - 0"	34' - 6"	12.3

OSC-A-9 8-21-13

Ciorba Group, Inc. CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4658
Fax. 773.775.4659
Email dlchicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

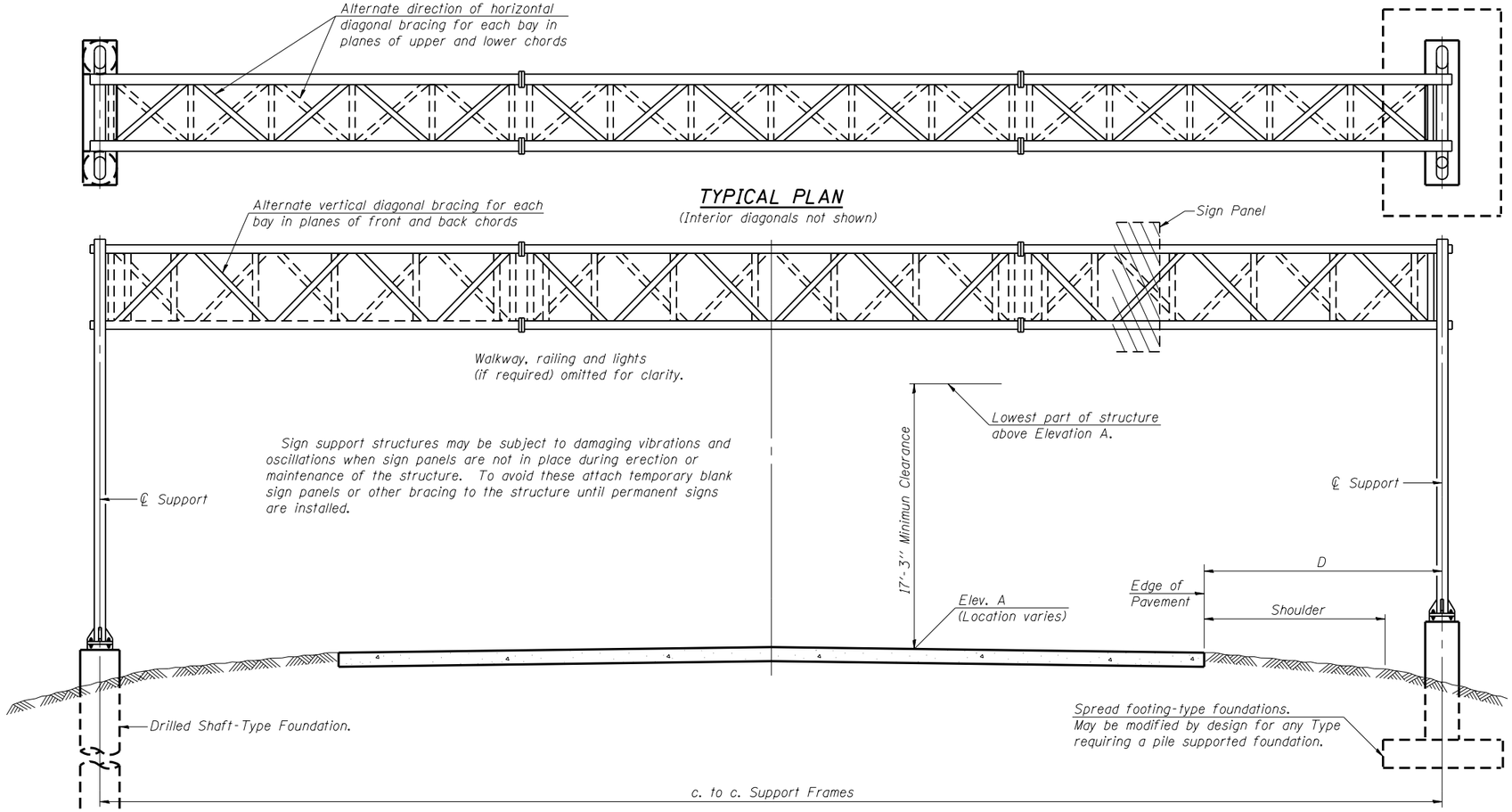
CANTILEVER SIGN STRUCTURES – DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST

SHEET NO. S-9 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	28
• D-2 OVD SIN STR REPL 14-27	CONTRACT NO. 46288			
ILLINOIS	FED. AID PROJECT			

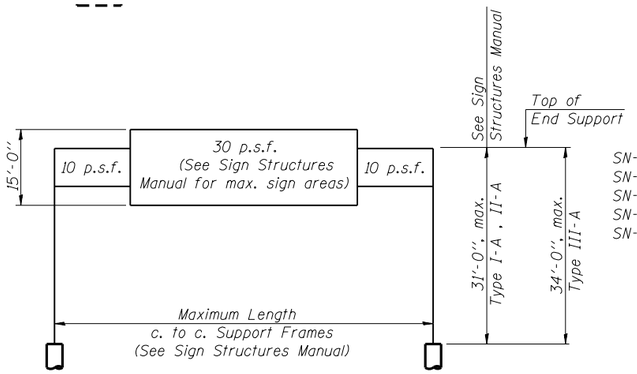
•• WINNEBAGO & OGLE

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-021-CN_-_S009.dgn



TYPICAL PLAN

(Interior diagonals not shown)



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.

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
SN-031	2S101I039R138.8		II-A	112'-0"	840.72	44'-0"	12'-0"	476 Sq.Ft.
SN-032	2S101I039R139.4		II-A	123'-0"	815.30	44'-0"	13'-0"	514 Sq.Ft.
SN-033	2S101I039R139.8		III-A	140'-0"	844.30	38'-0"	13'-0"	514 Sq.Ft.
SN-034	2S101U020R021.5		II-A	119'-0"	839.50	46'-0"	10'-0"	390 Sq.Ft.
SN-039	2S071I039L118.7		II-A	130'-0"	809.38	34'-0"	14'-0"	536 Sq.Ft.

**Looking upstation for structures with signs both sides.

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

GENERAL NOTES

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

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

LOADING: 90 M.P.H. WIND VELOCITY

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

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
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 Specificiations.

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 Concrete 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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Overhead Sign Structure Span Type I-A	Foot	
Overhead Sign Structure Span Type II-A	Foot	484.0
Overhead Sign Structure Span Type III-A	Foot	140.0
Overhead Sign Structure Walkway, Type A	Foot	261.75
Drilled Shaft Concrete Foundations	Cu Yd	26.0
Concrete Foundations	Cu Yd	149.6
Rock Excavation for Structures	Cu Yd	92.3

OS-A-1 8-21-13

Ciorba Group, Inc.
CONSULTING ENGINEERS
2007 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4004
Fax 773.775.4014
Email.ciorba@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0.2.0000 '' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

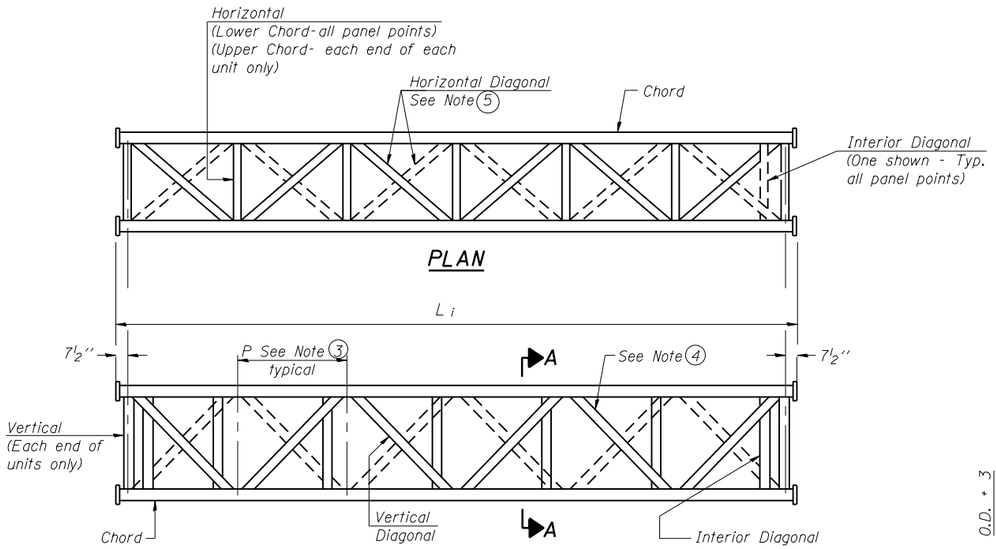
OVERHEAD SIGN STRUCTURES - GENERAL PLAN & ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

SHEET NO. S-10 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	29
• D-2 OVD SIN STR REPL 14-27	CONTRACT NO. 46288			
	ILLINOIS FED. AID PROJECT			

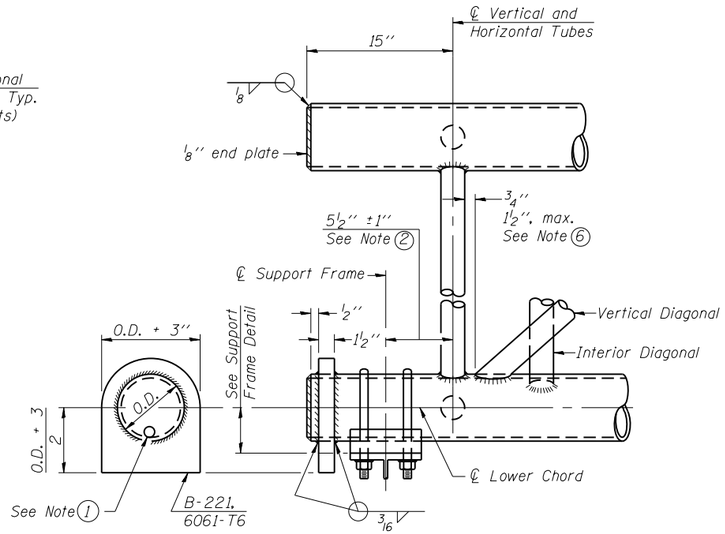
•• WINNEBAGO & OGLE

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-03_-CN_-S010.dgn

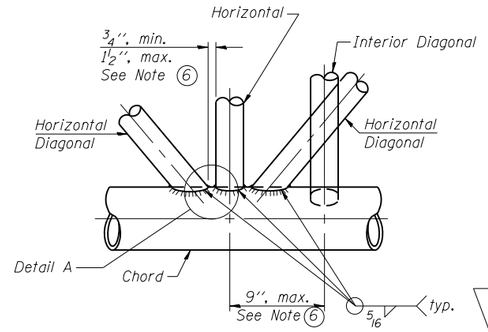


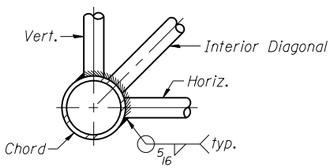
ELEVATION
TYPICAL INTERIOR UNIT

Even number of panels/interior unit required.

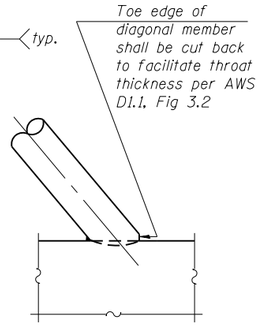


SUPPORT END DETAIL FOR EXTERIOR UNIT

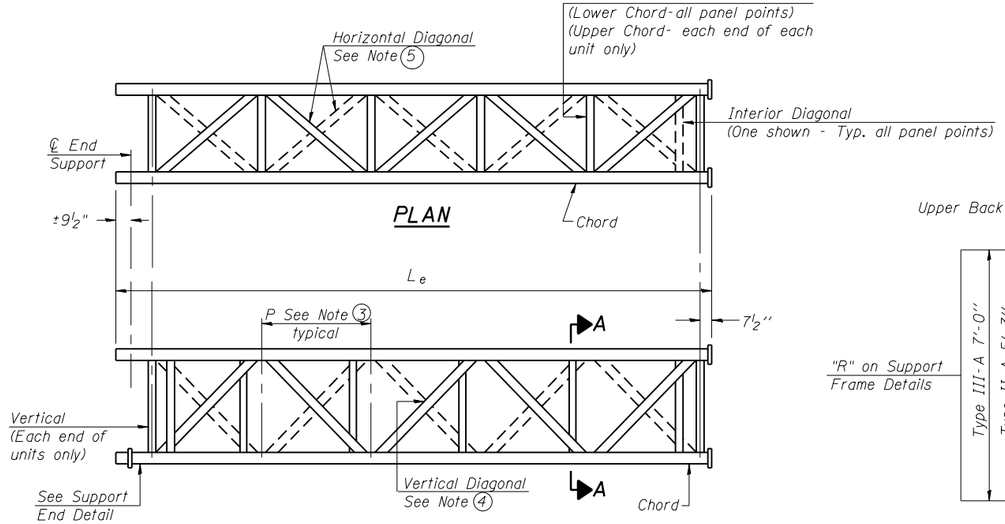




TYPICAL JOINT DETAILS

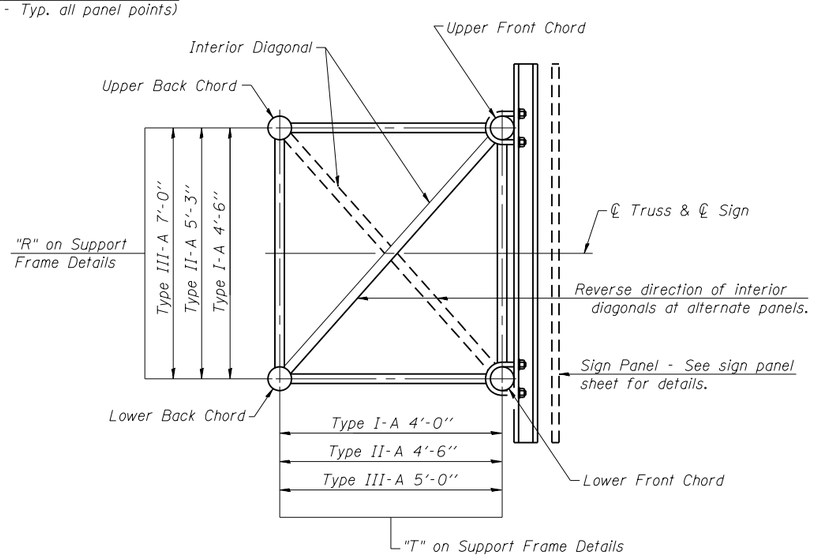


DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior units allowed.



SECTION A-S

1. Contractor may alternatively use standard aluminum drive-fit cap to close end. ½" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
2. 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).
3. Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
4. Vertical Diagonals in front and back face shall alternate.
5. Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
6. All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a ¾" minimum to 1½" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OS-A-2

6-1-12

Ciorba Group, Inc.
CONSULTING ENGINEERS
2007 North Cumberland Avenue
Chicago, Illinois 60656
Tel: 773.775.4600
Fax 773.775.4014
Email chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 ' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET NO. S-11 OF S-26 SHEETS

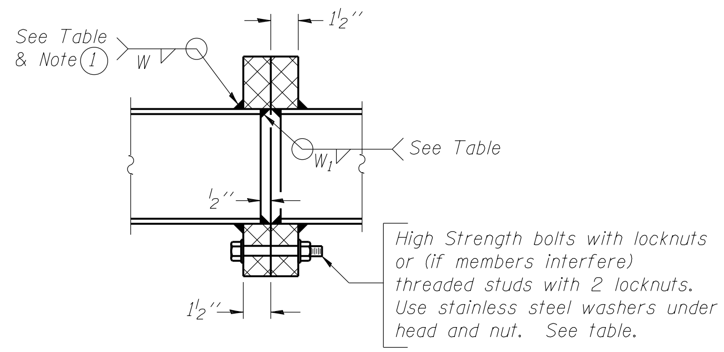
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	30
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS	FED. AID PROJECT			

•• WINNEBAGO & OGLE

N:\PROJ\00200080.00\00200080.01\Design\Structural\CAD\SN-03_-CN_-S01.dgn

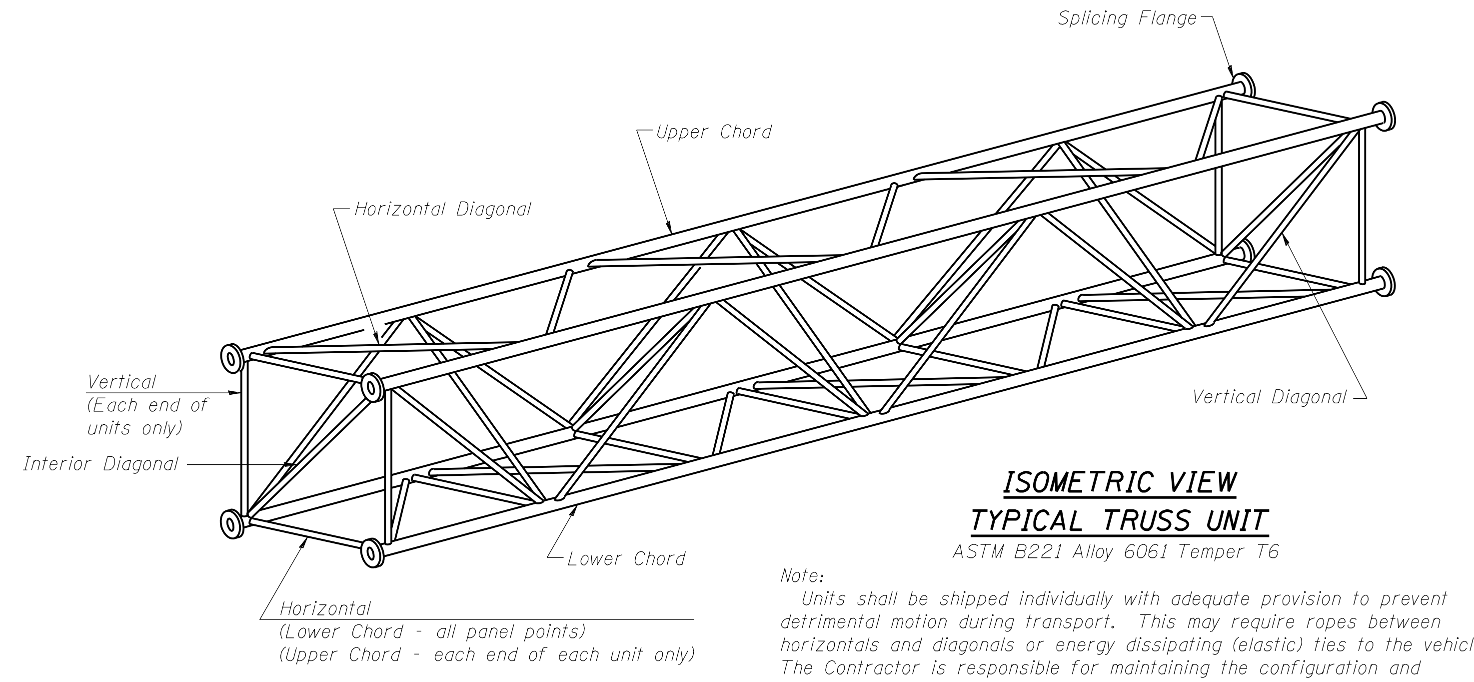
TRUSS UNIT TABLE

	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 No./Splice	Bolts Dia.	Weld Sizes W	Weld Sizes W_1	A	B
SN-031	2S101I039R138.8		II-A	7	39'-11¼"	5'-5¼"	1	6	33'-10½"	5'-5¼"	7"	5/16"	3"	5/16"	3¾"	6	1"	3/8"	1/4"	11½"	15"
SN-032	2S101I039R139.4		II-A	6	31'-5"	4'-11¼"	2	6	30'-10½"	4'-11¼"	7"	3/8"	3"	5/16"	4⅜"	8	1"	7/16"	5/16"	11½"	15"
SN-033	2S101I039R139.8		III-A	6	33'-1½"	5'-2½"	2	7	37'-8½"	5'-2½"	7"	1/2"	3¼"	5/16"	4¼"	8	1"	9/16"	7/16"	11½"	15"
SN-034	2S101U020R021.5		II-A	6	30'-6"	4'-9¼"	2	6	29'-10½"	4'-9¼"	7"	5/16"	3"	5/16"	4⅛"	6	1"	3/8"	1/4"	11½"	15"
SN-039	2S071I039L118.7		II-A	6	33'-3"	5'-2¾"	2	6	32'-7½"	5'-2¾"	7"	3/8"	3"	5/16"	4¾"	8	1"	7/16"	5/16"	11½"	15"



SECTION B-B

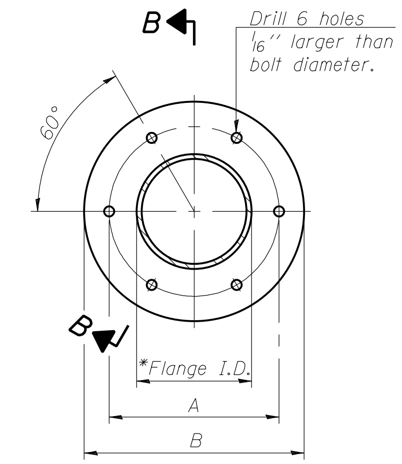
(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining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



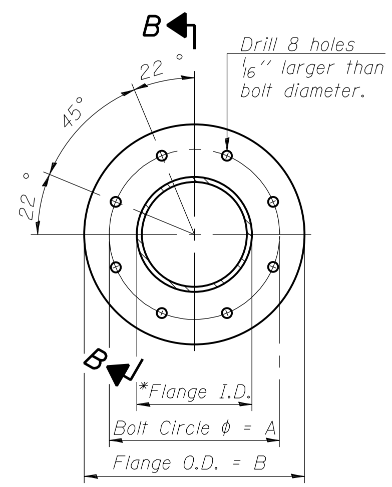
ISOMETRIC VIEW
TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

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



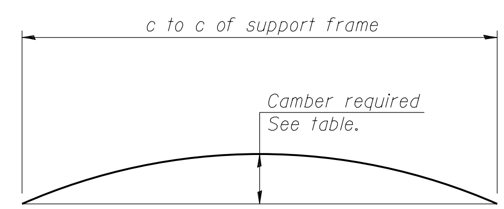
TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES

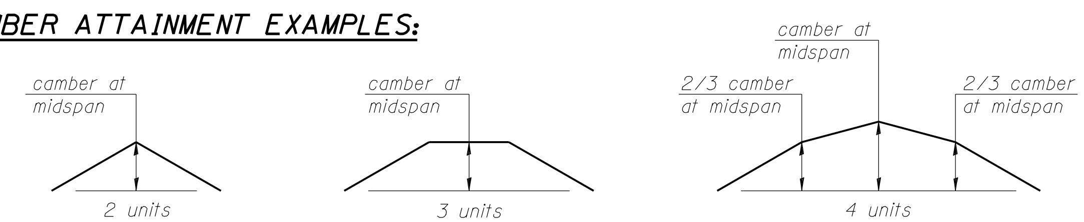
ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".



CAMBER DIAGRAM

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

CAMBER ATTAINMENT EXAMPLES:



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

OS4-A-2 6-1-12

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03_-CN_-S012.dgn

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel: 773.775.4009
Fax: 773.775.4014
Email: chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

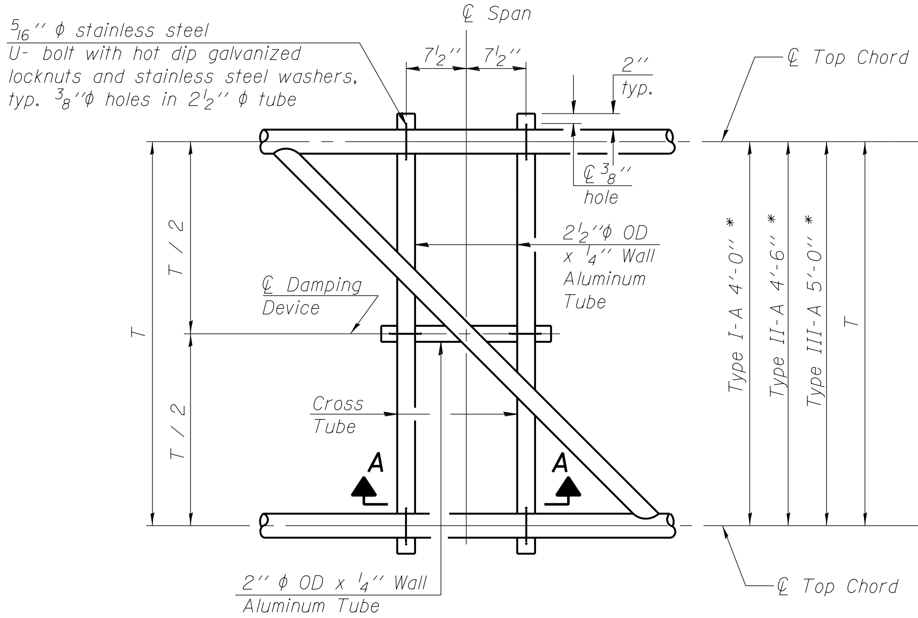
OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

SHEET NO. S-12 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	31
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
		ILLINOIS FED. AID PROJECT		

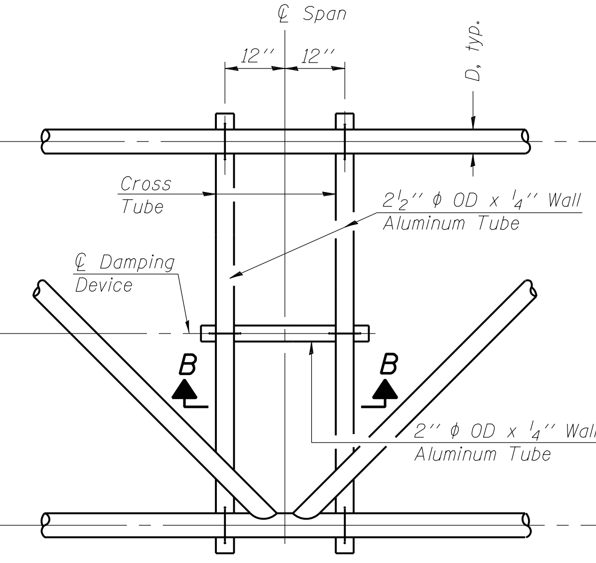
•• WINNEBAGO & OGLE

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



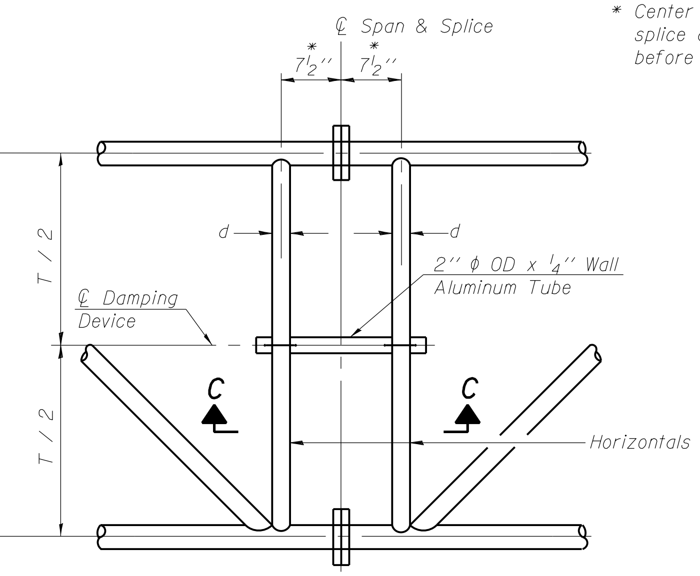
PLAN DETAIL "A"

℄ Span between Panel Points



PLAN DETAIL "B"

℄ Span at Panel Point



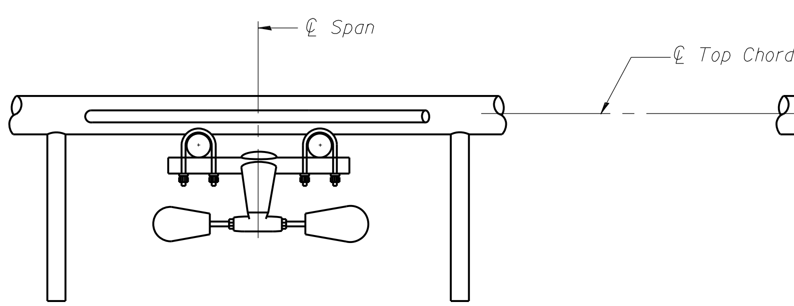
PLAN DETAIL "C"

℄ Span at ℄ Chord Splice

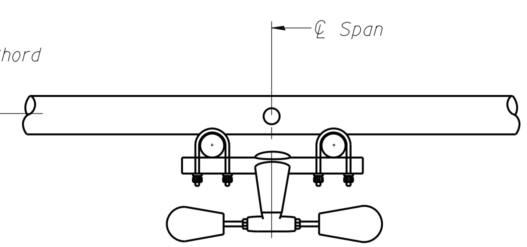
NOTES

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

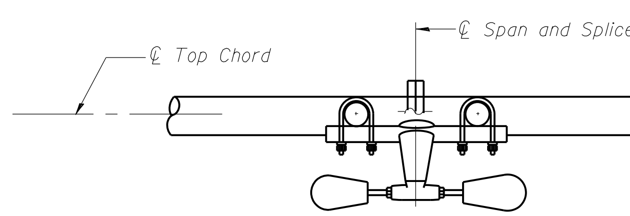
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



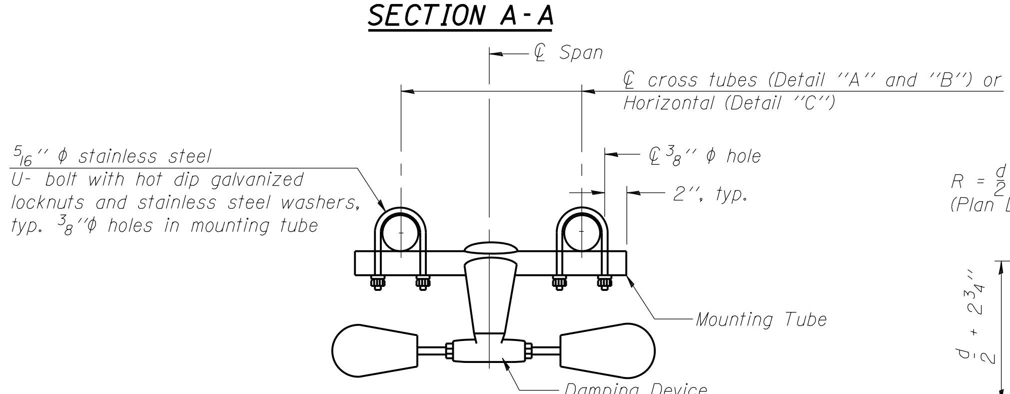
SECTION A-A



SECTION B-B

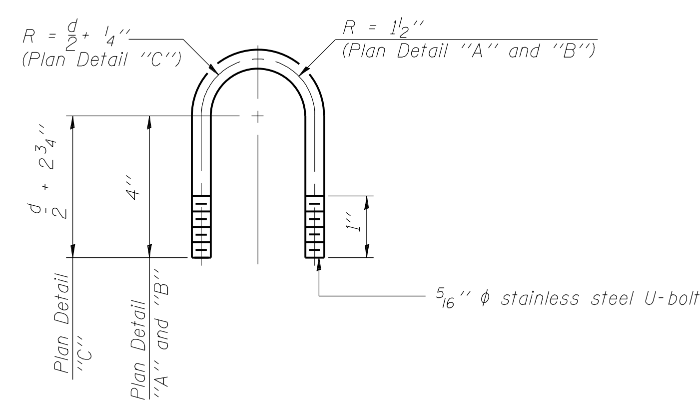


SECTION C-C



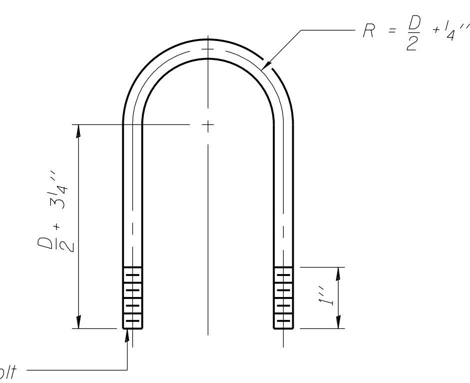
TRUSS DAMPING DEVICE CONNECTION DETAIL

(Typical)



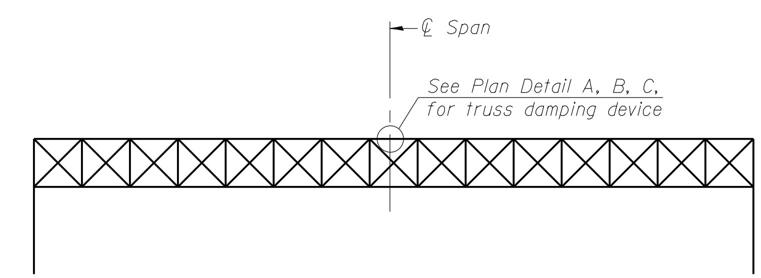
DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL

(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL

(Typical - Detail ''A'' and ''B'')



ELEVATION

Aluminum Overhead Sign Truss

OS-A-D 6-1-12

Ciorba Group, Inc. CONSULTING ENGINEERS

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 ' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

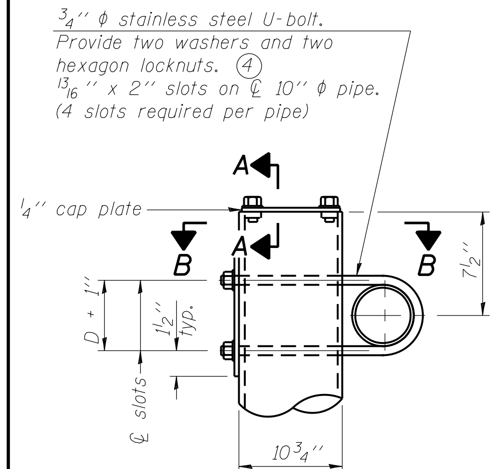
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURE
DAMPING DEVICE
SHEET NO. S-13 OF S-26 SHEETS

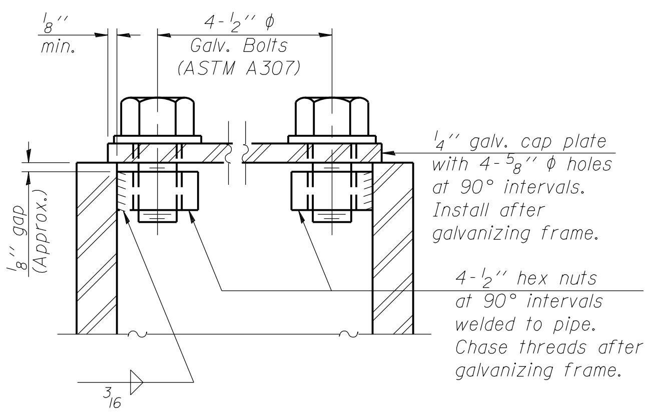
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	32
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
		ILLINOIS FED. AID PROJECT		

•• WINNEBAGO & OGLE

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03-CN_-S013.dgn

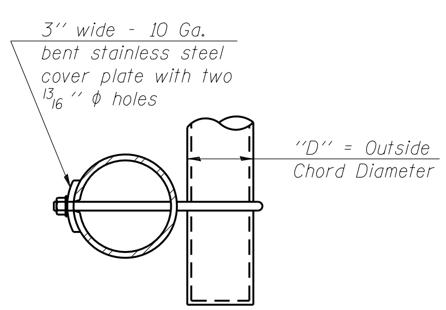


DETAIL A

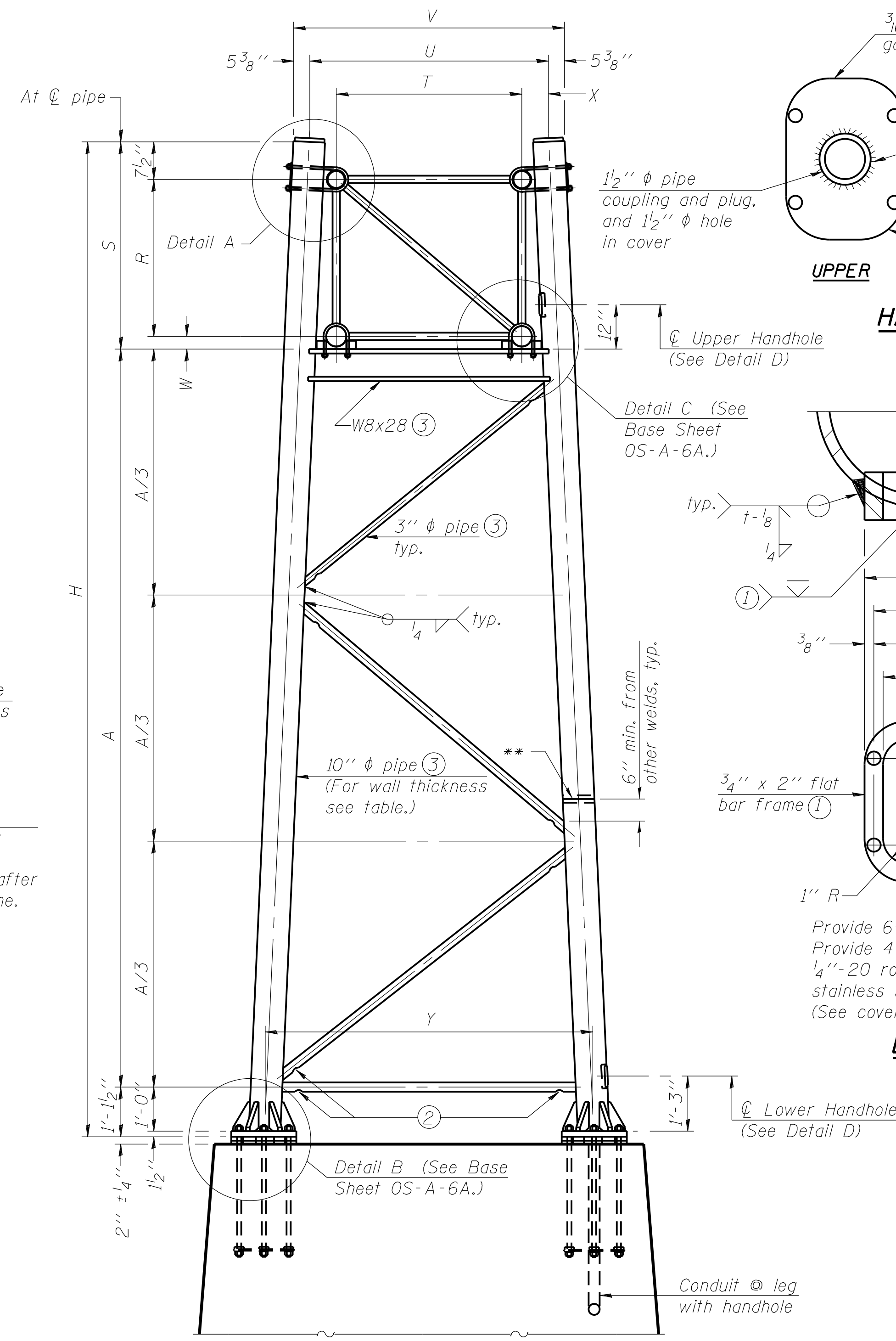


SECTION A-A

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

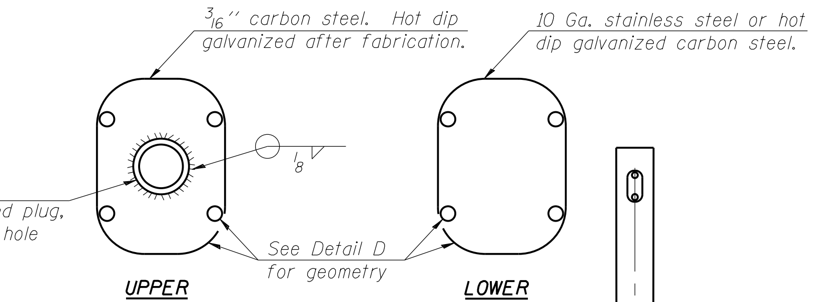


SECTION B-B

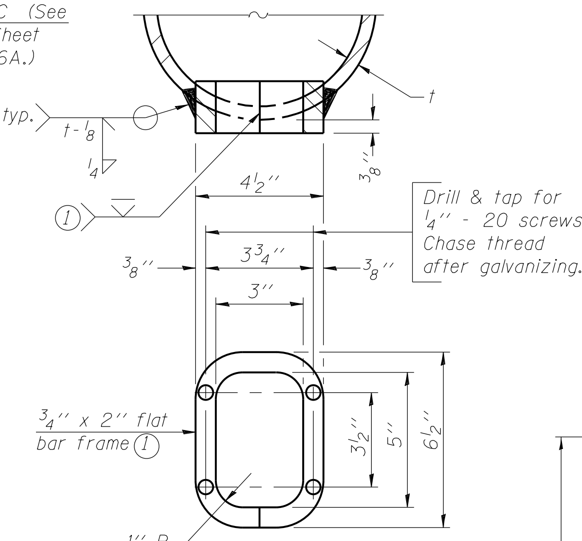


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

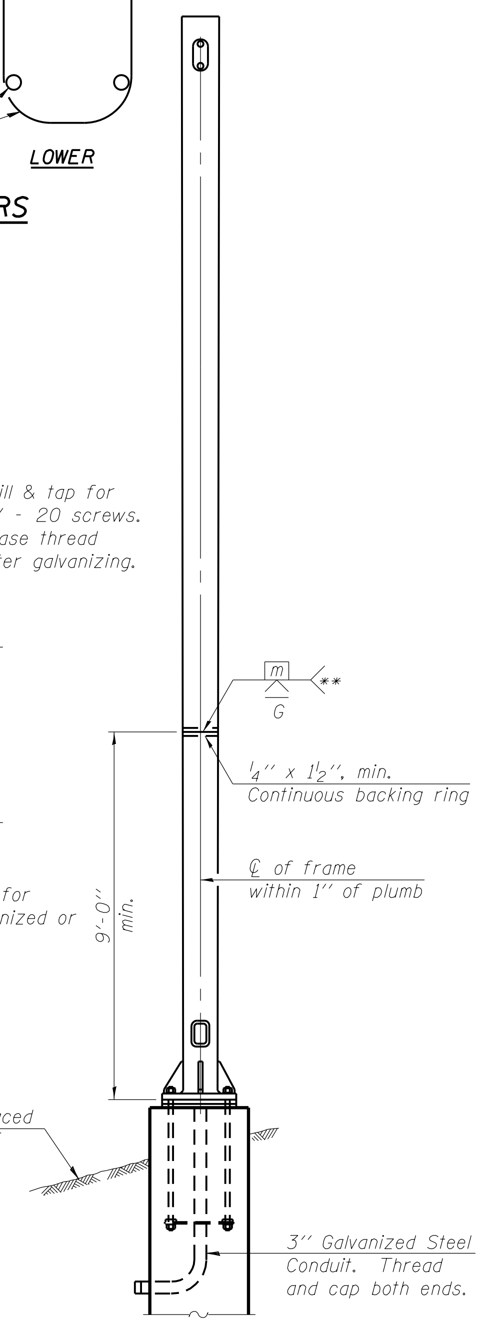


HANDHOLE COVERS



Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

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

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6''	5'-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'' ϕ PIPE TRUSS SUPPORT FRAME

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

	Structure Number	Station	Support Left	Support Right	Truss Type	Pipe Wall Thickness	H (6)	A
SN-031	2S101I039R138.8			x	II-A	0.500"	32'-8 3/4"	25'-4"
SN-031	2S101I039R138.8		x		II-A	0.500"	31'-3 3/4"	23'-11"
SN-032	2S101I039R139.4			x	II-A	0.500"	34'-4 5/8"	26'-11 7/8"
SN-032	2S101I039R139.4		x		II-A	0.500"	32'-6 3/8"	25'-1 5/8"
SN-034	2S101U020R021.5			x	II-A	0.365"	29'-4 5/8"	21'-11 7/8"
SN-034	2S101U020R021.5		x		II-A	0.365"	29'-11 3/8"	22'-6 5/8"
SN-039	2S071I039L118.7			x	II-A	0.365"	30'-11 5/8"	23'-6 7/8"
SN-039	2S071I039L118.7		x		II-A	0.365"	30'-3"	22'-10 1/4"

OS-A-6 6-1-12

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009
Fax 773.775.4014
Email chicago@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 ' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

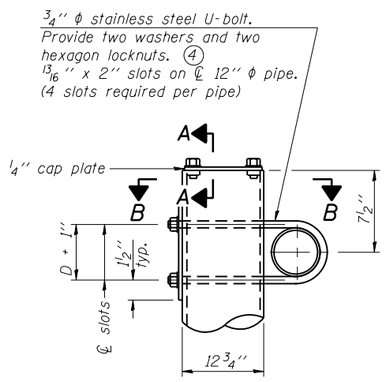
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

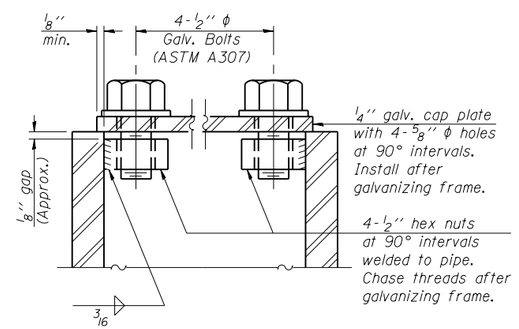
SHEET NO. S-14 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	33
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
		ILLINOIS FED. AID PROJECT		

•• WINNEBAGO & OGLE

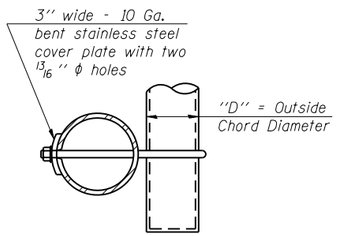


DETAIL A

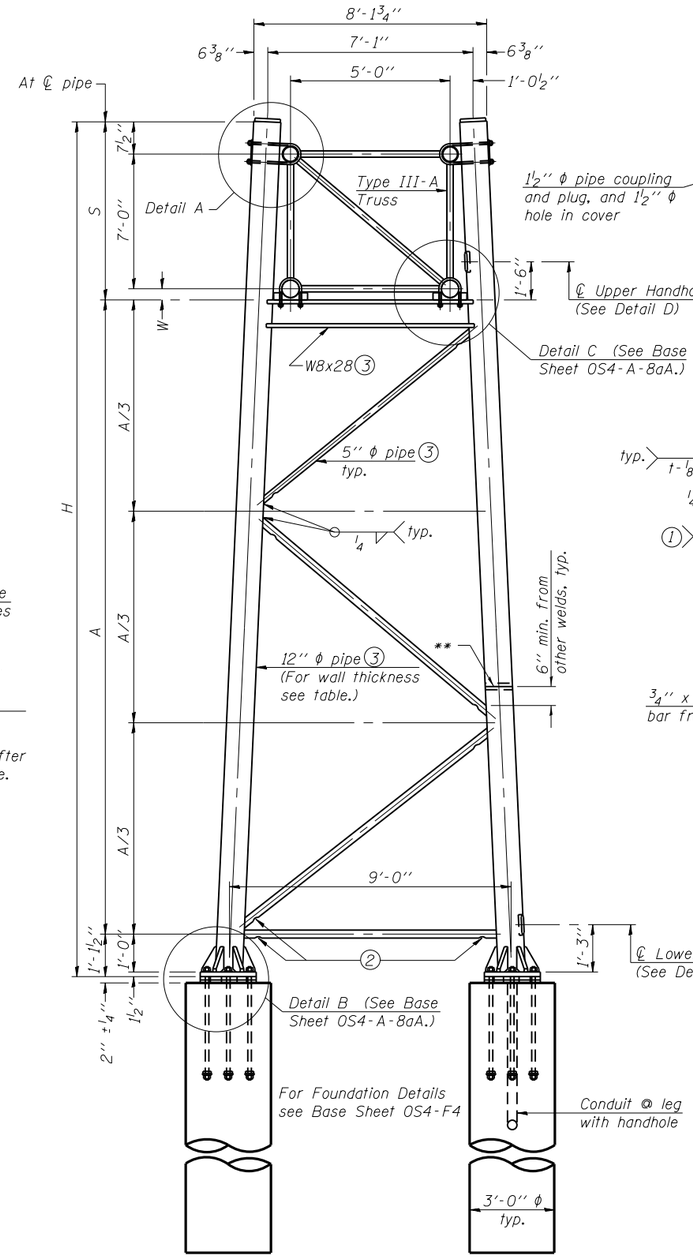


SECTION A-A

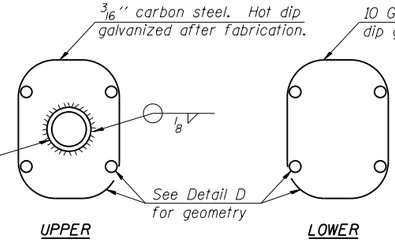
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



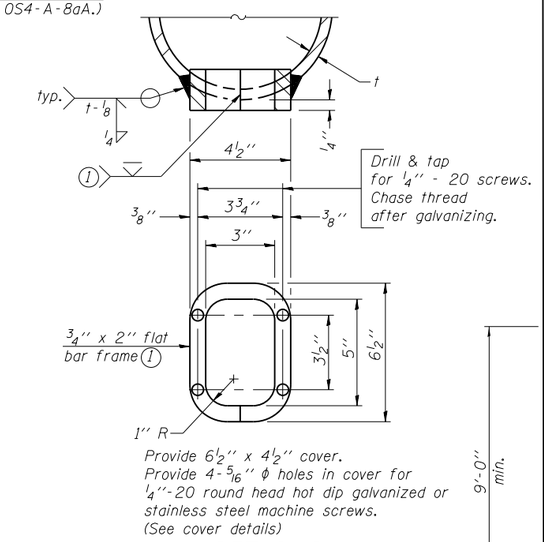
SECTION B-B



SIDE ELEVATION



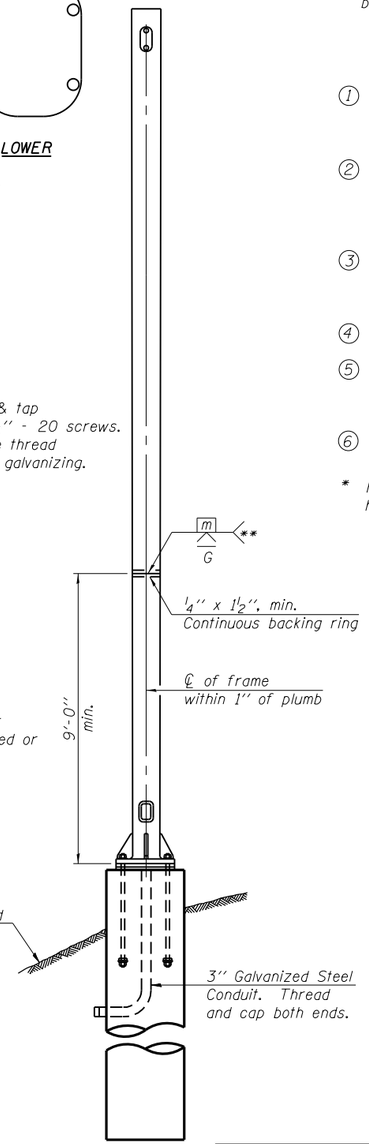
HANDHOLE COVERS



Provide 6 1/2" x 4 1/2" cover.
Provide 4-5/16" ϕ holes in cover for 1/4"-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

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

(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.

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

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.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
SN-033	2S101I039R139.8		x	0.375"	28'-9 1/4"	19'-7 1/2"
SN-033	2S101I039R139.8	x		0.375"	32'-1 1/8"	22'-11 3/8"

OS4-A-8a 6-1-12

Clorba Group, Inc.
CONSULTING ENGINEERS
5007 North Cumberland Avenue
Suite 402 Chicago Illinois 60656
Tel: 773.775.4005
Fax: 773.775.4514
Email: ch@clorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 ' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

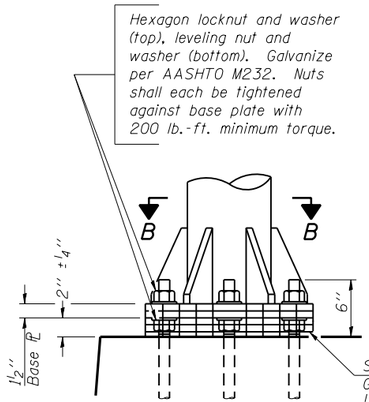
OVERHEAD SIGN STRUCTURES – SUPPORT FRAME FOR TYPE III–A ALUMINUM TRUSS

SHEET NO. S-15 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	34
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS FED. AID PROJECT			

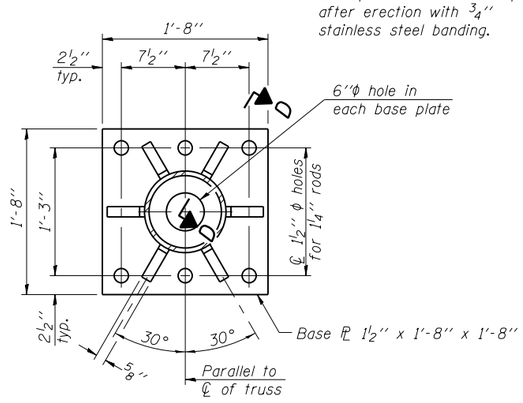
•• WINNEBAGO & OGLE

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03-CN_-S015.dgn

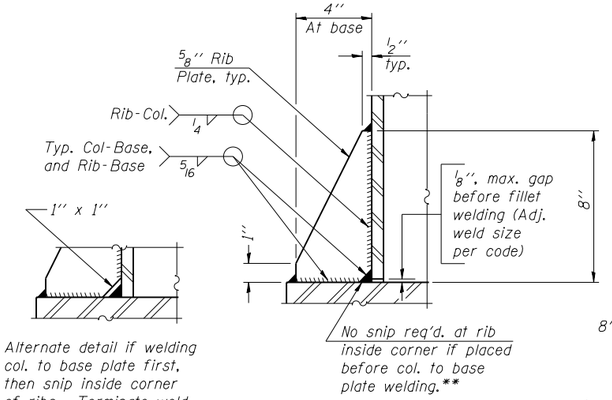


DETAIL B

Ribs shall be cut to fit slope of pipe.

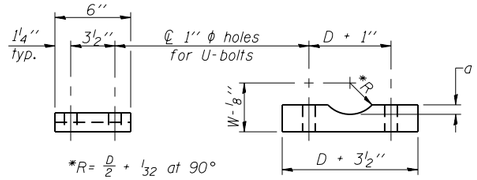


SECTION B-B



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

SECTION D-D



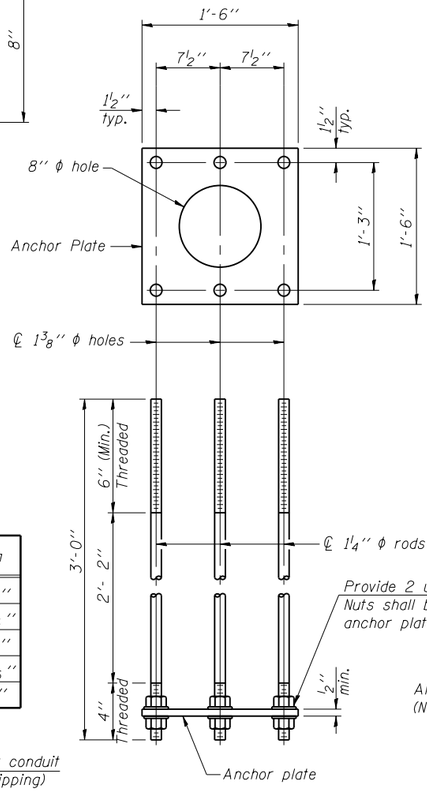
*R = D/2 + 1/32 at 90°

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

SADDLE SHIM DETAIL

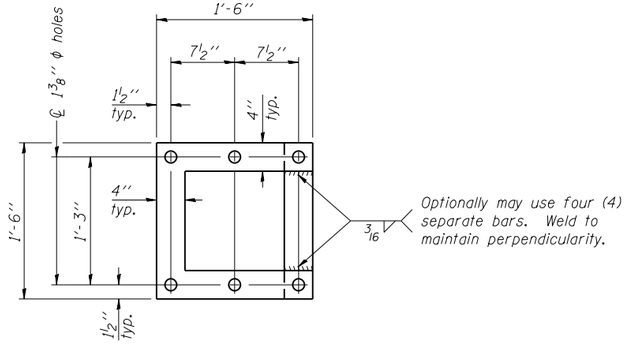
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

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

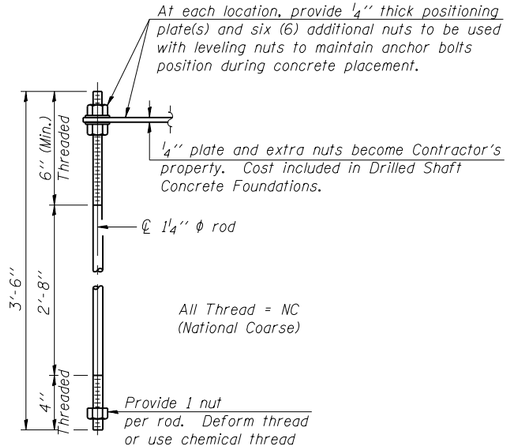


ANCHOR ROD DETAIL

Spread Footing Foundation



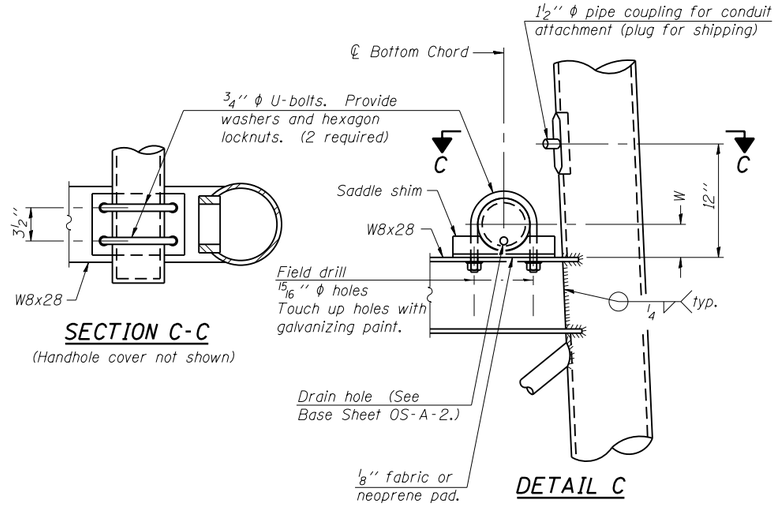
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

Drilled Shaft Foundation

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



SECTION C-C

(Handhole cover not shown)

DETAIL C

10'' ϕ PIPE SUPPORT FRAME DETAILS

OS-A-6A 6-1-12

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0.2.0000 '' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

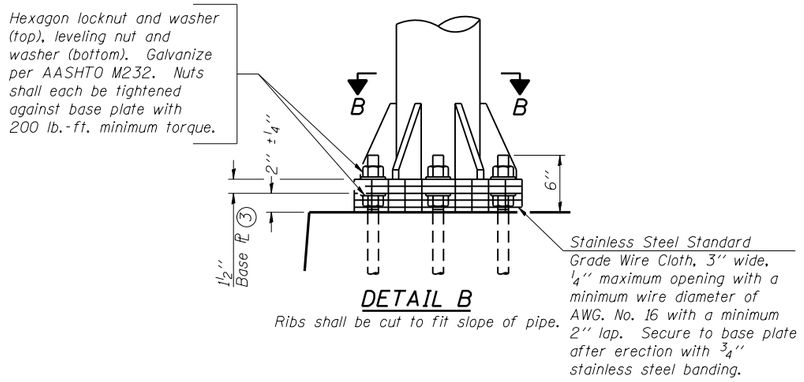
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS – ALUMINUM TRUSS
SHEET NO. S-16 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	35
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE

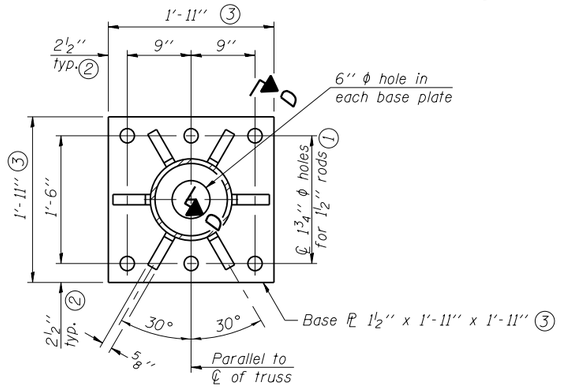
Clorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4005
Fax 773.775.4007
Email dlchicago@clorba.com

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03_-CN_-5016.dgn

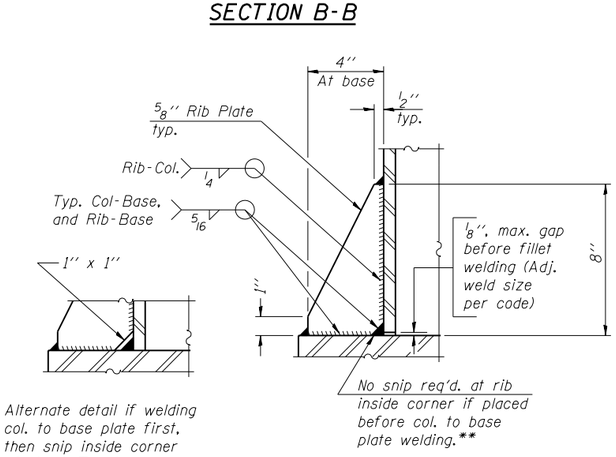


DETAIL B

Ribs shall be cut to fit slope of pipe.

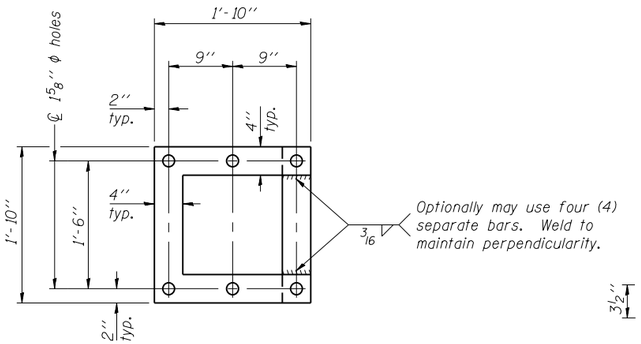


SECTION B-B

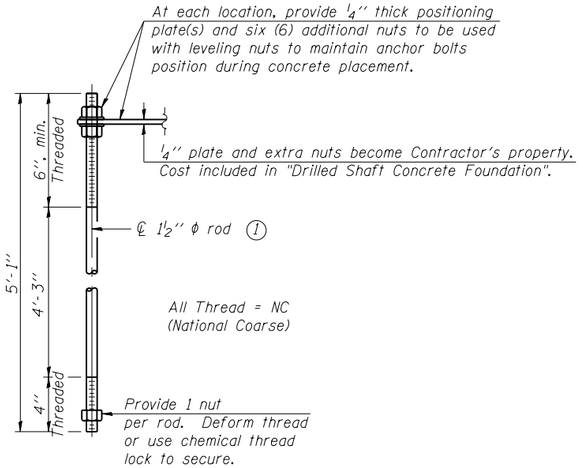


** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D

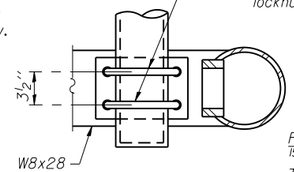


POSITIONING PLATE(S)



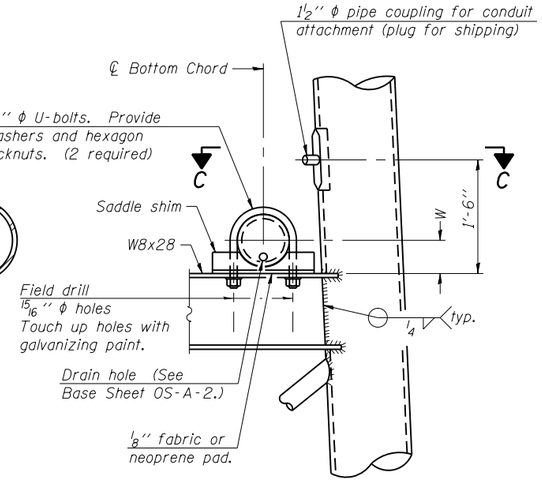
ANCHOR ROD DETAIL

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

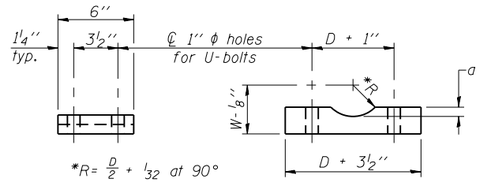


SECTION C-C

(Handhole cover not shown)



DETAIL C



*R = D/2 + 1/32 at 90°

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

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)

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

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

① 1 3/4'' ϕ rod, 2'' ϕ holes

② 2 3/4'' edge distance

③ Base PL 1 5/8'' x 1'-11 1/2'' x 1'-11 1/2''

OS4-A-8aA 6-1-12

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel 773.775.4005
Fax 773.775.4014
Email ciorba@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0.2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

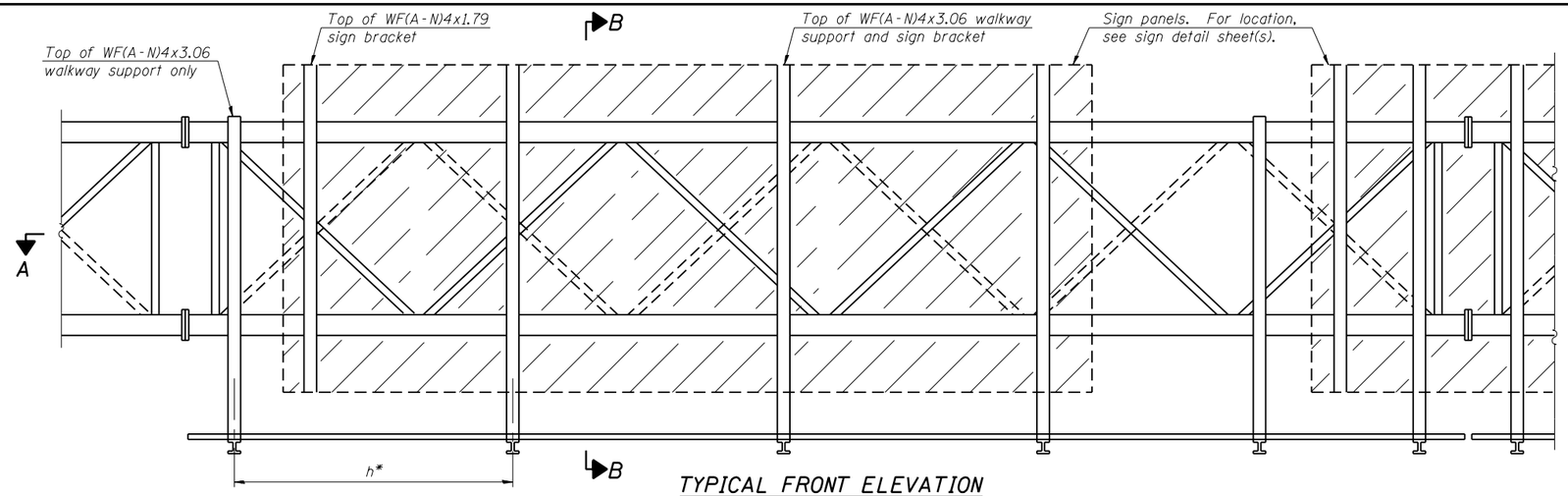
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS

SHEET NO. S-17 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	36
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

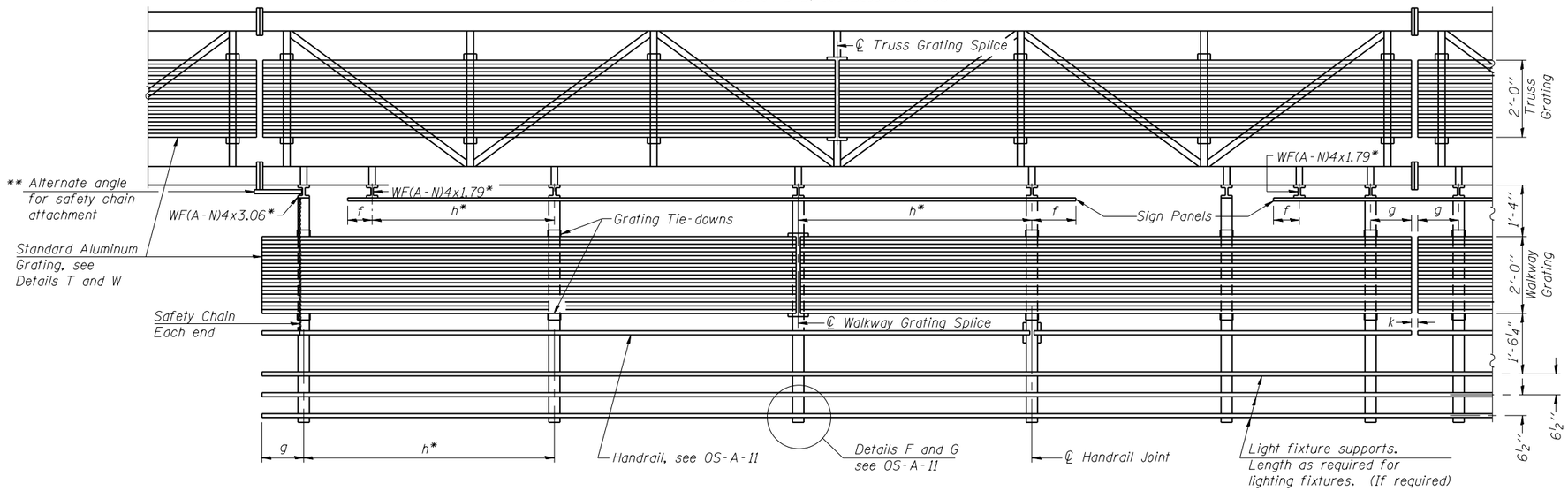
•• WINNEBAGO & OGLE

N:\PROJ\00200080.00\00200080.01\Design\Structural\CAD\SN-03-CN_-S017.dgn



TYPICAL FRONT ELEVATION

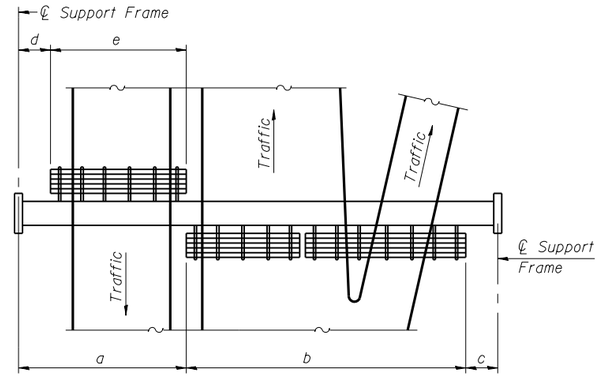
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



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
SN-031	2S101I039R138.8		36'-3"	39'-0"	36'-9"	n/a	n/a	39'-0"
SN-032	2S101I039R139.4		52'-9"	39'-0"	31'-3"	n/a	n/a	39'-0"
SN-033	2S101I039R139.8		43'-0"	60'-3"	36'-9"	n/a	n/a	60'-3"
SN-034	2S101U020R021.5		15'-0"	63'-3"	40'-9"	n/a	n/a	63'-3"
SN-039	2S071I039L118.7		39'-0"	60'-3"	30'-9"	n/a	n/a	60'-3"



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 ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ 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.

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 ±½" based on available standard widths.

OS-A-9 6-1-12

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
Email: office.agc@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

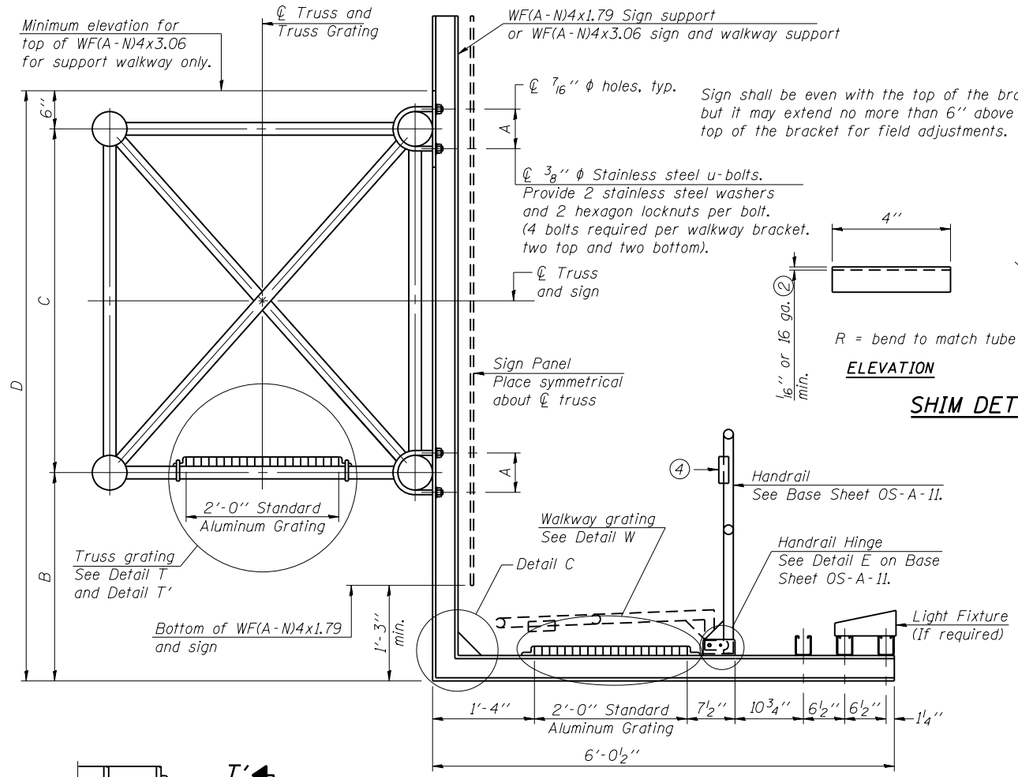
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SHEET NO. S-18 OF S-26 SHEETS

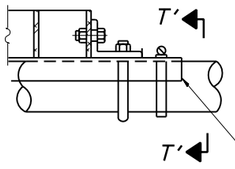
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	37
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-03-CN_-S018.dgn



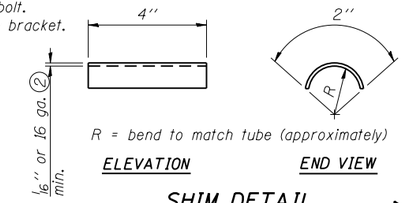
SECTION B-B



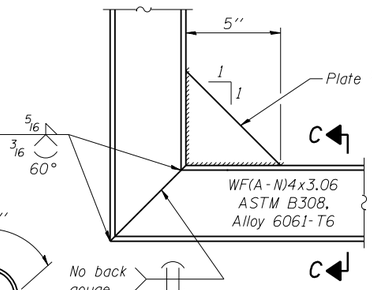
DETAIL T'

(Truss grating splice)

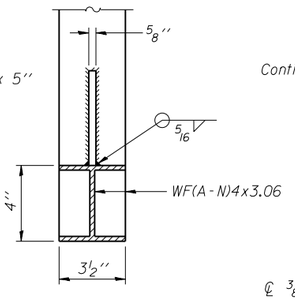
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



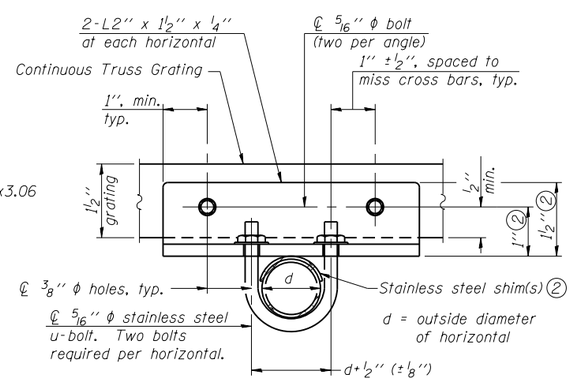
SHIM DETAIL



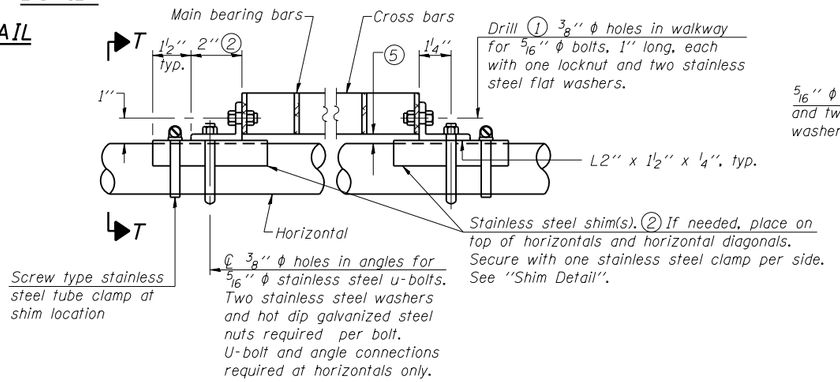
DETAIL C



SECTION C-C

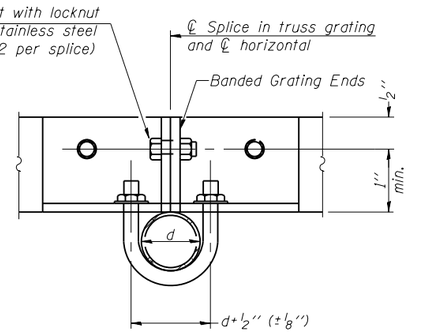


SECTION T-T

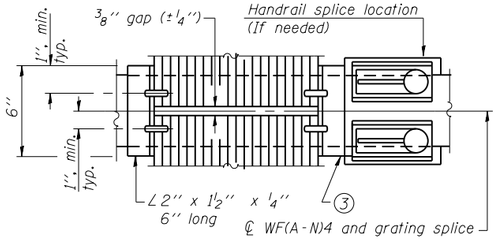


DETAIL T

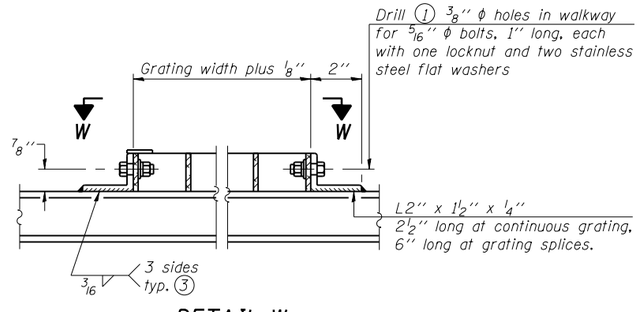
(Continuous Truss grating)



SECTION T'-T'

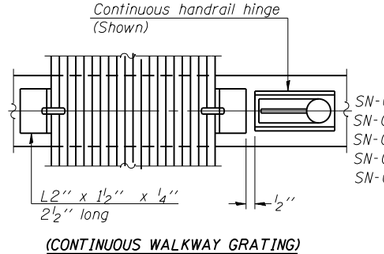


(AT WALKWAY GRATING SPLICE)



DETAIL W

(Walkway grating)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1½" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1½" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "T" 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 1½", 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
SN-031 2S101I039R138.8		7½"	4'-7½"	5'-3"	10'-4½"
SN-032 2S101I039R139.4		7½"	5'-1½"	5'-3"	10'-10½"
SN-033 2S101I039R139.8		7½"	4'-3"	7'-0"	11'-9"
SN-034 2S101U020R021.5		7½"	3'-7½"	5'-3"	9'-4½"
SN-039 2S071I039L118.7		7½"	5'-7½"	5'-3"	11'-4½"

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 ¼" extension bars. (See Base Sheet OS-A-11.)

④ ℄ ⅛" x ½" x 2" welded to handrail posts to protect locations that contact grating.

⑤ Tube to grading gap may vary from 0 to ½", max. to align walkway, allow for camber, etc.

⑥ Based on actual height of tallest sign given on OS-A-1.

OS-A-10 6-1-12

Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue Chicago, Illinois 60656 Tel. 773.775.4608 Fax 773.775.4014 Email: office@ciorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

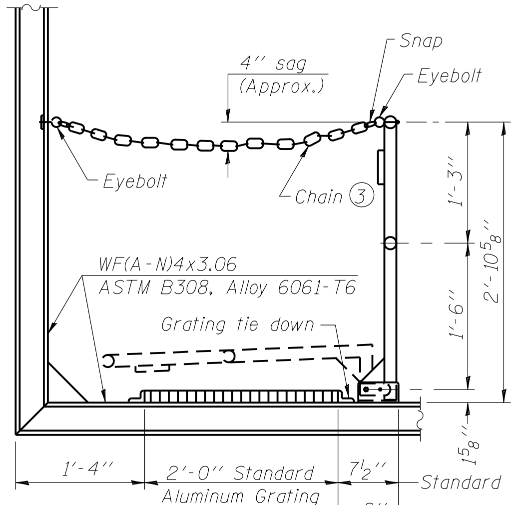
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

SHEET NO. S-19 OF S-26 SHEETS

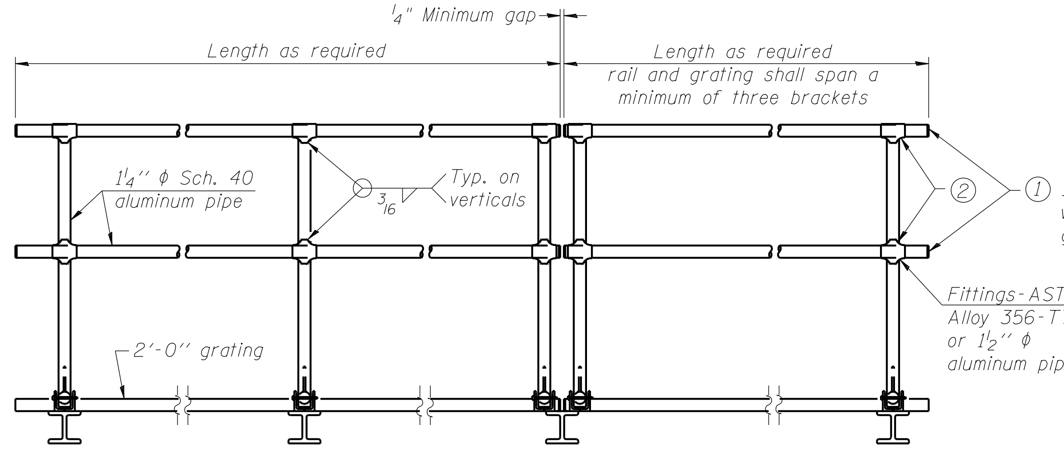
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	38
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

•• WINNEBAGO & OGLE

N:\PROJ\00220080.00\00220080.01\Design\Structural\CAD\SN-03-CN_-S019.dgn



SIDE ELEVATION
(Showing safety chain w/o sign)

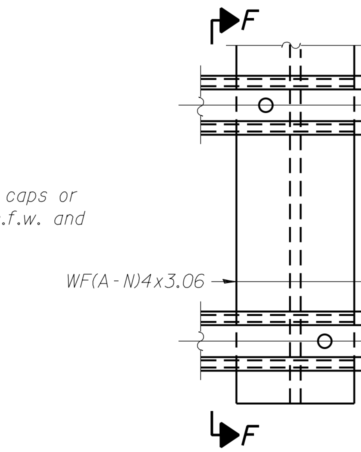


FRONT ELEVATION

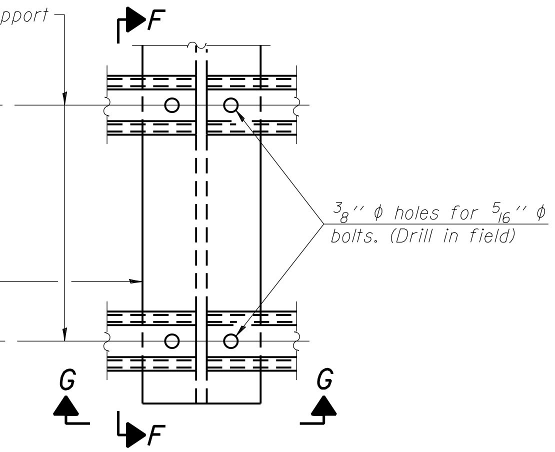
HANDRAIL DETAILS
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

① Install standard force-fit end caps or weld ⅛" end plates with ⅛" c.f.w. and grind smooth. (All rail ends)

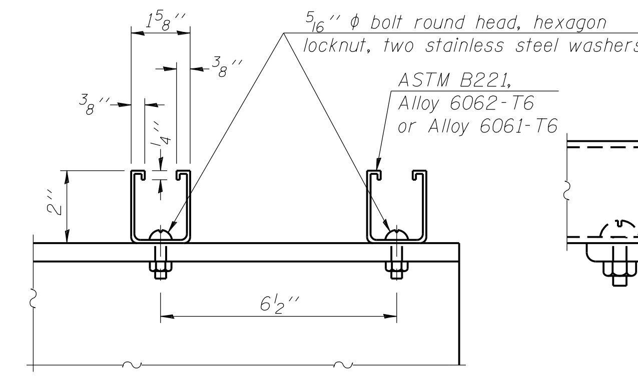
② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" ϕ hole in fitting for ⅜" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16"ϕ holes on top rail at ends only.)



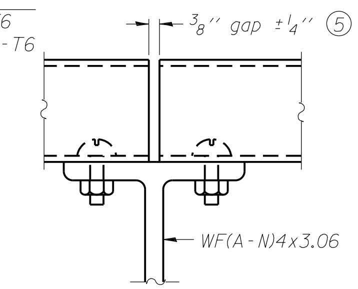
DETAIL F



DETAIL G



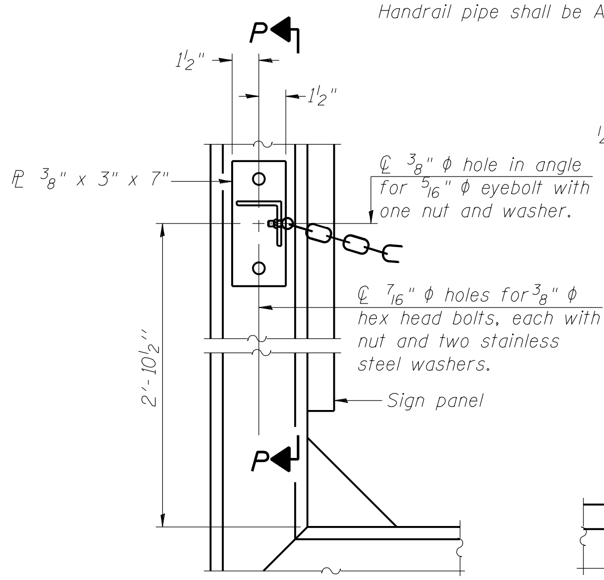
SECTION F-F



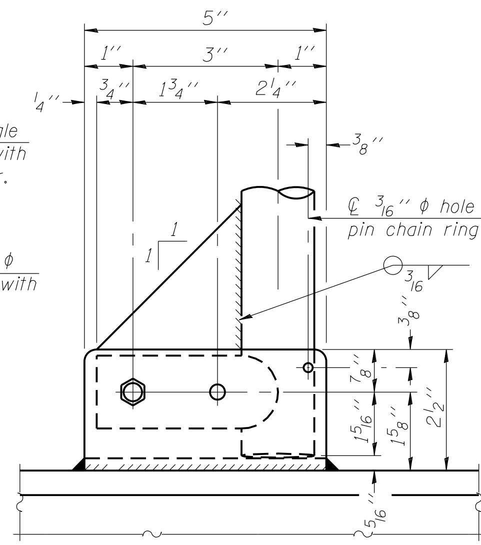
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

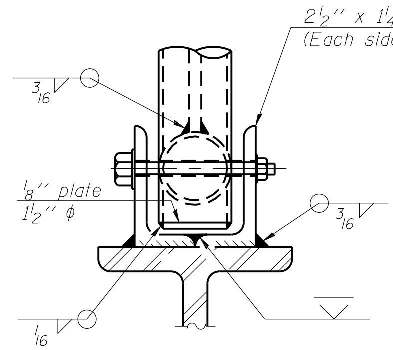
⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



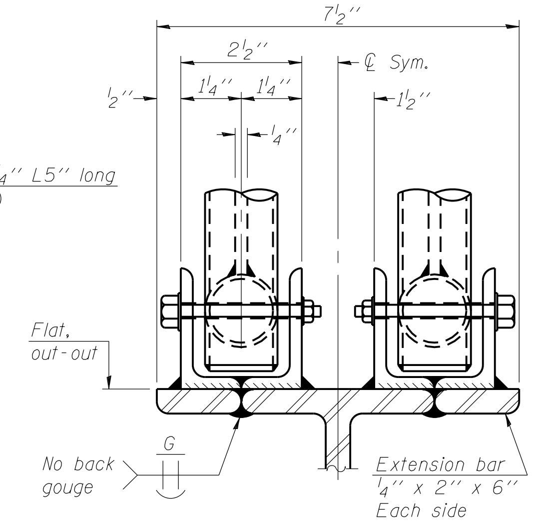
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



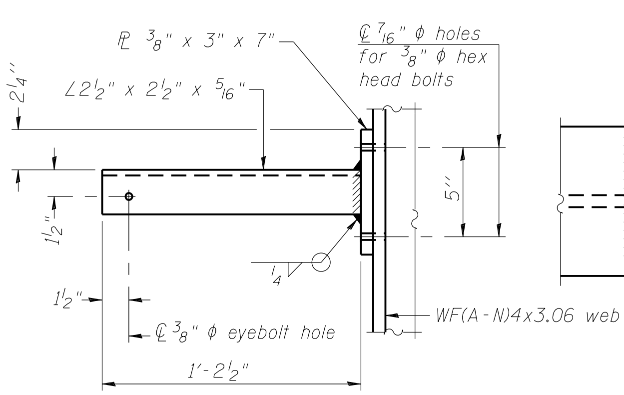
SIDE ELEVATION



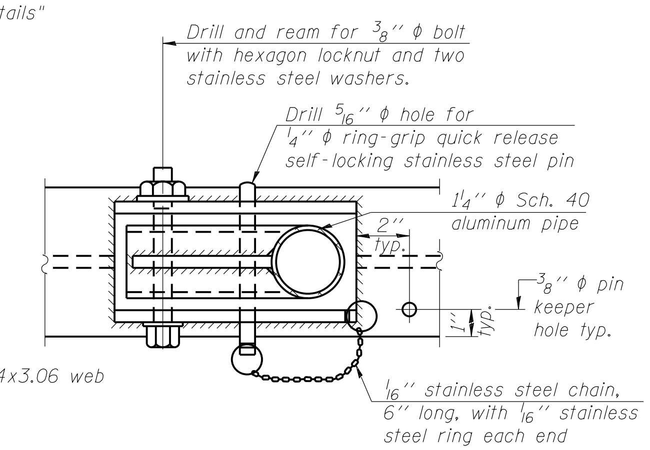
FRONT ELEVATION
See "Elevation" at right for dimensions.



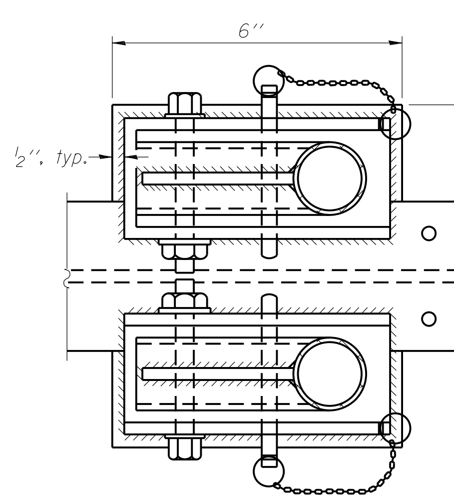
ELEVATION AT HANDRAIL JOINT ④



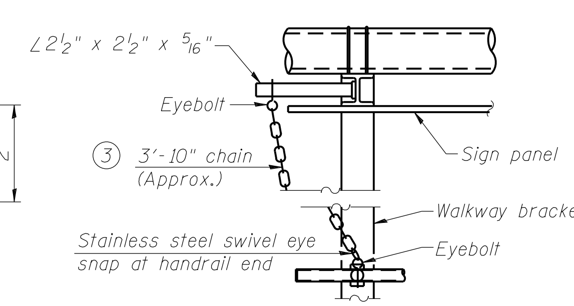
SECTION P-P



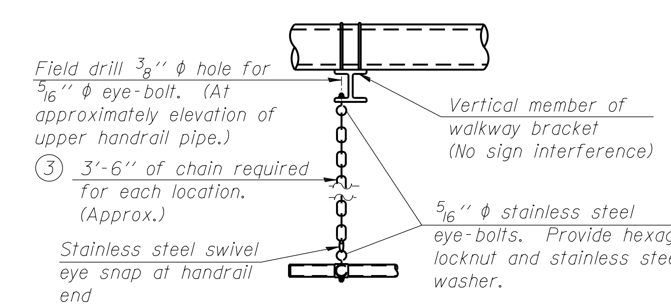
PLAN
DETAIL E HANDRAIL HINGE



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)



SAFETY CHAIN
One required for each end of each walkway.

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

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

OS-A-11 6-1-12

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03-CN-S020.dgn

Cl orba Group, Inc. CONSULTING ENGINEERS	USER NAME = jattanaseo	DESIGNED - NG	REVISED -
		CHECKED - BWS	REVISED -
	PLOT SCALE = 0:2.0000 ' / in.	DRAWN - RD	REVISED -
	PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS
SHEET NO. S-20 OF S-26 SHEETS

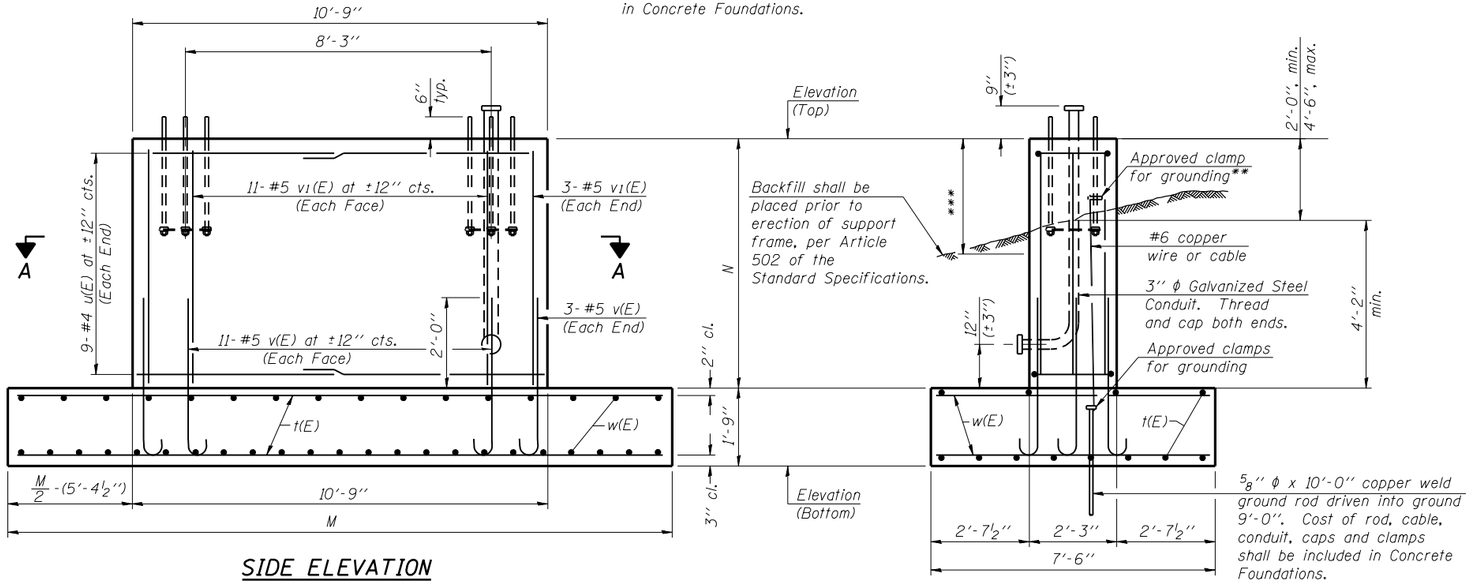
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	39
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
		ILLINOIS FED. AID PROJECT		

•• WINNEBAGO & OGLE

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

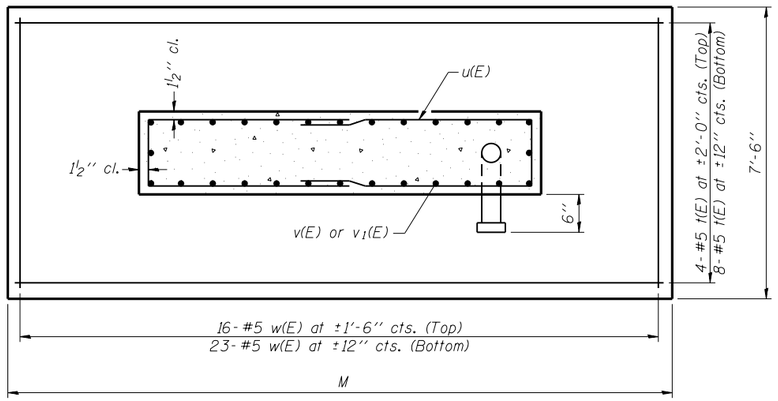
** Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

*** A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.

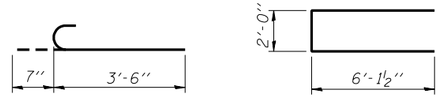


SIDE ELEVATION

END ELEVATION



SECTION A-A



BAR v(E) BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	12	#5	*	
u(E)	18	#4	14'-3"	
v(E)	28	#5	4'-1"	
v1(E)	28	#5	*	
w(E)	39	#5	7'-3"	

*Length of t(E) bar = (Dim. M) - 6"
v1(E) bar = (Dim. N) - 3"

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)	Rock Excavation for Structures (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M		
SN-031	2S101I039R138.8	838.49	829.57	7'-2"	24'-6"	837.08	828.16	7'-2"	24'-6"	36.7	92.3
SN-032	2S101I039R139.4	811.85	802.43	7'-8"	25'-0"	810.00	800.58	7'-8"	25'-0"	38.1	
SN-034	2S101U020R021.5	838.64	830.22	6'-8"	24'-6"	839.20	830.78	6'-8"	24'-6"	35.8	
SN-039	2S071I039L118.7	808.21	798.29	8'-2"	25'-0"	807.50	797.58	8'-2"	25'-0"	39.0	

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 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.

During construction, if footing length or width or wall height change by more than 12", or if reinforcement is changed, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 10" ϕ SUPPORT FRAME

OS-F3 8-21-13

Clorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel: 773.775.4605
Fax: 773.775.4514
Email: dl4cago@clorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0:2.0000 '' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

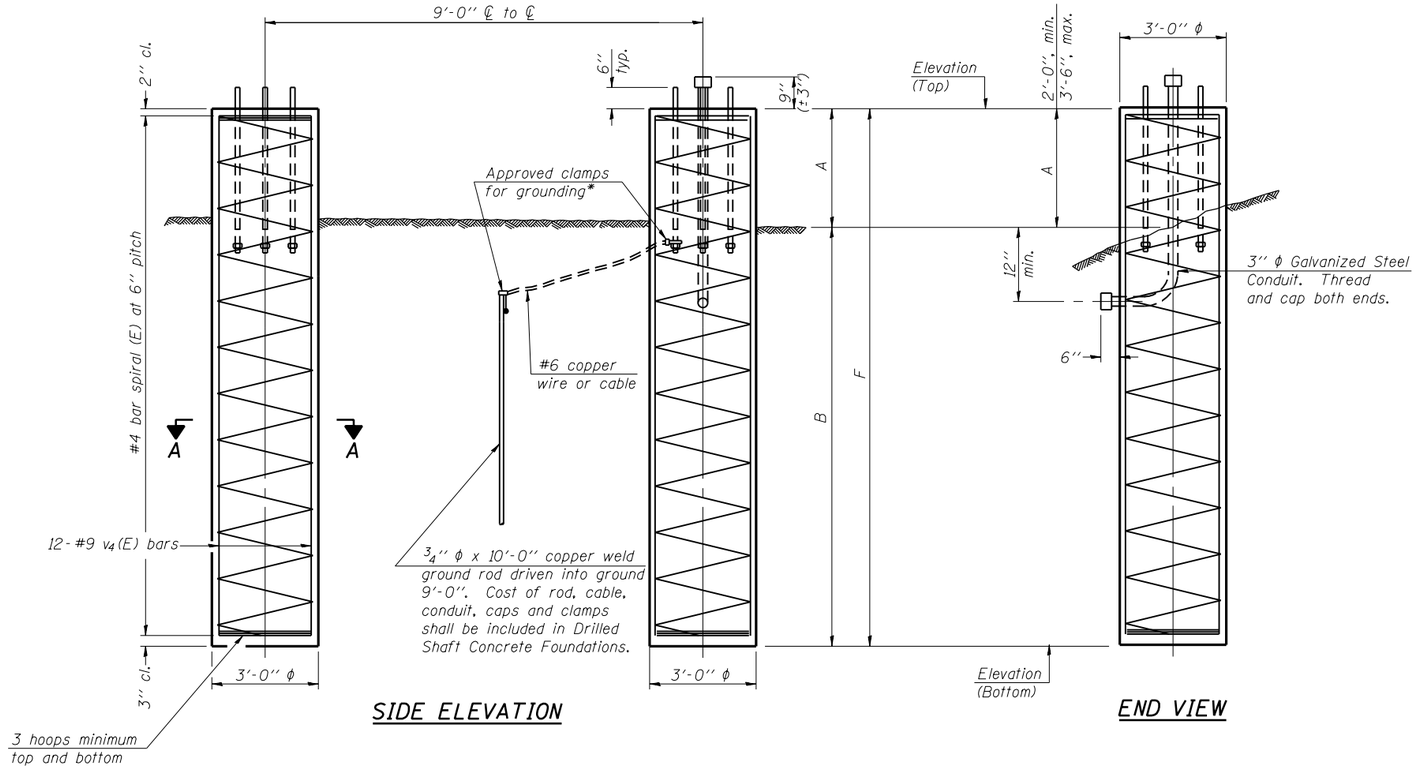
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS
SHEET NO. S-21 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	40
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS FED. AID PROJECT				

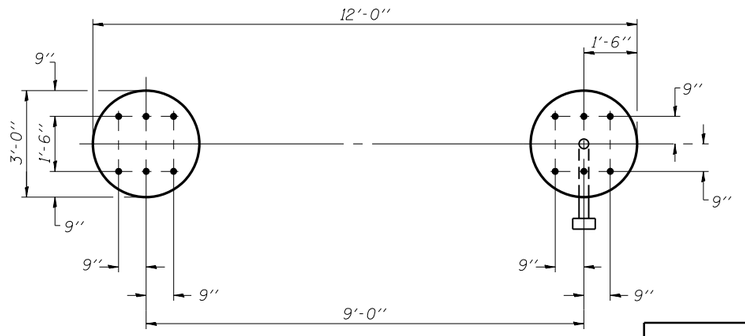
•• WINNEBAGO & OGLE

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03_-CN_-S021.dgn



SIDE ELEVATION

END VIEW



PLAN

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

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

BAR LIST - EACH FOUNDATION

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

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

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

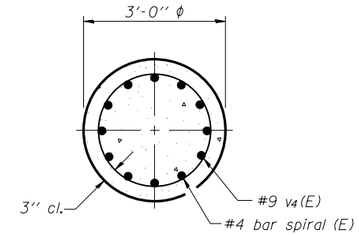
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



SECTION A-A

DETAILS FOR 12" ϕ 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	
SN-033	2S101I039R139.8		842.17	817.42	2'-9"	22'-0"	24'-9"	845.49	820.74	2'-9"	22'-0"	24'-9"	26.0

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-03.-CN.-S022.dgn

OS4-F4 8-21-13

Clorba Group, Inc.
CONSULTING ENGINEERS
10 South Cumberland Avenue, Suite 402 Chicago, Illinois 60606
Tel 773.775.4005
Fax 773.775.4014
Email cMcago@clorba.com

USER NAME = jattanasio	DESIGNED - NG	REVISED -
	CHECKED - BWS	REVISED -
PLOT SCALE = 0.2.0000 ' / in.	DRAWN - RD	REVISED -
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS
SHEET NO. S-22 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	41
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS	FED. AID PROJECT			

•• WINNEBAGO & OGLE

SOIL BORING LOG

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1
Date 4/2/13

ROUTE FAI 39 DESCRIPTION P92-ST3 I-39 Sign Truss NB, .8 m. S. of Lyndon Road LOGGED BY W. Garza

SECTION 201-(1-2, 2 & 3) SG LOCATION Cherry Valley Twp. - 16NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 031
Station 2493+00

BORING NO. B-1
Station 2493+30
Offset 61.00ft Lt CL NB
Ground Surface Elev. 846.5 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter ____ ft
Upon Completion ____ ft
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.020311 Lat. - 42.201189 MEDIUM brown SILTY CLAY LOAM	844.50			0.6 P	19
MEDIUM tan weathered LIMESTONE	843.00		22 9 8		
VERY DENSE tan weathered LIMESTONE	840.50	-5	5 100/11"		
End of Boring		-10 -15 -20			

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

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1
Date 4/2/13

ROUTE FAI 39 DESCRIPTION P92-ST3 I-39 Sign Truss NB, .8 m. S. of Lyndon Road LOGGED BY W. Garza

SECTION 201-(1-2, 2 & 3) SG LOCATION Cherry Valley Twp. - 16NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 031
Station 2493+00

BORING NO. B-2
Station 2493+14
Offset 31.00ft Rt CL NB
Ground Surface Elev. 837.4 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter ____ ft
Upon Completion ____ ft
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.020096 Lat. 42.200992	835.40				
DENSE tan weathered LIMESTONE	833.90		27 15 19		
MEDIUM tan weathered LIMESTONE	831.40	-5	7 6 20		
VERY DENSE tan weathered LIMESTONE	828.90		100/3"		
End of Boring		-10 -15 -20			

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

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1
Date 4/22/13

ROUTE Harrison Avenue DESCRIPTION P92-ST2 Sign Truss, on Harrison Avenue WB @ Ramp to I-39 SB LOGGED BY W. Garza

SECTION (1,2,3,4,5,6)5G-1 & 1-SG-1 LOCATION Rockford Twp. - 35SE, SEC. , TWP. 44N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. #021
Station NE Quad

BORING NO. B-1
Station 51+84
Offset 66.00ft Lt CL WB
Ground Surface Elev. 776.7 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion Dry ft
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long - 89.965141 Lat. 42.239594 MEDIUM tan SANDY LOAM	774.70			0.5 P	9
MEDIUM tan SANDY LOAM	773.20		4 6 7	0.9 B	9
STIFF tan SANDY LOAM	770.20	-5	4 6 10	1.7 B	10
HARD tan SANDY LOAM TILL	768.20		11 12 15	4.5 P	9
VERY STIFF tan SANDY LOAM TILL	765.70	-10	10 12 17	3.1 S	9
DENSE tan SANDY LOAM TILL	763.20		13 17 20		8
VERY STIFF tan SANDY LOAM TILL with SAND lens	760.70	-15	13 16 19	2.6 S	9
VERY STIFF tan SANDY LOAM TILL	758.20		9 11 14	2.9 S	9
HARD tan SANDY LOAM TILL		-20	6		
HARD tan SANDY LOAM TILL *(continued)*	755.70		11 15	4.3 B	10
HARD tan SANDY LOAM TILL	753.20		4 9 13	4.1 B	9
STIFF tan SANDY LOAM TILL with SAND lens	750.20	-25	6 13 17	1.2 B	11
VERY DENSE tan weathered LIMESTONE	748.20		10 19 32		
DENSE tan weathered LIMESTONE	745.70	-30	16 17 20		
MEDIUM tan weathered LIMESTONE	743.20		20 8 11		
MEDIUM tan weathered LIMESTONE	740.70	-35	8 5 11		
End of Boring		-40			

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)

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-boring_-CN_-S023.dgn

Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com	USER NAME = jattanaseo	DESIGNED - NG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES BORING LOG - 1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED - BWS	REVISED -			VAR.	•	••	45 / 42
	PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - RD	REVISED -			• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288	
	PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -		SHEET NO. S-23 OF S-26 SHEETS		ILLINOIS FED. AID PROJECT		

•• WINNEBAGO & OGLE

SOIL BORING LOG (1)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1

Date 4/3/13

ROUTE FAI 39 DESCRIPTION P92-ST4 I-39 Sign Truss NB, .5 m. S. of US 20 Bypass LOGGED BY W. Garza

SECTION 201-(1-2, 2 & 3) SG LOCATION Cherry Valley Twp. - 9SW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 032
Station

BORING NO. B-1
Station 2522+70
Offset 24.00ft Rt CL NB
Ground Surface Elev. 617.0 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion Dry ft
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.012469 814.5 Lat. 42.206785 SOFT brown LOAM	615.00			0.3 P	14
VERY DENSE tan weathered LIMESTONE (fill)	613.50				
MEDIUM light brown SANDY LOAM	611.00	-5	5 4 12	0.5 P	12
HARD tan SANDY CLAY LOAM	608.50		8 7 14	5.0 S	10
No Recovery	606.00	-10	9 12 13		
HARD tan SILTY CLAY	603.50		8 11 13	6.8 S	16
MEDIUM tan dry fine SAND	601.00	-15	7 12 16		
VERY DENSE tan SANDY LOAM	598.50		25 53 51		7
		-20	21		
Hard Drilling VERY DENSE tan SANDY LOAM TILL *(continued)*	596.00		100/6"		
End of Boring		-25			
		-30			
		-35			
		-40			

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 (2)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1

Date 4/3/13

ROUTE FAI 39 DESCRIPTION P92-ST4 I-39 Sign Truss NB, .5 m. S. of US 20 Bypass LOGGED BY W. Garza

SECTION 201-(1-2, 2 & 3) SG LOCATION Cherry Valley Twp. - 9SW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 032
Station

BORING NO. B-2
Station 2522+65
Offset 66.50ft Lt CL NB
Ground Surface Elev. 610.1 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion Dry ft
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.012787 808.5 Lat. 42.206888 SOFT brown SILTY CLAY LOAM	608.10			0.3 P	16
VERY DENSE tan SANDY LOAM TILL	606.60		36 44 56		7
VERY DENSE tan SANDY LOAM TILL	603.60	-5	39 48 48		7
VERY DENSE tan SANDY LOAM	601.60		33 47 56		
End of Boring		-10			
		-15			
		-20			

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 (3)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1

Date 5/2/13

ROUTE US 20 Bypass EB DESCRIPTION P92-ST5 Sign Truss, I-39 US 20 Bypass, .6 m. E. of Alpine Road LOGGED BY W. Garza

SECTION LOCATION Cherry Valley Twp. - 9NW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 034
Station 1138+00

BORING NO. B-1
Station 1138+13
Offset 7.00ft Lt CL
Ground Surface Elev. 836.3 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

Groundwater Elev.:
First Encounter 829.3 ft ▼
Upon Completion 820.8 ft ▽
After ____ Hrs. ____ ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.011529 Lat. 42.213210 MEDIUM brown/tan LOAM	834.30			0.8 P	18
VERY STIFF light gray SILTY CLAY LOAM TILL	832.80		3 5 7	2.1 P	21
MEDIUM light gray SILTY CLAY LOAM TILL	829.80	-5	2 3 3	0.5 B	25
▼ LOOSE light brown fine SAND	827.80		3 5 4		
VERY LOOSE light brown fine SAND	825.30	-10	1 1 2		
MEDIUM light brown dirty SAND with LIMESTONE fragments	822.30		4 5 13		
VERY STIFF tan SANDY LOAM TILL with LIMESTONE, Dolomite 6" ▽	819.80	-15	7 14 26	2.3 S	10
VERY DENSE tan weathered LIMESTONE	817.80		100/3"		
		-20	100/1.5"		
VERY DENSE tan weathered LIMESTONE *(continued)*	815.30				
End of Boring		-25			
		-30			
		-35			
		-40			

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)

Note:
Ground surface elevations for structure number 032 revised based on survey information.

SOIL BORING LOG

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1 | Date 5/2/13

ROUTE US 20 Bypass EB **DESCRIPTION** P92-ST5 Sign Truss, I-39 US 20 Bypass, .6 m. E. of Alpine Road **LOGGED BY** W. Garza

SECTION **LOCATION** Cherry Valley Twp. - 9NW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-45 Automatic

STRUCT. NO. 034
Station 1138+00

BORING NO. B-2
Station 1138+12
Offset 92.00ft Rt CL
Ground Surface Elev. 836.3 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 821.8 ft ▼
Upon Completion 833.3 ft ▽
After Hrs. ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.011038 Lat. 42.213213 MEDIUM light brown SILTY CLAY LOAM	834.30			0.5 P	21
STIFF light brown SANDY LOAM ▽	832.30		2 3 4	1.1 B	20
MEDIUM light brown SANDY LOAM TILL	830.30	-5	2 2 5	0.8 P	12
STIFF light brown SANDY LOAM TILL	827.80		4 7 10	1.2 S	10
VERY STIFF light brown SANDY LOAM TILL	825.30	-10	7 12 21	3.6 P	10
VERY STIFF tan SANDY LOAM TILL	822.30		15 19 19	3.1 P	9
▼ VERY DENSE tan weathered LIMESTONE	820.30	-15	28 42 55		
VERY DENSE tan weathered LIMESTONE	817.80		100/1"		
End of Boring		-20			

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

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1 | Date 4/30/13

ROUTE I-39 **DESCRIPTION** P92-ST6 Sign Truss, I-39, .2 m. S. of Linden Road **LOGGED BY** W. Garza

SECTION 201-2 & 3 **LOCATION** Cherry Valley Twp. - 9SW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-45 Automatic

STRUCT. NO. 033
Station 2546+00

BORING NO. B-1
Station 2546+13
Offset 12.00ft Lt CL
Ground Surface Elev. 840.2 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.018454 Lat. 42.220269 STIFF brown SILTY CLAY LOAM	838.20			1.0 P	16
LOOSE tan weathered LIMESTONE (fill)	836.70		7 6 4		
VERY STIFF light brown SILTY CLAY LOAM	834.20	-5	3 5 8	2.1 B	23
HARD redish brown CLAY LOAM TILL	831.70		5 10 13	4.2 B	13
Hard Drilling VERY STIFF tan SANDY LOAM	829.20	-10	8 13 22	3.5 S	8
VERY STIFF brown SANDY CLAY LOAM	826.70		5 6 13	2.4 P	16
HARD brown CLAY LOAM	824.20	-15	4 7 10	4.1 B	20
STIFF brown/tan SANDY LOAM with SAND lens	821.70		2 4 6	1.6 P	10
STIFF light brown SANDY LOAM		-20	3		
STIFF light brown SANDY LOAM *(continued)*	819.20		4 6	1.8 S	12
STIFF tan SANDY LOAM TILL	816.70		4 5 7	1.3 P	8
STIFF tan SANDY LOAM TILL	814.20	-25	7 13 14	1.3 P	18
Hard Drilling HARD tan SANDY LOAM TILL	811.70		20 28 30	4.5 P	7
Hard Drilling VERY STIFF tan SANDY LOAM TILL	809.20	-30	15 21 23	2.1 S	8
End of Boring					
		-35			
		-40			

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

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

Page 1 of 1 | Date 4/30/13

ROUTE I-39 **DESCRIPTION** P92-ST6 Sign Truss, I-39, .2 m. S. of Linden Road **LOGGED BY** W. Garza

SECTION 201-2 & 3 **LOCATION** Cherry Valley Twp. - 9SW, **SEC.** , **TWP.** 43N, **RNG.** 2E

COUNTY Winnebago **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME-45 Automatic

STRUCT. NO. 033
Station 2546+00

BORING NO. B-2
Station 2546+18
Offset 117.00ft Rt CL
Ground Surface Elev. 840.9 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter None ft
Upon Completion Dry ft
After Hrs. ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.018435 Lat. 42.220012 SOFT light brown LOAM	838.90			0.4 P	13
STIFF tan SANDY LOAM	837.40		5 6 6	1.2 B	15
STIFF light brown CLAY LOAM	834.90	-5	4 4 5	1.5 B	19
VERY STIFF light brown CLAY LOAM	832.40		3 5 9	2.9 B	15
VERY STIFF light brown/gray LOAM	829.90	-10	4 7 12	3.1 B	18
HARD tan SANDY LOAM with LIMESTONE	827.40		17 17 12	4.5 P	15
VERY STIFF tan SANDY CLAY LOAM	824.90	-15	6 8 13	2.5 B	11
VERY STIFF light brown CLAY LOAM	822.40		5 6 10	3.1 B	18
		-20	3		
STIFF light brown SILTY CLAY LOAM *(continued)*	819.90		3 6	1.2 B	22
STIFF light brown SANDY LOAM with SAND lens	816.90		5 4 9	1.1 S	13
STIFF tan SANDY LOAM TILL	814.90	-25	3 4 4	1.2 P	12
VERY DENSE tan SANDY LOAM TILL	812.40		7 18 33		6
VERY DENSE tan SANDY LOAM TILL Refusal @ 30.5'	810.40	-30	36 100/8"		7
End of Boring					
		-35			
		-40			

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)

Ciorba Group, Inc. CONSULTING ENGINEERS 5507 North Cumberland Avenue Suite 402 Chicago, Illinois 60656 Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com	USER NAME = jattanaseo PLOT SCALE = 0:2.0000 ':' / in. PLOT DATE = 1/31/2014	DESIGNED - NG CHECKED - BWS DRAWN - RD CHECKED - BWS	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES BORING LOG - 3 SHEET NO. S-25 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	44
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
	ILLINOIS	FED. AID PROJECT		

•• WINNEBAGO & OGLE

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-boring_-CN_-S025.dgn

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 4/29/13

ROUTE FAI 39 DESCRIPTION P92-ST7 Sign Truss, I-39 SB, .3 m. N. of I-88 LOGGED BY W. Garza

SECTION 161-1-1SG 81-1SG-1 LOCATION Dement Twp. - 29SE, SEC. , TWP. 40N, RNG. 2E

COUNTY Ogle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 039
Station 1428+00

BORING NO. B-1
Station 1427+75
Offset 114.00ft Lt CL
Ground Surface Elev. 805.6 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 786.1 ft
Upon Completion Wash ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.023308 Lat. 41.910403 VERY SOFT light brown LOAM		0.2 P	13
803.60			
DENSE light gray SANDY LOAM	13 15 17		9
802.10			
HARD dark gray CLAY LOAM	9 9 14	5.8 B	23
-5			
799.60			
VERY STIFF light gray SILT with SAND lens	9 16 25	2.5 P	15
796.60			
MEDIUM gray moist fine SAND	11 6 8		
-10			
794.10			
VERY STIFF gray SANDY LOAM	8 8 12	3.1 P	14
792.10			
VERY STIFF gray SILTY CLAY LOAM	3 5 6	2.5 B	23
-15			
789.10			
MEDIUM light gray SANDY GRAVEL	6 8 19		
787.10			
-20	8		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
DENSE light gray clean medium coarse SAND *(continued)*	15 20		
784.60			
MEDIUM light gray fine SAND	6 10 11		
782.10			
MEDIUM light gray fine SAND	6 11 12		
-25			
779.60			
776.60			
Wash VERY STIFF light gray SILTY CLAY	5 5 10	2.1 P	18
-30			
774.10			
MEDIUM light gray fine SAND	2 10 14		
772.10			
DENSE light gray fine SAND	9 14 19		
-35			
769.60			
End of Boring			
-40			

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
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 4/29/13

ROUTE FAI 39 DESCRIPTION P92-ST7 Sign Truss, I-39 SB, .3 m. N. of I-88 LOGGED BY W. Garza

SECTION 161-1-1SG 81-1SG-1 LOCATION Dement Twp. - 29SE, SEC. , TWP. 40N, RNG. 2E

COUNTY Ogle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. 039
Station 1428+00

BORING NO. B-2
Station 1427+83
Offset 10.00ft Lt CL
Ground Surface Elev. 804.5 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 787.5 ft
Upon Completion Wash ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Long. - 89.022705 Lat. 41.910611 MEDIUM brown SILTY CLAY LOAM		0.5 P	25
802.50			
VERY DENSE light gray fine SAND with SILT lens	18 20 34		14
800.50			
DENSE light gray SAND	15 18 25		
-5			
798.50			
MEDIUM light gray moist SAND	13 5 6		
795.50			
VERY STIFF dark gray LOAM with GRAVEL	4 6 11	2.0 S	14
-10			
793.50			
STIFF gray SILTY CLAY LOAM	4 4 8	1.6 B	
791.00			
DENSE tan SANDY GRAVEL	10 13 18		25
-15			
788.00			
DENSE tan SANDY GRAVEL	14 16 19		
786.00			
MEDIUM light gray fine SAND	5		
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
MEDIUM light gray fine SAND *(continued)*	7 8		
783.50			
MEDIUM light gray fine SAND	2 8 10		
780.50			
Wash MEDIUM light gray SILT with fine SAND lens	5 7 8	0.6 P	21
-25			
778.50			
STIFF light gray SILT	4 4 4	1.4 P	22
776.00			
VERY STIFF light gray SILT	11 8 6	2.1 S	19
-30			
773.50			
VERY SOFT light gray SILT	4 4 5	0.3 P	19
770.50			
LOOSE light gray fine SAND	1 2 2		
-35			
768.50			
End of Boring			
-40			

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)

N:\PROJ\0020080.00\0020080.01\Design\Structural\CAD\SN-boring-CN_-_S026.dgn

Clorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4605
Fax 773.775.4514
Email dl4cago@clorba.com

USER NAME = jattanaseo	DESIGNED - NG	REVISED -	
	CHECKED - BWS	REVISED -	
PLOT SCALE = 0:2.0000 '/ in.	DRAWN - RD	REVISED -	
PLOT DATE = 1/31/2014	CHECKED - BWS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
BORING LOG - 4

SHEET NO. S-26 OF S-26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	•	••	45	45
• D-2 OVD SIN STR REPL 14-27		CONTRACT NO. 46288		
ILLINOIS	FED. AID PROJECT			

•• WINNEBAGO & OGLE