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04-27-12 LETTING ITEM 167 STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES

SECTION D3 OVD MESSAGE SG-2012

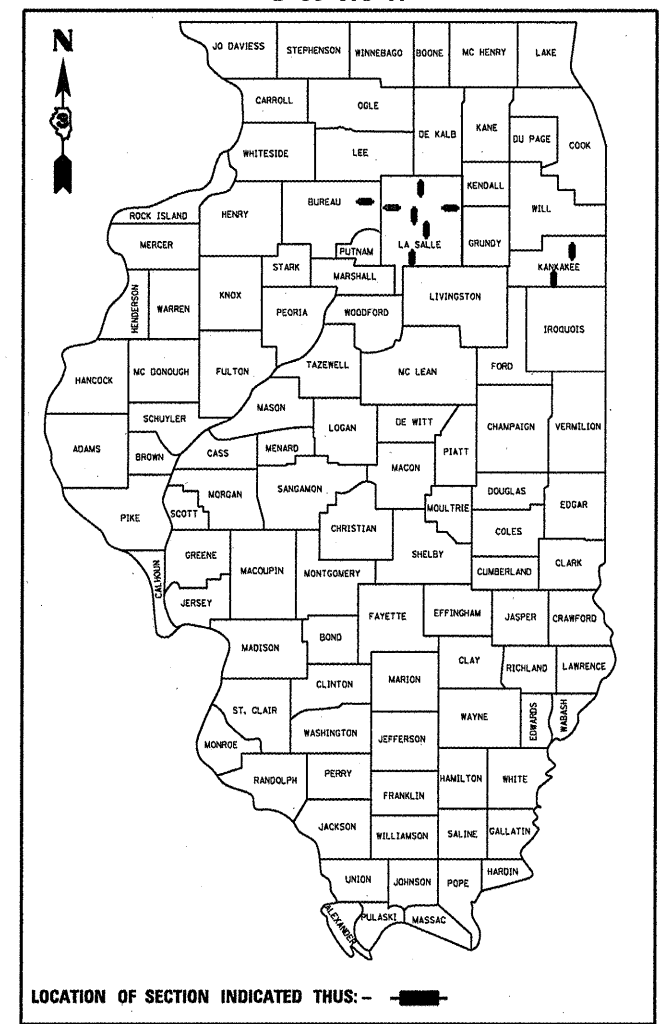
FURNISH AND ERECT BUTTERFLY AND OVERHEAD MESSAGE BOARD SIGN TRUSSES

BUREAU, LASALLE AND KANKAKEE COUNTY
C-93-093-11

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	1
		ILLINOIS	CONTRACT NO. 66B28	

5091=51

D-93-075-11



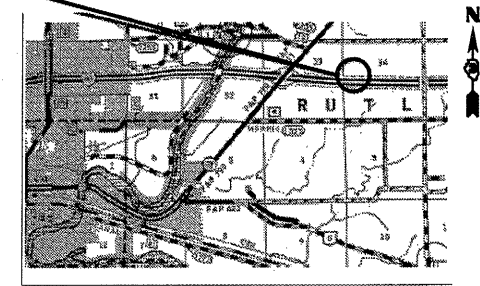
LOCATION OF SECTION INDICATED THUS: -

FUNCTIONAL CLASSIFICATION
RURAL - INTERSTATE

FAI ROUTE 80	FAI ROUTE 39	FAI ROUTE 57
2011 ADT = 38500	2011 ADT = 18200	2011 ADT = 18100
P.V. = 75.71%	P.V. = 68.13%	P.V. = 77.66%
M.U. = 18.18%	M.U. = 26.92%	M.U. = 17.26%
S.U. = 6.10%	S.U. = 4.95%	S.U. = 5.08%

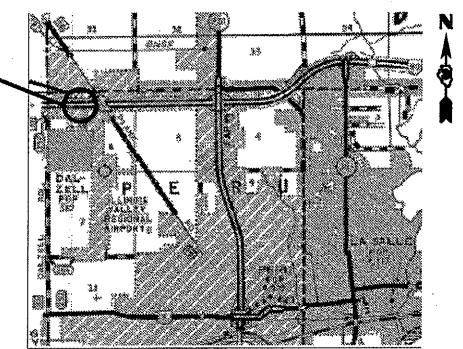
LOCATION 1 - FAI ROUTE 80

OVERHEAD SIGN STRUCTURE
S.N.# 3S0501080996.0
I-80 WB
(PROPOSED STA. 785+00 WBL)
3 MI. EAST OF IL 71



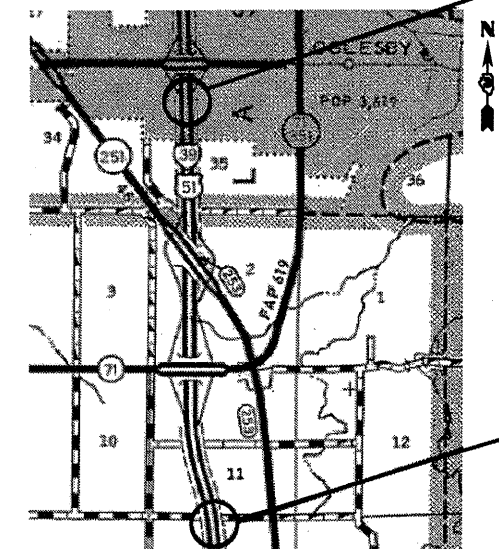
LOCATION 2 - FAI ROUTE 80

OVERHEAD SIGN STRUCTURE
S.N.# 3S00610808072.5
I-80 EB
(PROPOSED STA. 437+50 EBL)
3 MI. WEST OF IL 251



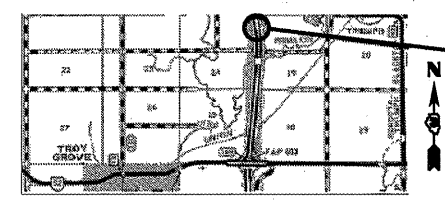
LOCATION 4 - FAI ROUTE 39

OVERHEAD SIGN STRUCTURE - BUTTERFLY
S.N.# 3F0501039R52.6
I-39 NB
(PROPOSED STA. 701+50 NBL)
JUST SOUTH OF OGLESBY SPUR
AND WALNUT ST. INTERCHANGE



LOCATION 5 - FAI ROUTE 39

OVERHEAD SIGN STRUCTURE
S.N.# 3S0501039R068.5
I-39 SB
(PROPOSED STA. 540+00 SBL)
3 MI. NORTH OF IL 52



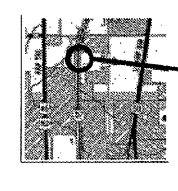
LOCATION 3 - FAI ROUTE 39

OVERHEAD SIGN STRUCTURE
S.N.# 3S0501039R049.0
I-39 NB
(PROPOSED STA. 190+00 NBL)
3 MI. SOUTH OF IL 71



LOCATION 8 - FAI ROUTE 57

OVERHEAD SIGN STRUCTURE
S.N.# 3S0461057L319.9
I-57 SB
(PROPOSED STA. 547+30 SBL)
1.37 MI. NORTH OF EAST 6000 NORTH RD.



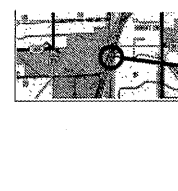
LOCATION 6 - FAI ROUTE 39

OVERHEAD SIGN STRUCTURE - BUTTERFLY
S.N.# 3F0501039L057.6
I-39 SB
(PROPOSED STA. 965+00 SBL)
JUST NORTH OF RT 6 I-39 INTERCHANGE.



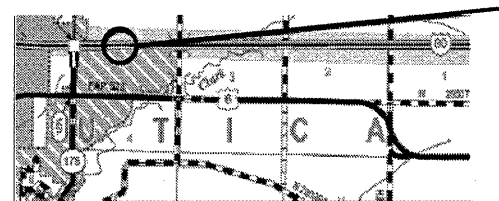
LOCATION 7 - FAI ROUTE 57

OVERHEAD SIGN STRUCTURE
S.N.# 3S0461057R305.0
I-57 NB
(PROPOSED STA. 555+00 SBL)
2 MI SOUTH OF IL4552 I-57 INTERCHG.



LOCATION 9 - FAI ROUTE 80

OVERHEAD SIGN STRUCTURE - BUTTERFLY
S.N.# 3F0501080L004.0 - 350501080L004.0
I-80 WB
(PROPOSED STA. 150+00 WBL)
2 MI EAST OF IL 170
0.86 MI E. OF E. 10th RD.



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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: JOE KANNEL, P.E.
UNIT CHIEF: RON WOODSHANK
CONTRACT NO. 66B28

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 2-24 2012
PASSED Eric S. Therkildsen
ENGINEER OF OPERATIONS

March 23 2012
John D. Baranzelli, P.E./B
acting ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED March 23 2012
William R. Frazer, Jr.
acting DIRECTOR DIVISION OF HIGHWAYS

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Rev.

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 THE 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 FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE "JULIE" NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED.

THE LOCATION OF ALL UTILITIES AND PRIVATELY OWNED FACILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE INSTALLATION OF ANY COMPONENTS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES AT HIS/HER OWN EXPENSE IF REQUIRED. THE CONTRACTOR SHALL ALSO BE LIABLE FOR ANY DAMAGE TO IDOT FACILITIES RESULTING FROM INACCURATE LOCATING.

ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE SLACK IN ACCORDANCE WITH ARTICLE 873.03 UNLESS SPECIFIED OTHERWISE.

ELECTRICAL CABLE WILL BE MEASURED FOR PAYMENT IN ACCORDANCE WITH ARTICLE 873.04.

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

THE COMMUNICATION VAULT SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE MEDIAN, SIDEWALK, OR GROUND LINE.

COILABLE POLYETHYLENE DUCT MAY BE SUBSTITUTED FOR UNDERGROUND CONDUIT.

POTHOLING TO LOCATE EXISTING UNDERGROUND UTILITIES SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE UNDERGROUND CONDUIT PAY ITEMS.

REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, AND ISLANDS FOR UTILITY LOCATING PURPOSES WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE CONDUIT PAY ITEMS.

NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.

THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THIS COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR THE CONDUITS.

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.

COMMITMENTS

ALL EXCAVATED MATERIAL SHALL REMAIN ON SITE AND BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

DATE: 2-24-2012

PREPARED BY: Dave Brandman
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: Herbert K. King
DISTRICT CONSTRUCTION ENGINEER

Ray J. Phillips
DISTRICT MATERIALS ENGINEER

Bruce A. Wheeler
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = potelyj	DESIGNED -	REVISED -
o:\p\work\p\dot\potelyj\0250292\0366828-shr-details.DGN		DRAWN -	REVISED -
PLOT SCALE = 99.9999 ' / in.		CHECKED -	REVISED -
PLOT DATE = 2/23/2012		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE:	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	F.A.I. RTE. VAR	SECTION D3 OVD MESSAGE SG - 2012	COUNTY VAR	TOTAL SHEETS 50	SHEET NO. 2
							CONTRACT NO. 66B28
ILLINOIS							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				STATE FUNDS		
				100% STATE		
				BUREAU STRUCTURE 0040 RURAL	LASALLE STRUCTURE 0040 RURAL	KANKAKEE STRUCTURE 0040 RURAL
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	4492	766	2730	996
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	18	3	12	3
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	18	3	12	3
63302000 78200410	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 2 GUARDRAIL MARKERS, TYPE A	EACH EACH	2 58	9	36	2
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	18	3	12	3
67100100	MOBILIZATION	L SUM	1	0.13	0.63	0.23
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	384	64	192	128
73301805	OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	116		116	
73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	186	31	93	62
73301900	OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	12		12	
73400200	DRILLED SHAFT CONCRETE FOUNDATION	CU YD	149.3	20.9	90.6	37.8
80400100	ELECTRIC SERVICE INSTALL	EACH	9	1	6	2
81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	775	84	527	164
81023870	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	90	10	60	20
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	4530	496	3068	966
86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1		1	
X0323920	POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	9	1	6	2
X0323923	SUPPORT EQUIPMENT AND MAINTENANCE	L SUM	1	0.33	0.33	0.33
X0325485	TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	9	1	6	2
X0325922	CELLULAR MODEM	EACH	9	1	6	2
X0326253	LCD MONITOR	EACH	4		4	
X0326254	LAPTOP COMPUTER	EACH	1		1	
X0326255	APPLICATION SERVER	EACH	1		1	
X0326263	EQUIPMENT CABINET	EACH	1		1	
X0326880	MESSAGE BOARD VEHICLE DRIVER	HOUR	1080	120	720	240
X0326905	CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	9	1	6	2
X0326906	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED (MATERIAL ONLY)	EACH	2		2	
X0326907	PORTABLE, VEHICLE MOUNTED, CHANGEABLE MESSAGE SIGN	CAL MO	4.5	0.5	3	1
Z0033052	COMMUNICATIONS VAULT	EACH	9	1	6	2
X0327387	ELECTRICAL WORK, IDOT DISTRICT 3 HEADQUARTERS	L SUM	1		1	

FILE NAME =	USER NAME = petelyj	DESIGNED -	REVISED -
ot\pwork\p\idot\petelyj\0258292\03688	28-shd-details.DGN	DRAWN -	REVISED -
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PLOT DATE = 2/24/2012	DATE -	REVISED -	REVISED -

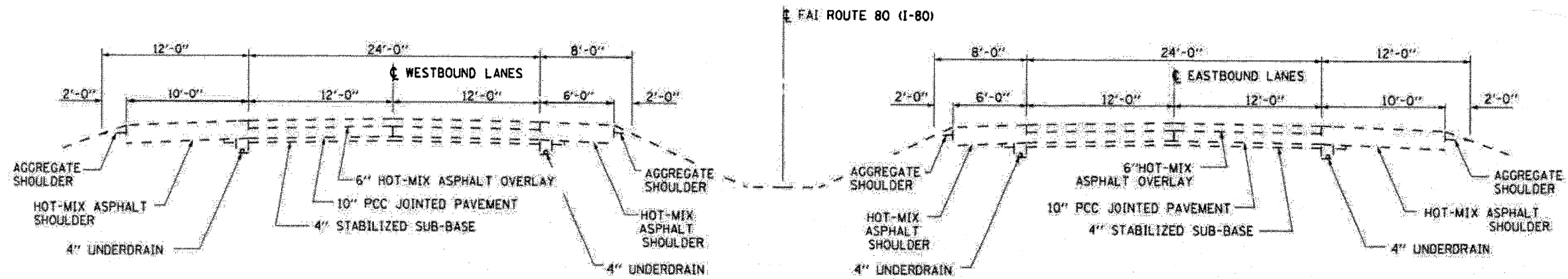
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

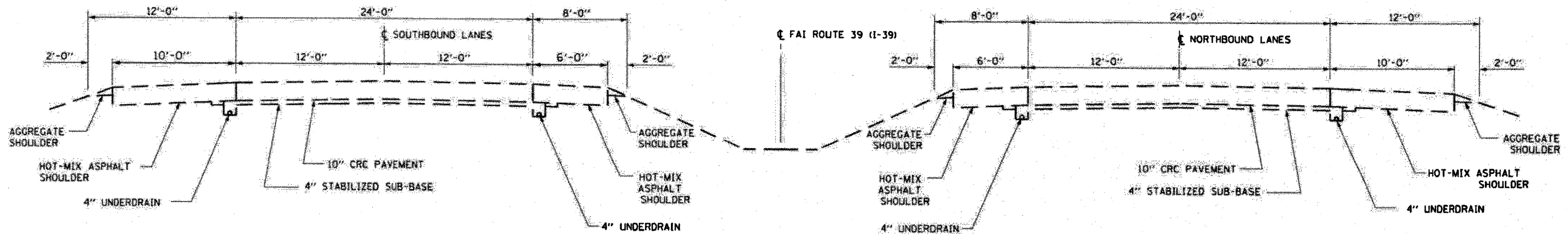
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I. RTE. VAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D3 OVD MESSAGE SG - 2012	VAR	50	3
			CONTRACT NO. 66828	
ILLINOIS				

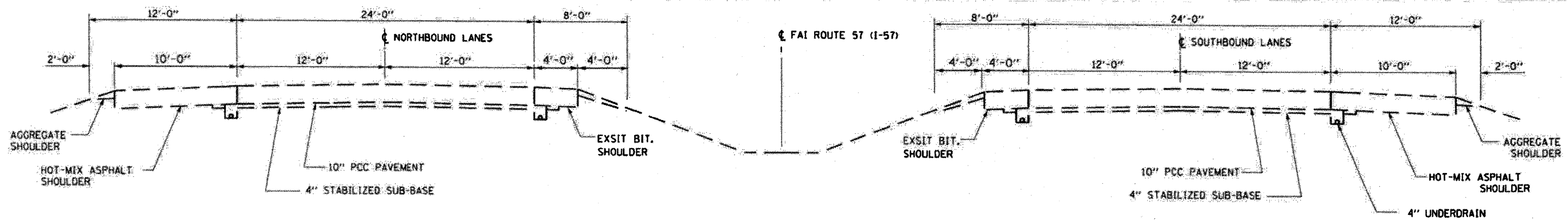
Rev.



TYPICAL SECTION
FAI ROUTE 80 (I-80)



TYPICAL SECTION
FAI ROUTE 39 (I-39)



TYPICAL SECTION
FAI ROUTE 57 (I-57)

USER NAME: p2810	DESIGNED: _____	REVISED: _____
PLOT SCALE: 1/8" = 1'-0"	DRAWN: _____	REVISED: _____
PLOT DATE: 3/8/2012	CHECKED: _____	REVISED: _____
	DATE: _____	REVISED: _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	4
ILLINOIS			CONTRACT NO. 66828	

LOCATION 5
 I-39 (SB)
 0.18 MILES NORTH OF
 CO HWY 19 (N 3973 RD.)
 UTILITY PROVIDER: AMEREN
 OVERHEAD SIGN STR.
 (LAT: 41.50656, LONG: -89.05131)

LOCATION 2
 I-80 (EB)
 1.11 MI WEST
 OF CO HWY 56 (PLANK RD.)
 UTILITY PROVIDER: AMEREN
 OVERHEAD SIGN STR.
 (LAT: 41.36431, LONG: -89.17375)

LOCATION 9
 I-80 (WB)
 0.86 MILES EAST OF E. 10TH RD.
 UTILITY PROVIDER: AMEREN
 BUTTERFLY SIGN STR.
 (LAT: 41.36820, LONG: -88.95548)

LOCATION 1
 I-80 (WB)
 0.98 MILES EAST OF EAST 22ND RD.
 UTILITY PROVIDER: AMEREN
 OVERHEAD SIGN STR.
 (LAT: 41.37553, LONG: -88.72710)

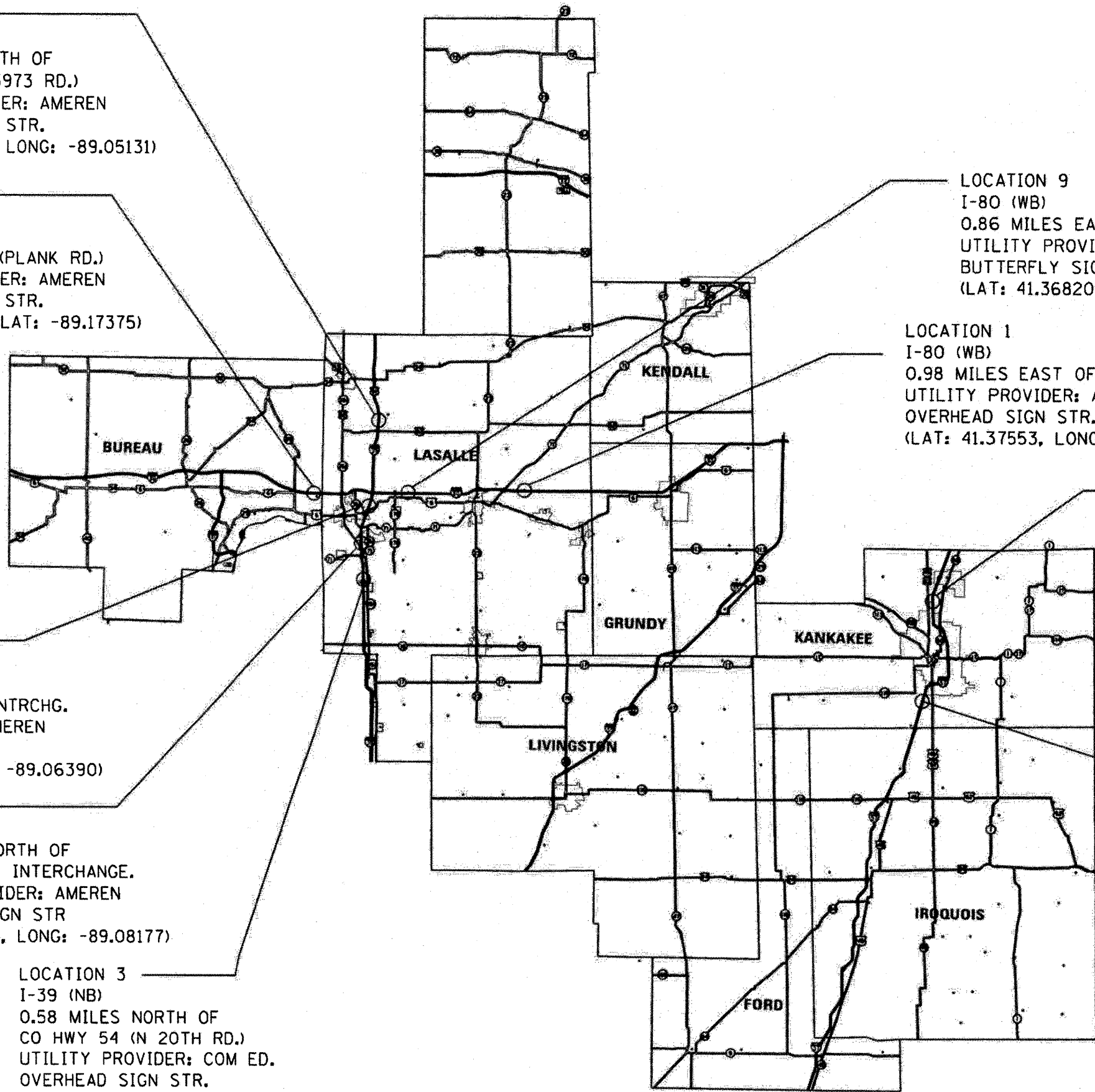
LOCATION 8
 I-57 (SB)
 1.37 MILES NORTH
 OF 6000 N ROAD
 UTILITY PROVIDER: COM ED.
 OVERHEAD SIGN STR.
 (LAT: 41.22625, LONG: -87.86420)

LOCATION 6
 I-39 (SB)
 0.68 MILES NORTH OF
 US RT 6 AND I- 39 INTRCHG.
 UTILITY PROVIDER: AMEREN
 BUTTERFLY SIGN STR
 (LAT: 41.35098, LONG: -89.06390)

LOCATION 4
 I-39 (NB)
 0.35 MILES NORTH OF
 I-39 & IL 251 INTERCHANGE.
 UTILITY PROVIDER: AMEREN
 BUTTERFLY SIGN STR
 (LAT: 41.28120, LONG: -89.08177)

LOCATION 7
 I-57 (NB)
 0.13 MILES SOUTH OF
 W 5000 S RD. (OTTO RD.)
 UTILITY PROVIDER: COM ED.
 OVERHEAD SIGN STR.
 (LAT: 41.04551, LONG: -87.89155)

LOCATION 3
 I-39 (NB)
 0.58 MILES NORTH OF
 CO HWY 54 (N 20TH RD.)
 UTILITY PROVIDER: COM ED.
 OVERHEAD SIGN STR.
 (LAT: 41.22975, LONG: -89.07766)



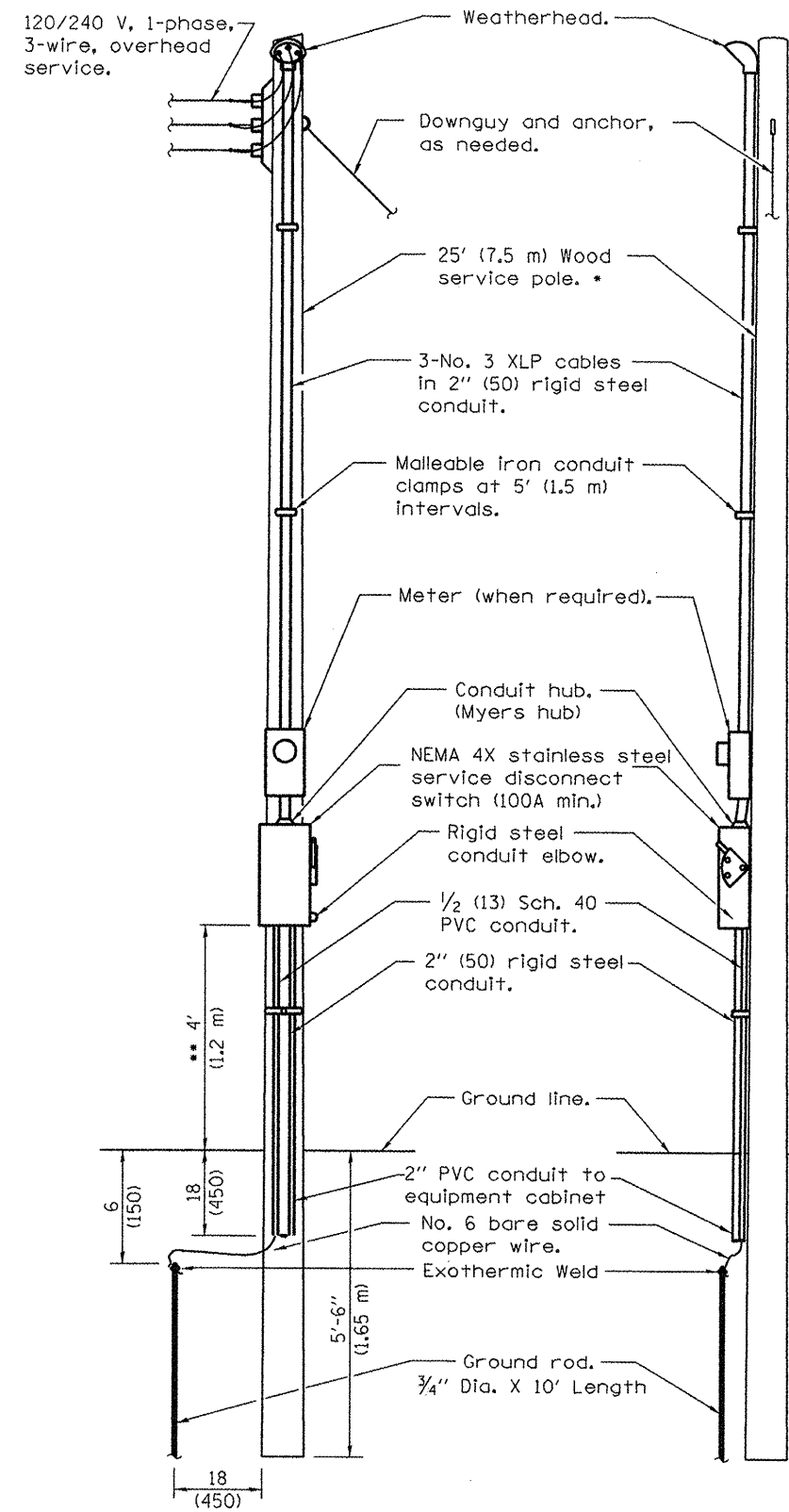
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		CHECKED: -	REVISED: -
		DATE: -	REVISED: -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

LOCATION MAP

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	03 OVD MESSAGE SG - 2012	VAR	50	5
			CONTRACT NO. 66B28	
ILLINOIS				



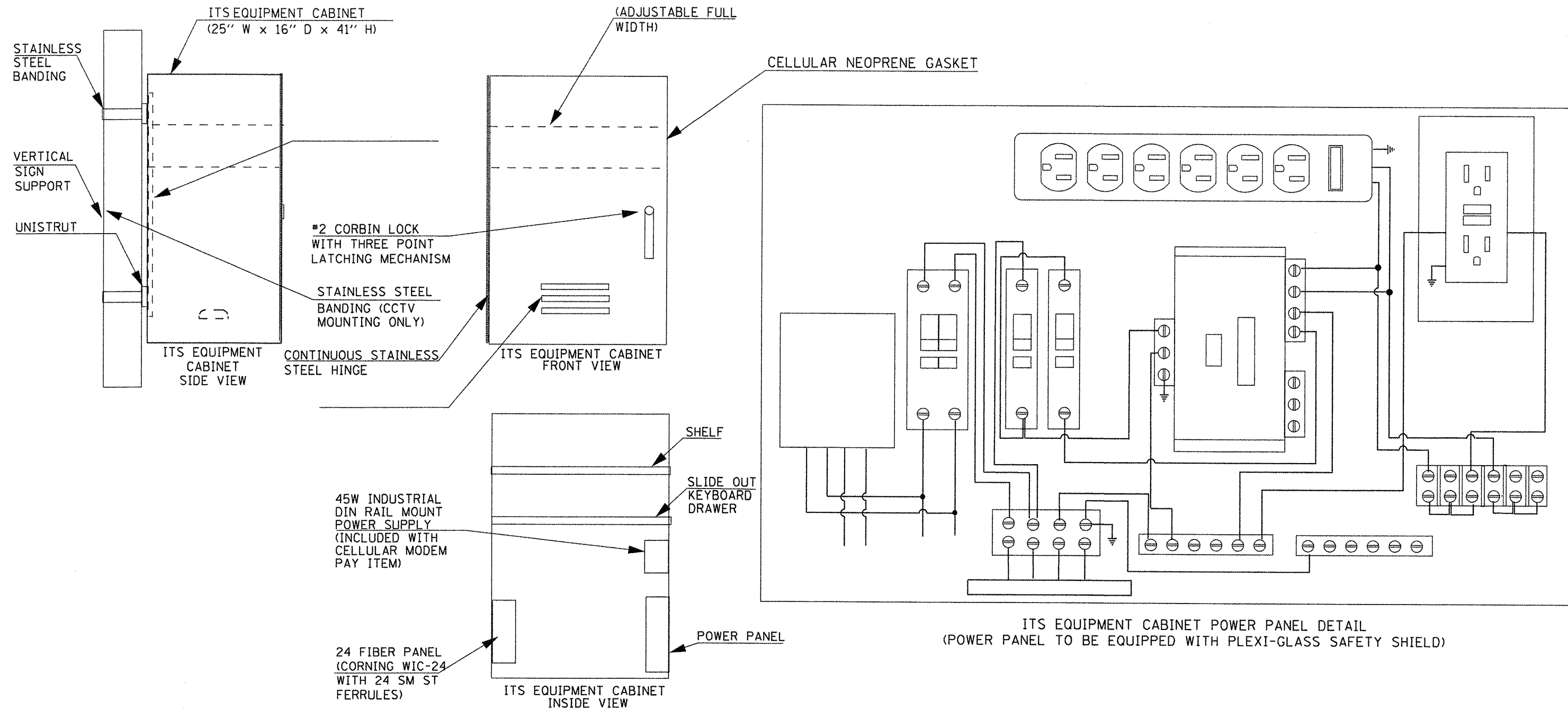
The Contractor shall install fuses in the service disconnect that are rated for the wire size in accordance with NEC requirements (60A fuses for #6 cable).

FRONT SIDE

ELECTRIC SERVICE INSTALLATION

- Size larger as needed.
- Or as directed by Utility Company.

FILE NAME =	USER NAME = potelyj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION DETAIL	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pvidot\potelyj\d0258292\0366828-eh-t-detail.dgn	DRAWN -	REVISED -	VAR			D3 OVD MESSAGE SG - 2012	VAR	50	6	
PLOT SCALE = 1/80.0000" / in.	CHECKED -	REVISED -	CONTRACT NO. 66B28							
PLOT DATE = 2/23/2012	DATE -	REVISED -	ILLINOIS							
					SCALE: _____	SHEET NO. X OF X SHEETS		STA. _____ TO STA. _____		



NOTES

1. THE ITS EQUIPMENT CABINET SHALL BE A NEMA TYPE 3R CABINET WITH MINIMUM OUTSIDE DIMENSIONS OF 41" (H) X 25" (W) X 16" (D). THE CABINET SHALL BE CONSTRUCTED FROM .125" THICK ALUMINUM AND HAVE A NATURAL FINISH.
2. THE CABINET SHALL BE FURNISHED WITH ONE ADJUSTABLE HEIGHT SHELF, THREE POSITION DOOR STOP (90, 120, 180 DEGREES), NEOPRENE DOOR GASKET, AIR VENT LOUVERS, CONTINUOUS STAINLESS STEEL DOOR HINGE, INTERIOR STIFFENERS FOR MOUNTING, THREE POINT LATCHING MECHANISM WITH #2 CORBIN LOCK, 24 FIBER INTERCONNECT CENTER, POWER PANEL, AND ALL STAINLESS STEEL HARDWARE.
3. THE CABINET SHALL BE EQUIPPED WITH A THERMOSTATICALLY CONTROLLED VENTILATION FAN, 250 WATT HEATER STRIP (WITH GUARD), AND DELUXE PLEATED AIR FILTER.
4. THE CABINET SHALL BE EQUIPPED WITH A SLIDE OUT KEYBOARD TRAY WITH INTEGRATED DOCUMENT STORAGE DRAWER.
5. THE CONTRACTOR SHALL INSTALL ALL DIN RAIL MOUNTED EQUIPMENT IN THE CABINET.
6. THE CONTRACTOR SHALL INSTALL A 48" X 48" CONCRETE STAND PAD AT EACH CABINET LOCATION. THE COST OF THE STANDPAD SHALL BE INCLUDED IN THE COST OF THE CABINET.

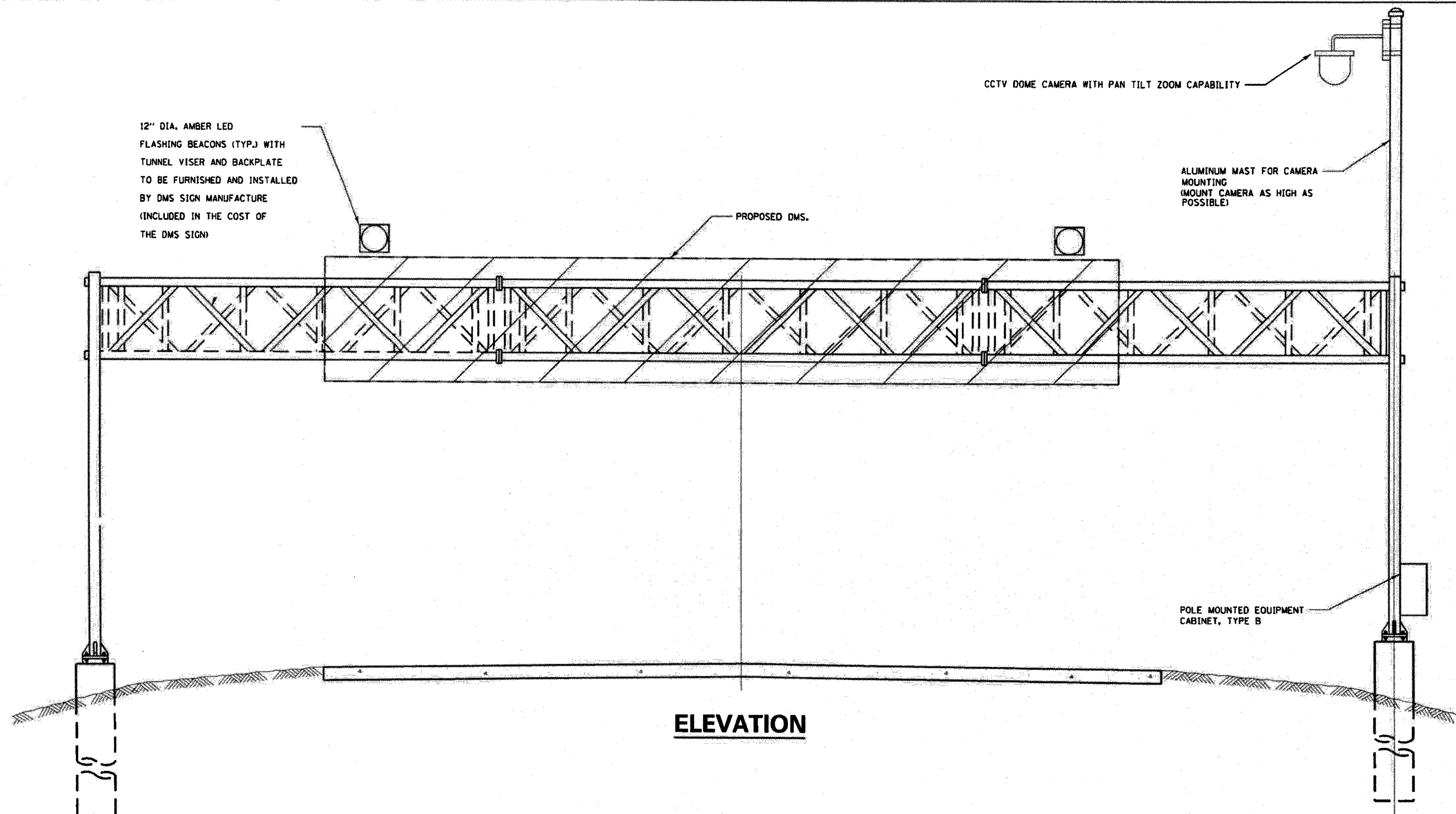
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		CHECKED -	REVISED -
		DATE -	REVISED -
PLOT SCALE = 99,9999 ' / in.			
PLOT DATE = 2/23/2012			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

POLE MOUNTED EQUIPMENT CABINET, TYPE B DETAIL

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

F.A.I. RTE. VAR	SECTION D3 OVD MESSAGE SG - 2012	COUNTY VAR	TOTAL SHEETS 50	SHEET NO. 7
ILLINOIS				CONTRACT NO. 66828



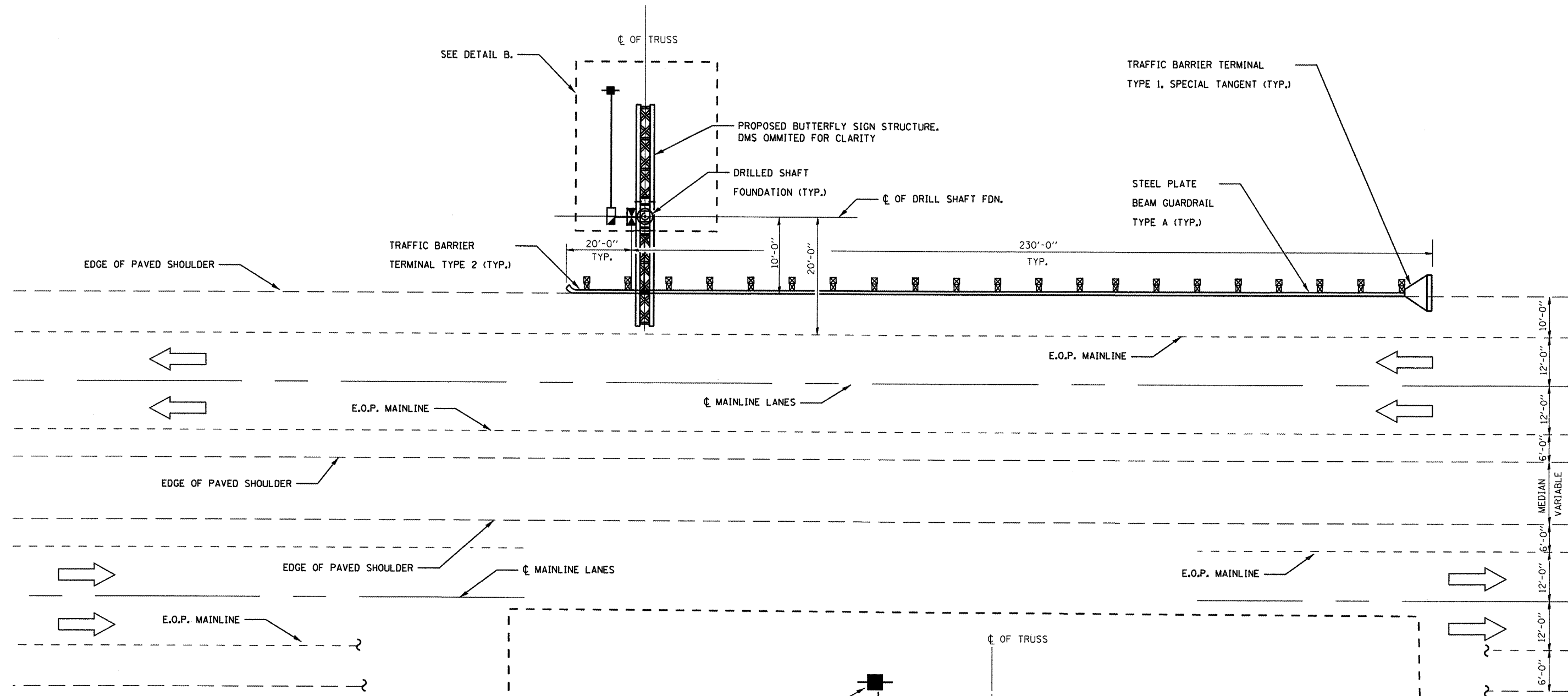
ELEVATION

CCTV CAMERA PLACEMENT (TYP.)
OVERHEAD SIGN STRUCTURES (TYP.)

NOTES:

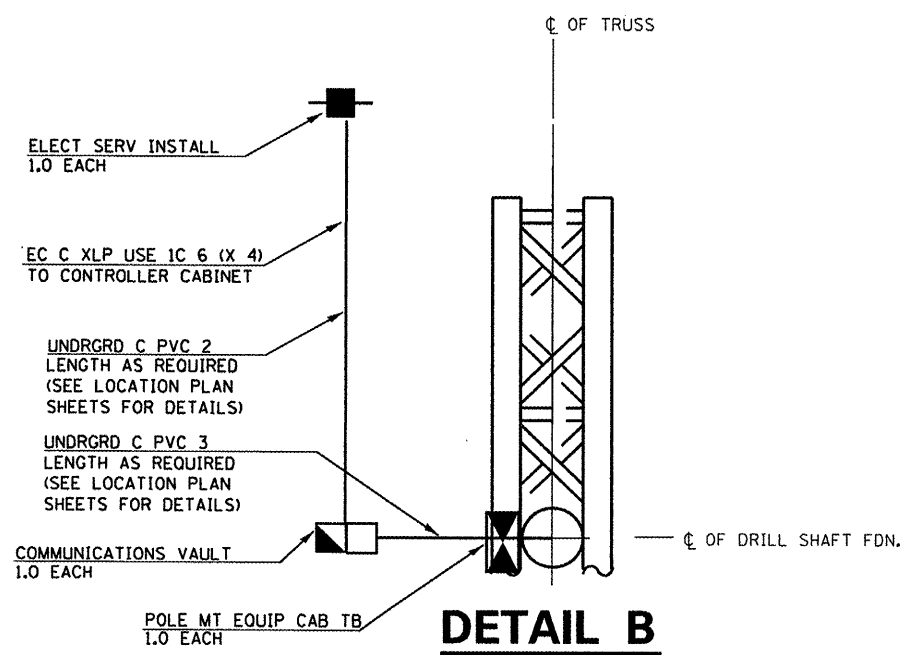
* THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL AND STRUCTURAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

FILE NAME c:\pwwork\project\petel\0258292\0306	USER NAME petel	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED DMS AND CCTV CAMERA DETAIL FOR OVERHEAD SIGN STRUCTURE	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	
		DRAWN -	REVISED -			VAR	03 OVD MESSAGE SG - 2012	VAR	50	8
		CHECKED -	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	CONTRACT NO. 66B28	
		DATE -	REVISED -						[ILLINOIS]	

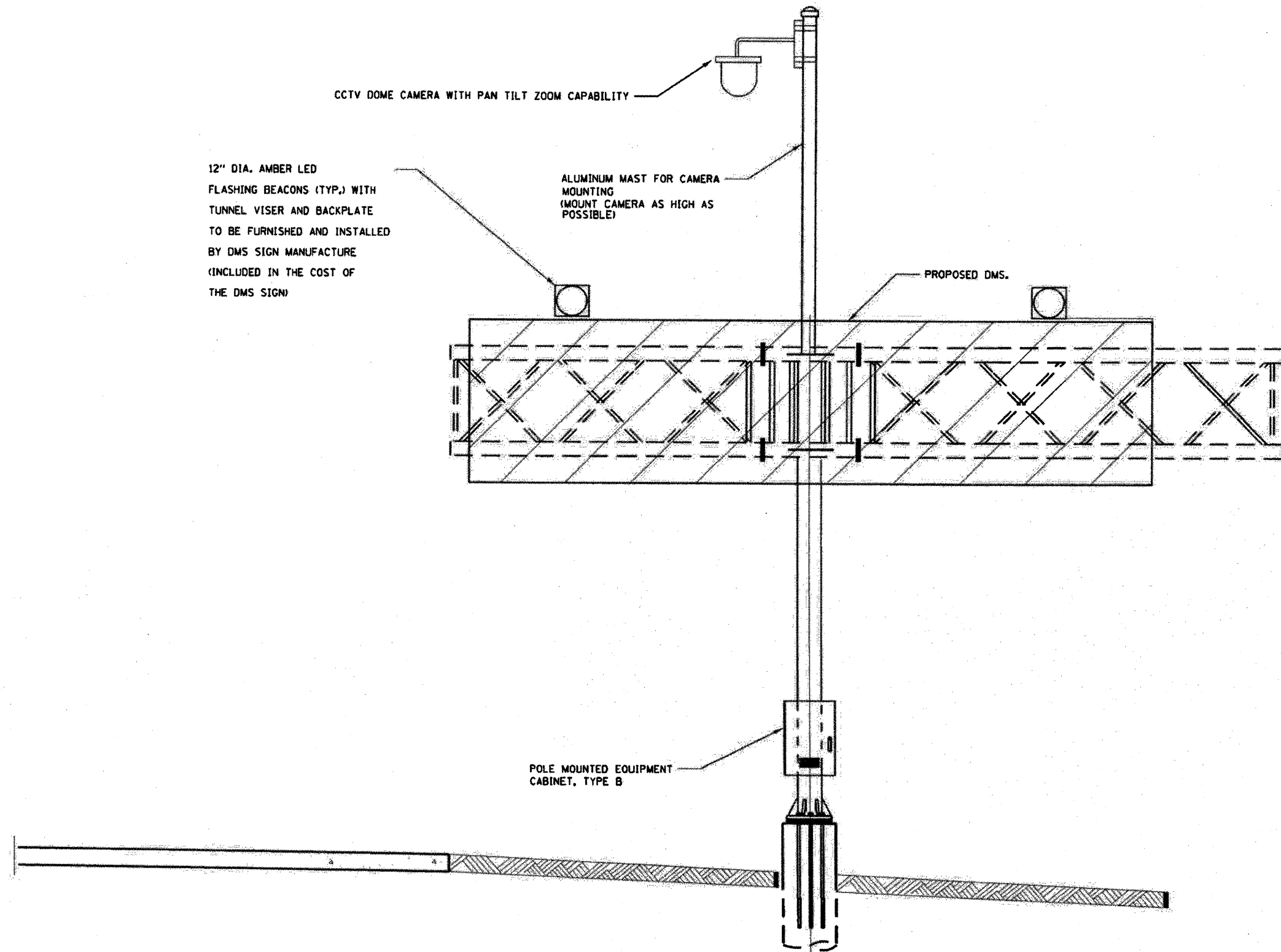


PLAN
BUTTERFLY SIGN STRUCTURES (TYP.)

NOTES:
 THE CONTRACTOR SHALL SUBMIT COMPLETE DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.



FILE NAME =	USER NAME = patelijj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED DMS POWER/COMMUNICATION CABINET AND STEEL PLATE BEAM GUARDRAIL FOR BUTTERFLY SIGN STRUCTURES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw_work\pwidot\patelijj\d0250292\036628-sht-details.DGN	PLOT SCALE = 99.9999 1/ in.	DRAWN -	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	9	CONTRACT NO. 66B28	
	PLOT DATE = 2/23/2012	CHECKED -	REVISED -			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____			
		DATE -	REVISED -								



12" DIA. AMBER LED
FLASHING BEACONS (TYP.) WITH
TUNNEL VISER AND BACKPLATE
TO BE FURNISHED AND INSTALLED
BY DMS SIGN MANUFACTURE
(INCLUDED IN THE COST OF
THE DMS SIGN)

ALUMINUM MAST FOR CAMERA
MOUNTING
(MOUNT CAMERA AS HIGH AS
POSSIBLE)

PROPOSED DMS.

POLE MOUNTED EQUIPMENT
CABINET, TYPE B

ELEVATION

**CCTV CAMERA PLACEMENT (TYP.)
BUTTERFLY SIGN STRUCTURES (TYP.)**

NOTES:

* THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS
SEALED BY AN ILLINOIS LICENSED ELECTRICAL AND STRUCTURAL ENGINEER
TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR
TO THE ORDERING OF ANY MATERIALS.

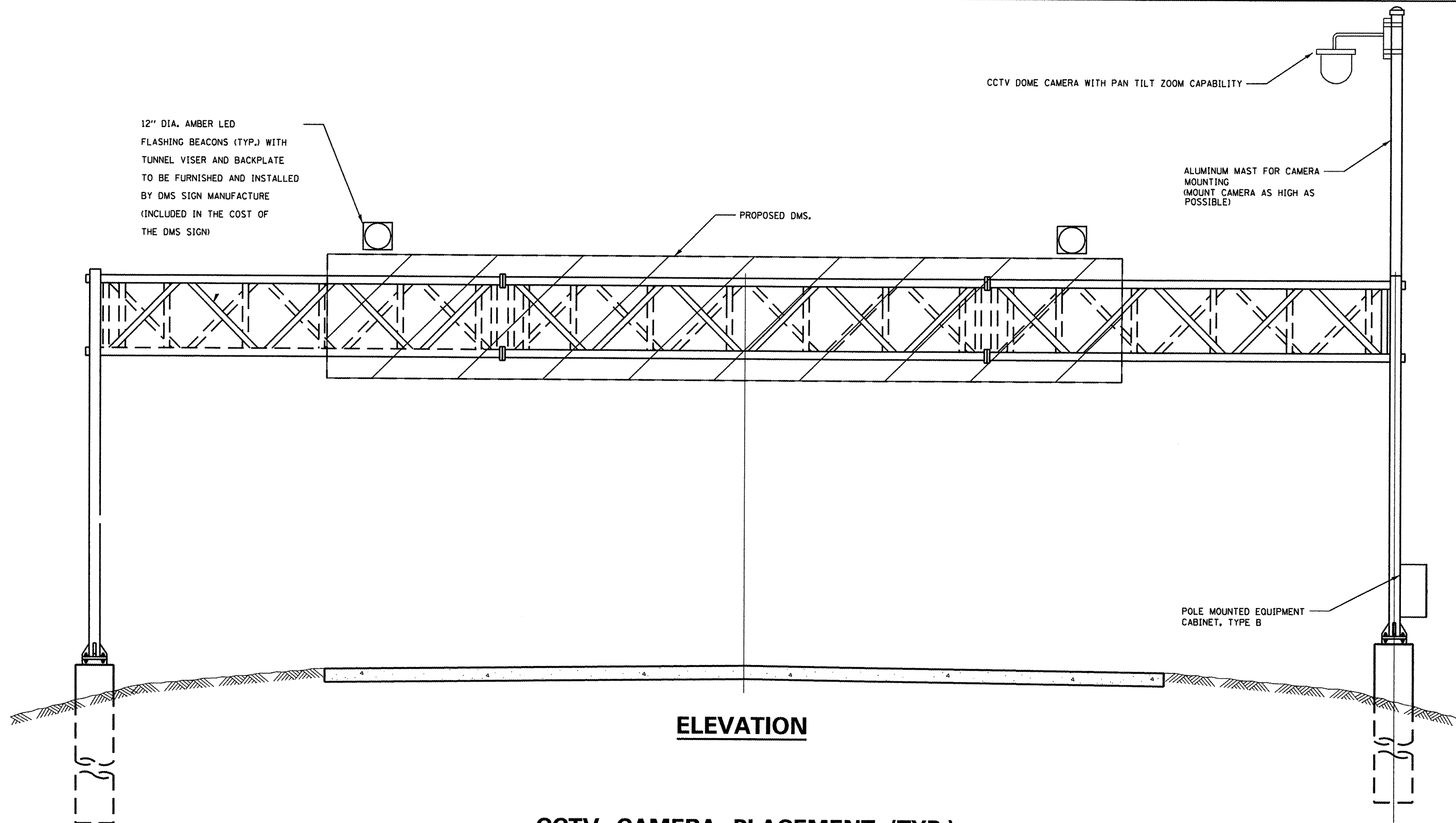
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	PLOT SCALE = 1/8" = 1'-0"	CHECKED =	REVISED =
	PLOT DATE = 3/8/2012	DATE =	REVISED =

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS AND CCTV CAMERA DETAIL FOR
BUTTERFLY TRUSS SIGN STRUCTURE

P.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR:	D3-OVD MESSAGE SG - 2012	VAR	50	10
			CONTRACT NO. 66B28	
[ILLINOIS]				

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



12" DIA. AMBER LED
FLASHING BEACONS (TYP.) WITH
TUNNEL VISER AND BACKPLATE
TO BE FURNISHED AND INSTALLED
BY DMS SIGN MANUFACTURE
(INCLUDED IN THE COST OF
THE DMS SIGN)

CCTV DOME CAMERA WITH PAN TILT ZOOM CAPABILITY

ALUMINUM MAST FOR CAMERA
MOUNTING
(MOUNT CAMERA AS HIGH AS
POSSIBLE)

PROPOSED DMS.

POLE MOUNTED EQUIPMENT
CABINET, TYPE B

ELEVATION

CCTV CAMERA PLACEMENT (TYP.)
OVERHEAD SIGN STRUCTURES (TYP.)

NOTES:

* THE CONTRACTOR SHALL SUBMIT COMPLETE DESIGN DETAILS AND CALCULATIONS
SEALED BY AN ILLINOIS LICENSED ELECTRICAL AND STRUCTURAL ENGINEER
TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR
TO THE ORDERING OF ANY MATERIALS.

FILE NAME =	USER NAME = petaljj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED DMS AND CCTV CAMERA DETAIL FOR OVERHEAD SIGN STRUCTURE	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
cr\pw_work\pwidot\petaljj\d0250292\0366828-shd-details.DGN	DRAWN -	REVISED -	VAR			D3 OVD MESSAGE SG - 2012	VAR	50	11	
PLOT SCALE = 99.9999' / in.	CHECKED -	REVISED -	SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____			ILLINOIS		CONTRACT NO. 66B28		
PLOT DATE = 2/23/2012	DATE -	REVISED -								

ALUMINUM POLE CAP

CCTV CAMERA

4-1/2" DIAMETER SCHEDULE 80 ALUMINUM POLE, 20 FT. LENGTH (INSTALLED VERTICAL AND PLUMB)

ADJUSTABLE MAST ARM CLAMP
COMPONENT PRODUCTS, INC.
CPI-MAB-1070 (8"-10" DIAMETER)
CPI-MAB-1071 (12"-14" DIAMETER)
OR APPROVED EQUAL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE CAMERA MAST COMPONENTS FIT CORRECTLY AND ARE COMPATIBLE WITH THE SIGN STRUCTURE. THE MANUFACTURER OF THE SIGN STRUCTURE SHALL APPROVE THE CAMERA MAST DESIGN. THE COST OF FURNISHING AND INSTALLING THE CAMERA MAST SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GALVANIZED STEEL UNISTRUT, BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ONTO THE SIGN STRUCTURE VERTICAL SUPPORTS. THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR ALL MATERIALS AND DETAIL DRAWINGS FOR PROPOSED MOUNTING METHODS PRIOR TO COMMENCING WORK. ALL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE EQUIPMENT CABINET.

1-5#8" X 1-5/8" 12 GA. GALVANIZED STEEL UNISTRUT (ALL CUT ENDS TO BE COLD-GALVANIZED)

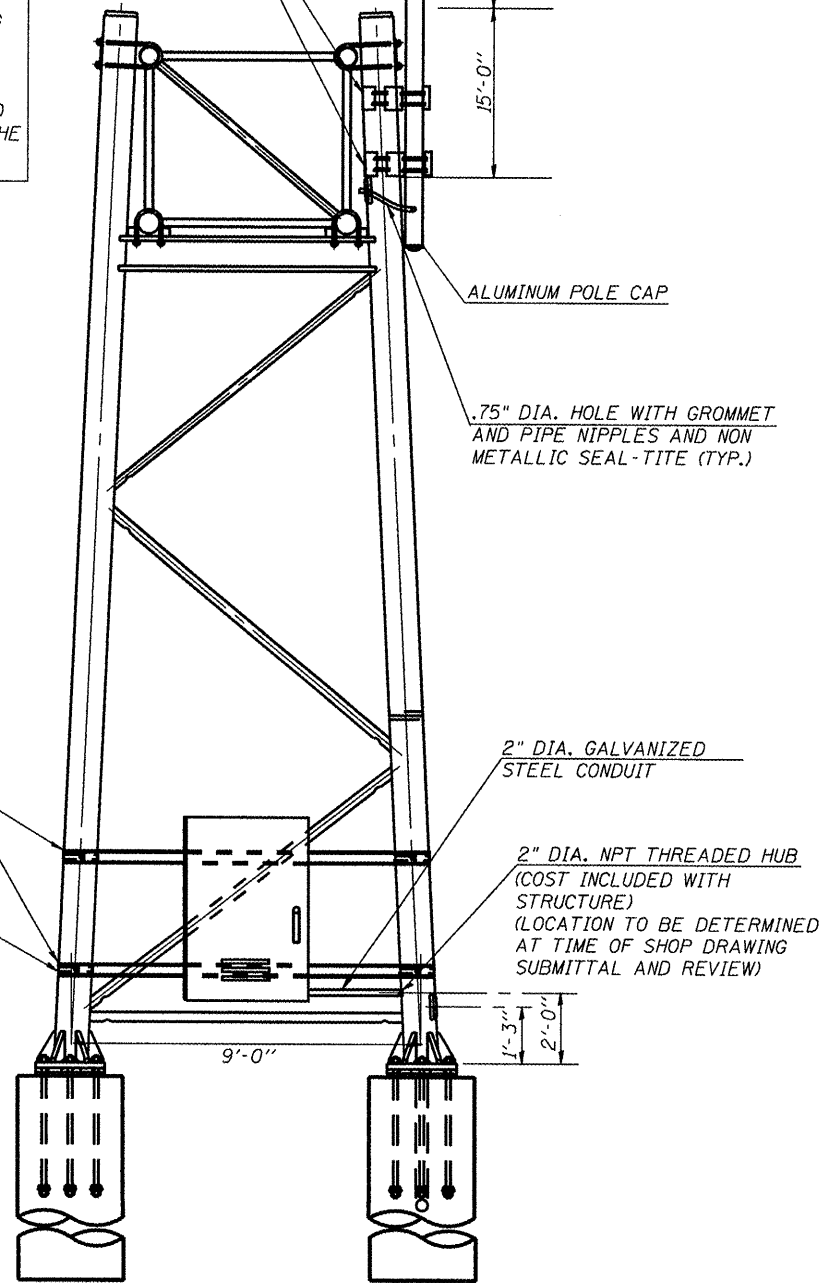
STAINLESS STEEL BANDING AND BUCKLE (TYPICAL)

ALUMINUM POLE CAP

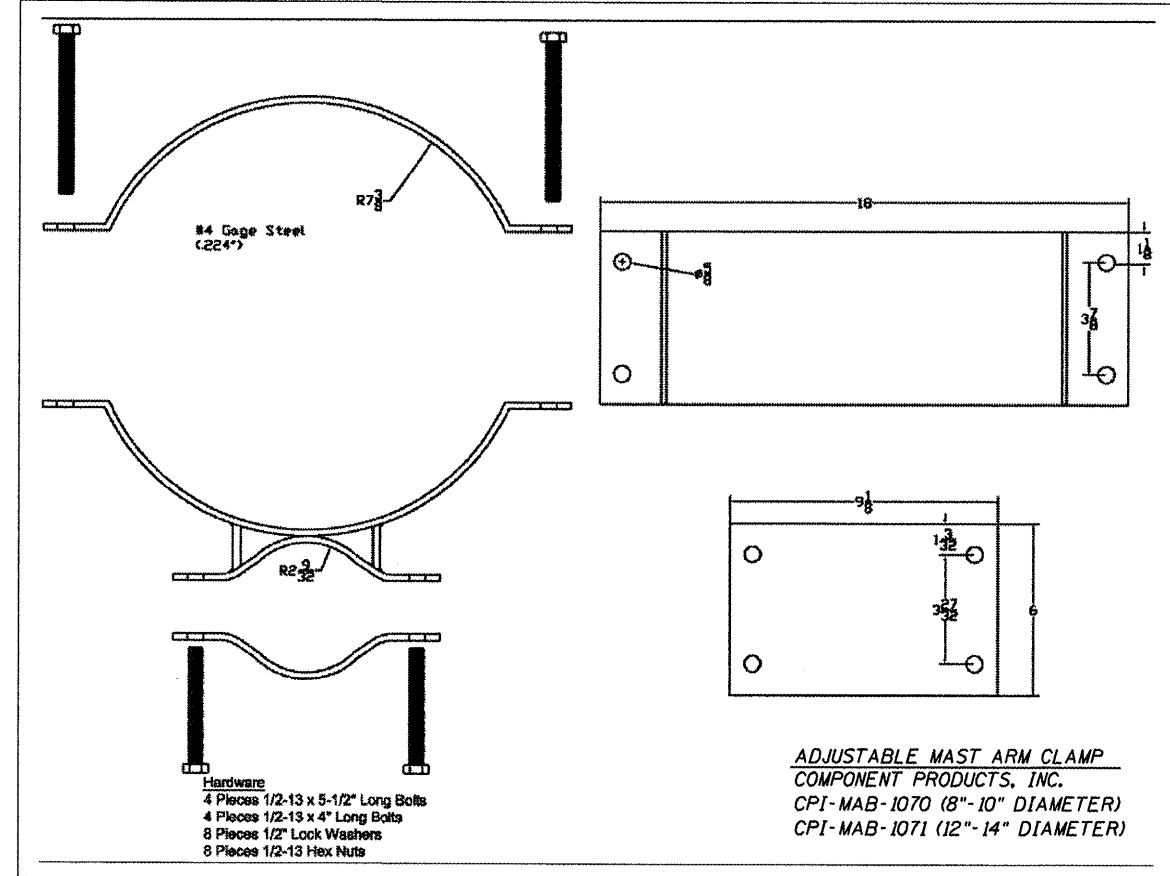
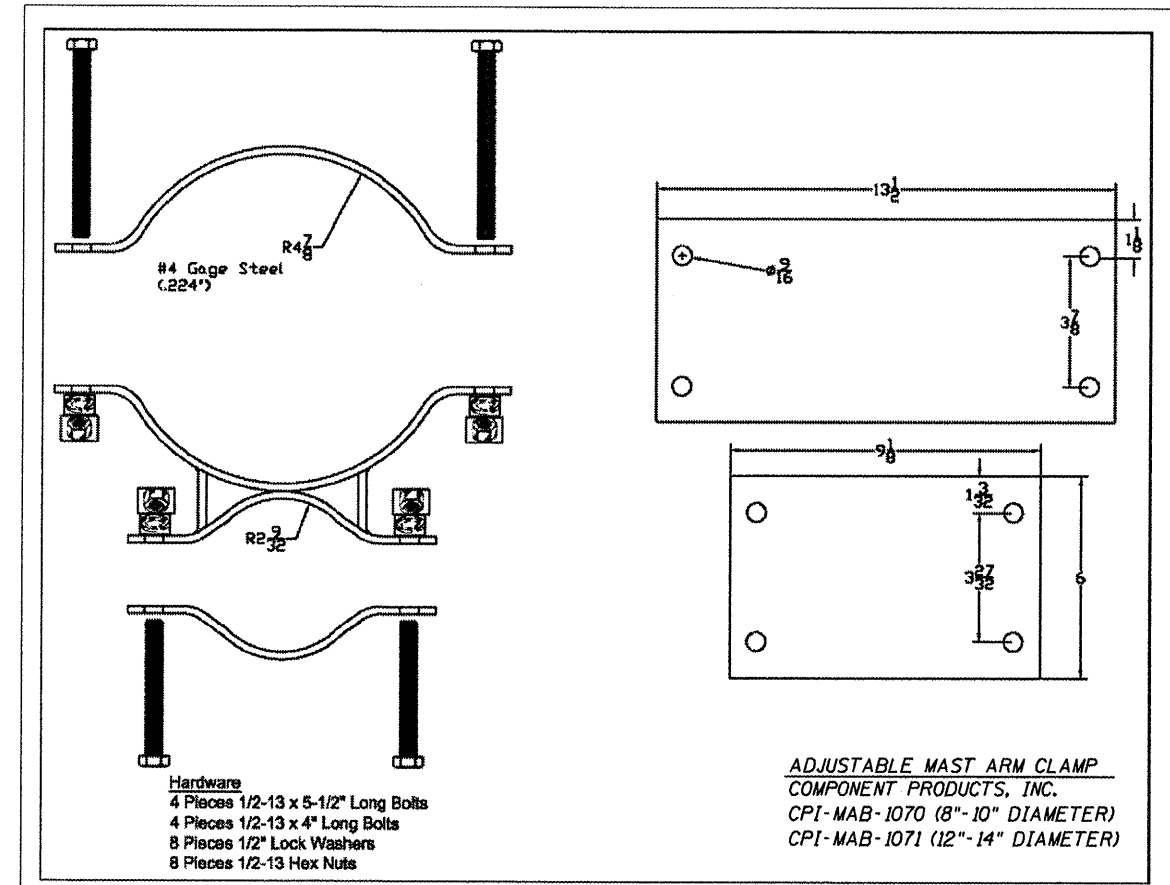
.75" DIA. HOLE WITH GROMMET AND PIPE NIPPLES AND NON METALLIC SEAL-TITE (TYP.)

2" DIA. GALVANIZED STEEL CONDUIT

2" DIA. NPT THREADED HUB (COST INCLUDED WITH STRUCTURE) (LOCATION TO BE DETERMINED AT TIME OF SHOP DRAWING SUBMITTAL AND REVIEW)



SIDE ELEVATION

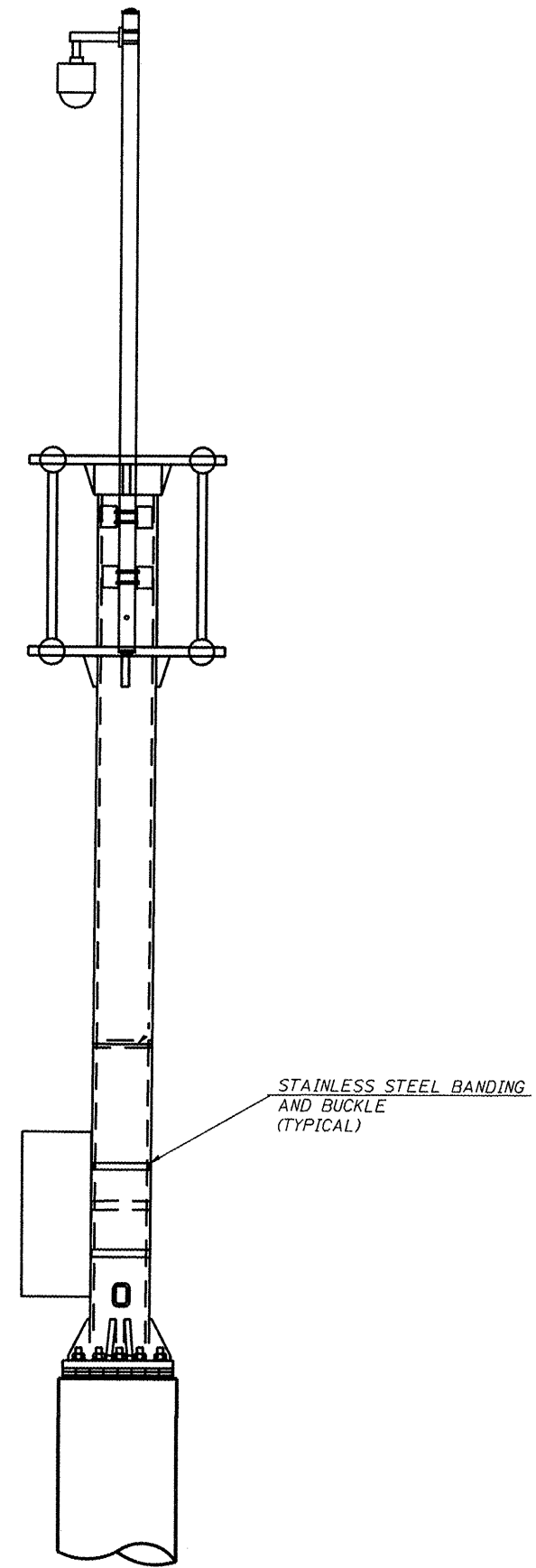
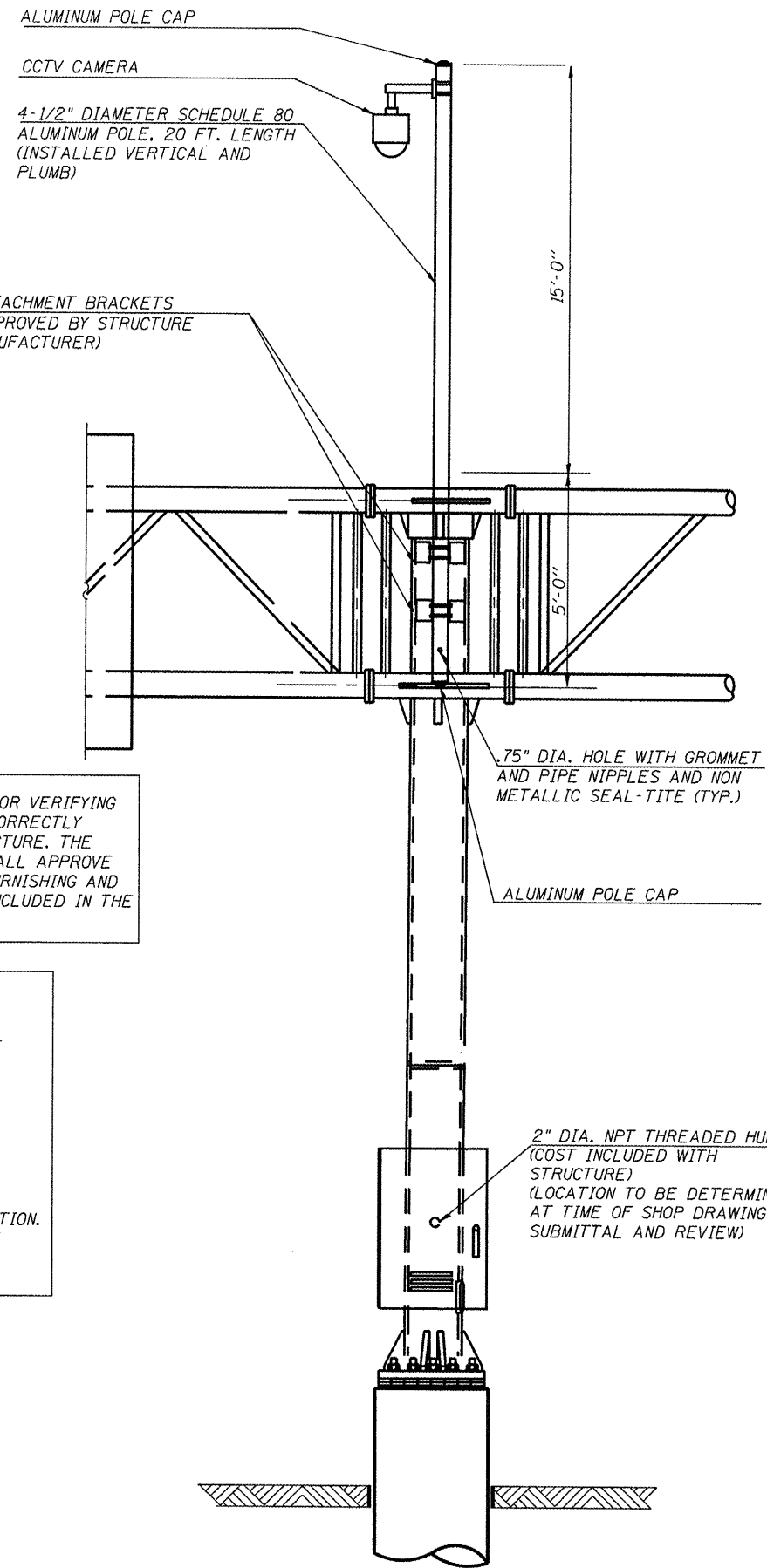


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		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CCTV CAMERA AND EQUIPMENT CABINET MOUNTING DETAIL
FOR OVERHEAD SIGN STRUCTURES

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	12
CONTRACT NO. 66B28			ILLINOIS	



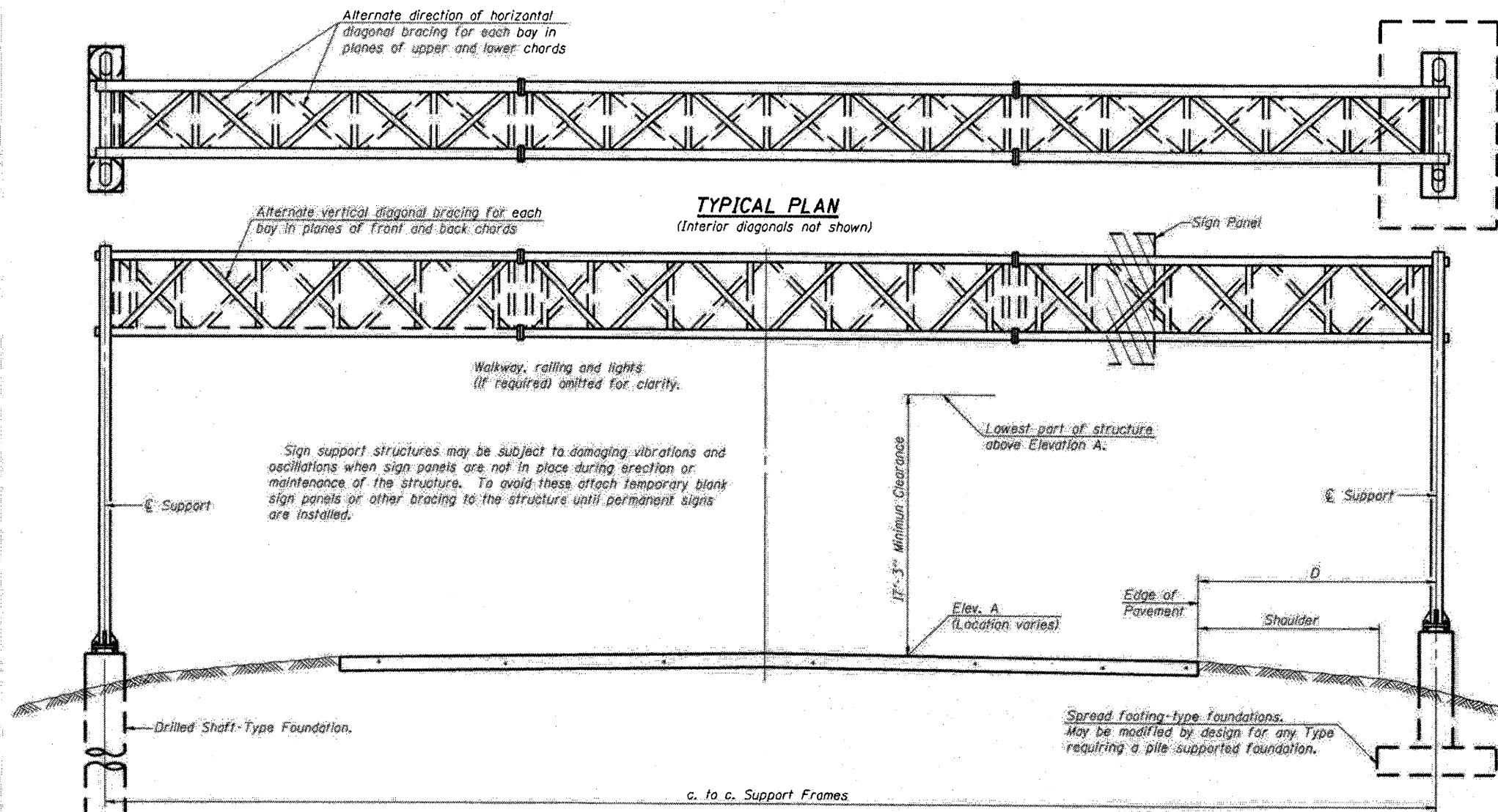
FRONT ELEVATION

SIDE ELEVATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE CAMERA MAST COMPONENTS FIT CORRECTLY AND ARE COMPATIBLE WITH THE SIGN STRUCTURE. THE MANUFACTURER OF THE SIGN STRUCTURE SHALL APPROVE THE CAMERA MAST DESIGN. THE COST OF FURNISHING AND INSTALLING THE CAMERA MAST SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GALVANIZED STEEL UNISTRUT, BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ONTO THE SIGN STRUCTURE VERTICAL SUPPORT. THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR ALL MATERIALS AND DETAIL DRAWINGS FOR PROPOSED MOUNTING METHODS PRIOR TO COMMENCING WORK. ALL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE EQUIPMENT CABINET.

FILE NAME =	USER NAME = petelyj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTTERFLY SIGN STRUCTURES - TYPE II-F-A & III-F-A TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pw_work\pedit\petelyj\d8250292\036628-shr-details.dgn	28-shr-details.dgn	DRAWN -	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	13	
PLOT SCALE = 99.9999 ' / in.		CHECKED -	REVISED -			CONTRACT NO. 66B28					
PLOT DATE = 2/23/2012		DATE -	REVISED -			ILLINOIS					



GENERAL NOTES

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

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

LOADING: 90 M.P.H. WIND VELOCITY

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

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

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

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

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

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

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

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

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

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

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

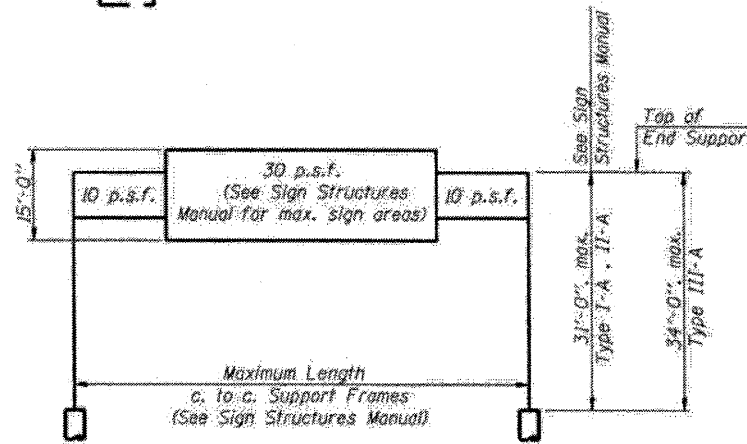
TYPICAL ELEVATION
(Looking at Face of Signs)**

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
3S0501080L096.0	785+00	III-A	64'-0"	683.45	20.0'	10.0'	300.0 Sq. Ft.
3S0061080R072.5	437+50	III-A	64'-0"	654.59	20.0'	10.0'	300.0 Sq. Ft.
3S0501039R049.0	190+00	III-A	64'-0"	675.68	20.0'	10.0'	300.0 Sq. Ft.
3S0501039L068.5	540+00	III-A	64'-0"	670.92	20.0'	10.0'	300.0 Sq. Ft.
3S0461057R305.0	555+00	III-A	64'-0"	634.24	20.0'	10.0'	300.0 Sq. Ft.
3S0461057L319.9	547+30	III-A	64'-0"	660.73	20.0'	10.0'	300.0 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.



DESIGN WIND LOADING DIAGRAM

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

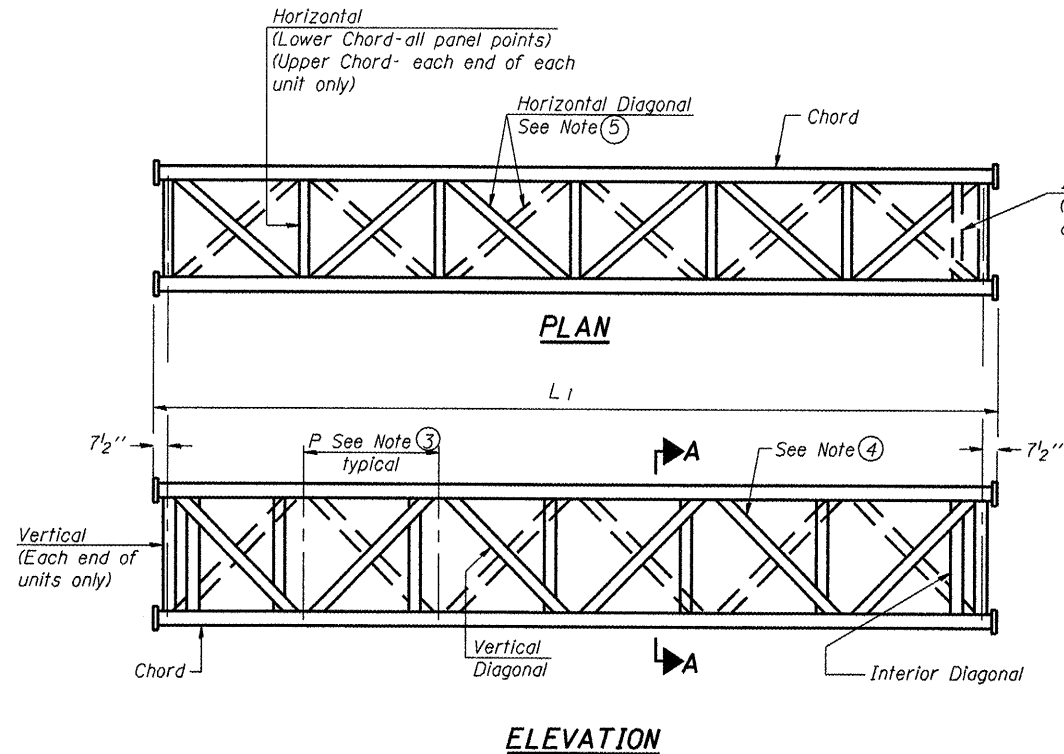
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	384
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	186
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	121.4

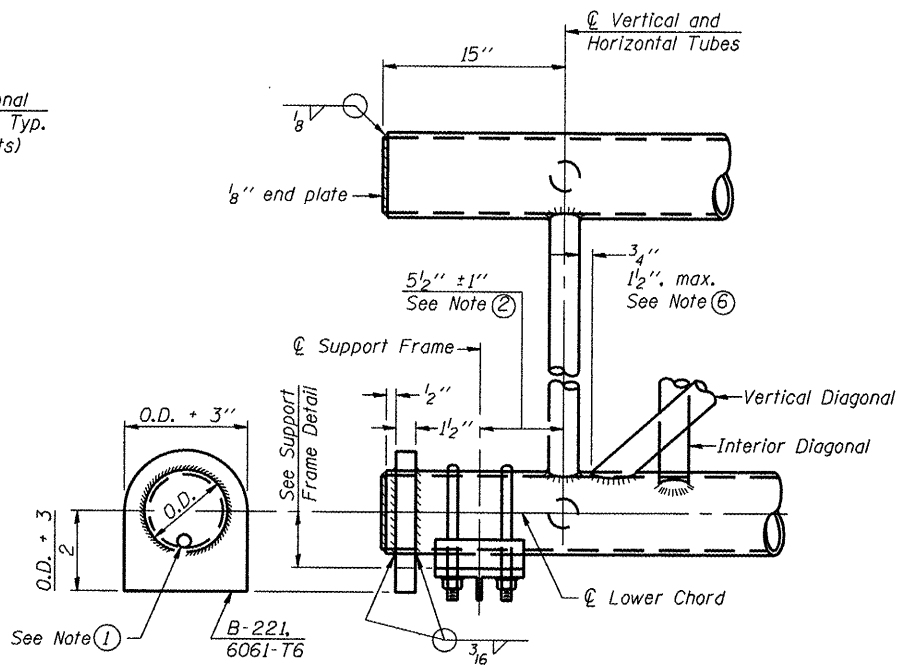
OS-A-1

1-20-11

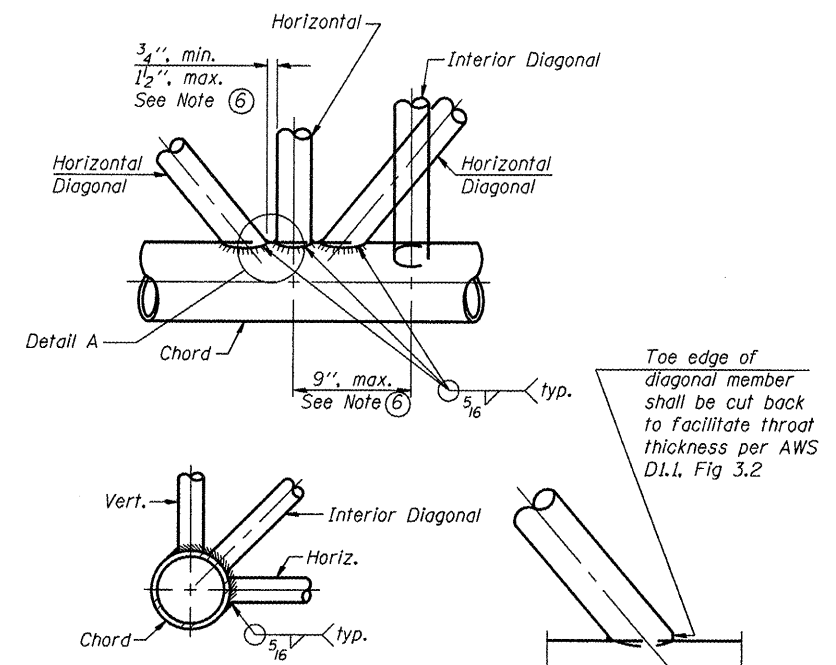
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20-etc\details\DOM	20-etc\details\DOM	DRAWN: YOGESH PATEL	REVISED:			VAR:	D3 OVD MESSAGE SG - 2012	VAR:	50	14	
PLOT SCALE: 1/8" = 1'-0"		CHECKED: RON WOODSHANK	REVISED:			SCALE:					CONTRACT NO. 66B20
PLOT DATE: 1/18/2012		DATE:	REVISED:			SHEET NO. 1 OF 1 SHEETS	STA.:				



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

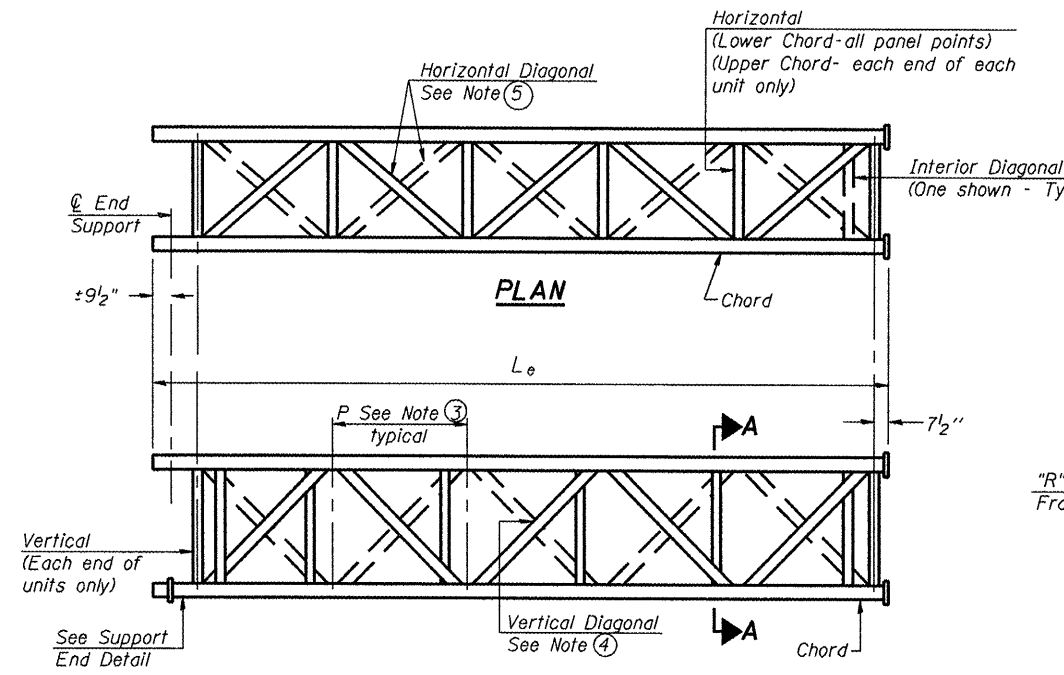


SUPPORT END DETAIL FOR EXTERIOR UNIT

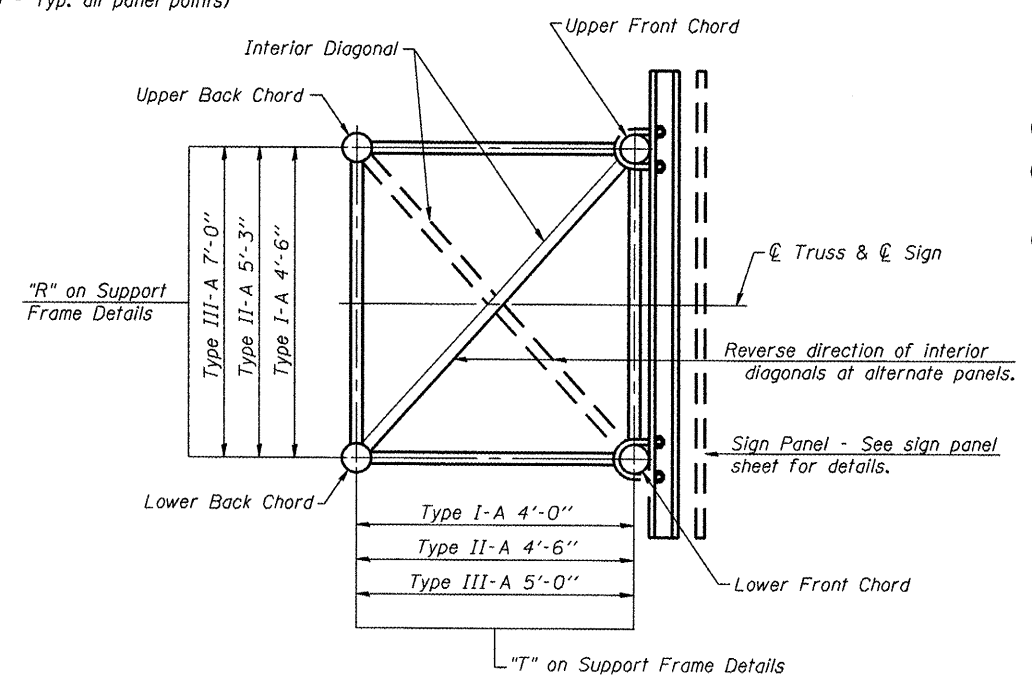


TYPICAL JOINT DETAILS

DETAIL A



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



SECTION A-A

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" 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 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

05-A-2

1-20-11

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		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

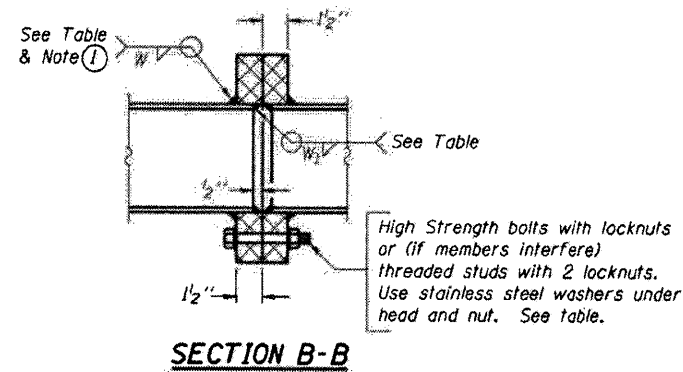
**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

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

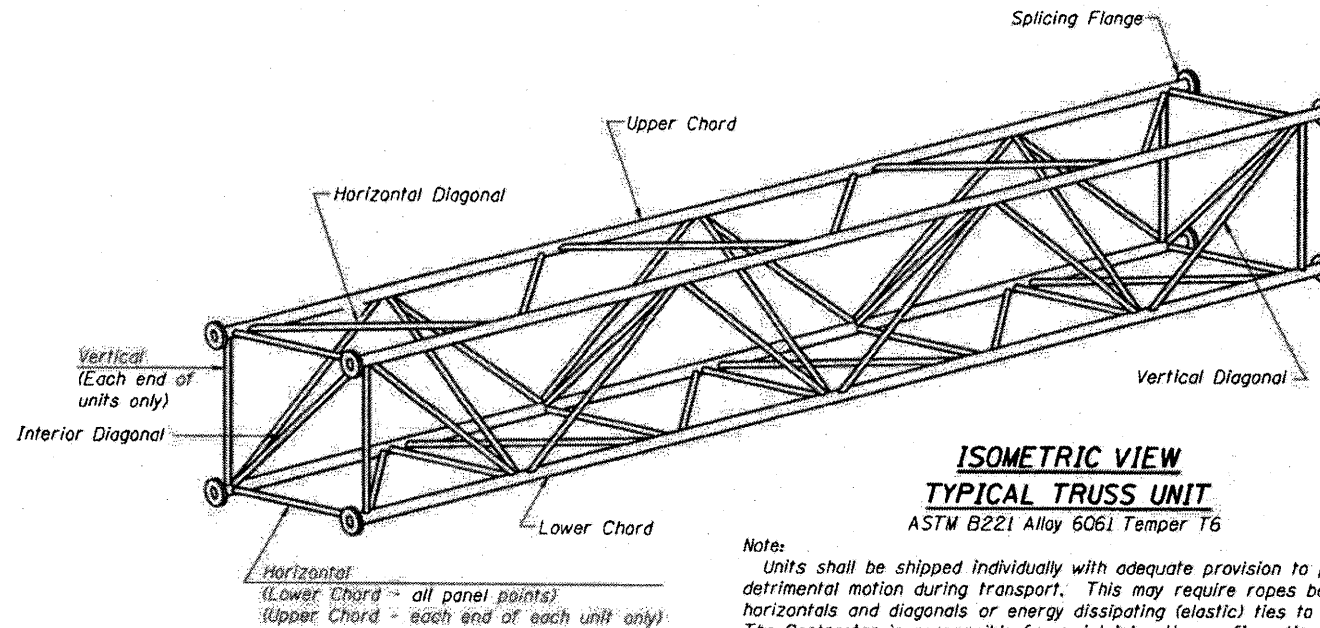
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	49	15
		CONTRACT NO. 66B28		
ILLINOIS				

TRUSS UNIT TABLE

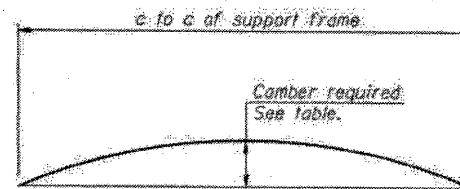
Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L _u)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L _i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes			
															No./Splice	Di.	W	W ₁	A	B
3S0501080L096.0	785+00	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"
3S0061080R072.5	437+50	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"
3S0501039R049.0	190+00	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"
3S0501039L068.5	540+00	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"
3S0461057R305.0	555+00	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"
3S0461057L319.9	547+30	III-A	7	32'-9 1/2"	4'-5"	0	--	--	--	7"	5/16"	3 1/4"	5/16"	0.77"	6	1"	7/16"	5/16"	11 1/2"	15"



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.



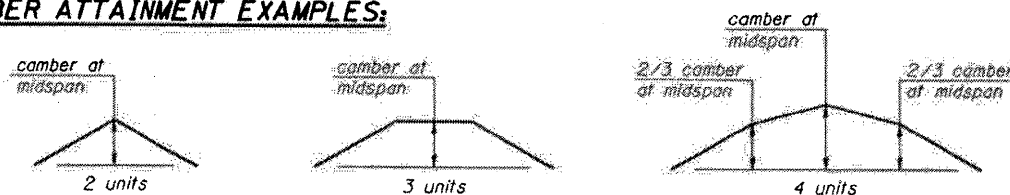
Note: Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection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



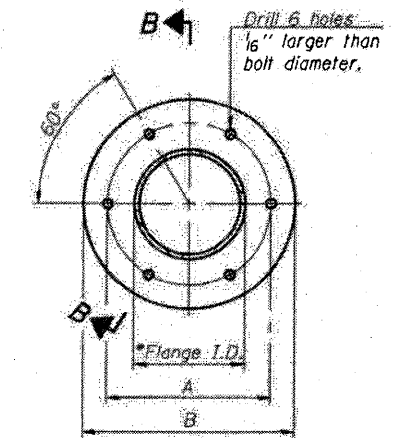
CAMBER DIAGRAM

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

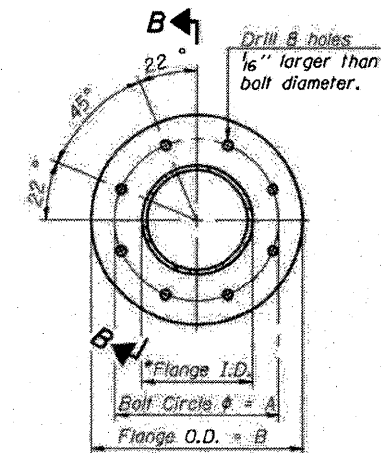
CAMBER ATTAINMENT EXAMPLES:



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



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



TRUSS TYPES II-A & III-A

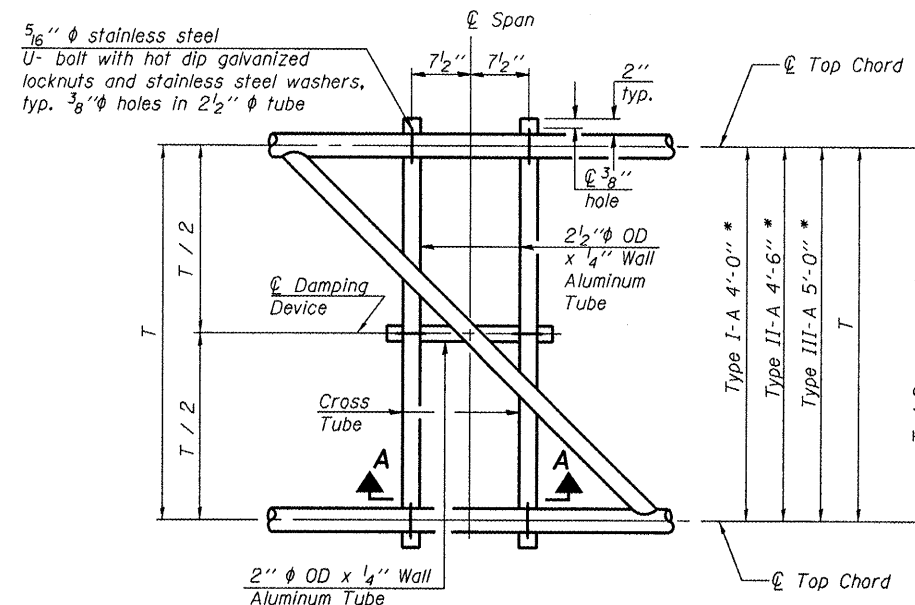
SPLICING FLANGES

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

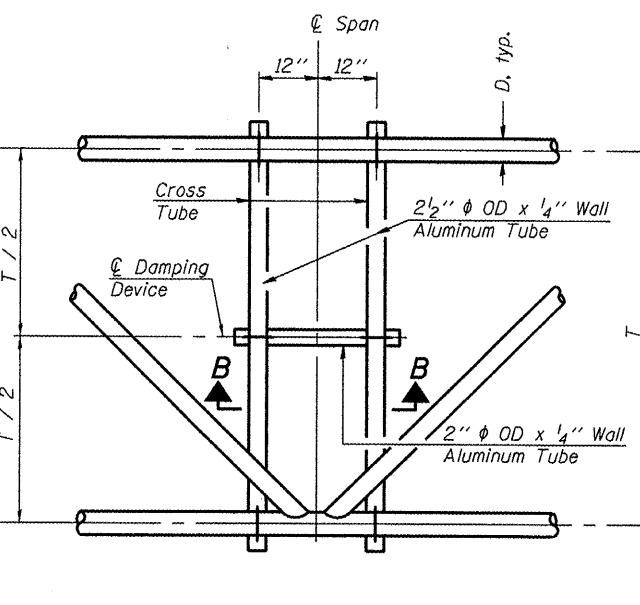
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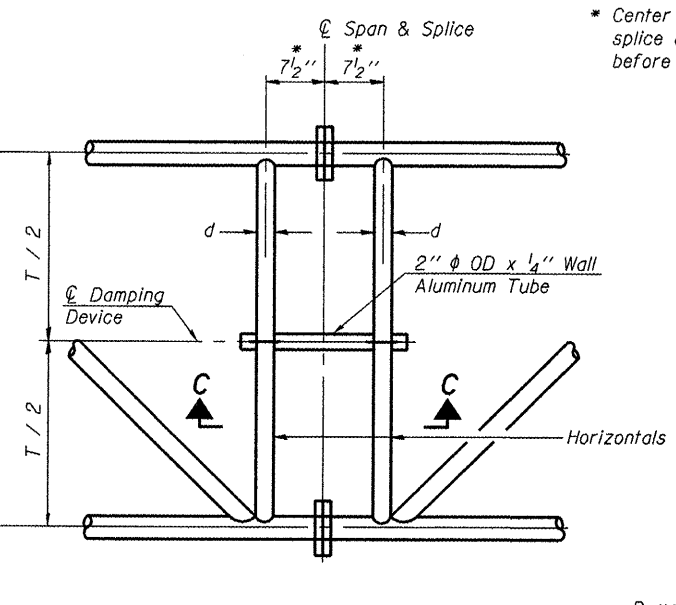
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PLT SCALE: 99.9999 / in.	CHECKED: RON WOODSHANK	REVISED: -	VAR:			03 DVD MESSAGE 56 - 2012	VAR:	50	10	
PLT DATE: 3/8/2012	DATE: -	REVISED: -	SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____			CONTRACT NO. 66028				
						ILLINOIS				



PLAN DETAIL "A"
 ☉ Span between Panel Points



PLAN DETAIL "B"
 ☉ Span at Panel Point



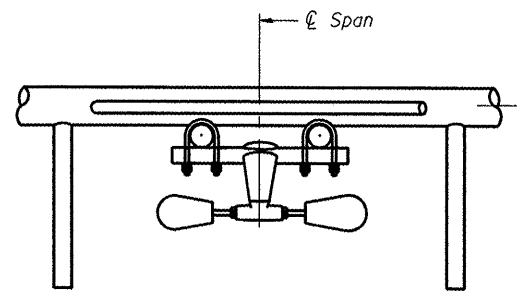
PLAN DETAIL "C"
 ☉ Span at Chord Splice

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

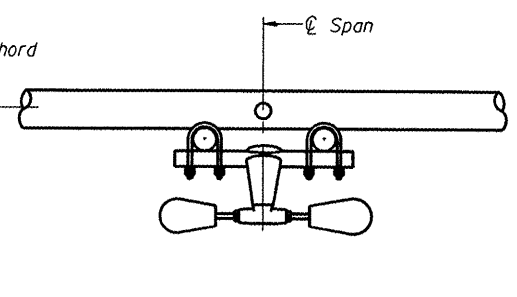
NOTES

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

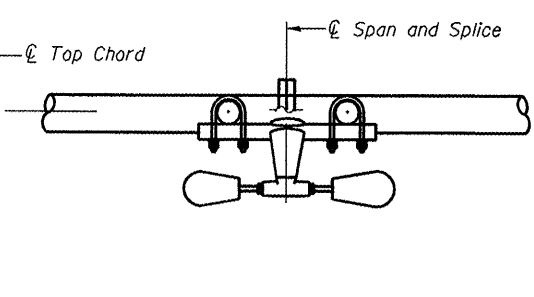
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



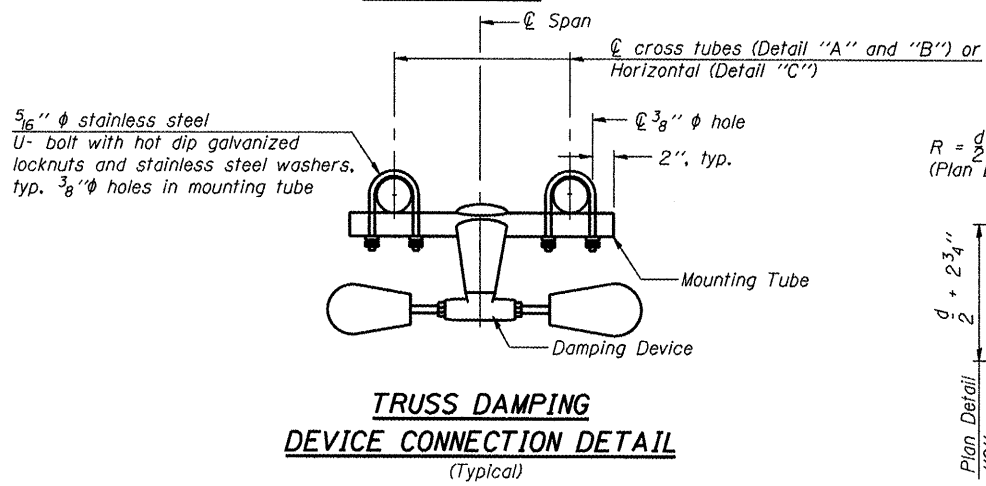
SECTION A-A



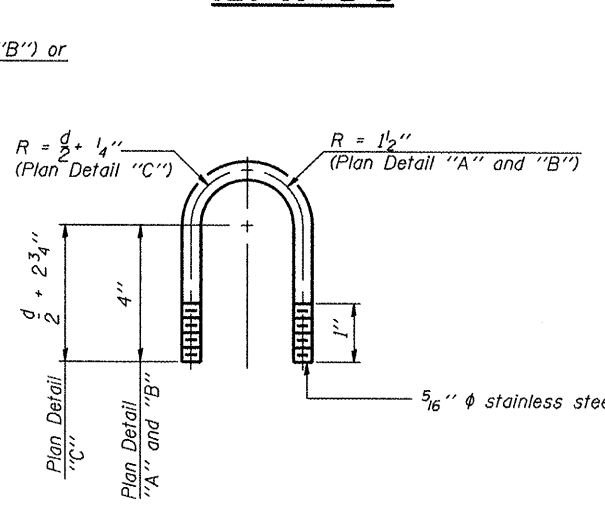
SECTION B-B



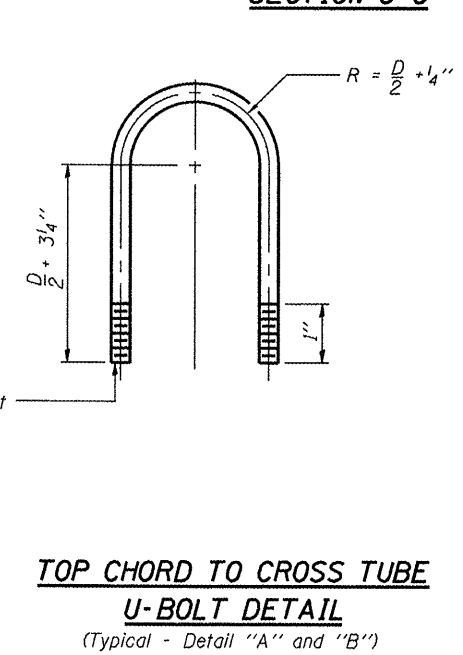
SECTION C-C



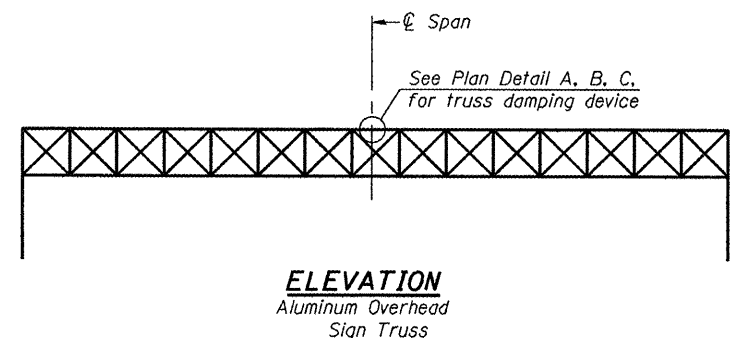
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
 (Typical)



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



ELEVATION
 Aluminum Overhead Sign Truss

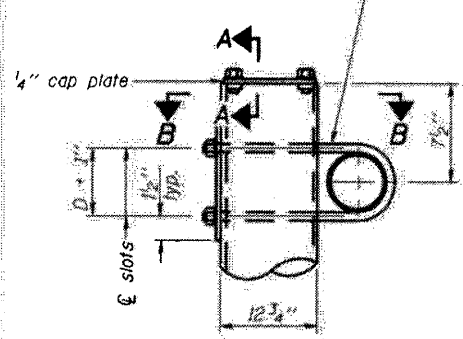
OS-A-D

1-20-11

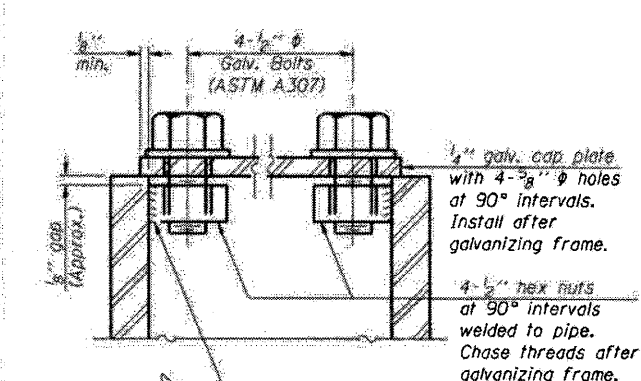
FILE NAME =	USER NAME = potelyj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURE DAMPING DEVICE	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw_work\p\ridot\potelyj\0250292\036628-shd-detaila.DGN	PLOT SCALE = 99.9999 ' / in.	DRAWN -	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	17	
PLOT DATE = 2/23/2012	DATE -	CHECKED -	REVISED -			CONTRACT NO. 6020					
		DATE -	REVISED -			ILLINOIS					

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

3/4" stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1/16" x 2" slots on 1/2" pipe.
(4 slots required per pipe)

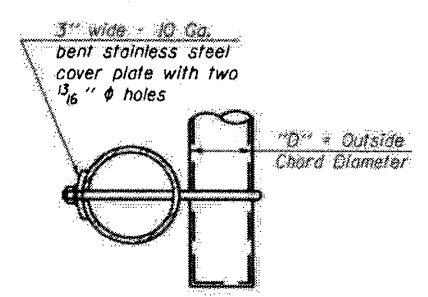


DETAIL A

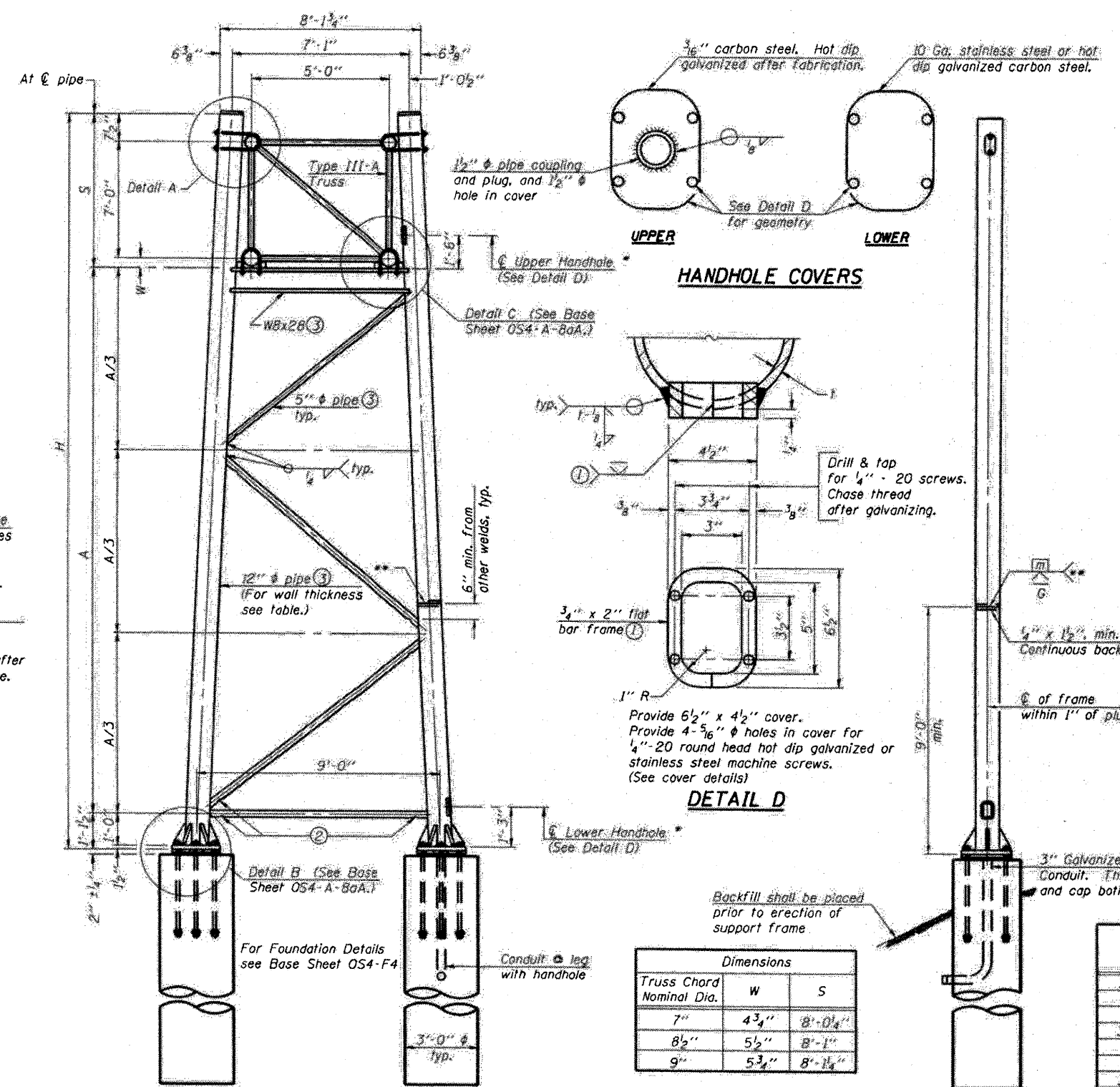


SECTION A-A

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



SECTION B-B



SIDE ELEVATION

END ELEVATION

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

TRUSS SUPPORT DETAILS

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

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

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

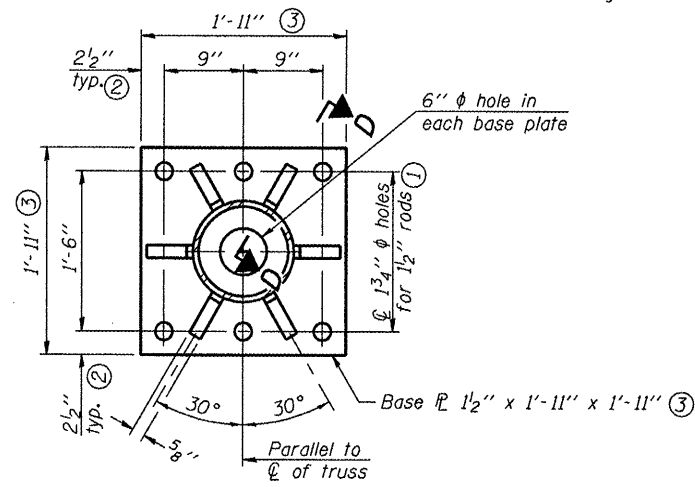
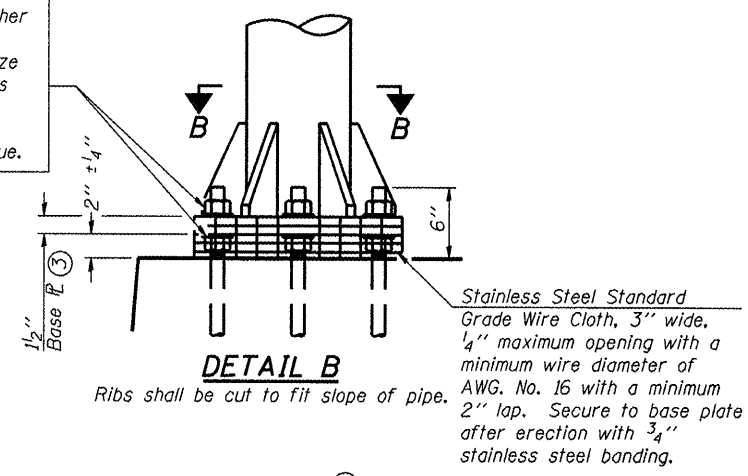
* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
3S0501080L096.0	785+00	X		0.33"	31'-2"	23'-2"
			X	0.33"	31'-7"	23'-6"
3S0061080R072.5	437+50	X		0.33"	31'-8"	23'-7"
			X	0.33"	32'-7"	24'-7"
3S0501039R049.0	190+00	X		0.33"	31'-0"	23'-0"
			X	0.33"	32'-4"	24'-4"
3S0501039L068.5	540+00	X		0.33"	30'-9"	22'-9"
			X	0.33"	30'-6"	22'-6"
3S0461057R305.0	555+00	X		0.33"	30'-1"	22'-1"
			X	0.33"	31'-3"	23'-3"
3S0461057L319.9	547+30	X		0.33"	30'-5"	22'-5"
			X	0.33"	30'-10"	22'-10"

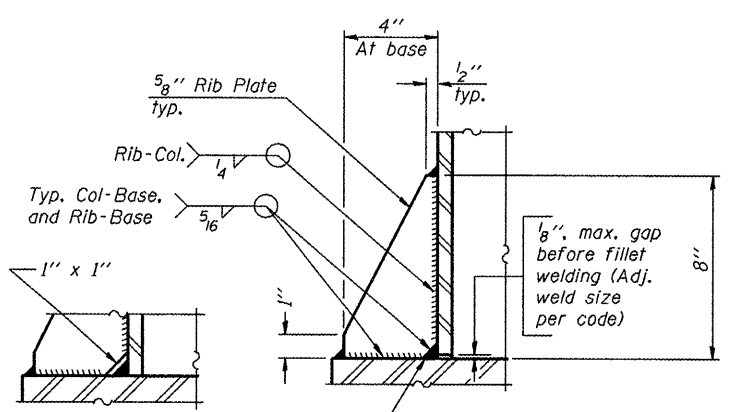
OS4-A-8a 1-20-11

FILE NAME -	USER NAME - pccslj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES - SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS	SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DR -	DR -	VAR	03 QVD MESSAGE SC - 2012						VAR	50	18		
PLT SCALE - 1/8" = 1'-0"	CHECKED -	DATE -	REVISED -						CONTRACT NO. 60000				
PLT DATE - 3/8/2012	DATE -	REVISED -	ILLINOIS										

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

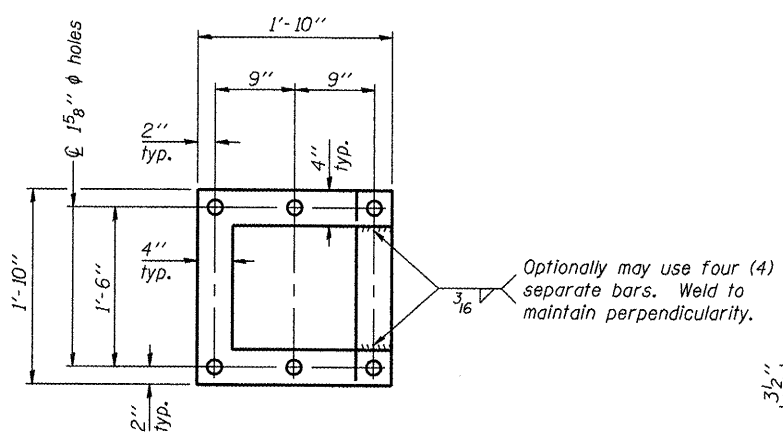


SECTION B-B

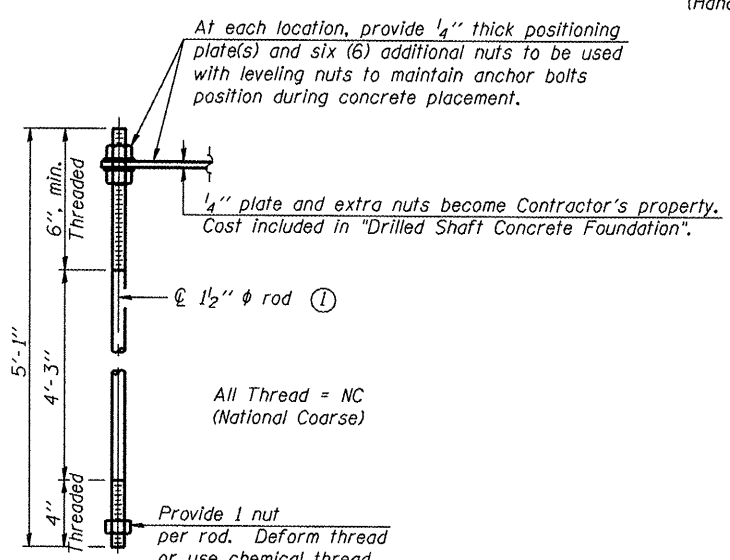


SECTION D-D

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



POSITIONING PLATE(S)



ANCHOR ROD DETAIL

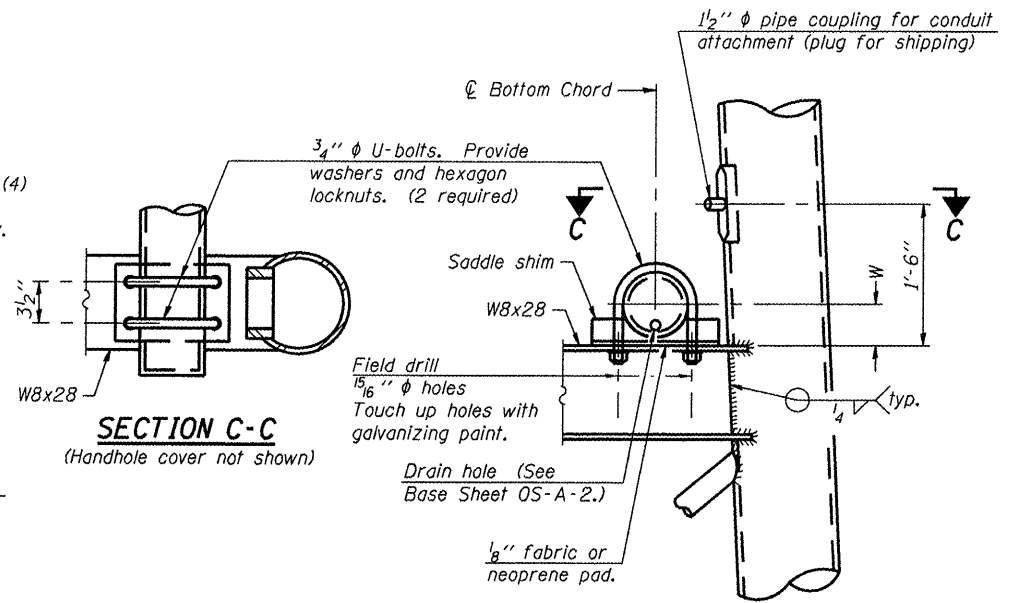
Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS

12" Ø PIPE SUPPORT FRAME DETAILS

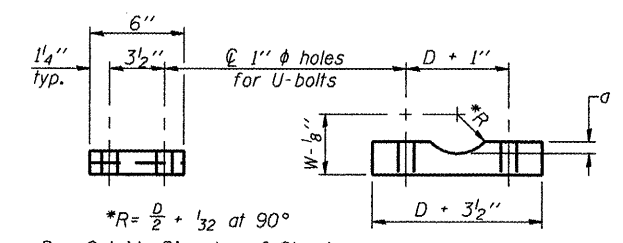
Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

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



SECTION C-C
(Handhole cover not shown)

DETAIL C



SADDLE SHIM DETAIL

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

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

OS4-A-80a

1-20-11

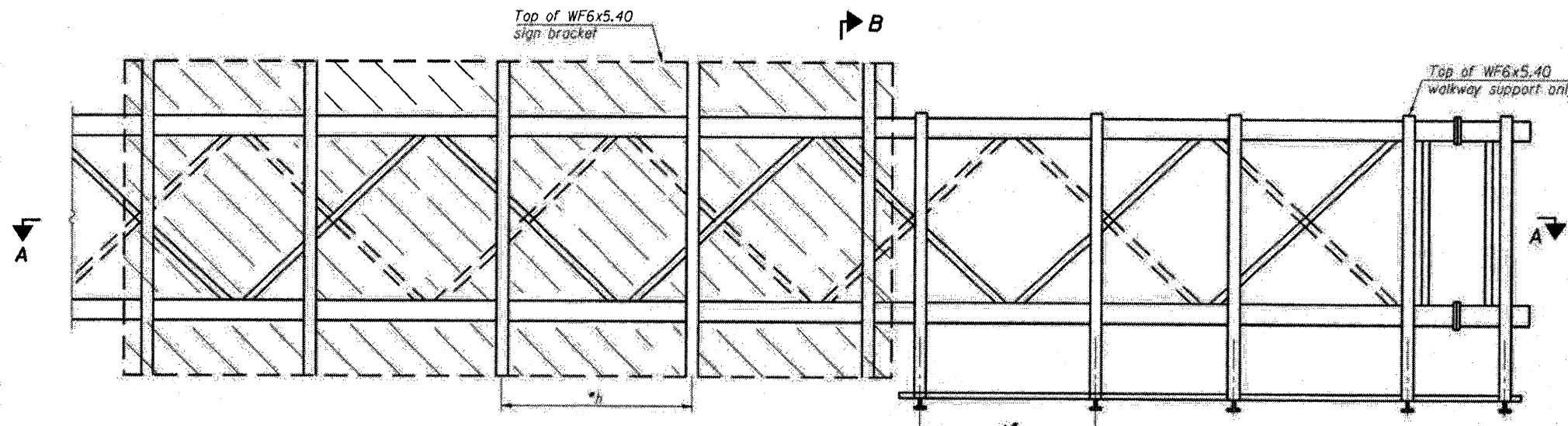
FILE NAME =	USER NAME = pateluj	DESIGNED -	REVISED -
c:\pwwork\pwwork\pateluj\d0250292\036828-shd-details.DGN		DRAWN -	REVISED -
PLOT SCALE = 99.9999 ' / in.		CHECKED -	REVISED -
PLOT DATE = 2/23/2012		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

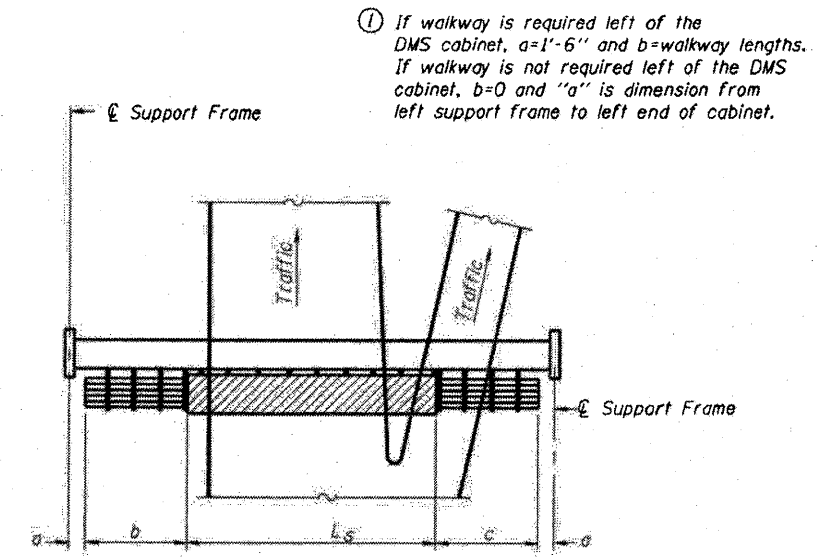
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I. RTE. VAR	SECTION D3 OVD MESSAGE SG - 2012	COUNTY VAR	TOTAL SHEETS 50	SHEET 19
			CONTRACT NO. 66B28	



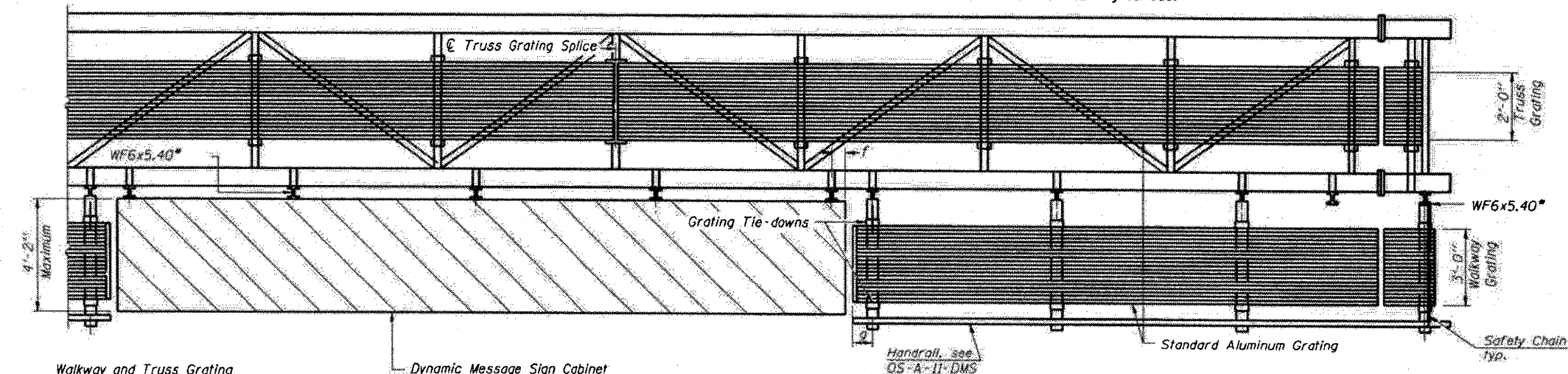
TYPICAL FRONT ELEVATION
With handrail omitted for clarity.

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



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

① If walkway is required left of the DMS cabinet, a=1'-6" and b=walkway lengths. If walkway is not required left of the DMS cabinet, b=0 and "a" is dimension from left support frame to left end of cabinet.



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

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. Grating and handrail splices placed as needed.

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".

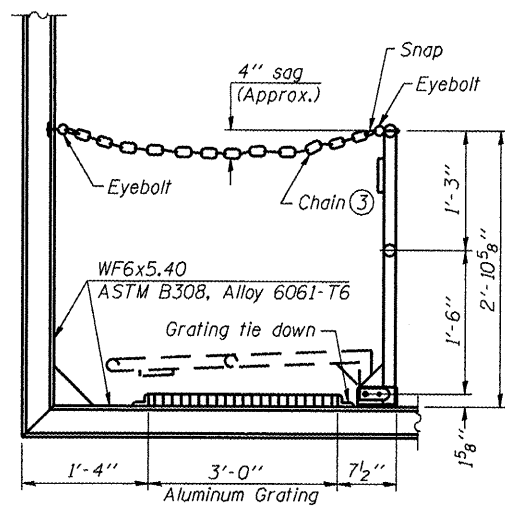
BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
	14'-0"	3
	20'-0"	4
	26'-0"	5
	32'-0"	6

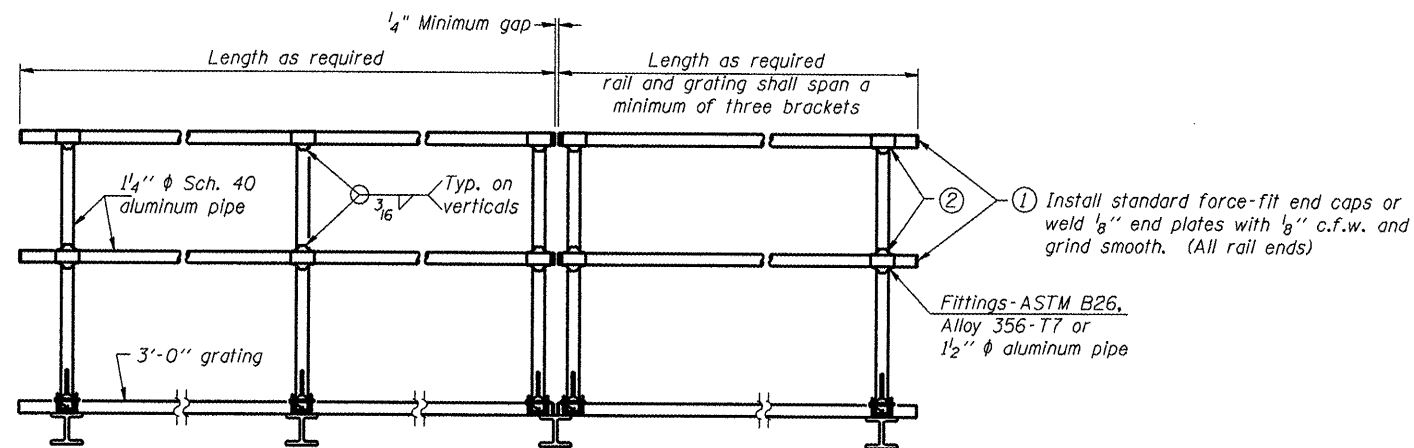
Notes:
 • Space walkway brackets WF6x5.40 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
 h = 6'-0" maximum (center to center of sign and/or walkway support brackets, WF6x5.40)
 Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
 For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
 For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

Structure Number	Station	a	b	c	Ls	Walkway Grating and Handrail Lengths
3S05010801096.0	785+00	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"
3S0061080R072.5	437+50	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"
3S0501039R049.0	190+00	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"
3S0501039L068.5	540+00	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"
3S0461057R305.0	555+00	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"
3S0461057L319.9	547+30	1'-6"	15'-6"	15'-6"	30'-0"	31'-0"

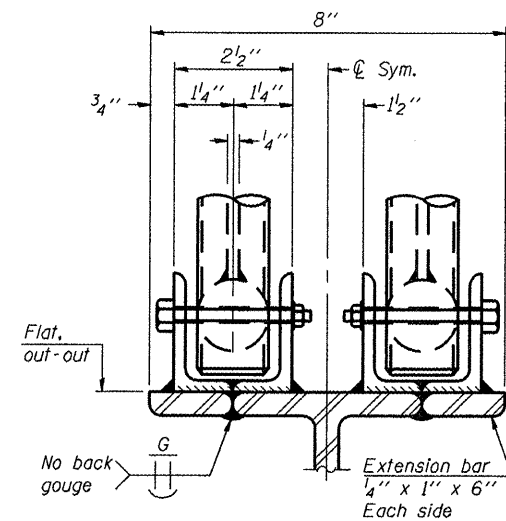
OS-A-9-DMS 1-20-11



SIDE ELEVATION
(Showing safety chain w/o sign)



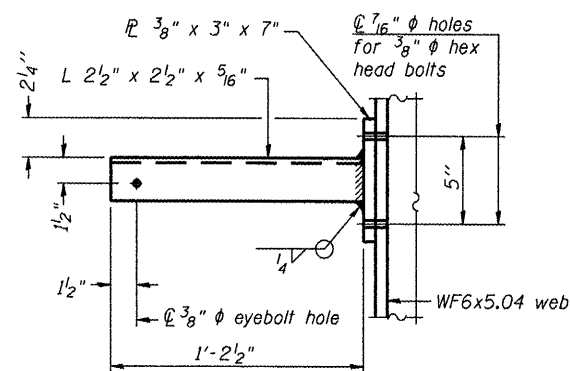
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT (4)

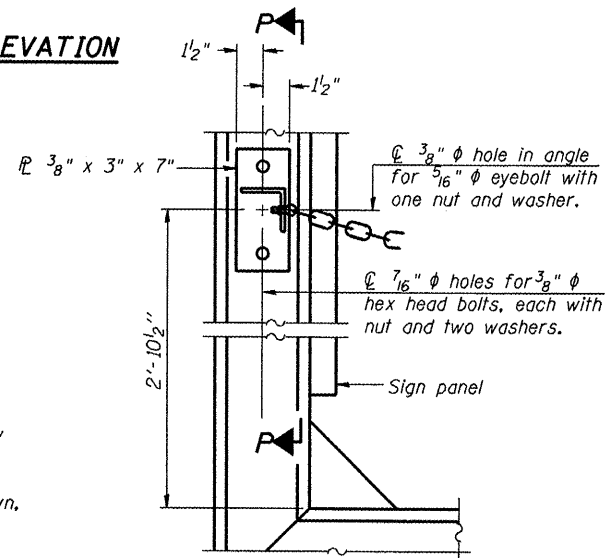
HANDRAIL DETAILS

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



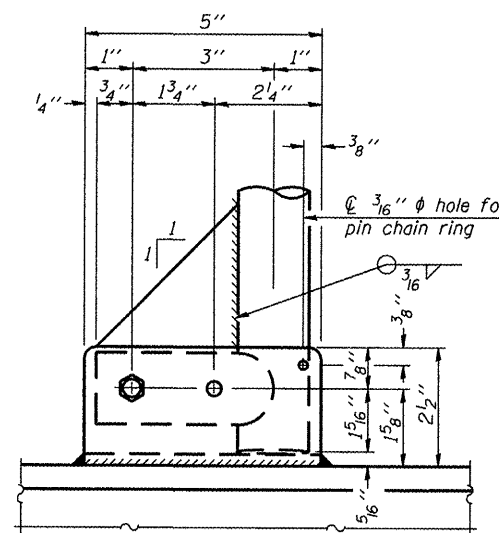
SECTION P-P

- (2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16" hole in fitting for 3/8" bolt. Field drill 7/16" hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" holes on top rail at ends only.)
- (3) 3/16" type 304L stainless steel chain, approximately 12 links per foot.
- (4) Extrusions may be used in lieu of the details shown, with approval of the Engineer.

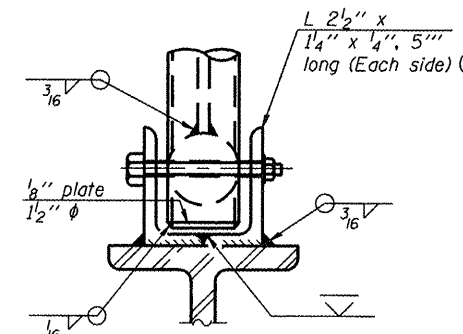


ALTERNATE SAFETY CHAIN ATTACHMENT

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

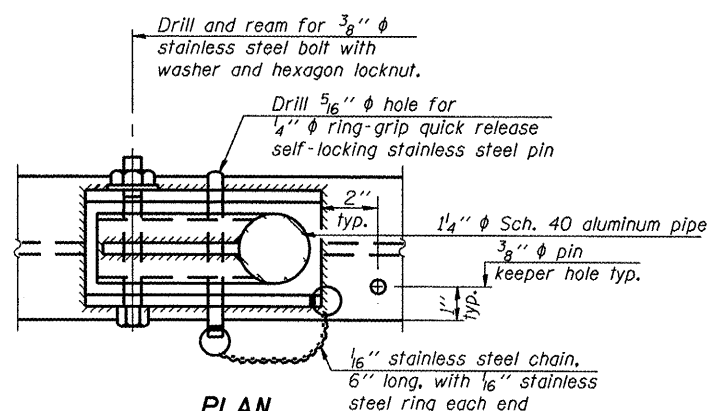


SIDE ELEVATION

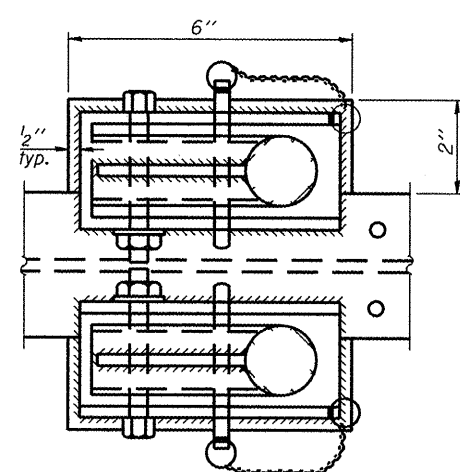


FRONT ELEVATION

See "ELEVATION" at right for dimensions.

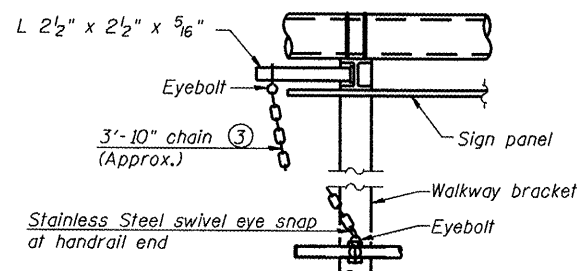


PLAN DETAIL E HANDRAIL HINGE



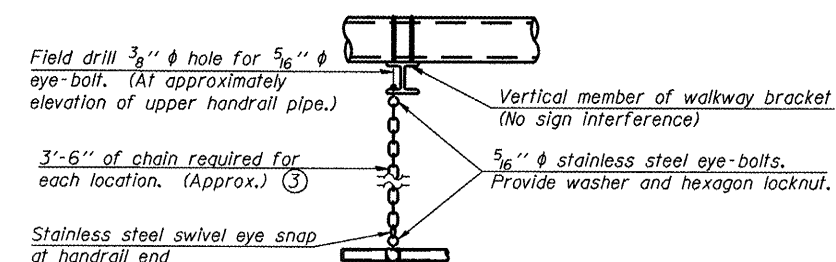
PLAN AT HANDRAIL JOINT

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.

OS-A-II-DMS

1-20-11

FILE NAME =	USER NAME = pateluj	DESIGNED - YOGESH PATEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OVERHEAD SIGN STRUCTURES ALTERNATE ALUMINUM HANDRAIL DETAILS FOR DMS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pedit\pateluj\0250292\0366	28-sht-details.DGN	DRAWN - YOGESH PATEL	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	22	
	PLOT SCALE = 99.9999 1/16"	CHECKED - RON WOODSHANK	REVISED -			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____	TO STA. _____	CONTRACT NO. 60022	
	PLOT DATE = 2/23/2012	DATE -	REVISED -								

BAR LIST - EACH FOUNDATION

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

NOTES:

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

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

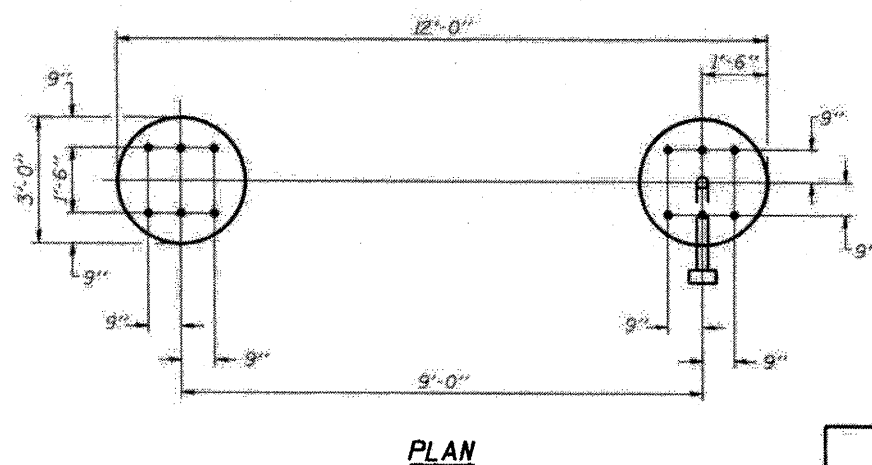
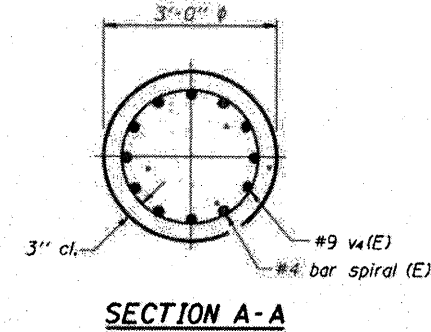
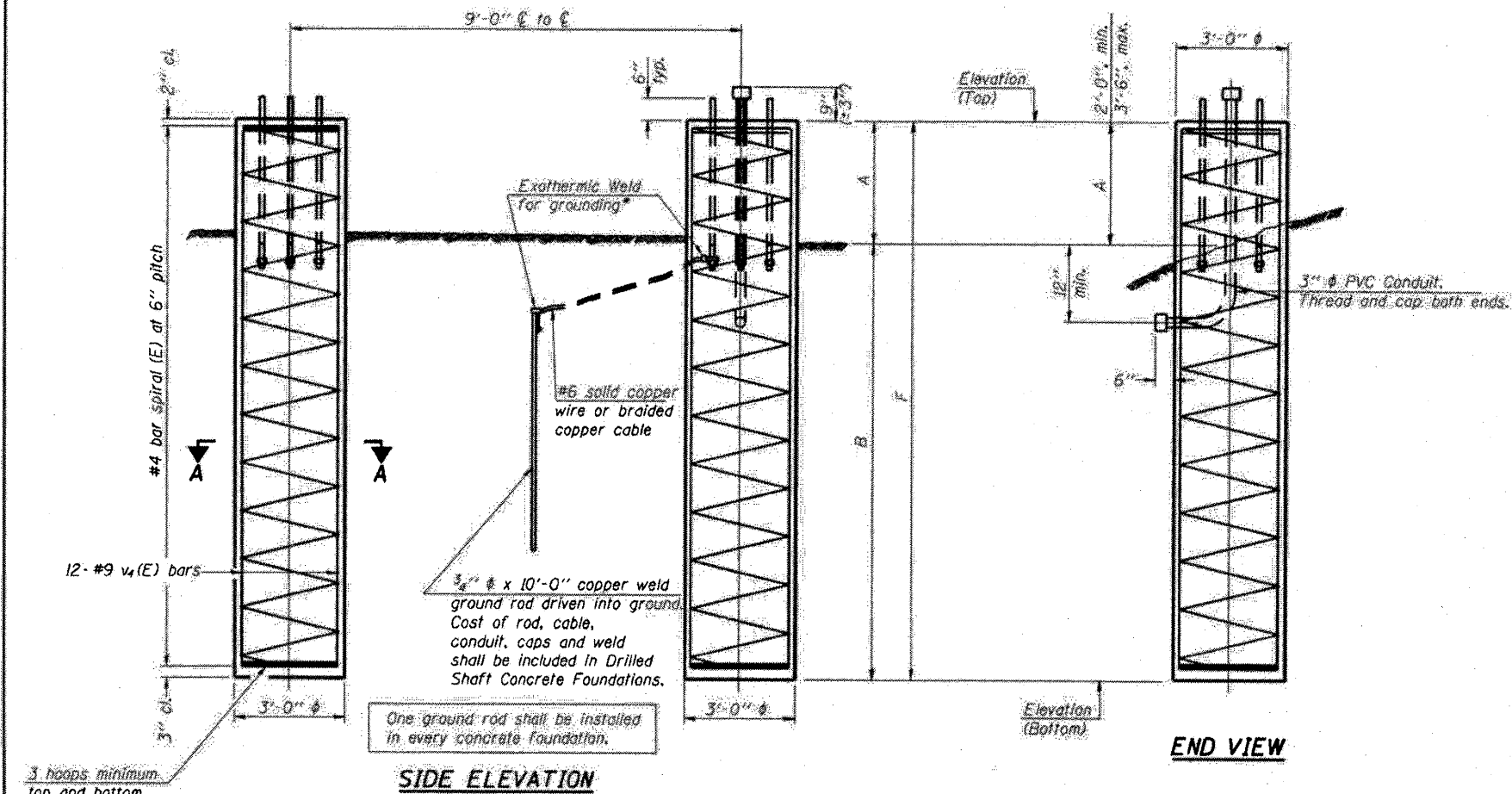
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

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

Concrete shall be placed monolithically, without construction joints.

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

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



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

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

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

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
3S0501080L096.0	785+00	681.98	661.98	2'-0"	18'-0"	20'-0"	681.60	661.60	2'-0"	18'-0"	20'-0"	20.9
3S0061080R072.5	437+50	652.67	632.67	2'-0"	18'-0"	20'-0"	651.68	631.68	2'-0"	18'-0"	20'-0"	20.9
3S0501039R049.0	190+00	674.35	654.35	2'-0"	18'-0"	20'-0"	673.03	653.03	2'-0"	18'-0"	20'-0"	20.9
3S0501039L068.5	540+00	669.88	649.88	2'-0"	18'-0"	20'-0"	670.10	650.10	2'-0"	18'-0"	20'-0"	20.9
3S0461057R305.0	555+00	633.85	615.85	2'-0"	16'-0"	18'-0"	632.71	614.71	2'-0"	16'-0"	18'-0"	18.9
3S0461057L319.9	547+30	660.06	642.06	2'-0"	16'-0"	18'-0"	659.62	641.62	2'-0"	16'-0"	18'-0"	18.9

054-F4

1-20-11

FILE NAME: c:\p\work\p\d\patel\108258292-036828-shs-details.DWG	USER NAME: pateluj	DESIGNED: _____	REVISED: _____
PLOT SCALE: 1/8" = 1'-0"	PLT DATE: 3/8/2012	DRAWN: _____	REVISED: _____
		CHECKED: _____	REVISED: _____
		DATE: _____	REVISED: _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

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

F.A.I. RTE.:	SECTION	COUNTY	TOTAL SHEET NO.
VAR:	03 OVD MESSAGE 50 - 2012	VAR	50 23
		CONTRACT NO.	66B28
ILLINOIS			



SOIL BORING LOG

Date 5/10/11

ROUTE 1-80 DESCRIPTION 1-80 West Bound, MP 96.05, Station 785+00 LOGGED BY Larry Myers

SECTION 03 OVD Message SG-2012 LOCATION NE 1/4, SEC. 35, TWP. 34N, RNG. 4E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S05010801096.0
Station 785+00

BORING NO. 1
Station 785+00
Offset 60.0 ft Lt.
Ground Surface Elev. 682.18 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter _____ ft
Upon Completion 666.2 ft
After _____ Hrs. _____ ft

DEPTH (ft)	BULGE (ft)	SHEAR (lb/ft ²)	PENETROMETER (lb)	M.O.S. (%)	DEPTH (ft)	BULGE (ft)	SHEAR (lb/ft ²)	M.O.S. (%)
0					0			
5					5			
6					6	6.5	20	
9					9	S		
679.68								
4					4			
4	3.0	22			4	6.1	20	
4	P				8	S		
-5					-5			
2					6			
2	1.5	28			6	5.4	20	
2	P				7	S		
675.18								
2					3			
5	3.1	21			4	4.3	19	
6	S				5	S		
672.68								
-10					-10			
6					3			
9	7.8	18			5	4.6	20	
13	S				6	S		
5								
8	7.8	16						
11	S							
-15					-15			
5					3			
7	7.6	23			3	4.1	21	
9	S				8	S		
645.68								
5								
8	7.1	19						
8	S							
-20					-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, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 5/10/11

ROUTE 1-80 DESCRIPTION 1-80 West Bound, MP 96.05, Station 785+00 LOGGED BY Larry Myers

SECTION 03 OVD Message SG-2012 LOCATION NE 1/4, SEC. 35, TWP. 34N, RNG. 4E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S05010801096.0
Station 785+00

BORING NO. 2
Station 785+00
Offset 14.00 ft Lt.
Ground Surface Elev. 683.12 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter _____ ft
Upon Completion 667.1 ft
After _____ Hrs. _____ ft

DEPTH (ft)	BULGE (ft)	SHEAR (lb/ft ²)	PENETROMETER (lb)	M.O.S. (%)	DEPTH (ft)	BULGE (ft)	SHEAR (lb/ft ²)	M.O.S. (%)
0					0			
6					6			
8	6.9	19.8			8	6.9	19.8	
12	S				12	S		
680.62								
3					3			
3	4.0	17.9			3	4.0	17.9	
8	P				8	P		
-5					-5			
3					3			
2	2.5	29.6			2	2.5	29.6	
4	P				4	P		
676.62								
2					2			
5	3.1	21			5	3.1	21	
6	S				6	S		
675.62								
1					1			
2	1.5	20.7			2	1.5	20.7	
6	P				6	P		
673.62								
-10					-10			
4					4			
6	4.1	17.0			6	4.1	17.0	
10	S				10	S		
6					6			
8	7.1	19.0			8	7.1	19.0	
12	S				12	S		
-15					-15			
10					10			
12	8.2	20.5			12	8.2	20.5	
16	S				16	S		
646.62								
-30					-30			
6					6			
10	7.1	14.4			10	7.1	14.4	
12	S				12	S		
6					6			
8	5.4	17.0			8	5.4	17.0	
8	S				8	S		
8					8			
8	7.1	16.6			8	7.1	16.6	
10	S				10	S		
-20					-20			

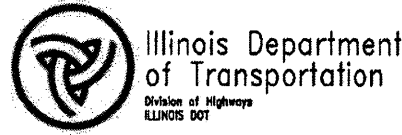
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING LOG

I-80 WB, MP 96.05, STATION 785+00

FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
2011051010801096.0	lmyers	DRAWN	REVISED			VAR	03 OVD MESSAGE SG - 2012	VAR	50	24	
		CHECKED	REVISED			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS	CONTRACT NO. 66B28
		DATE	REVISED								



SOIL BORING LOG

Page 1 of 1

Date 5/4/11

ROUTE I-80 DESCRIPTION I-80 East Bound, MP 72.48, Station 437+50 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION NW 1/4, SEC. 24, TWP. 16N, RNG. 11E, Latitude, Longitude

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S0061080R072.5
 Station 437+50

BORING NO. 1
 Station 437+50
 Offset 17.0 ft Rt.
 Ground Surface Elev. 653.80 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	SOIL DESCRIPTION
651.30	Augered White Shoulder Stone, Black & Brown Silty Clay Fill	6	Hard Purplish Gray Silty Clay Loam Till with Minor Layers of Silt & Sand/Gravel
648.80	Hard Black & Brown Silty Clay Fill	10	
646.80	Very Stiff Gray & Brown Silty Clay Loess	16	
646.80	Very Stiff Brown Silty Loam Till with Loamy Gravel Layer at 16.5' - 17'	20	
636.80	Stiff to Very Stiff Purple Gray Silty Clay Loam Till	24	
634.30		28	
		32	
		36	
		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, form 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 1

Date 5/4/11

ROUTE I-80 DESCRIPTION I-80 East Bound, MP 72.48, Station 437+50 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION NW 1/4, SEC. 24, TWP. 16N, RNG. 11E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S0061080R072.5
 Station 437+50

BORING NO. 2
 Station 437+50
 Offset 102.00ft Rt.
 Ground Surface Elev. 653.30 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	SOIL DESCRIPTION
650.80	Augered White Shoulder Stone, Brown Silty Clay Fill	11	Hard Purplish Gray Silty Clay Loam Till with Minor Layers of Sand & Gravel & Silt
648.30	Very Stiff Brown Silty Clay Fill	17	
648.30	Very Stiff Brown Silty Loam Till	22	
641.30	Hard Brown to Gray Silty Clay Loam Till with Loamy Gravel Layer @ 16'	27	
636.30	Very Stiff Purplish Gray Silty Clay Loam Till	34	
633.80		38	
		44	
		49	
		51	

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, form 137 (Rev. 8-99)

SOIL BORING LOG

I-80 EB, MP 72.48, STATION 437 + 50

FILE NAME: \\pww\work\project\pww\43750\250212\0366	USER NAME: jpatel	DESIGNED: -	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	SECTION D3 OVD MESSAGE SG - 2012	COUNTY VARI	TOTAL SHEETS	SHEET NO.	CONTRACT NO. 6b2c3
PLQP SCALE: 1/4" = 10' 0"	CHECKED: -	REVISED: -	50								25		
PLOT DATE: 3/8/2012	DATE: -	REVISED: -											



SOIL BORING LOG

Date 5/16/11

ROUTE I-39 DESCRIPTION I-39 North Bound, MP 49.01, Station 190+00 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION SE 1/4, SEC. 23, TWP. 32N, RNG. 1E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S0501039R049.0
Station 190+00
BORING NO. 1
Station 190+00
Offset 17.00ft Rt.
Ground Surface Elev. 674.65 ft

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	UCS (%)
5	Augered Shoulder Stone, Gray & Brown Silty Clay Loam Fill	5			
7		7	4.8	12.5	
10		10	S		
672.15	Very Stiff Gray, Brown & Black Silty Clay Loam Fill	7			
		6	3.5	10.8	
		5	P		
670.15	Very Stiff Black Silty Clay Loam Topsoil	9			
		5	3.8	23.6	
		7	B		
667.65	Stiff Brown & Gray Silty Clay/Silty Loam Loess	9			
		3	2.0	23.9	
		3	P		
-10		10			
		2	1.0	26.2	
663.15	Loose to Medium Brown Loamy Fine Sand to Medium Gravel	10			
		2	P		
		4			
		5		17.4	
		6			
-15		12			
		7		19.7	
		12			
657.15	Very Stiff to Hard Gray Silty Clay Loam Till	10			
		3			
		5	3.1	13.1	
		7	B		
-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, form 137 (Rev. 8-99)



SOIL BORING LOG

Date 5/17/11

ROUTE I-39 DESCRIPTION I-39 North Bound, MP 49.01, Station 190+00 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION SE 1/4, SEC. 23, TWP. 32N, RNG. 1E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3S0501039R049.0
Station 190+00
BORING NO. 2
Station 190+00
Offset 65.00ft Rt.
Ground Surface Elev. 674.48 ft

DEPTH (ft)	SOIL DESCRIPTION	DEPTH (ft)	BLOWS (/6")	UCS (tsf)	UCS (%)
6	Augered Shoulder Stone, Brown & Gray Silty Clay Loam Fill	6			
8		8	4.7	13.0	
9		9	S		
671.98	Hard Brown & Gray Silty Clay Loam Till Fill	8			
		5			
		8	>4.5	13.1	
		9	P		
669.48	Very Stiff Black Silty Clay Loam Topsoil	9			
		3			
		5	3.8	26.1	
		7	B		
667.48	Stiff Gray & Brown Silty Loam/Silt with Free Water @ 10'	10			
		2			
		2	1.5	27.2	
		3	P		
-10		10			
		2			
		2	1.0	28.7	
		2	P		
		1	1.0	25.9	
		2	P		
659.48	Very Stiff Brown Loam with Layers of Loamy Sand/Gravel	10			
		5			
		7	2.5	12.8	
		11	P		
657.48	Hard Gray Silty Clay Loam Till	15			
		11		5.7	19.3
		15	S		
-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, form 137 (Rev. 8-99)

SOIL BORING LOG

I-39 NB, MP 49.01, STATION 190+00

FILE NAME: 0:\pww\edink\pww\dot\pawel\208258292\0369	USER NAME: pawel	DESIGNED: 28-efc\decalia.ODD	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	F.A.T. RTE. VAR.	SECTION: D3 OVD MESSAGE SG - 2012	COUNTY: LaSalle	TOTAL SHEETS: 50	SHEET NO. 26	CONTRACT NO. 66B28
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SOIL BORING LOG

ROUTE I-57 (FAI 57) DESCRIPTION I-57 North Bound, MP 305.0, Station 555+00 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION NE 1/4, SEC. 36, TWP. 30N, RNG. 14W

COUNTY Kankakee DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O J S T	Surface Water Elev. Stream Bed Elev.	ft	D E P T H	B L O W S	U C S Qu	M O J S T	ft
BORING NO. 1 Station 555+00 Offset 16.00ft Lt. Ground Surface Elev. 633.47 ft					Groundwater Elev.: First Encounter 623.5 ft Upon Completion After Hrs.						
Augered Black Silty Clay Loam Fill & Brown Sand Fill					Medium Gray Fine Sand to Coarse Sand with Minor Fine Gravel with Free Water at 10' (continued)		5				20.9
630.97							8				
Stiff Black Sandy Loam with Layers of Brown Sand Fill		3					5				21.0
628.97		4	2.0	12.6			9				
Loose Brown Loamy Fine to Medium Sand					Very Stiff Gray Silty Clay Loam Till with Heavy Gravel @ 28' with Potential Boulders & Cobbles		4				
625.97		3		12.3			7	3.5	12.6		
		3					9	8			
Medium Buff Fine Silty Sand							3				
623.97		4					5	3.7	12.5		
		5		25.0			9	B			
Medium Gray Fine Sand to Coarse Sand with Minor Fine Gravel with Free Water at 10'					Auger Refusal @ 30' End of Boring		00/1				
		5		20.1							
		7									
		9									
		5									
		7		22.3							
		7									
		5		18.0							
		7									
		9									
		5		13.7							
		7									
		7									

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, form 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE I-57 (FAI 57) DESCRIPTION I-57 North Bound, MP 305.0, Station 555+00 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION NE 1/4, SEC. 36, TWP. 30N, RNG. 14W

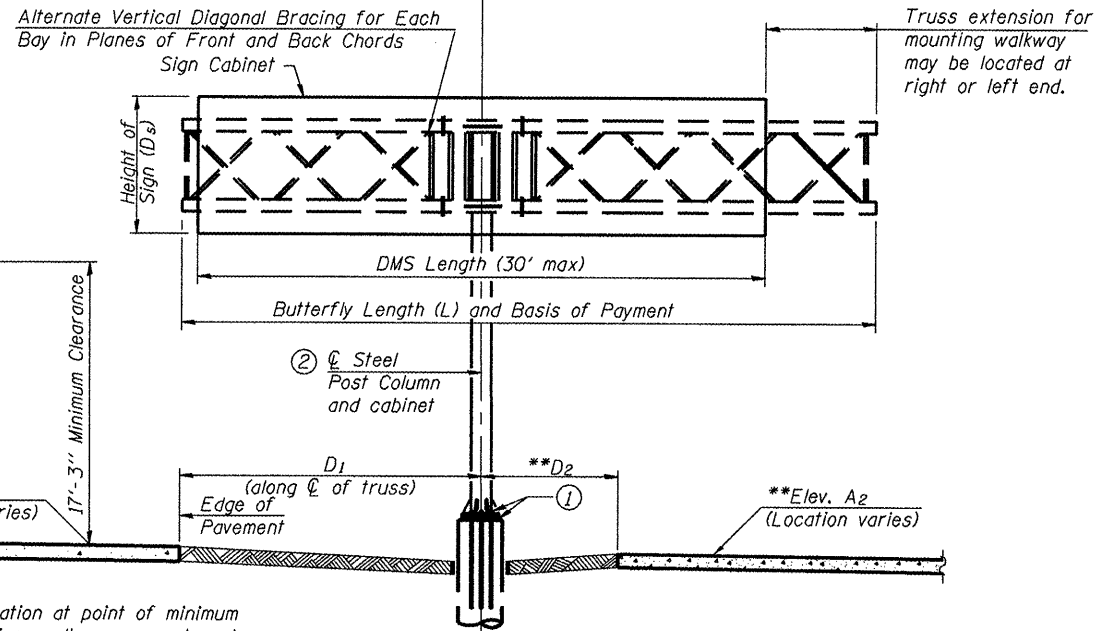
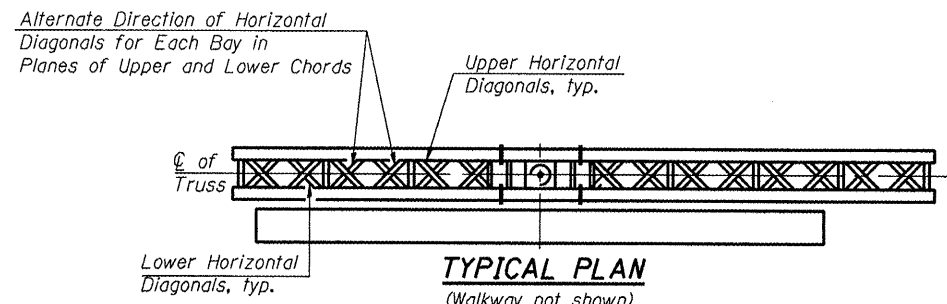
COUNTY Kankakee DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H	B L O W S	U C S Qu	M O J S T	Surface Water Elev. Stream Bed Elev.	ft	D E P T H	B L O W S	U C S Qu	M O J S T	ft
BORING NO. 2 Station 555+00 Offset 57.00ft Lt. Ground Surface Elev. 632.98 ft					Groundwater Elev.: First Encounter 623.0 ft Upon Completion After Hrs.						
Augered Black Silty Clay Loam Fill					Loose to Medium Gray Fine to Coarse Clean Sand with Free Water @ 10' (continued)		4				21.4
630.48							5				
Medium Brown & Gray Loamy Fine to Medium Sand Fill							5				20.9
627.98		5					9				
		12		14.3			5				
Loose Brown Loamy Fine to Coarse Sand with Loam Layers							6				
625.98		5		13.5			7				22.1
		3					9				
Loose to Medium Gray Fine to Coarse Clean Sand with Free Water @ 10'					Very Stiff to Hard Gray Clay Loam Till with Gravel Pieces & Sand Seams - Potential Cobble/Boulders		9				
605.98		4					12	4.0	11.6		
		4		23.2			17	P			
		4					10				
		3					12	>4.5	12.8		
		5		18.0			15	P			
		7					21				
		5		22.8			32	>4.5	10.3		
		9					31	P			
		5		70			70				
		5		22.7			32		9.2		
		7					21				
		6									
		6		22.7							
		8									
		6									
		8									

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, form 137 (Rev. 8-99)

SOIL BORING LOG
I-57 NB, MP 305.0, STATION 555+00

FILE NAME: c:\pwork\pilot\pilot\10228292\0308	USER NAME: peteluz	DESIGNED: -	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A.I. RTE.:	SECTION:	COUNTY:	TOTAL SHEET NO.:	
	28-enc-detaila.DGN	DRAWN: -	REVISED: -			VAR:	D3 OVD MESSAGE SG - 2012	VAR:	50	28
PLOT SCALE: 99.9999 1/16"		CHECKED: -	REVISED: -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.:	TO STA.:	CONTRACT NO. b00c8
PLOT DATE: 1/8/2012		DATE: -	REVISED: -							



TYPICAL ELEVATION

Looking in Direction of Traffic

** Elevation A₂ and dimension D₂ not used when butterfly structure is mounted on right side of the shoulder.

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

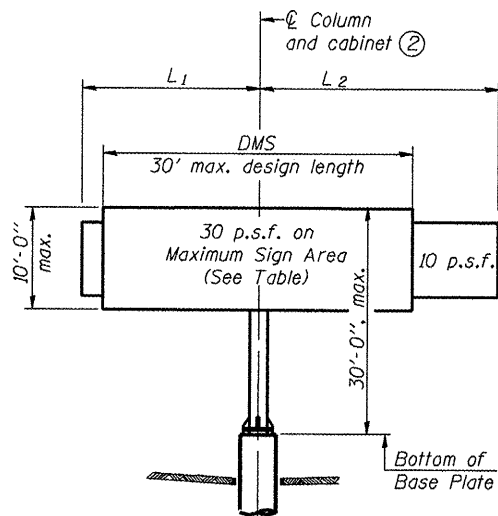
Structure Number	Station	Total Butterfly Length (L)	Elev. A ₁	Elev. A ₂	Dim. D ₁	Dim. D ₂	D _s	Total Sign Area	Access door and walkway location (Right or Left end)
3F0501039R052.6	701+50	38'-8"	646.83	**	20'-0"	**	10'-0"	300 Sq. Ft.	Right.
3F0501039L057.6	965+00	38'-8"	621.09	**	20'-0"	**	10'-0"	300 Sq. Ft.	Right.
3F0501080L083.6	130+00	38'-8"	634.70	**	20'-0"	**	10'-0"	300 Sq. Ft.	Right.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE III-F-A	Foot	116'-0"
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	12'-0"
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	27.9

TRUSS TYPE	MAXIMUM TOTAL DMS SIGN CABINET AREA
III-F-A	300 Sq. Ft.

Maximum DMS weight = 5000 LB.



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 bottom 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.
- ② Centerline cabinet must be located at centerline of column.
- * 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

WIND LOADING: 30 p.s.f. normal to DMS Cabinet Area and truss elements not behind sign Loading Diagram.

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

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 p.s.i.

f_y = 60,000 p.s.i. (reinforcement)

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

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

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W* (M183, M223 Gr. 50, or M222). Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

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

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

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

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

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

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

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

OSF-A-1-DMS 1-20-11

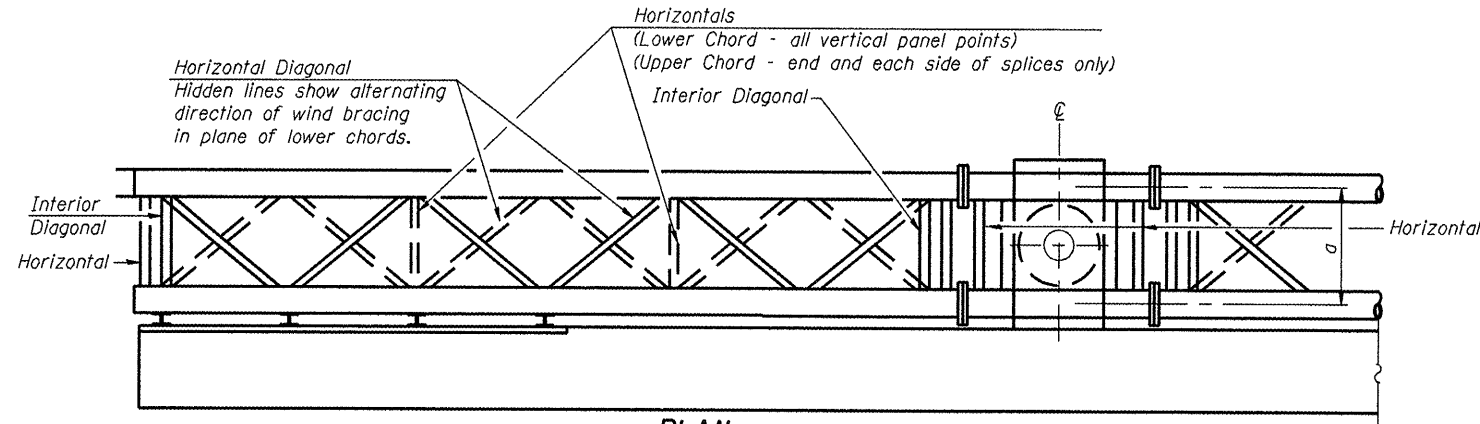
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PLOT SCALE = 99.9999 / in.		CHECKED -	REVISED -
PLOT DATE = 2/23/2012		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES - ALTERNATE PLAN & ELEVATION
FOR DMS - ALUMINUM TRUSS & STEEL POST

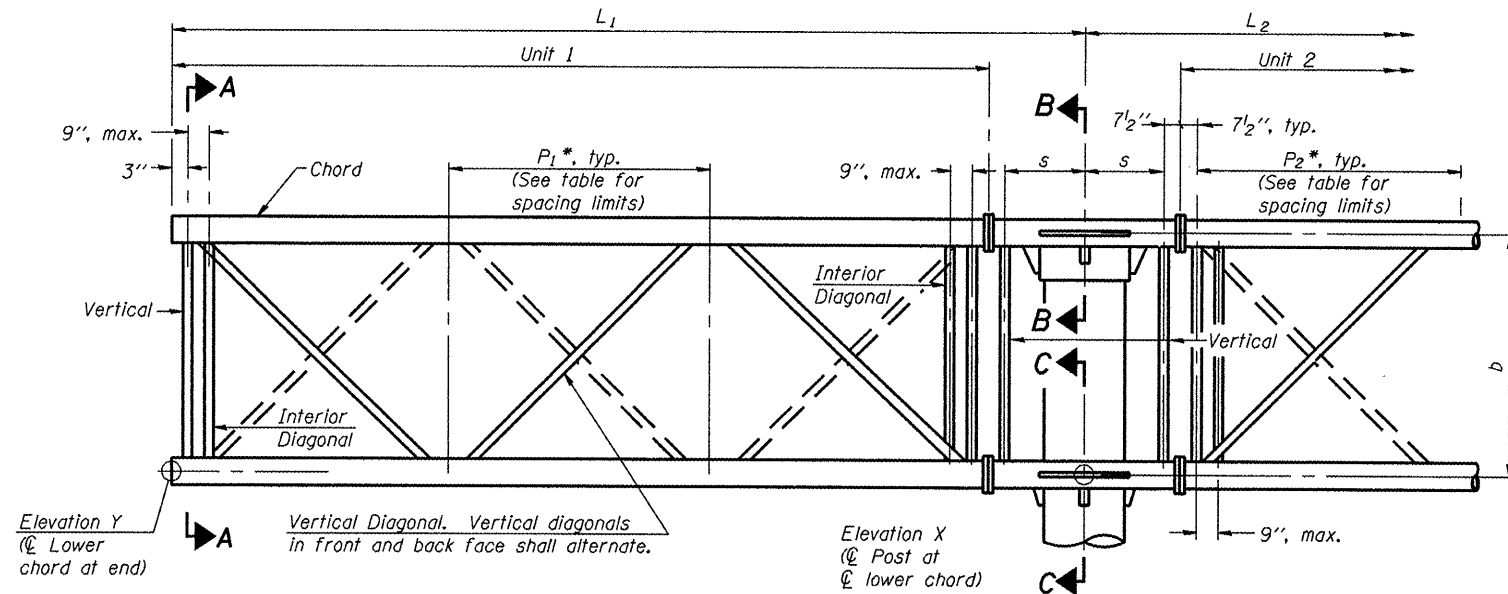
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	30
			CONTRACT NO. 66B28	
[ILLINOIS]				



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

PLAN
(Walkway not shown)



ELEVATION

(Sign and walkway omitted for clarity)

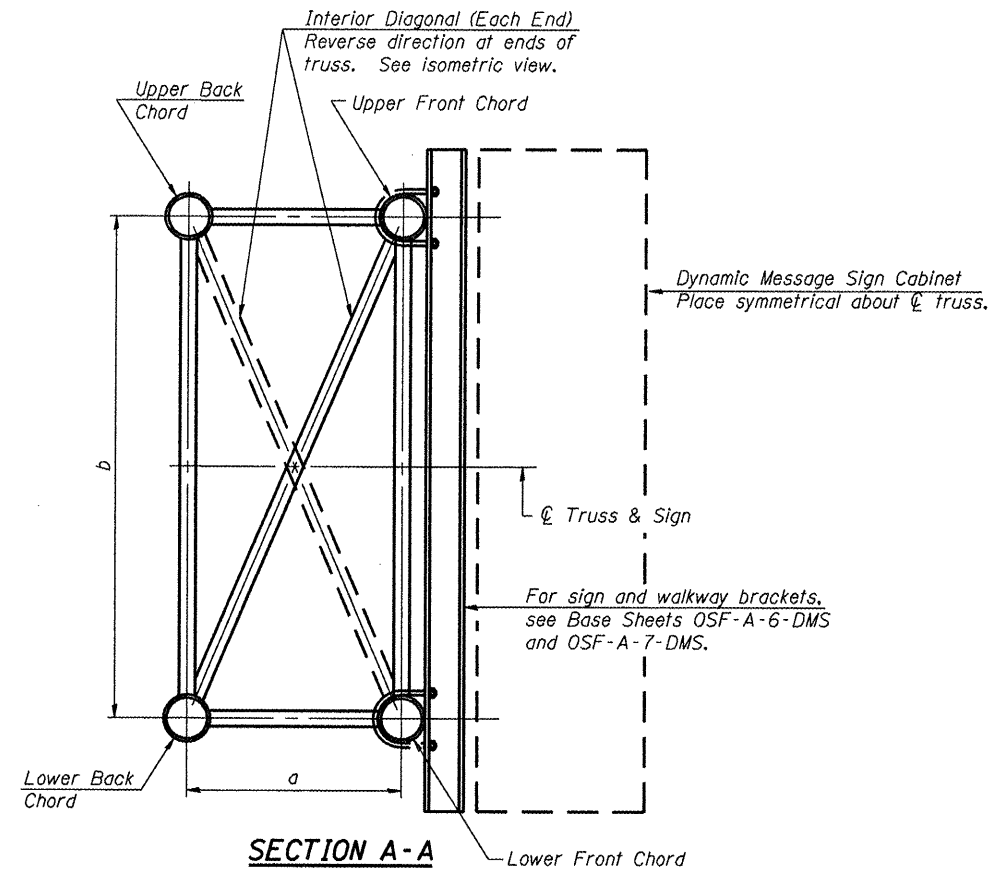
TYPICAL TRUSS UNIT

For Section B-B and Section C-C, see Base Sheet OSF-A-3-DMS

TRUSS UNIT TABLE

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord		Verticals; Horizontals; Vertical Horizontals; and Interior Diagonals	
					O.D.	Wall		
III-F-A	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3 1/2"	3/8"

*P = $\frac{L-s-1'-6''}{\# \text{ Panels}}$



SECTION A-A

Structure Number	Station	Truss Type	L ₁	L ₂	Number of Panels Unit 1	Panel Length (P ₁)*	Number of Panels Unit 2	Panel Length (P ₂)*
3F0501039R052.6	701+50	III-F-A	17'-4"	21'-4"	3	56"	4	54"
3F0501039L057.6	965+00	III-F-A	17'-4"	21'-4"	3	56"	4	54"
3F0501080L083.6	130+00	III-F-A	17'-4"	21'-4"	3	56"	4	54"

OSF-A-2-DMS 1-20-11

FILE NAME =	USER NAME = potelyj	DESIGNED -	REVISED -
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	PLOT SCALE = 99.9999 1/1 in.	CHECKED -	REVISED -
	PLOT DATE = 2/23/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES - ALTERNATE TRUSS DETAILS FOR DMS
ALUMINUM TRUSS & STEEL POST

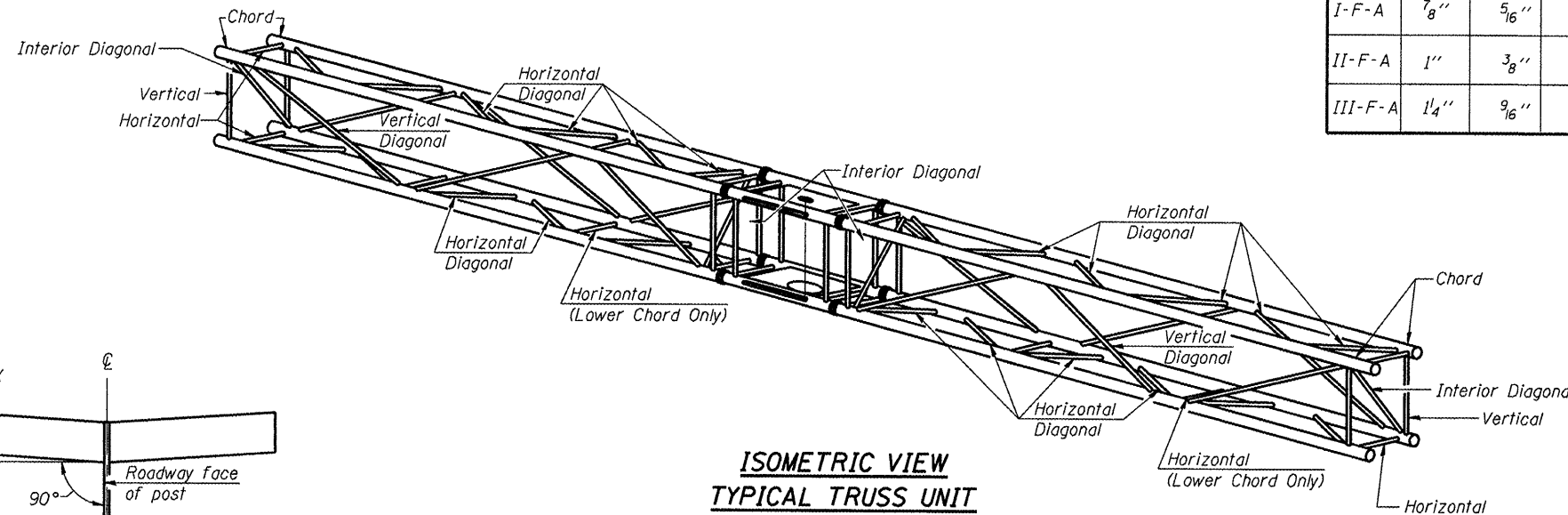
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	31
			CONTRACT NO. 6020	
ILLINOIS				

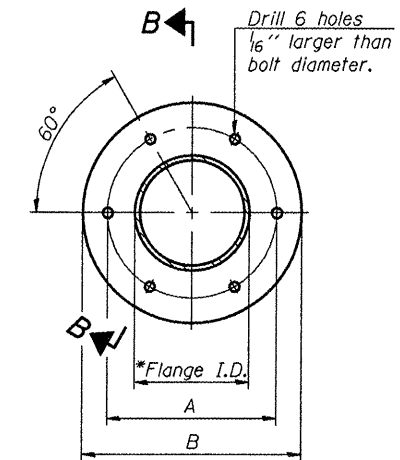
SHOP CAMBER TABLE

Unit Length L ₁ or L ₂	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"

Truss Type	Bolts Dia.	Weld Sizes		A	B
		W	W ₁		
I-F-A	7/8"	5/16"	1/4"	8 3/4"	11 3/4"
II-F-A	1"	3/8"	1/4"	11"	14 1/2"
III-F-A	1 1/4"	9/16"	5/16"	11 1/2"	15"



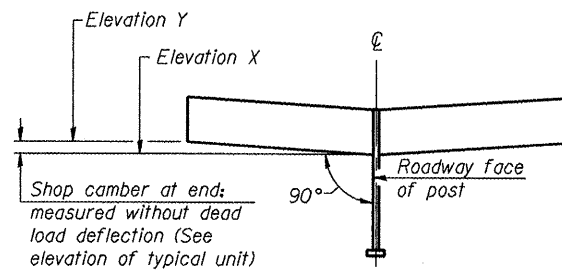
**ISOMETRIC VIEW
TYPICAL TRUSS UNIT**
ASTM B221 Alloy 6061 Temper T6



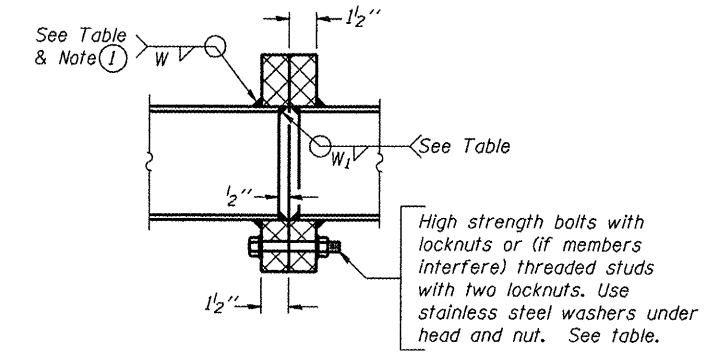
SPlicing FLANGE

ASTM b221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651

* To fit O.D. of Chord with maximum gap of 1/16".

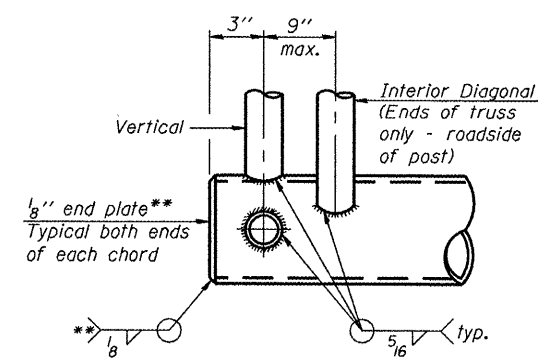


CAMBER DIAGRAM
(For Fabrication Only)



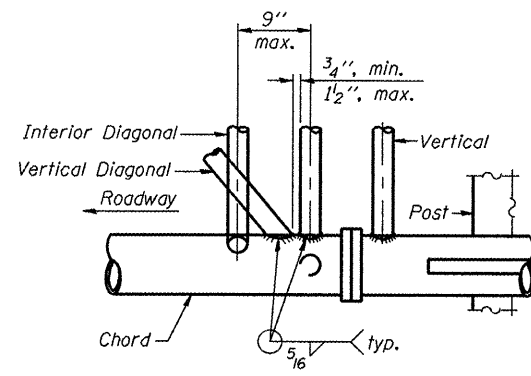
SECTION B-B

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.

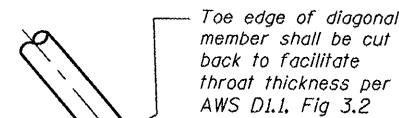


BUTTERFLY END JOINT DETAIL

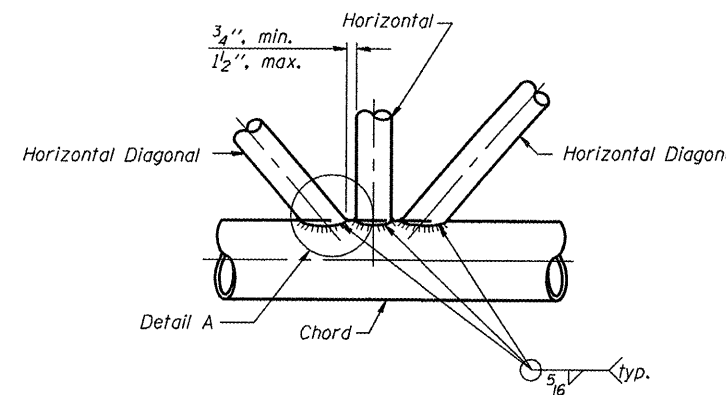
** Contractor may alternatively use standard aluminum drive-fit cap to close ends.



POST END JOINT DETAIL



DETAIL A

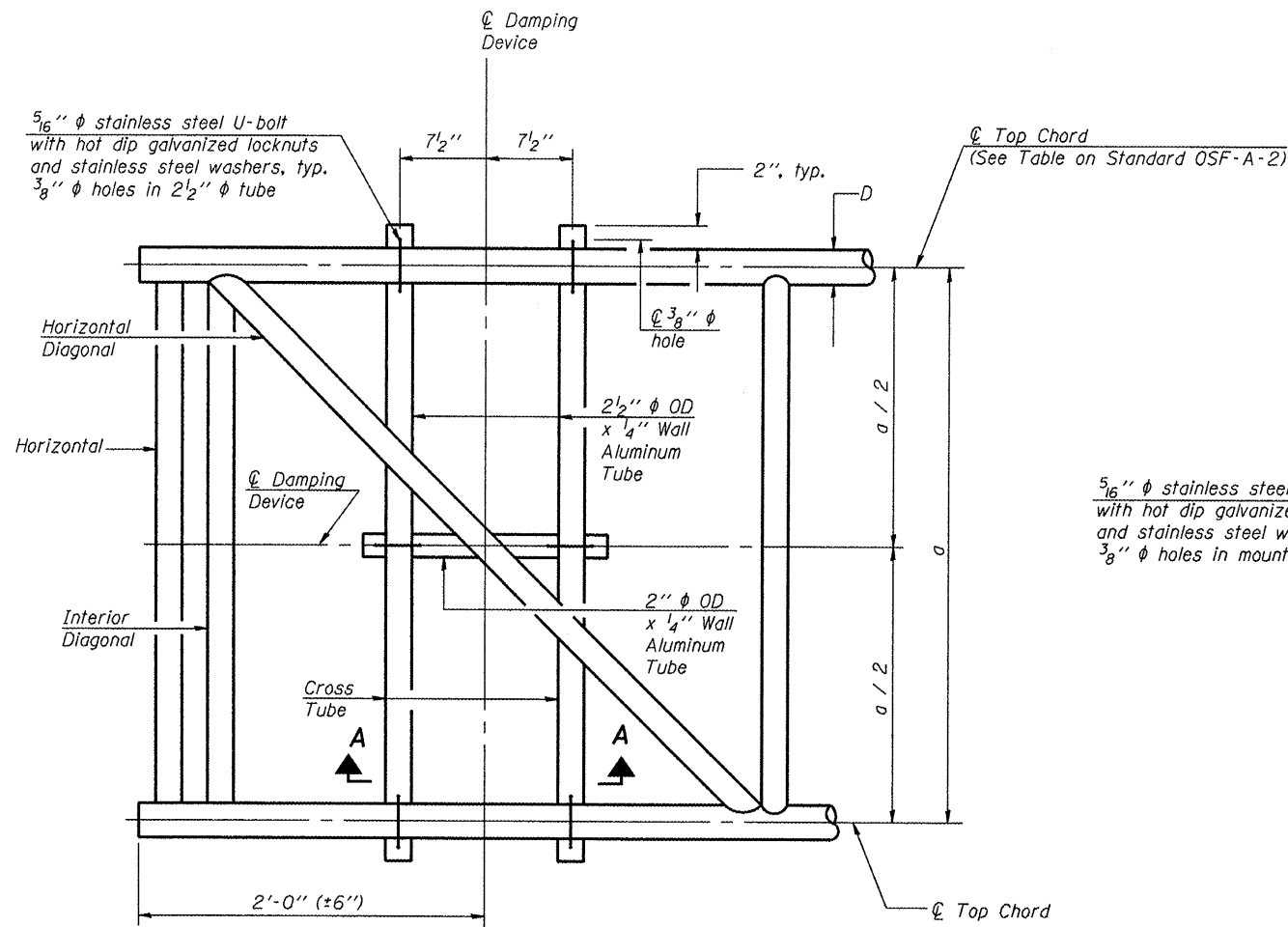


TRUSS INTERIOR JOINT DETAIL

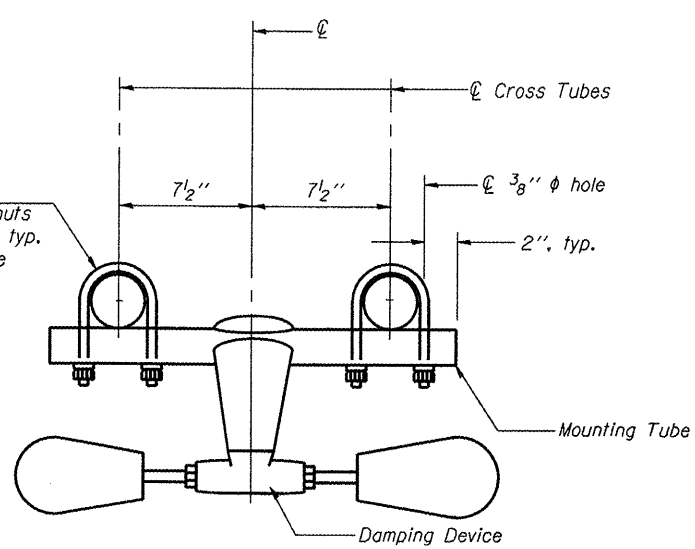
OSF-A-2A

1-20-11

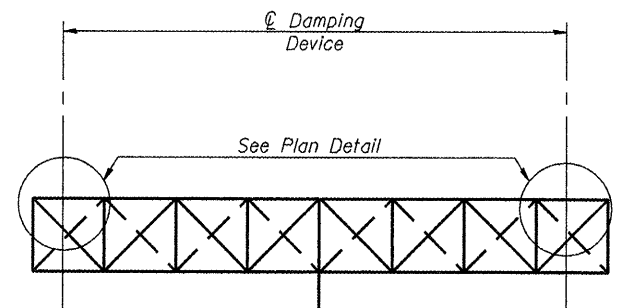
FILE NAME =	USER NAME = petelyj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTTERFLY SIGN STRUCTURES - TRUSS DETAILS ALUMINUM TRUSS & STEEL POST	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw_work\pvidot\petelyj\d0250292\0366628-sht-details.DGN		DRAWN -	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	32	
PLOT SCALE = 99.9999 / in.		CHECKED -	REVISED -			SCALE:		STA.	TO STA.	CONTRACT NO. 66B28	
PLOT DATE = 2/23/2012		DATE -	REVISED -							ILLINOIS	



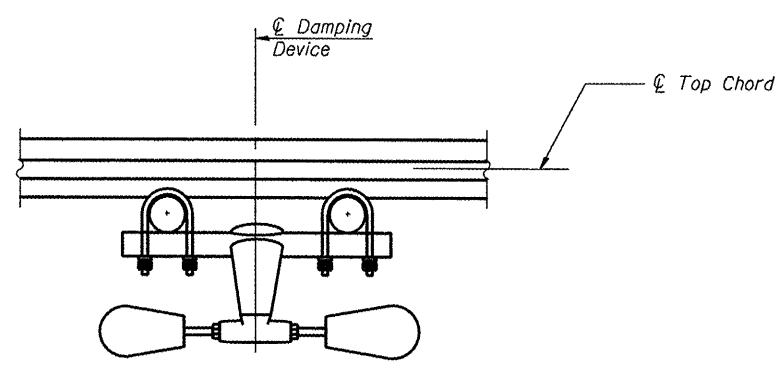
PLAN DETAIL



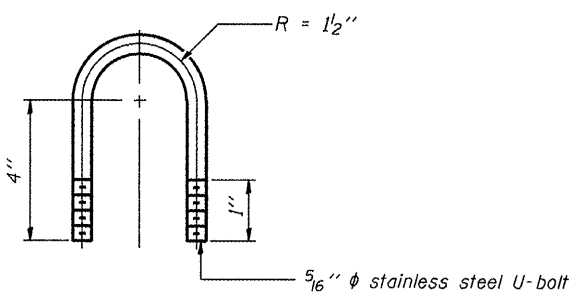
TRUSS DAMPING DEVICE CONNECTION DETAIL



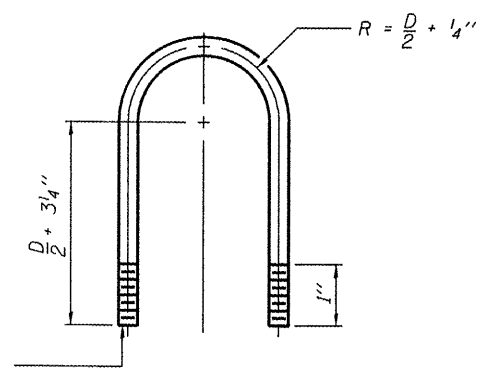
ELEVATION
Aluminum Butterfly Sign Structure



SECTION A-A



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



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

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

OSF-A-D

1-20-11

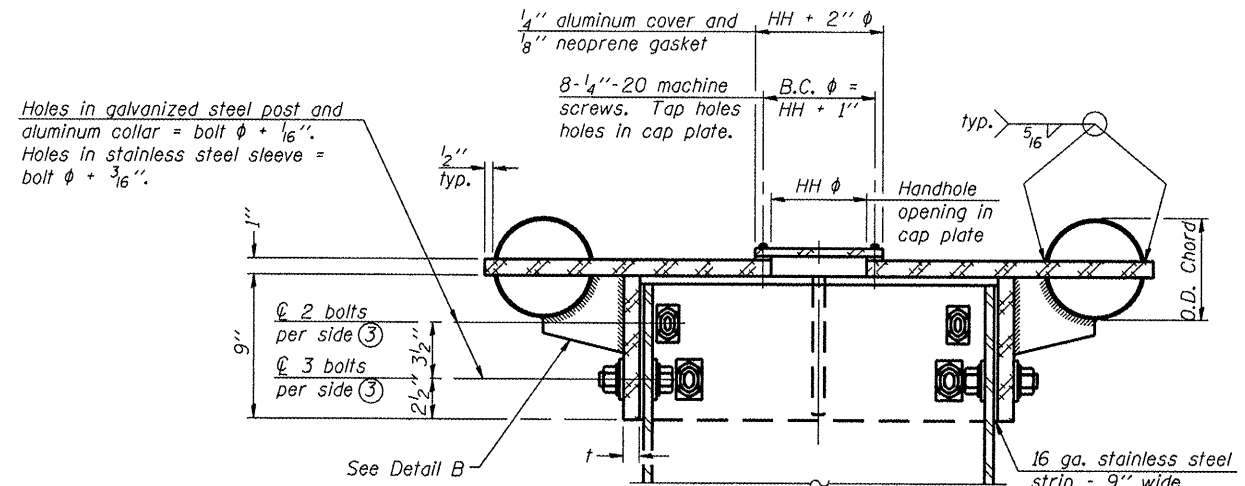
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ca:\pwwork\prijid\potelijj\20250292\0366828-shd-details.DGN		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURE
DAMPING DEVICE**

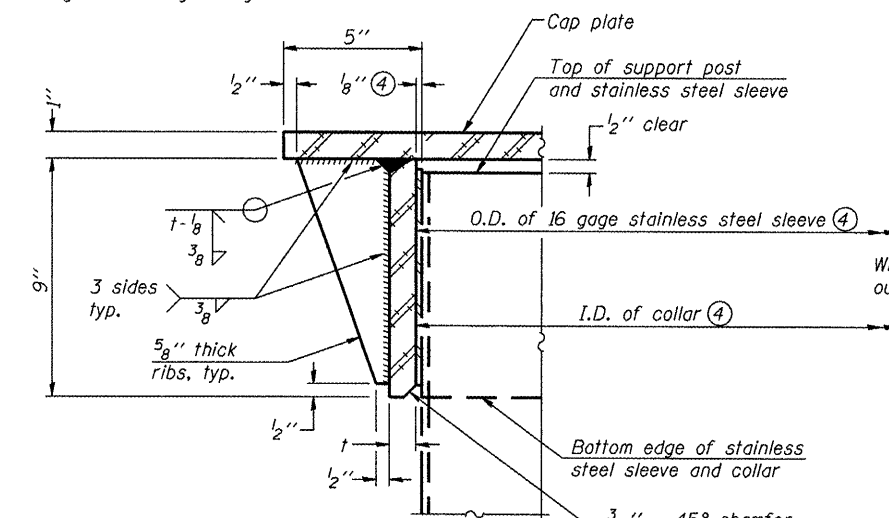
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	33
			CONTRACT NO. 66B28	
ILLINOIS				

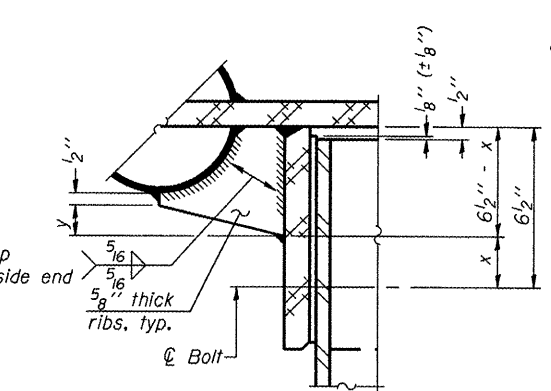


④ Collar I.D. shall be manufactured to correspond to O.D. of actual galvanized post and stainless steel sleeve plus 1/8" (+/- 1/16"). Maximum gap between post and collar at any location equals 1/8" before tightening bolts.

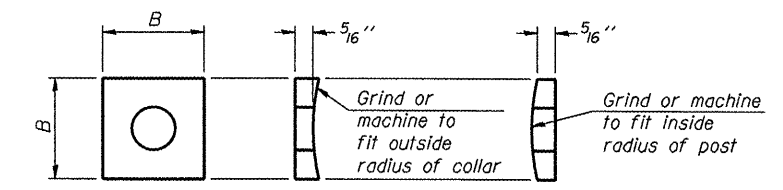
SECTION B-B
Bolts, washers (including contoured washers), and locknuts shall be stainless steel.



DETAIL A
(Two locations)



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

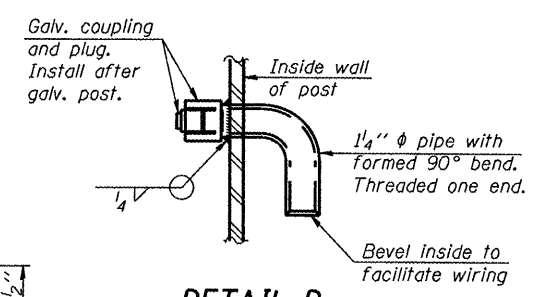


CONTOURED WASHERS

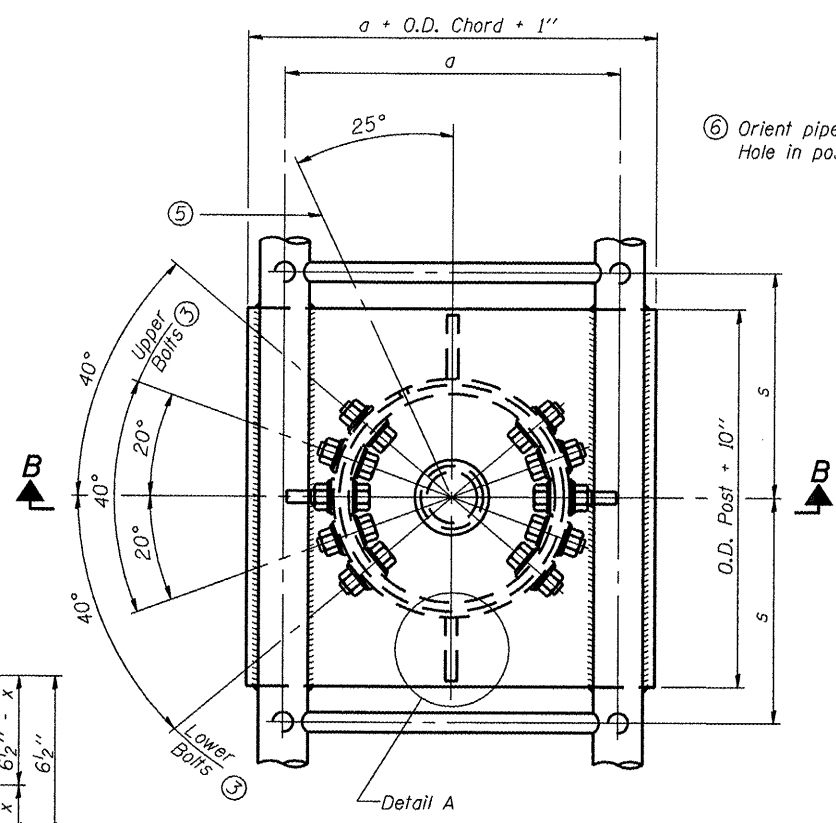
Bolt Size	Contoured Washers	
	Hole Dia.	B
7/8"	1"	2 1/2"
1"	1 1/8"	3"
1 1/4"	1 3/8"	3 1/4"

DETAIL OF STAINLESS STEEL SLEEVE

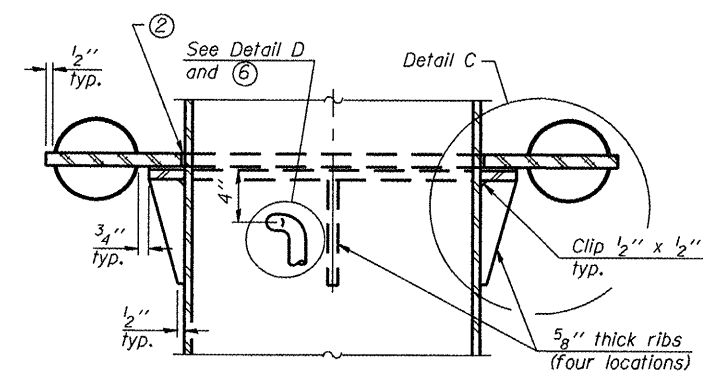
Weld to post after galvanizing. (Prepare post surface to insure tight, uniform fit and allow welding.) Welds to be 1/2" long at 6" cts. along top edge and at 1/4" opening.



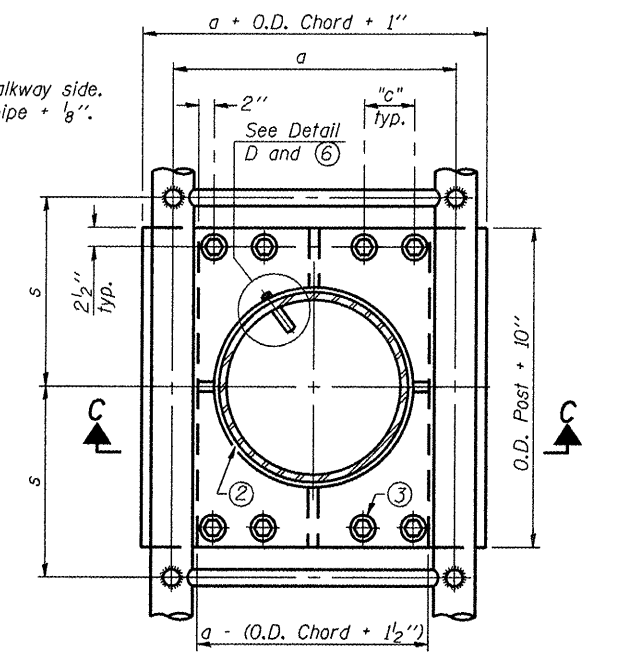
DETAIL D



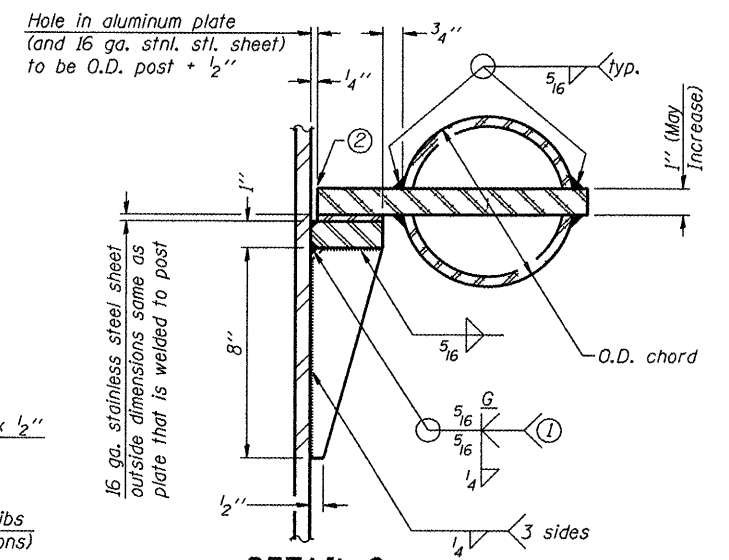
PLAN VIEW - TOP OF COLUMN
⑤ Optional full penetration weld in collar. (Two locations maximum....(180° apart)....X-ray or UT 100%)



SECTION C-C



SECTION THRU POST ABOVE LOWER CHORDS



DETAIL C

- ① Grind top if required to fully seat aluminum plate and stainless steel sheet.
- ② After tightening lower connection bolts, fill gap with non-hardening, silicone caulk suitable for exterior exposure and acceptable to the Engineer. Cost is included in Overhead Sign Structure Butterfly.

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

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-F-A	16" φ (83#/')	7/8"	3 1/4"	8"	5/8"	1 3/4"	2 1/4"
II-F-A	24" φ (125#/')	1"	3 1/2"	12"	7/8"	2"	1 1/4"
III-F-A	24" φ (125#/')	1 1/4"	3 1/2"	12"	7/8"	2"	1"

OSF-A-3

1-20-11

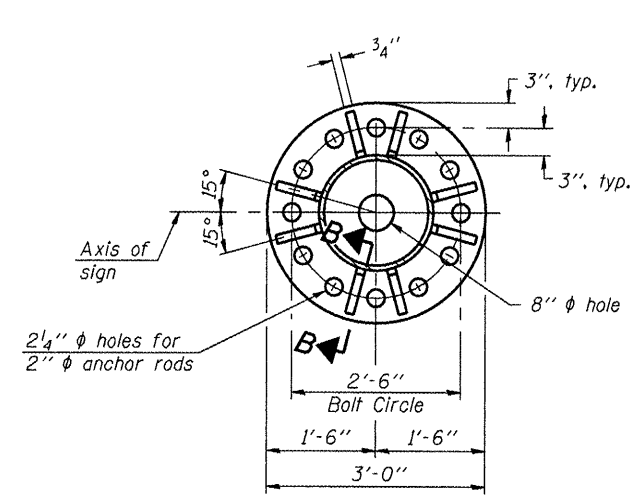
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PLOT DATE = 2/23/2012		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

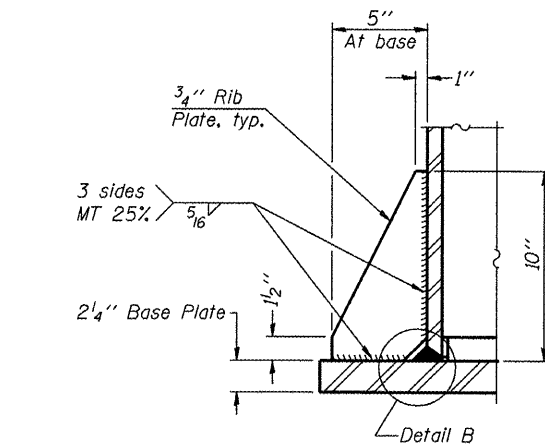
BUTTERFLY SIGN STRUCTURES - JUNCTURE DETAILS
ALUMINUM TRUSS & STEEL POST

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	34
			CONTRACT NO. 66B28	
ILLINOIS				

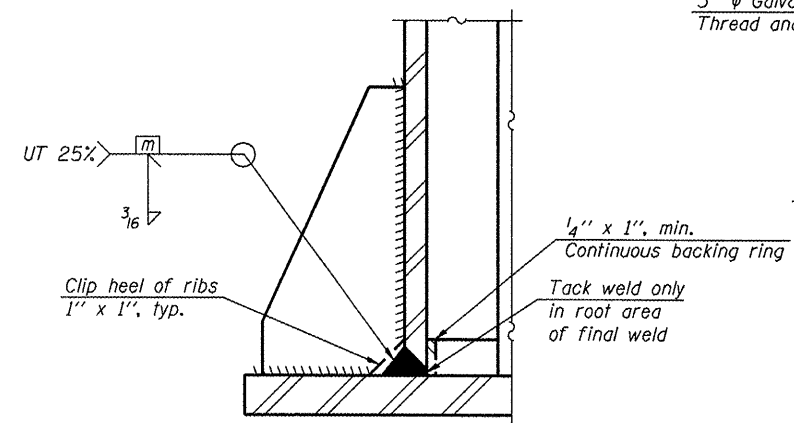
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.



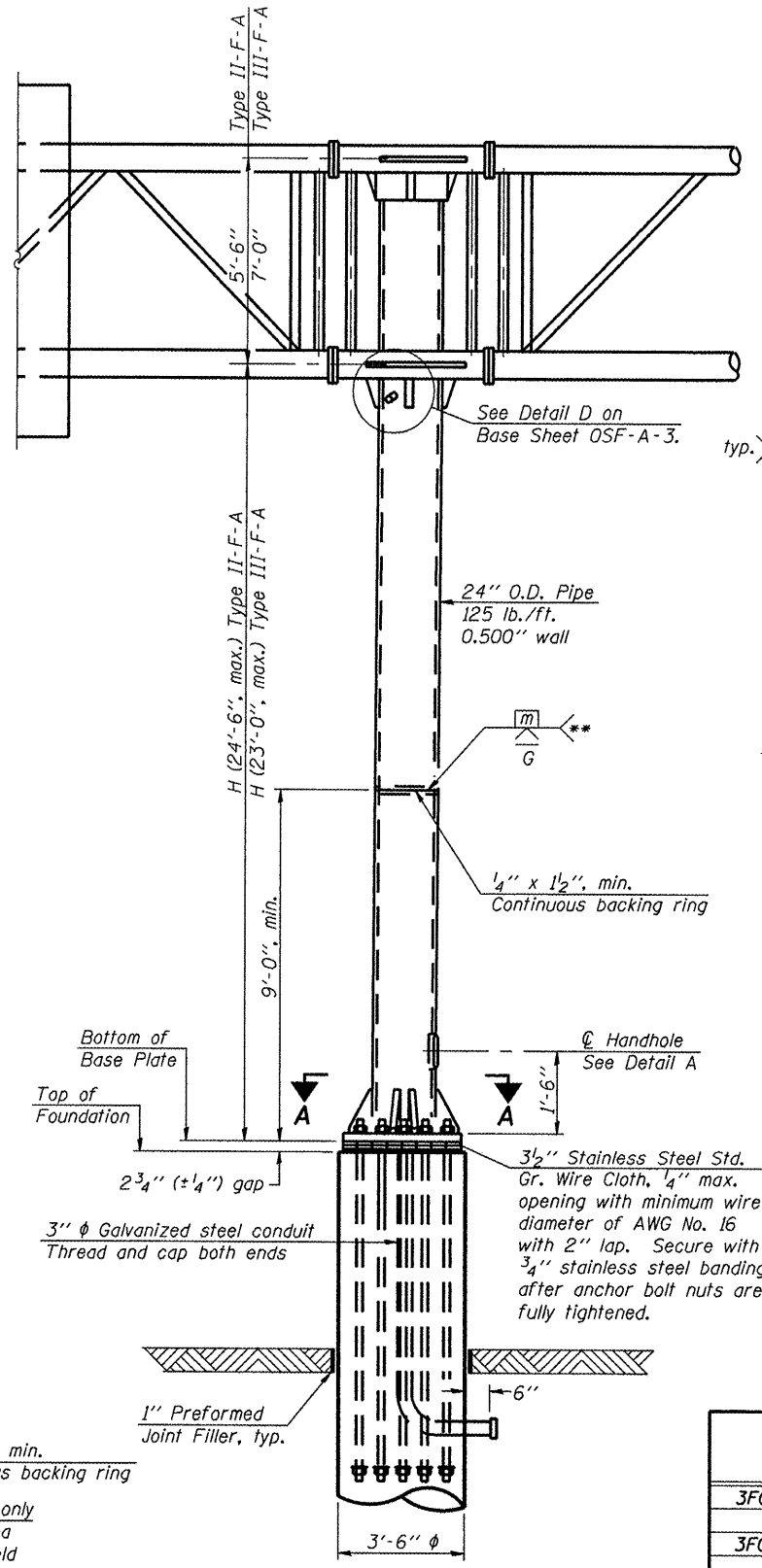
SECTION A-A



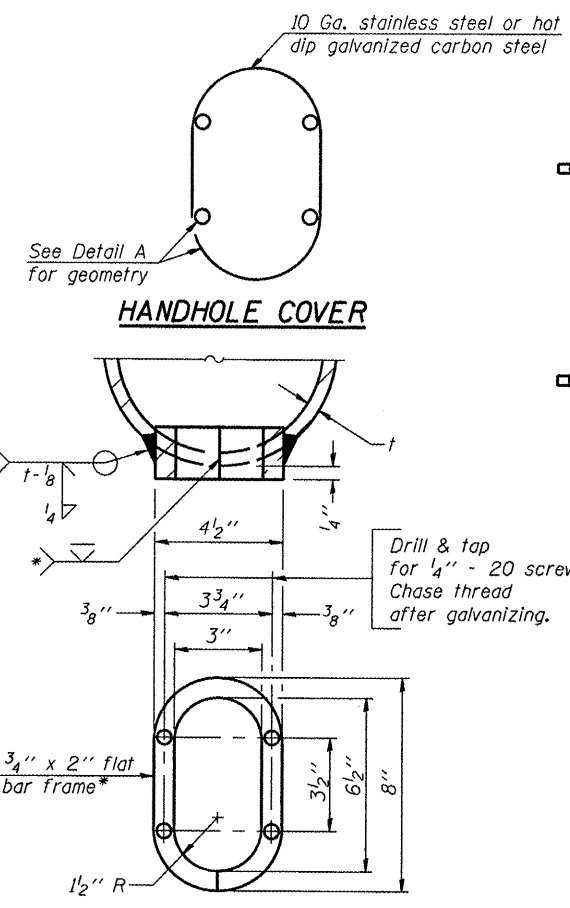
SECTION B-B



DETAIL B
(Typical rib)



FRONT ELEVATION
For Foundation Details see Base Sheet OSF-A-9.



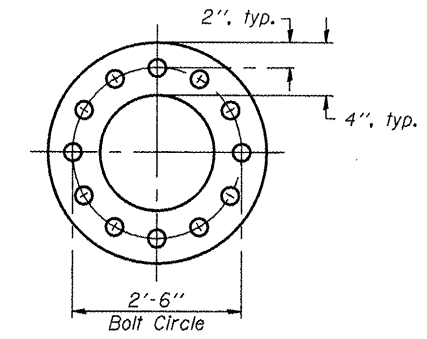
DETAIL A

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

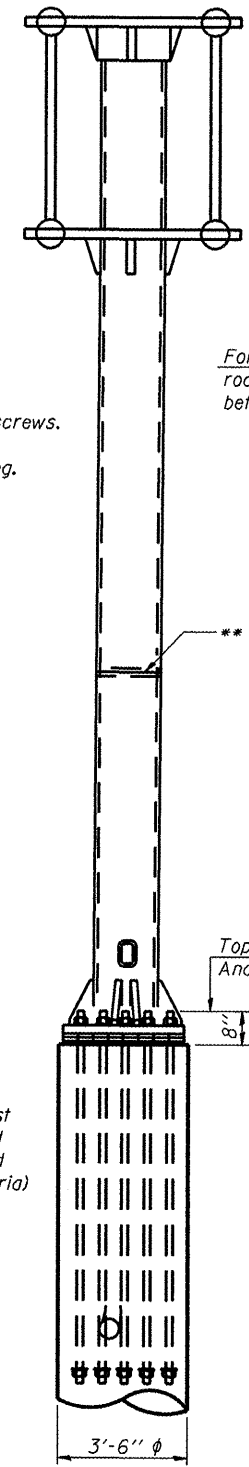
** Butt welded joint in post is only allowed for post heights (H) over 20 ft. in length. If used, weld procedure must be preapproved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Structure Number	Station	H
3F0501039R052.6	701+50	21'-1"
3F0501039L057.6	965+00	21'-8"
3F0501080L083.6	130+00	22'-9"

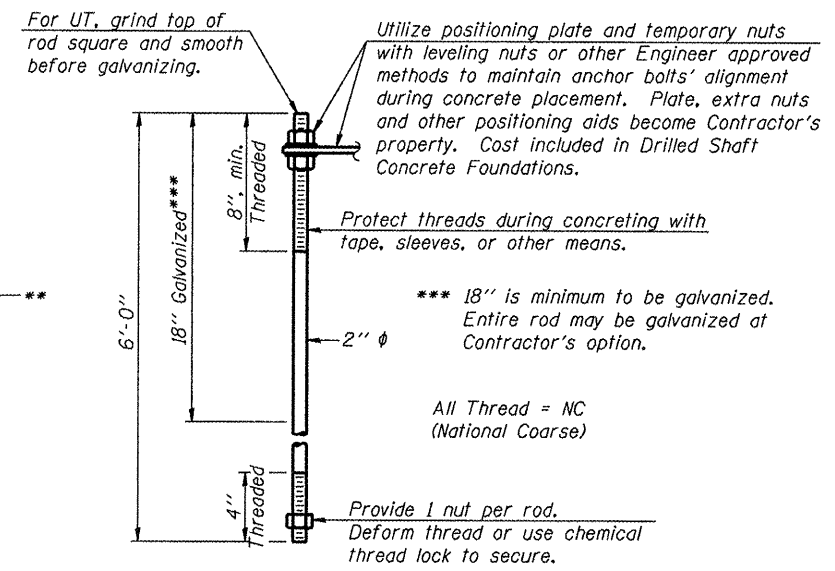
Note: "H" based on 15'-0" or actual sign height, whichever is greater.



SUGGESTED POSITIONING PLATE



SIDE ELEVATION



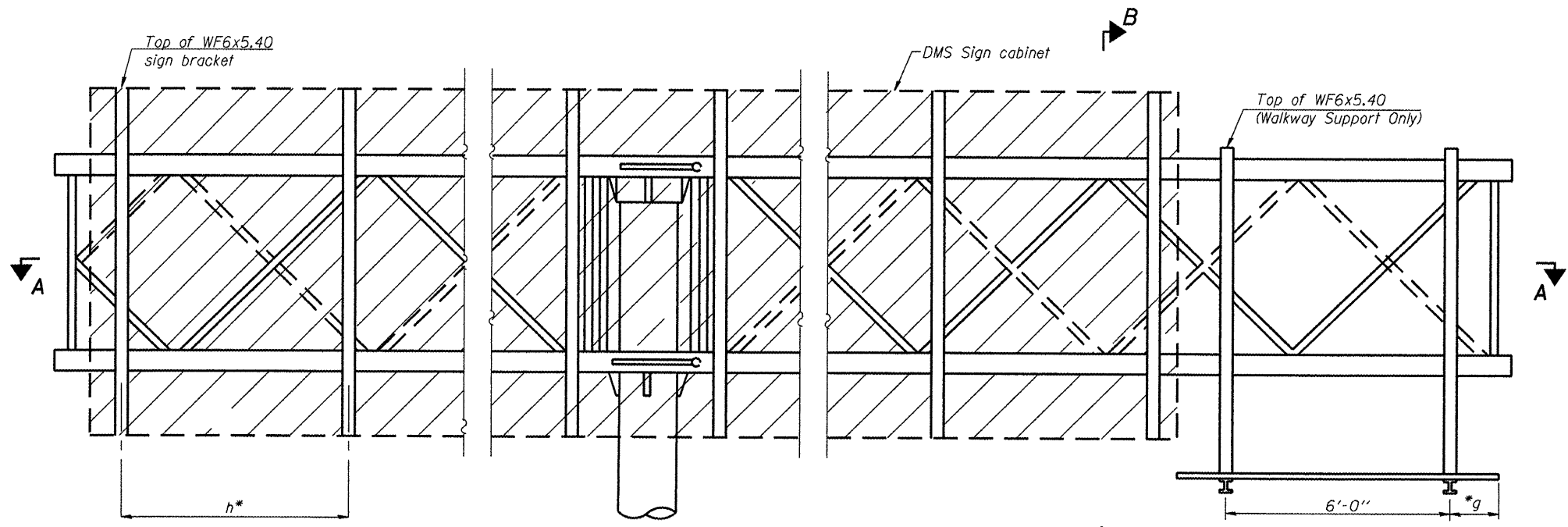
ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105. Galvanize the upper 18" (minimum) and associated AASHTO M291, Grade A, C or DH heavy hex nuts and hardened washers per AASHTO M232. No welding shall be permitted on rods. Provide a nut at bottom, a hexagon locknut and washer above base plate and a leveling nut and washer below base plate. Nuts shall each be tightened with 200 lb.-ft. minimum torque against base plate. Before or after threading, but before galvanizing, each anchor rod shall be ultrasonically tested (UT) by a Level II or III inspector, qualified in accord with ANSI guidelines, using a straight beam, 1/2" φ 3.5 mhz. transducer, to insure no rejectable flaws exist in the upper 18" (tension criteria). Cost of testing included in Drilled Shaft Concrete Foundations.

OSF-A-5

1-20-11

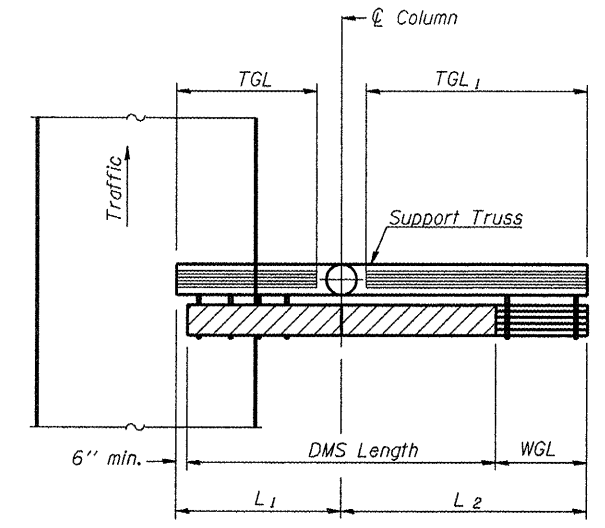
FILE NAME =	USER NAME = pateluj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTTERFLY SIGN STRUCTURES - TYPE II-F-A & III-F-A TRUSS SUPPORT POST - ALUMINUM TRUSS & STEEL POST	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pawid\pateluj\0250292\036628-sht-details.DGN	PLLOT SCALE = 99.9999 1/16"	DRAWN -	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	35	
PLLOT DATE = 2/23/2012	DATE -	CHECKED -	REVISED -			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 66B28		
		DATE -	REVISED -						ILLINOIS		



TYPICAL FRONT ELEVATION

With handrail omitted for clarity.
For section B-B see base sheet OSF-A-7-DMS

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



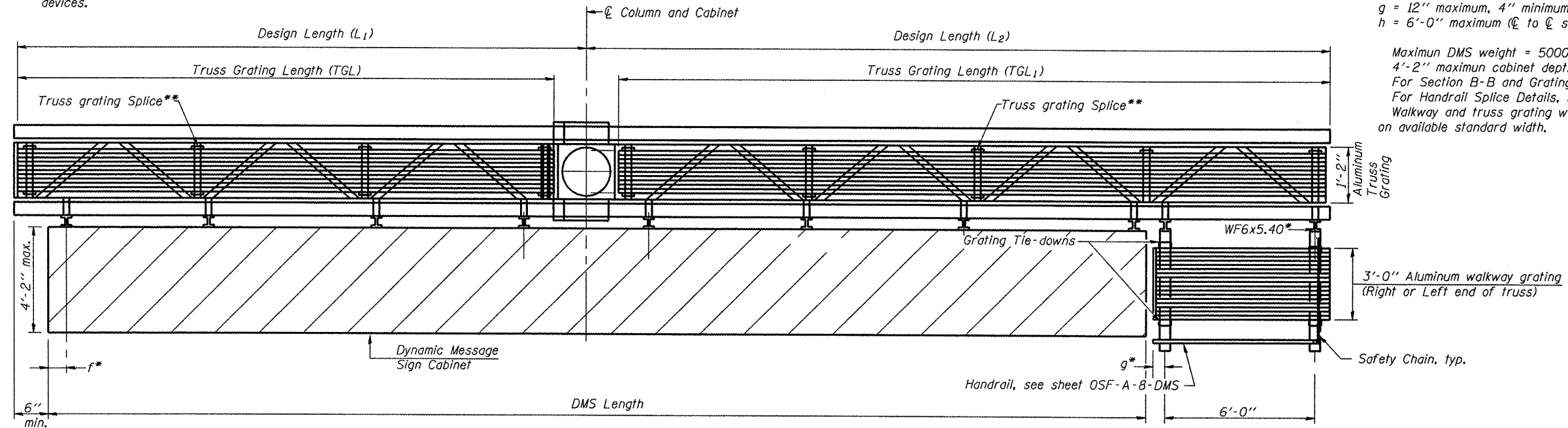
PLAN WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)
Butterfly may be located in shoulder area.
Walkway may be located at right or left end of truss.

Notes:

- Space walkway brackets and sign brackets WF6x5.40 for efficiency and within limits shown:
- f = 12" maximum, 4" minimum (End of sign to center of nearest bracket)
- g = 12" maximum, 4" minimum (End of walkway grating to center of nearest support bracket)
- h = 6'-0" maximum (center to center sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs.
4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40
For Section B-B and Grating Splice Details, see Base Sheet OSF-A-7-DMS.
For Handrail Splice Details, see Base Sheet OSF-A-8-DMS.
Walkway and truss grating width dimensions are nominal and may vary ±1/2" based on available standard width.



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.
** Grating splices and handrail joints placed as needed.
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 Butterfly Sign Structure.

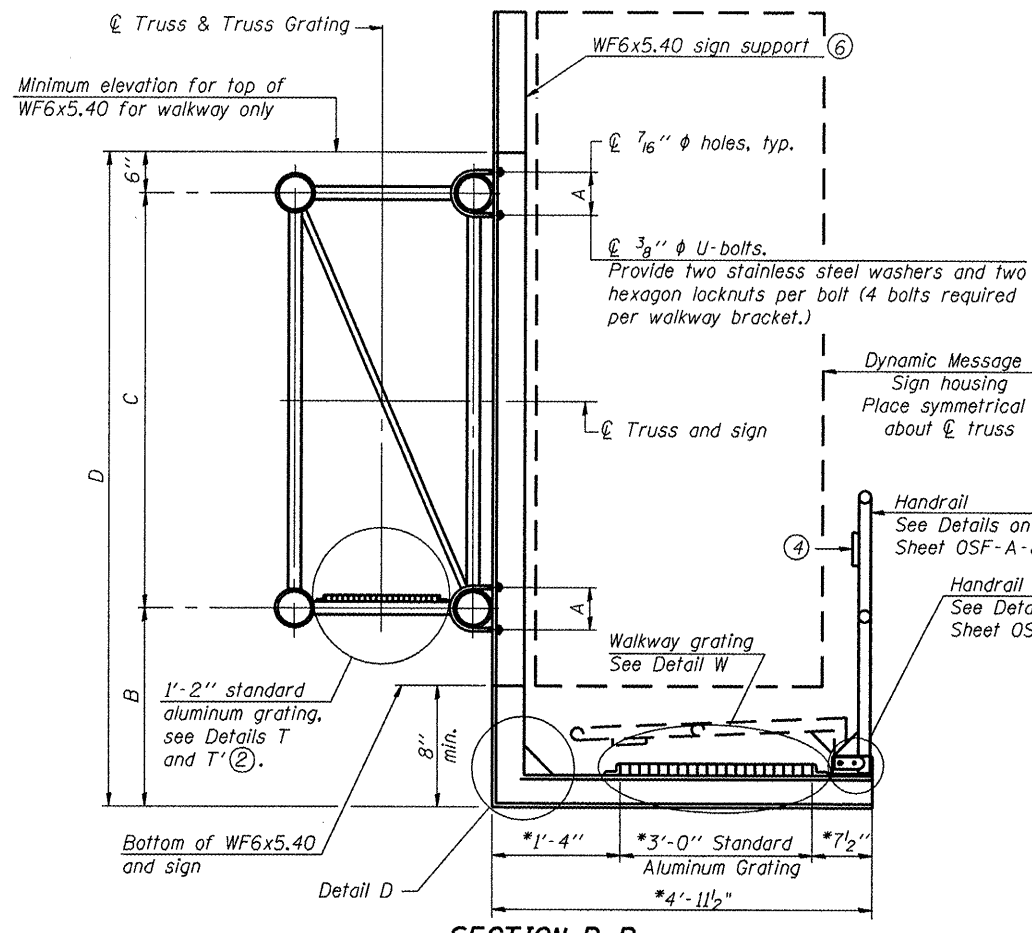
$$TGL = L_1 \text{ (or } L_2) - (\frac{\text{Post O.D.}}{2} + 6'')$$

BRACKET TABLE

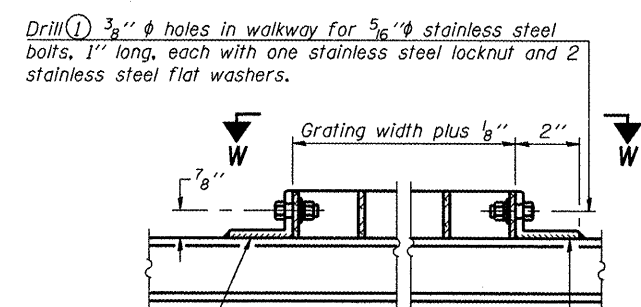
WF(A-N)4x3.06 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Structure Number	Station	DMS Length	TGL	TGL ₁	Walkway Location (Right or Left end of Truss)
3F0501039R052.6	701+50	30'-0"	15'-10"	19'-10"	Right
3F0501039L057.6	965+00	30'-0"	15'-10"	19'-10"	Right
3F0501080L083.6	130+00	30'-0"	15'-10"	19'-10"	Right

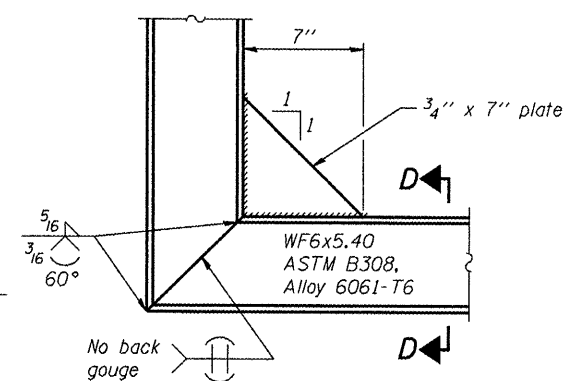
OSF-A-6-DMS 1-20-11



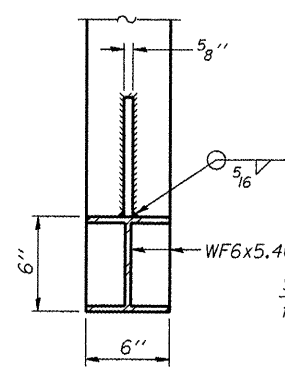
SECTION B-B



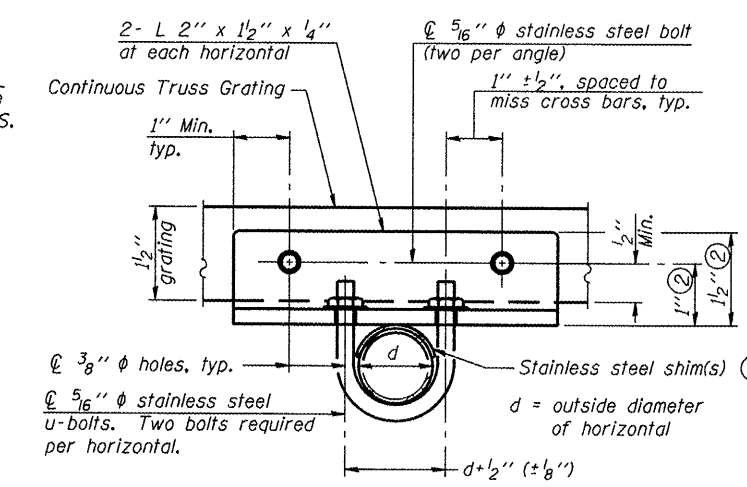
DETAIL W
(Walkway grating)



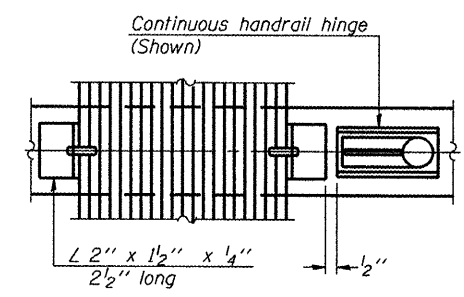
DETAIL D



SECTION D-D

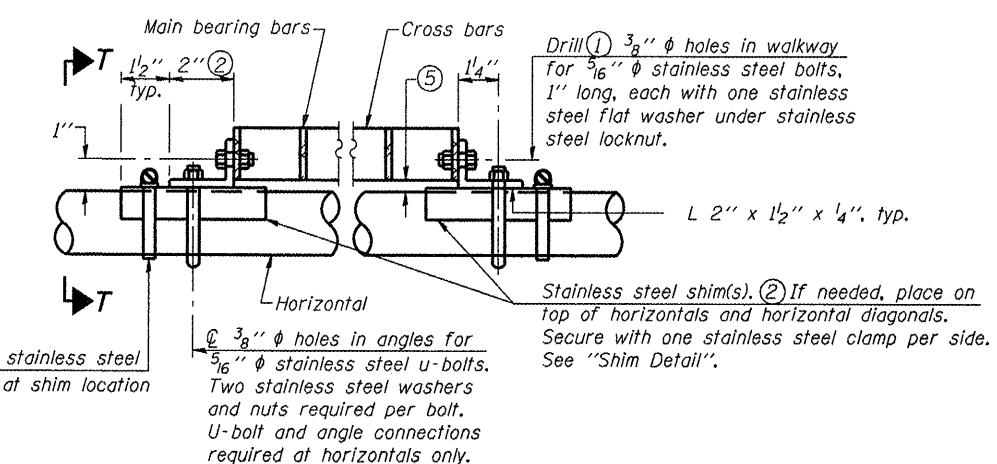


SECTION T-T

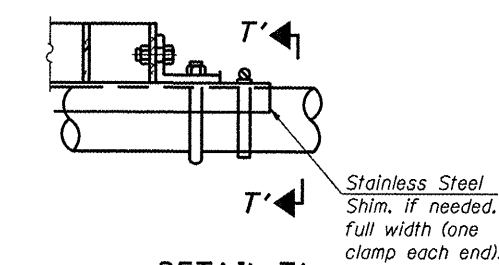


(CONTINUOUS WALKWAY GRATING)

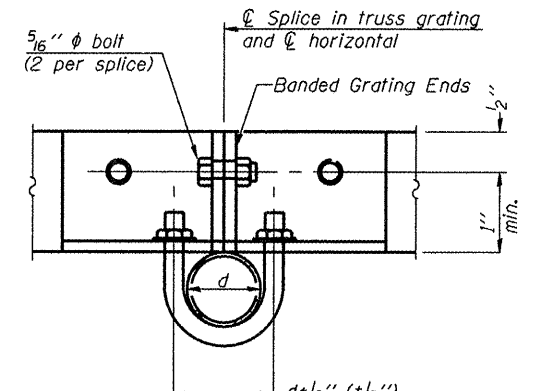
SECTION W-W



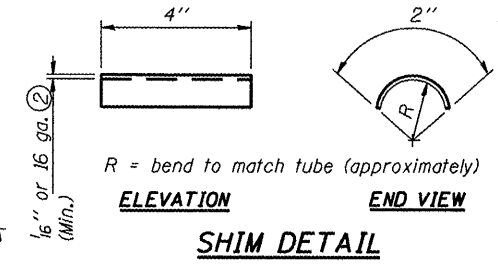
DETAIL T
(Continuous Truss grating)



DETAIL T'
(Truss grating splice)



SECTION T'-T'



ELEVATION

END VIEW

SHIM DETAIL

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be 3/8" x 1 1/2" on 1 3/8" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars (CB) shall be 3/8" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

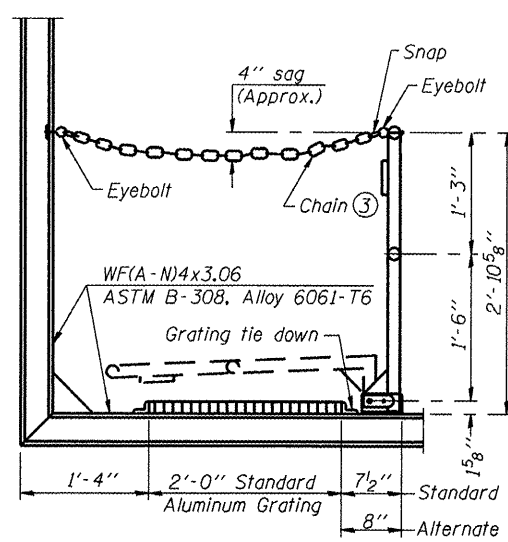
Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:
 Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/8" centers.
 Cross bars shall conform to ASTM 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 OSF-A-8)

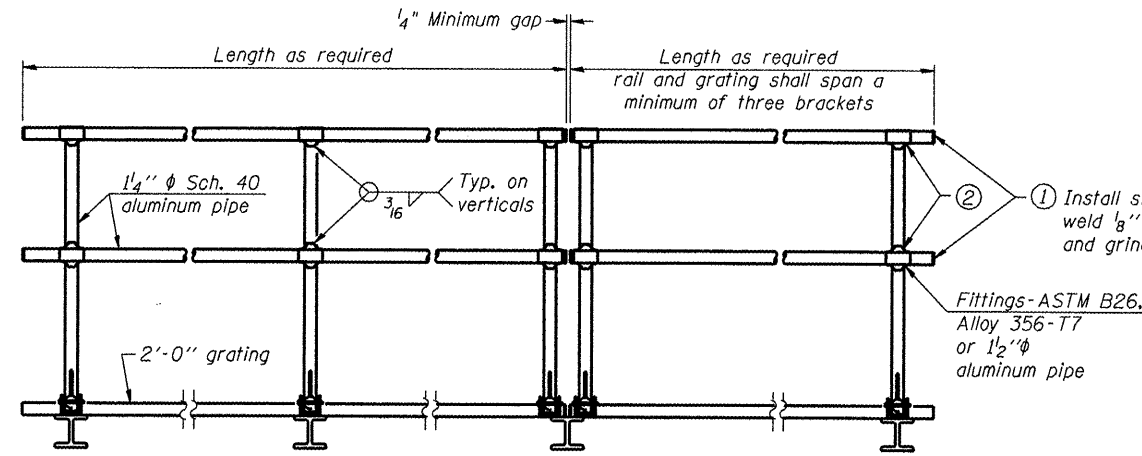
- ④ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- ⑤ Tube to grating gap may vary from 0 to 1/2" max. to align walkway, allow for camber, etc.
- ⑥ Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.
- ⑦ Based on actual sign height, Ds, given on OSF-A-1-DMS.

Structure Number	Station	A	⑦ B	C	⑦ D
3F0501039R052.6	701+50	7 1/2"	1'-8"	7'-0"	9'-2"
3F0501039L057.6	965+00	7 1/2"	1'-8"	7'-0"	9'-2"
3F0501080L083.6	130+00	7 1/2"	1'-8"	7'-0"	9'-2"

OSF-A-7-DMS 1-20-11



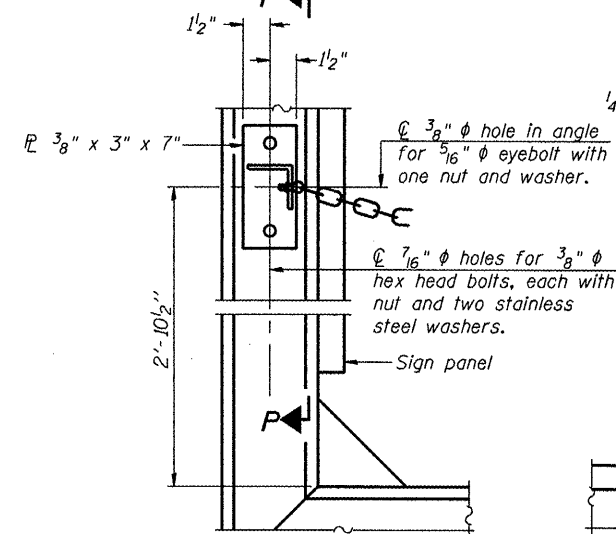
SIDE ELEVATION
(Showing Safety Chain W/O Sign)



FRONT ELEVATION

HANDRAIL DETAILS

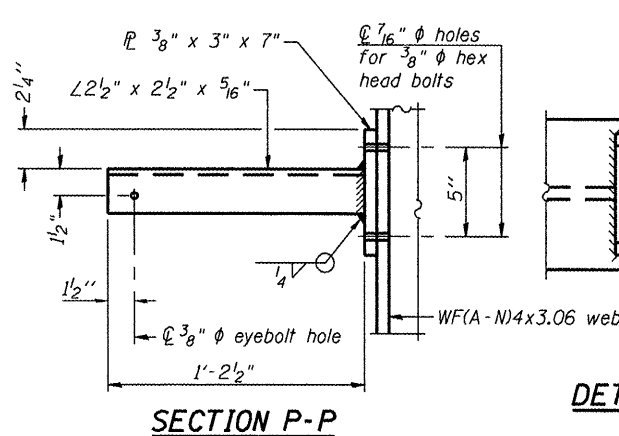
Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.



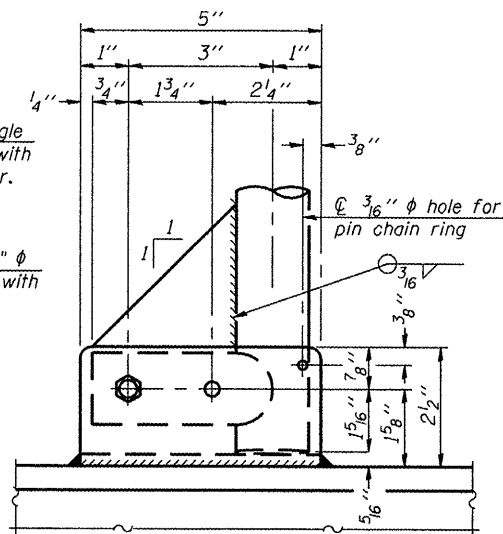
ALTERNATE SAFETY CHAIN ATTACHMENT

(With Sign Present)

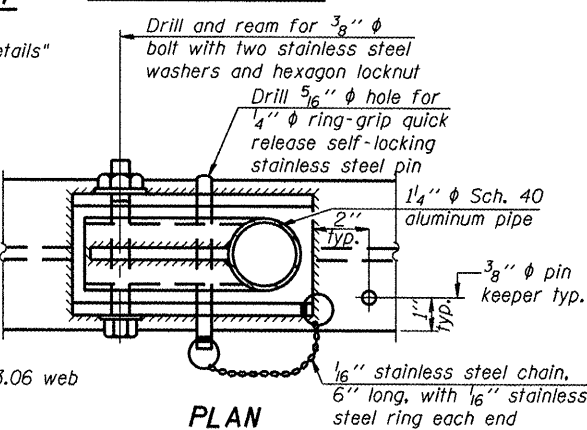
Items not shown same as "Side Elevation" of "Handrail Details"



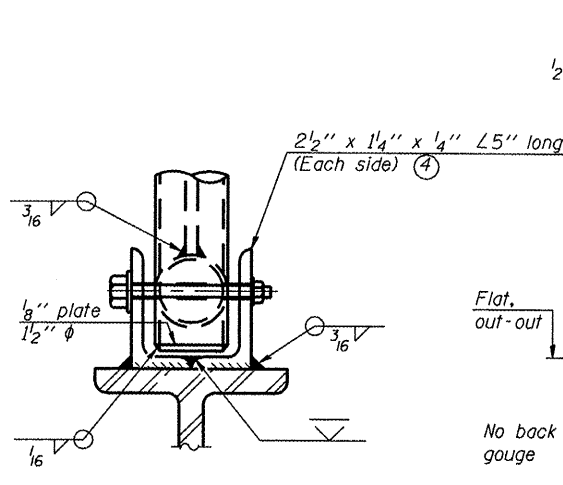
SECTION P-P



SIDE ELEVATION



PLAN
DETAIL E HANDRAIL HINGE

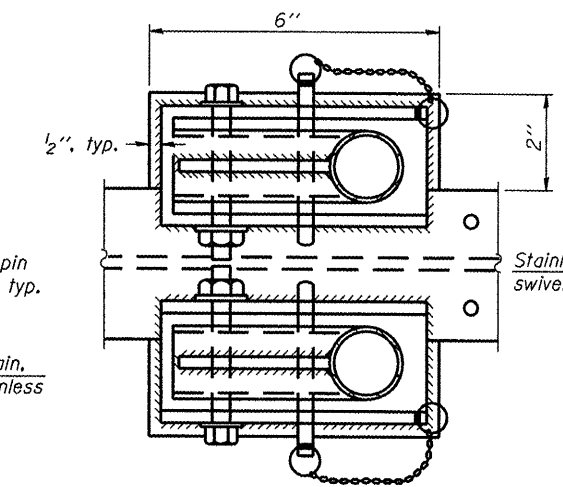


FRONT ELEVATION

Details not shown same as "ELEVATION" at right.

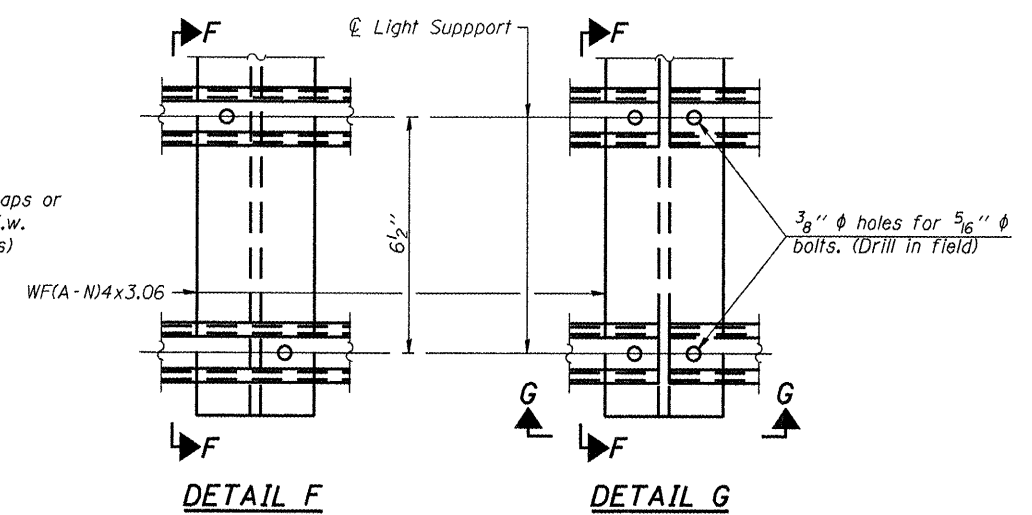
ELEVATION AT HANDRAIL JOINT ④

Details not shown same as "FRONT ELEVATION"



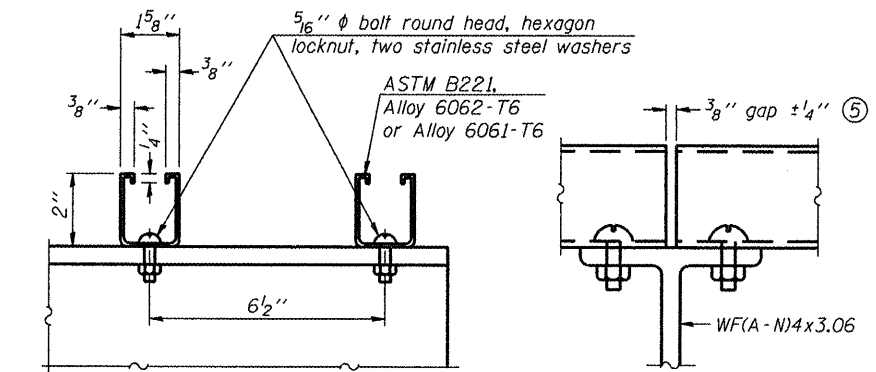
PLAN AT HANDRAIL JOINT

Details not shown same as "PLAN"



DETAIL F

DETAIL G

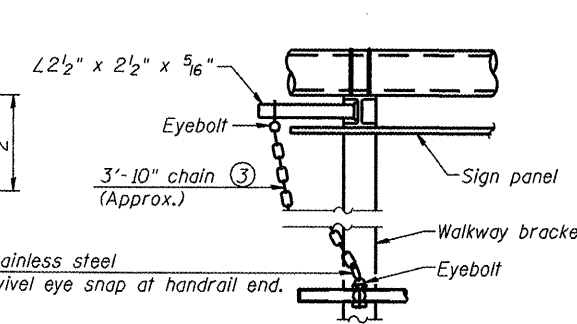


SECTION F-F

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.

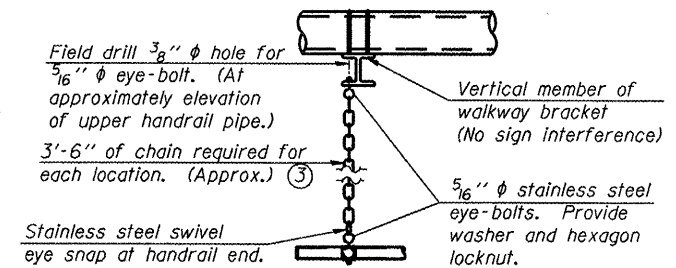


ALTERNATE SAFETY CHAIN ATTACHMENT

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

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

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



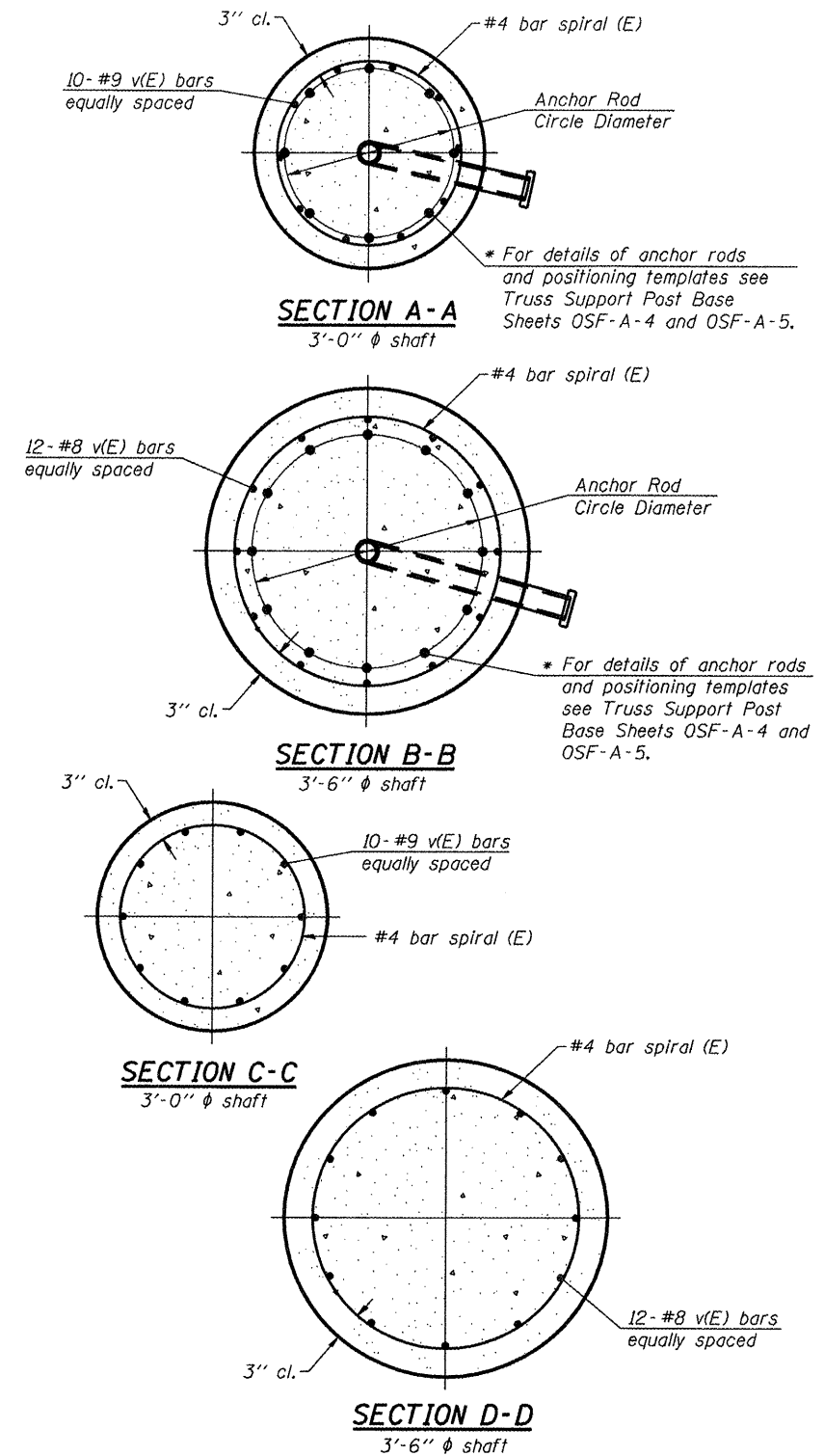
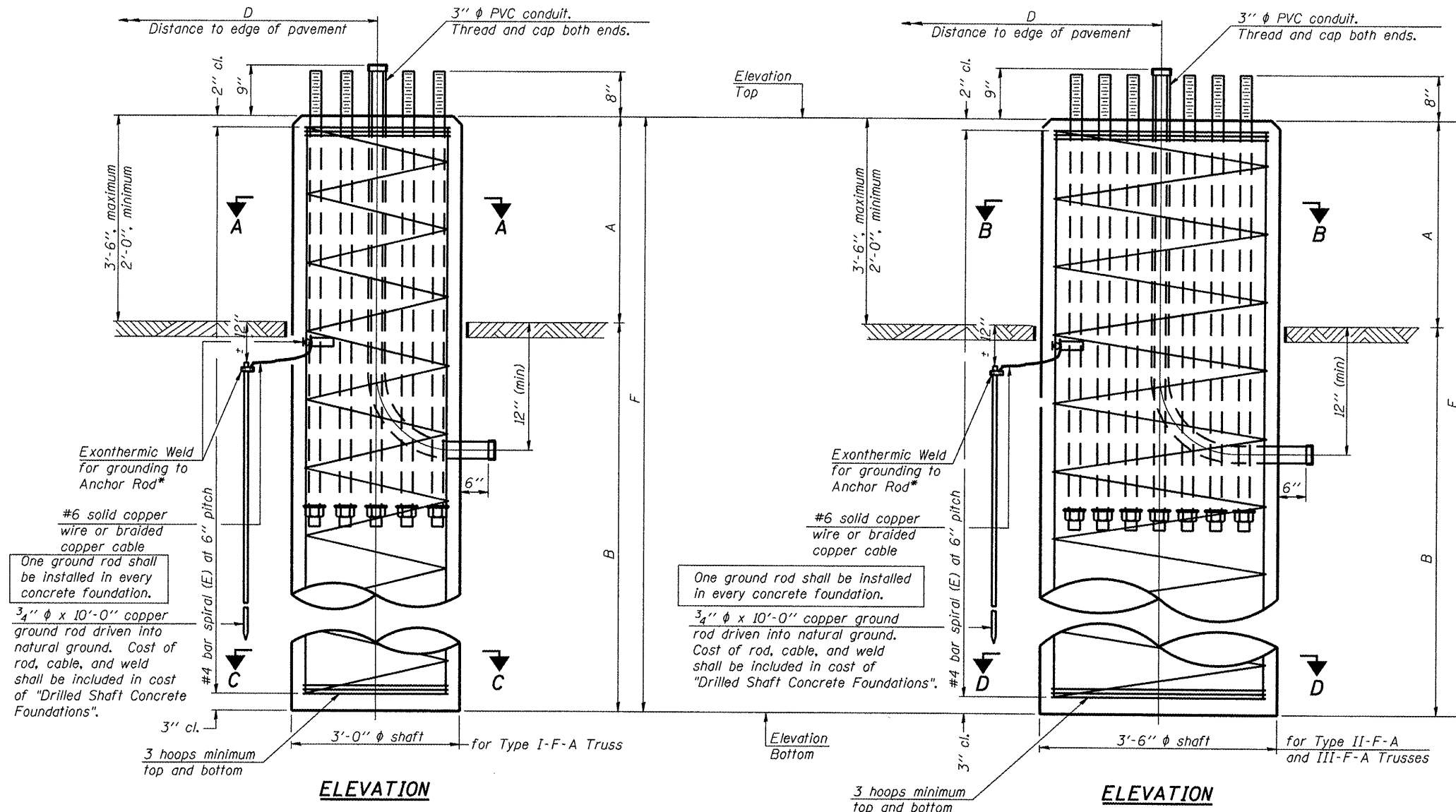
SAFETY CHAIN

One required for each end of each walkway.

OSF-A-8 1-20-11

FILE NAME =	USER NAME = petelyj	DESIGNED - YOGESH PATEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTTERFLY SIGN STRUCTURES - HANDRAIL DETAILS ALUMINUM TRUSS & STEEL POST	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pwork\p\p\p\petelyj\0258292\0368828-sht-details.DGN	PLOT SCALE = 99.9999 / in.	DRAWN - YOGESH PATEL	REVISED -			VAR	D3 OVD MESSAGE SG - 2012	VAR	50	30	
PLOT DATE = 2/23/2012	DATE -	CHECKED - RON WOODSHANK	REVISED -			SCALE: _____	SHEET NO. 1 OF 1 SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 60020		
		DATE -	REVISED -						ILLINOIS		

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



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

Truss Type	Post Base Sheet	Maximum Cantilever Length (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-F-A	OSF-A-4	25	200	3.0	17'-6"	8	2	22
II-F-A	OSF-A-5	30	400	3.5	22'-0"	12	2	30
III-F-A	OSF-A-5	35	400	3.5	24'-0"	12	2	30

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	A	B	F	Class DS Concrete Cubic Yards
3F0501039R052.6	701+50	III-F-A	3'-6"	647.44	621.44	2'-0"	24'-0"	26'-0"	9.3
3F0501039L057.6	965+00	III-F-A	3'-6"	621.15	595.15	2'-0"	24'-0"	26'-0"	9.3
3F0501080L083.6	130+00	III-F-A	3'-6"	633.64	607.64	2'-0"	24'-0"	26'-0"	9.3

OSF-A-9

1-20-11

FILE NAME =	USER NAME = potelyj	DESIGNED -	REVISED -
ci:\pwork\p\dot\potelyj\d0250242\0366828-sht-details.DGN		DRAWN -	REVISED -
PLOT SCALE = 99.9999 ' / in.		CHECKED -	REVISED -
PLOT DATE = 2/23/2012		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTTERFLY SIGN STRUCTURES - DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST**

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

F.A.I. RTE. VAR	SECTION D3 OVD MESSAGE SG - 2012	COUNTY VAR	TOTAL SHEETS 50	SHEET NO. 39
CONTRACT NO. 60020			ILLINOIS	



SOIL BORING LOG

ROUTE I-39 DESCRIPTION I-39 North Bound, MP 52.57, Station 701+50 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION NW 1/4, SEC. 2, TWP. 32N, RNG. 1E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3F0501039R052.6
Station 701+50
BORING NO. 1
Station 701+50
Offset 75.00ft Rt.
Ground Surface Elev. 645.87 ft

DEPTH (ft)	SOIL DESCRIPTION	TESTS	DEPTH (ft)	SOIL DESCRIPTION	TESTS
0	Augered Brown Silty Clay Loam Fill		0	Hard Reddish Brown Silty Clay Loam Till	
643.37			9		
			21		12.1 9.9
			36		S***
			9		
			13		11.5 8.7
			26		S**
			-25		
			10		
			14		11.5 7.6
			18		S**
			9		
			15		12.1 9.4
			22		S***
636.37			10		
			21		12.1 9.3
			31		S***
			7		
			12		10.9 9.0
			14		S*
			-35		
			10		
			14		11.5 9.8
			14		S**
			15		12.1 8.9
			21		S***
			609.37	End of Boring	
			9		
			18		12.1 8.7
			27		S***
			-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, form 137 (Rev. 8-99)

SOIL BORING LOG

I-39 NB, MP 52.57, STATION 701+50



SOIL BORING LOG

ROUTE I-39 DESCRIPTION I-39 South Bound, MP 57.59, Station 965+00 LOGGED BY Larry Myers

SECTION D3 OVD Message SG-2012 LOCATION SW 1/4, SEC. 12, TWP. 33N, RNG. 1E

COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3F0501039L057.6
Station 965+00
BORING NO. 1
Station 965+00
Offset 85.00ft Lt.
Ground Surface Elev. 620.09 ft

DEPTH (ft)	SOIL DESCRIPTION	TESTS	DEPTH (ft)	SOIL DESCRIPTION	TESTS
0	Augered Shoulder Stone, Brown & Red Silty Clay/Silty Clay Loam Fill		0	Very Dense Buff to White Very Fine Sand Highly Weathered and Reworked Sand Stone (continued)	
617.59			25		
			00/5'		4.5
			3		
			3		2.5 20.1
			4		P
			-5		
			3		
			5		4.0 18.2
			7		P
613.59			9		
612.59			27		
			64		3.9
			100/2'		
			-10		
			20		
			100/5'		8.5
			22		
			95		4.5
			100/1'		
			-35		
			21		
			100/5'		3.2
			20		
			100/5'		7.6
			-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, form 137 (Rev. 8-99)

SOIL BORING LOG

I-39 SB, MP 57.59, STATION 965+00

FILE NAME =	USER NAME = petelyj	DESIGNED - YOGESH PATEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
et\pwwork\pwwork\petelyj\20250292\036828-ahd-detail.dgn	DRAWN - YOGESH PATEL	REVISED -	VAR			D3 OVD MESSAGE SG - 2012	VAR	50	40
PLOT SCALE = 99.9999' / in.	CHECKED - RON WOODSHANK	REVISED -	SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____			CONTRACT NO. 66b2a		ILLINOIS	
PLOT DATE = 2/23/2012	DATE -	REVISED -							



SOIL BORING LOG

ROUTE I-80 DESCRIPTION I-80 Westbound, MP 83.60, Station 130+00 LT LOGGED BY Larry Myers
 SECTION D3 OVD Message SG-2012 LOCATION SW 1/4, SEC. 35, TWP. 34N, RNG. 2E, 3rd PM
 COUNTY LaSalle DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 3F0501080L083.60
 Station 130+00
 BORING NO. 1
 Station 130+00
 Offset 62.00ft Lt.
 Ground Surface Elev. 634.14 ft (ft) (/6") (tsf) (%)

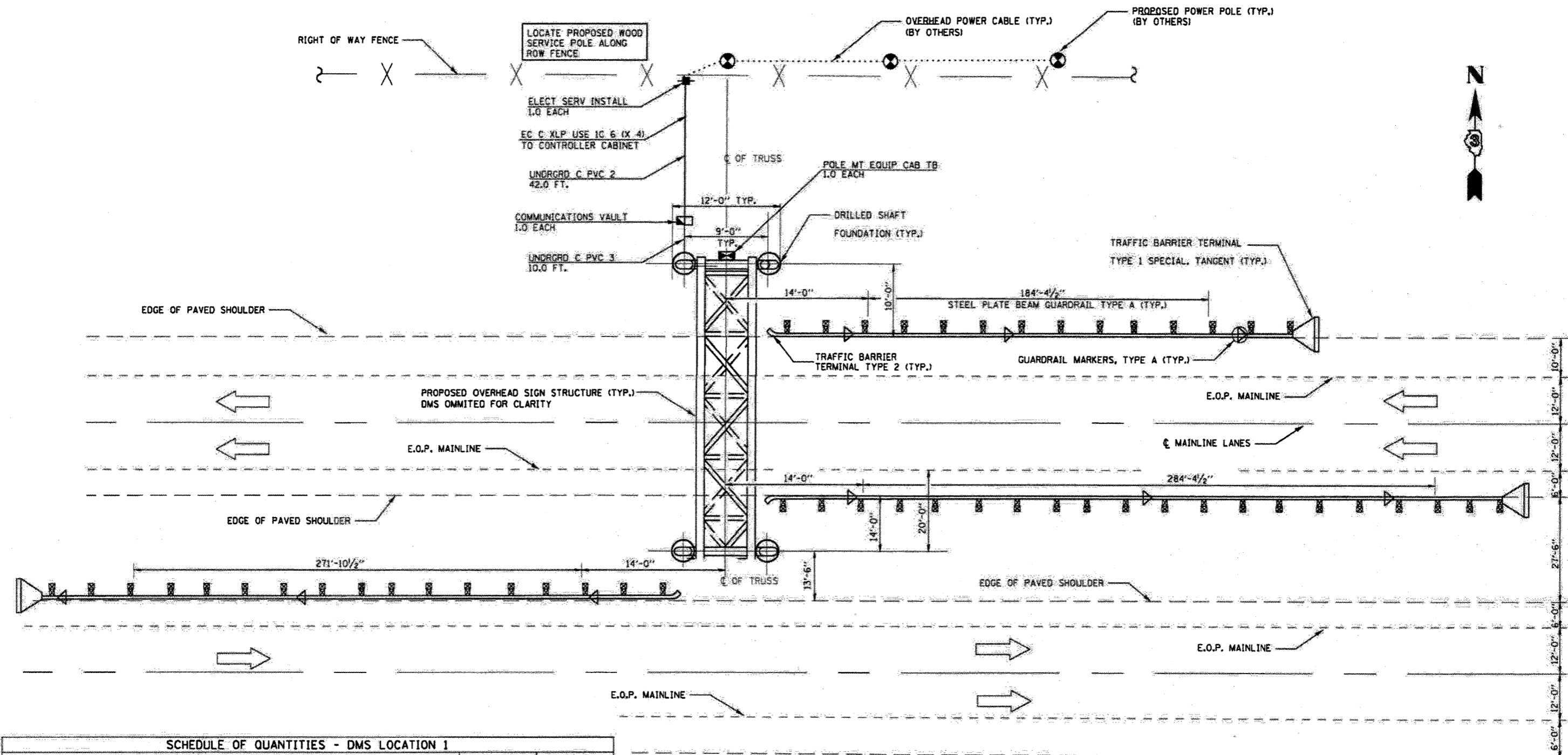
Soil Description	Depth (ft)	Bulge (B)	Shear (S)	Penetrometer (P)	SPT (N)	Soil Description	Depth (ft)	Bulge (B)	Shear (S)	Penetrometer (P)	SPT (N)
Augered brown silty clay loam fill fill.	9					Hard gray silty clay loam fill with minor silt layers. Sand layers at 28 ft. Potential boulders / cobbles at 27 ft to 30 ft.	9				
	17						17	7.2			15.8
	22						22	S			
631.64 Hard brown and gray silty clay loam fill fill.	6					Auger refusal at 30 ft. Assumed boulder. (continued)	8				
	7		4.5		11.5		16	6.3			15.3
	9		P				20	S			
629.64 Very stiff brown silty clay loess.	-5						-25				
	6						5				
	6		3.0		23.2		6	4.1			11.8
	7		P				7	S			
627.14 Very stiff brown and gray silty clay loam fill with silt layers.	3						14				
	4		3.0		19.7		16	>4.5			11.8
	5		P				24	P			
624.14 -10 Hard brown silty clay loam fill with sand and gravel layers.	6					End of Boring	604.06 -30				
	6		4.1		12.5		00/1				
	5		S								
	6										
	7		4.1		14.3						
	8		S								
619.64 Hard gray silty clay loam fill with minor silt layers. Sand layers at 28 ft. Potential boulders / cobbles at 27 ft to 30 ft.	-15						-35				
	7										
	9		5.2		15.1						
	12		S								
Auger refusal at 30 ft. Assumed boulder.	8										
	12		6.1		14.7						
	18		S								
	-20						-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, form 137 (Rev. 8-99)

SOIL BORING LOG

I-80 WB, MP 83.60, STATION 130 + 00

FILE NAME =	USER NAME = potelyj	DESIGNED - YOGESH PATEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\potelyj\0250292\036828-sht-details.DGN	DRAWN - YOGESH PATEL	REVISED -	VAR			D3 OVD MESSAGE SG - 2012	VAR	50	40A	
PLOT SCALE = 99.9999 / in.	CHECKED - RON WOODSHANK	REVISED -	CONTRACT NO. 66B28							
PLOT DATE = 2/23/2012	DATE -	REVISED -	ILLINOIS							
					SCALE: _____	SHEET NO. 1 OF 1 SHEETS		STA. _____ TO STA. _____		



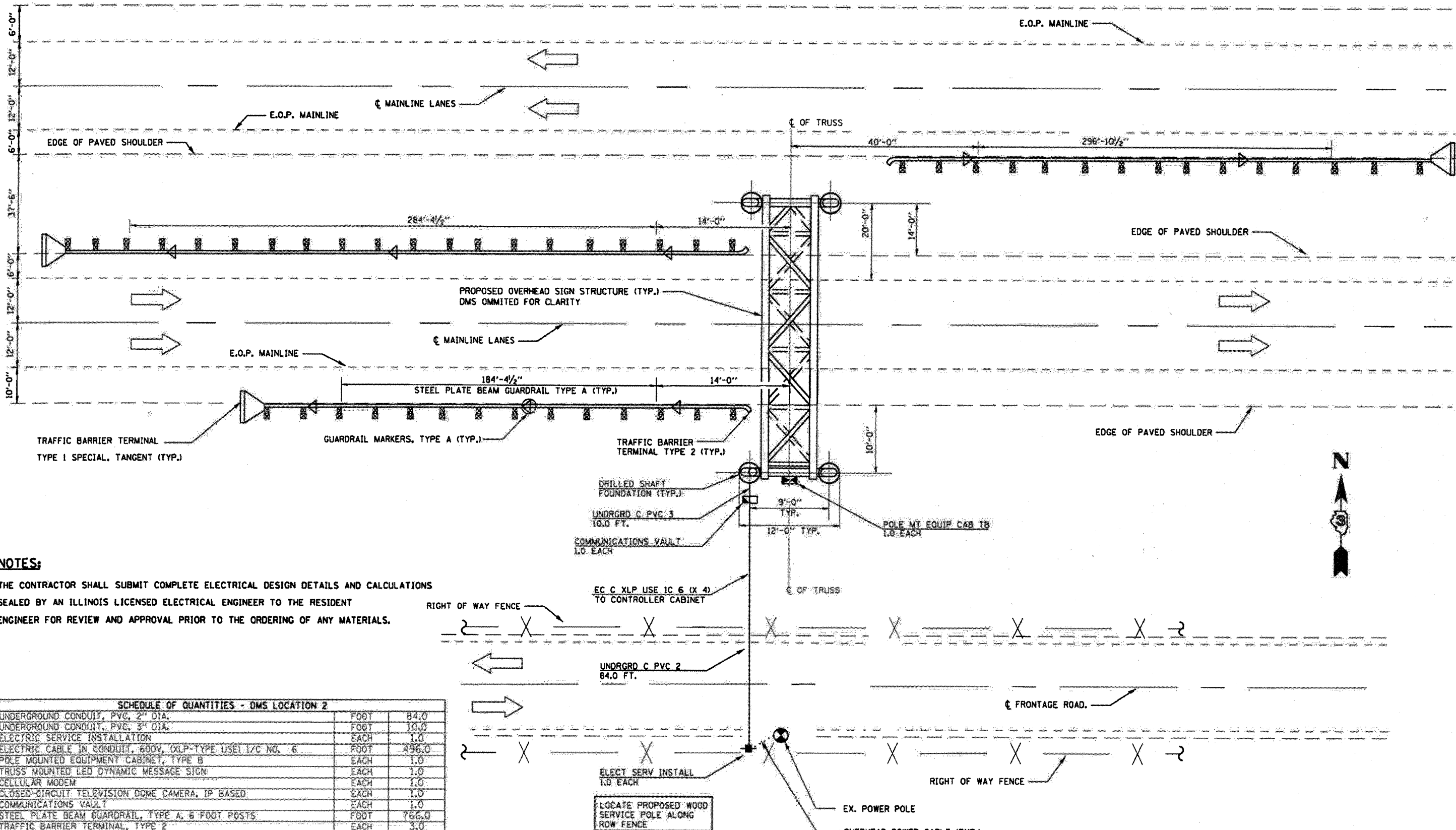
SCHEDULE OF QUANTITIES - DMS LOCATION 1

UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	42.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	328.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	740.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	9.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

LOCATION 1
I-80 WB M.P. 96.05 STA. 785 + 00

NOTES:

THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.



NOTES:

THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

SCHEDULE OF QUANTITIES - DMS LOCATION 2		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	84.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	496.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	766.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	9.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

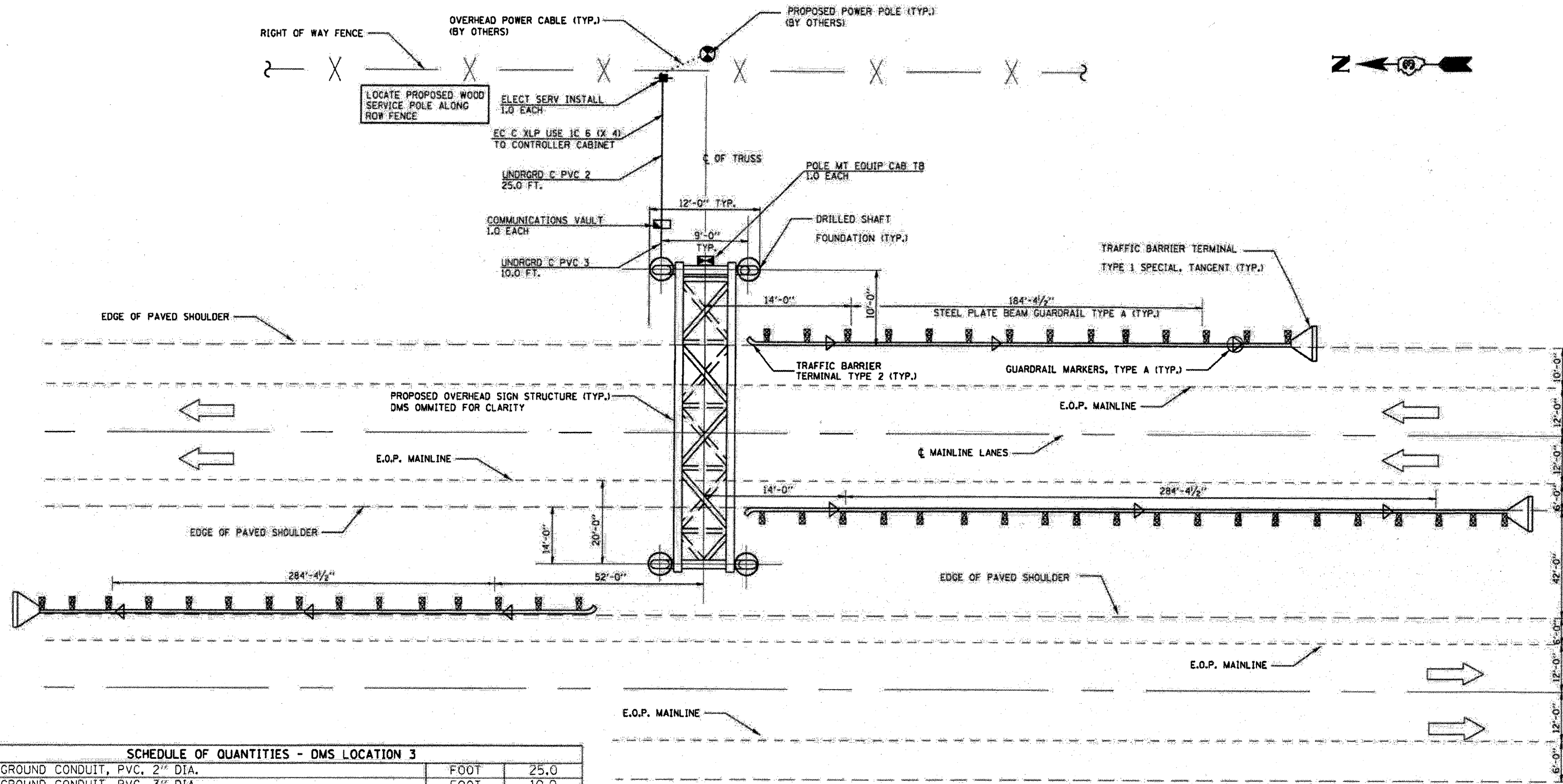
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	PLOT SCALE = 98.9999 1" = 100'	CHECKED -	REVISED -
	PLOT DATE = 3/9/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 2)
I-80 EB (M.P. 72.48, STA. 405+50)
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.I. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	42
			CONTRACT NO. 66B28	
ILLINOIS				

LOCATION 2
I-80 EB M.P. 72.48 STA. 437+50



SCHEDULE OF QUANTITIES - DMS LOCATION 3		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	25.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	260.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	755.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	9.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

LOCATION 3
I-39 NB M.P. 49.01 STA. 190+00

NOTES:
NOTES:
 THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.
 THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

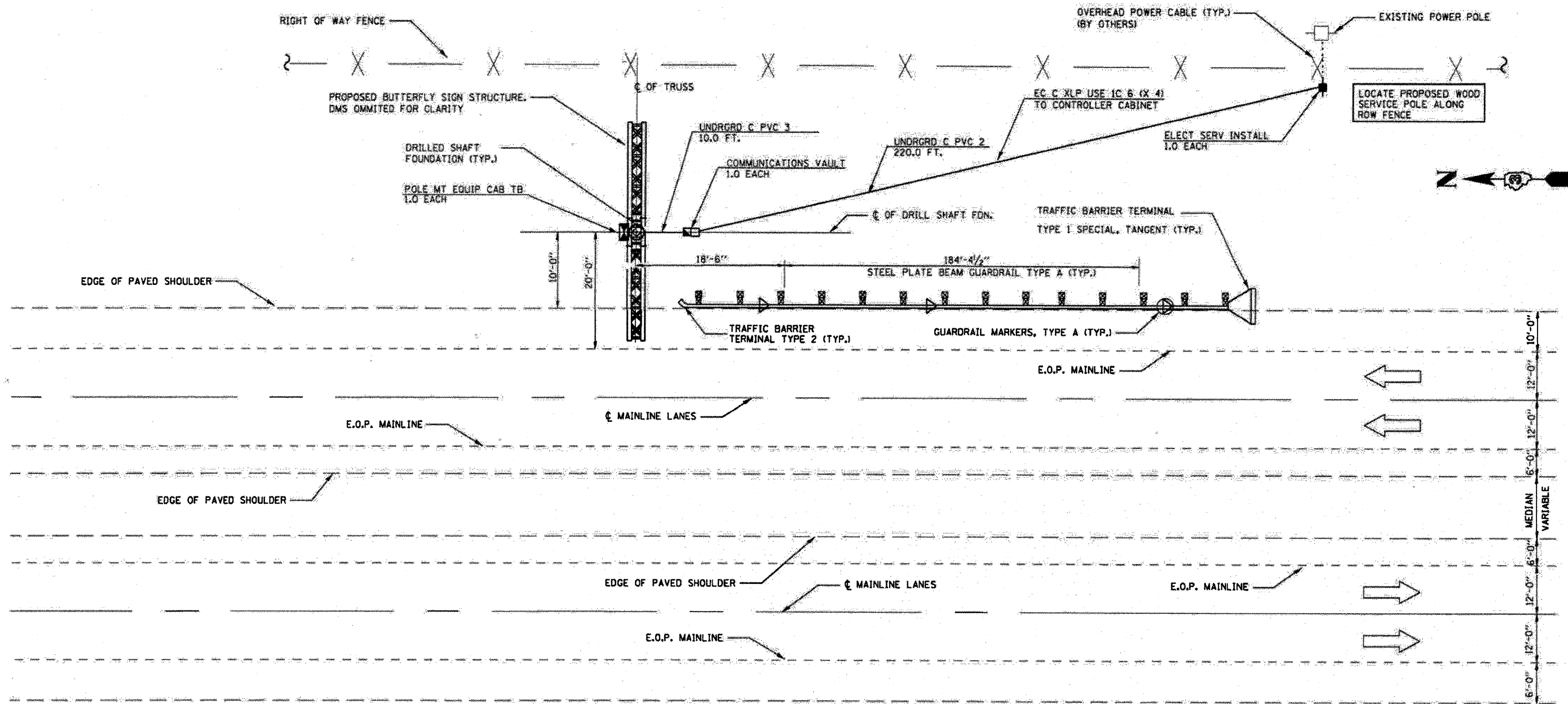
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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 3)
I-39 NB (M.P. 49.01, STA. 190+00)

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 DVD MESSAGE SG - 2012	VAR	50	43
			CONTRACT NO.	66B28
ILLINOIS				

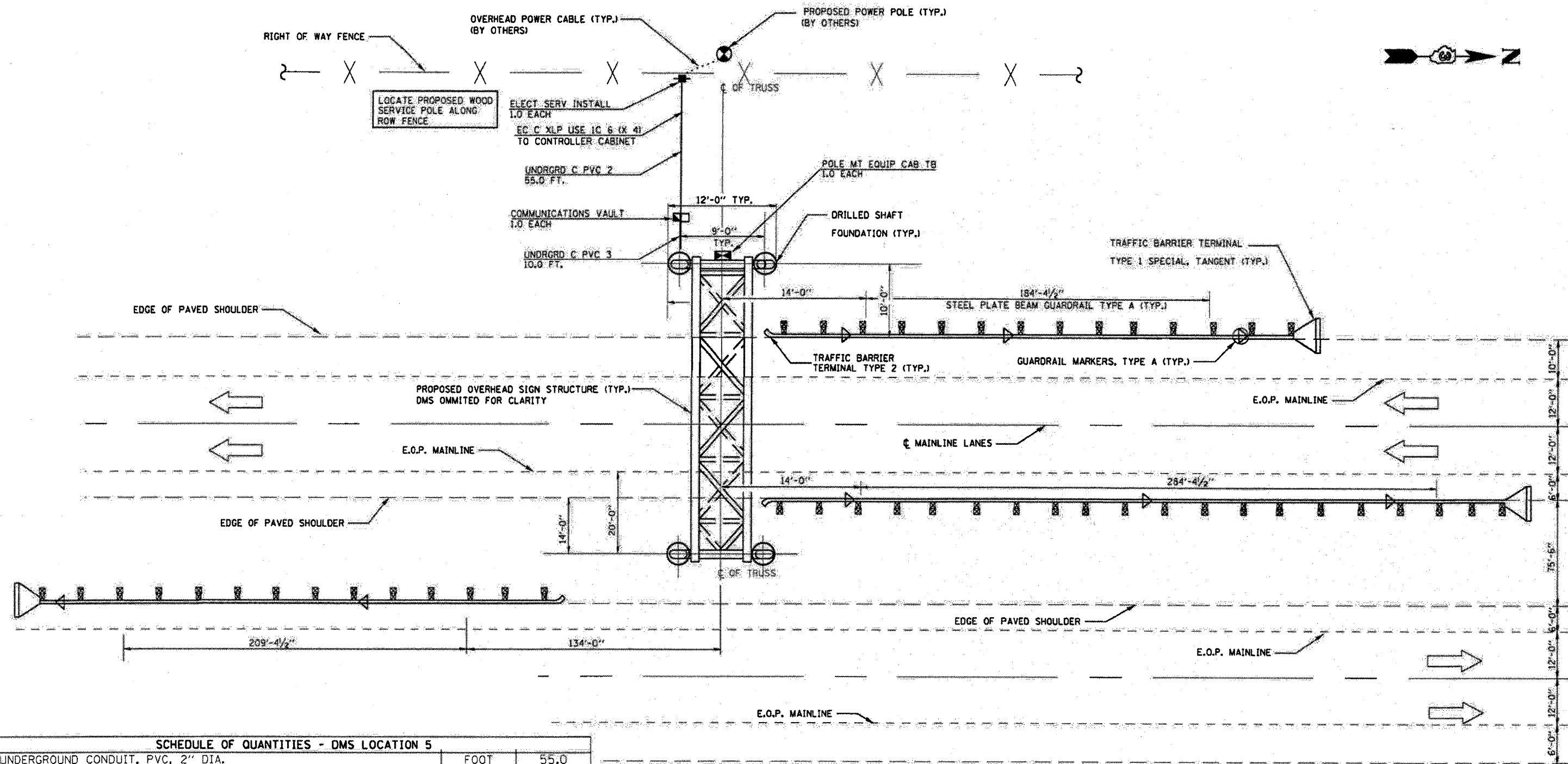


SCHEDULE OF QUANTITIES - DMS LOCATION 4

UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	210.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	1000.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	185.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1.0
GUARDRAIL MARKERS, TYPE A	EACH	3.0
TERMINAL MARKER - DIRECT APPLIED	EACH	1.0

LOCATION 4
I-39 NB M.P. 52.57 STA. 701+50

NOTES:
THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.



SCHEDULE OF QUANTITIES - DMS LOCATION 5		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	55.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	380.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	680.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	9.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

LOCATION 5
I-39 SB M.P. 68.48 STA. 540+00

NOTES:

THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

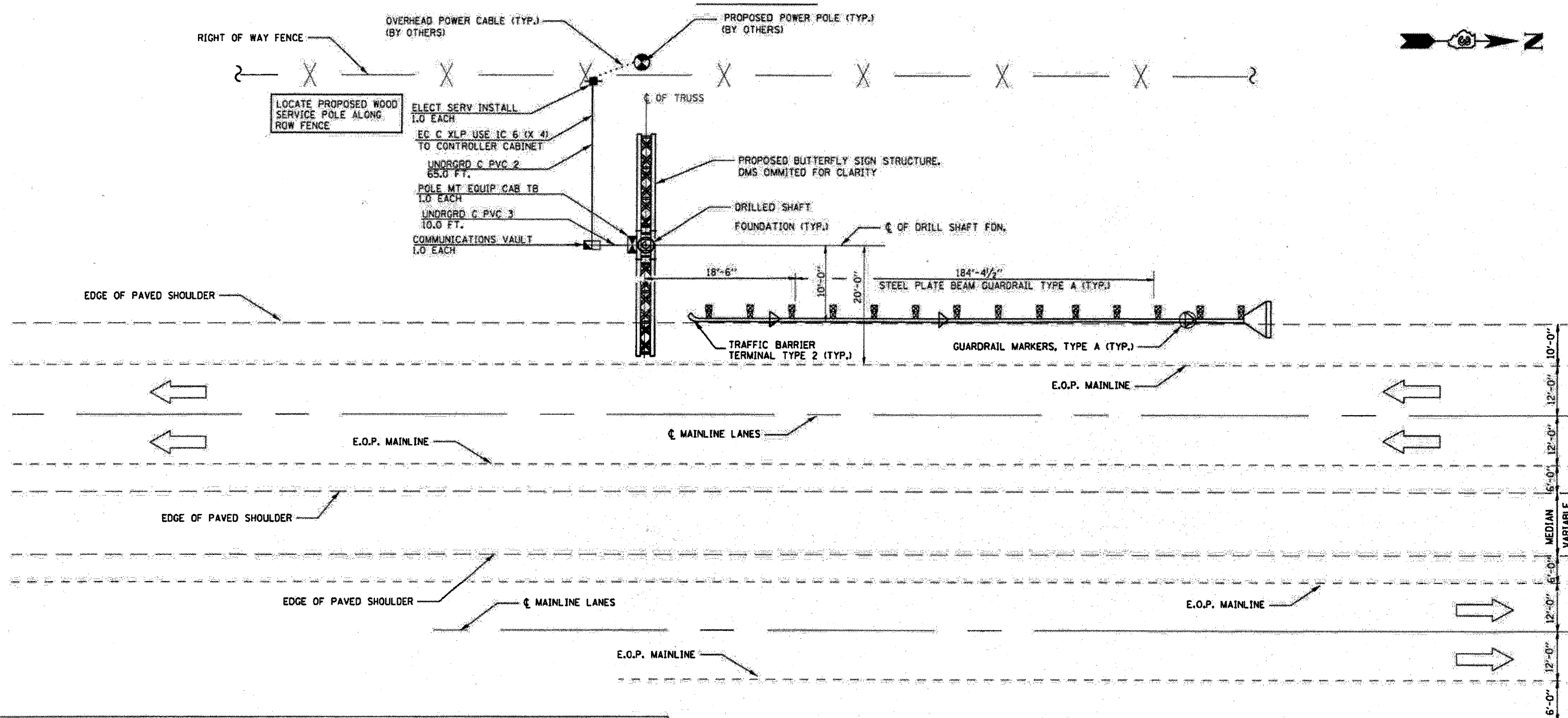
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 5)
I-39 SB (M.P. 68.48, STA. 540+00)

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

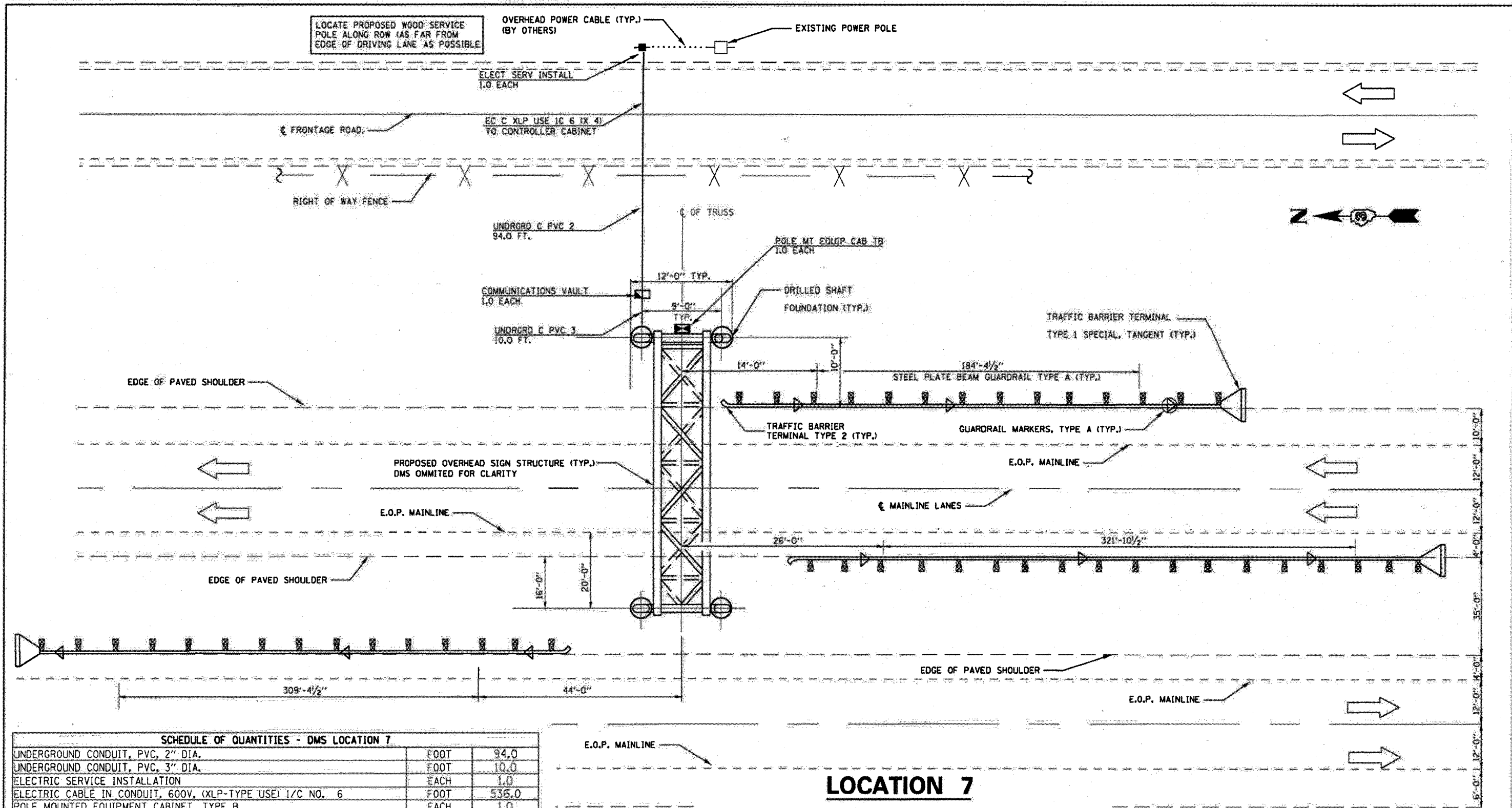
F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	03 OVD MESSAGE SG - 2012	VAR	50	45
			CONTRACT NO. 66B28	
ILLINOIS				



SCHEDULE OF QUANTITIES - DMS LOCATION 6		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	65.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	420.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	185.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1.0
GUARDRAIL MARKERS, TYPE A	EACH	3.0
TERMINAL MARKER - DIRECT APPLIED	EACH	1.0

LOCATION 6
I-39 SB M.P. 57.59 STA. 965 + 00

NOTES:
 THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.



LOCATION 7
I-57 NB M.P. 305 STA. 555 + 00

SCHEDULE OF QUANTITIES - DMS LOCATION 7

UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	94.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	536.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	814.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	9.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

NOTES:

THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

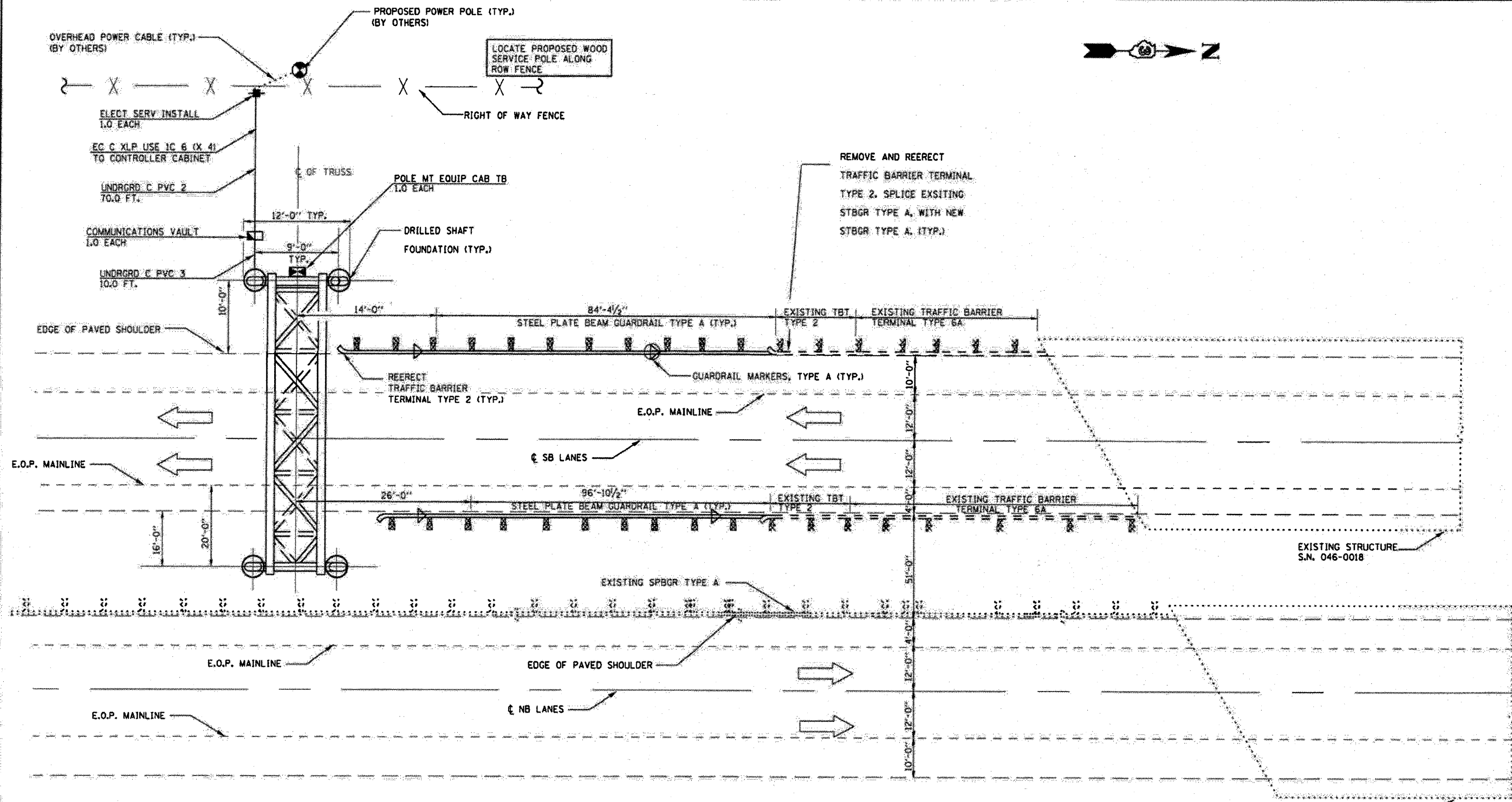
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 7)
I-57 NB (M.P. 305, STA. 555 + 00)

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50 47
		CONTRACT NO.	66B28
		ILLINOIS	



LOCATION 8

I-57 SB M.P. 319.93 STA. 547 + 30

SCHEDULE OF QUANTITIES - DMS LOCATION 8		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	70.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	430.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	750.0
REM RE-E T B TERM T2	EACH	2.0
GUARDRAIL MARKERS, TYPE A	EACH	4.0

NOTES:

THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.

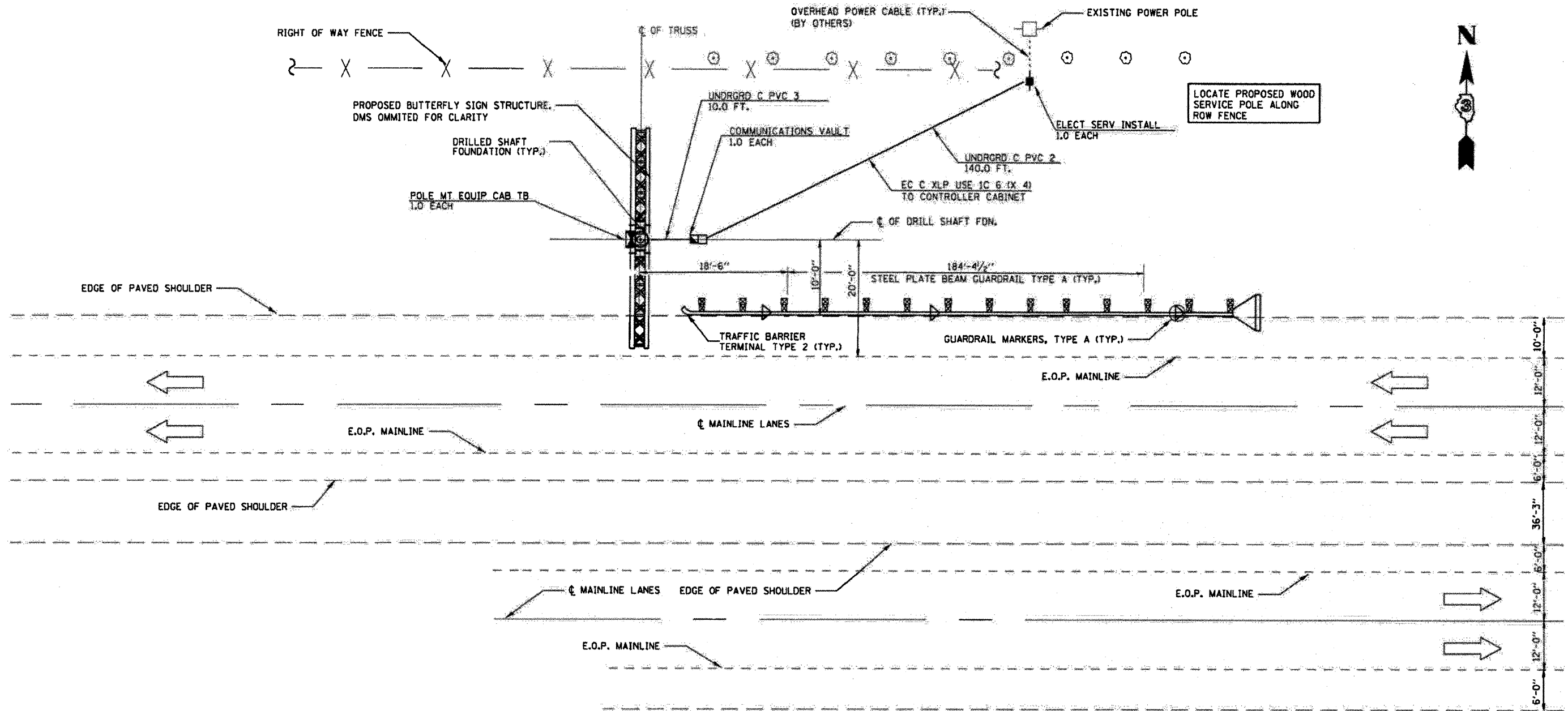
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PLOT DATE = 3/9/2012		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED DMS INSTALLATION (LOCATION 8)
I-57 SB (M.P. 319.93, STA. 547 + 30)**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D3 OVD MESSAGE SG - 2012	VAR	50	48
			CONTRACT NO. 66828	
ILLINOIS				



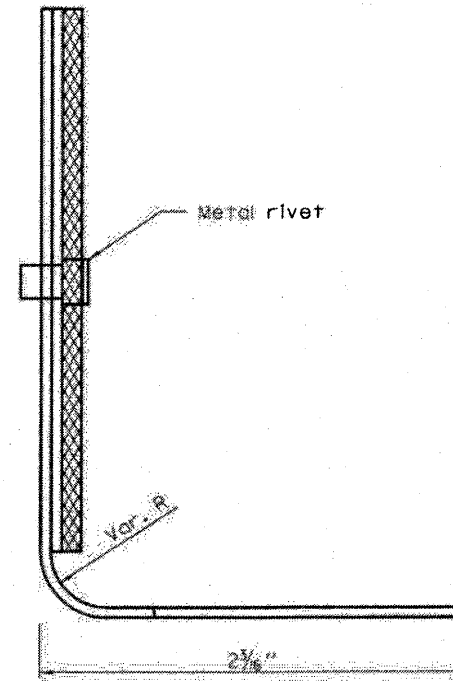
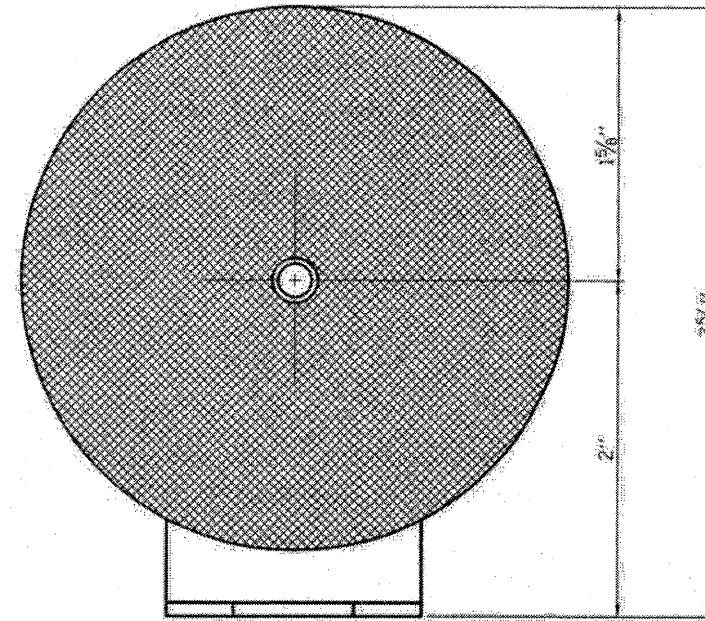
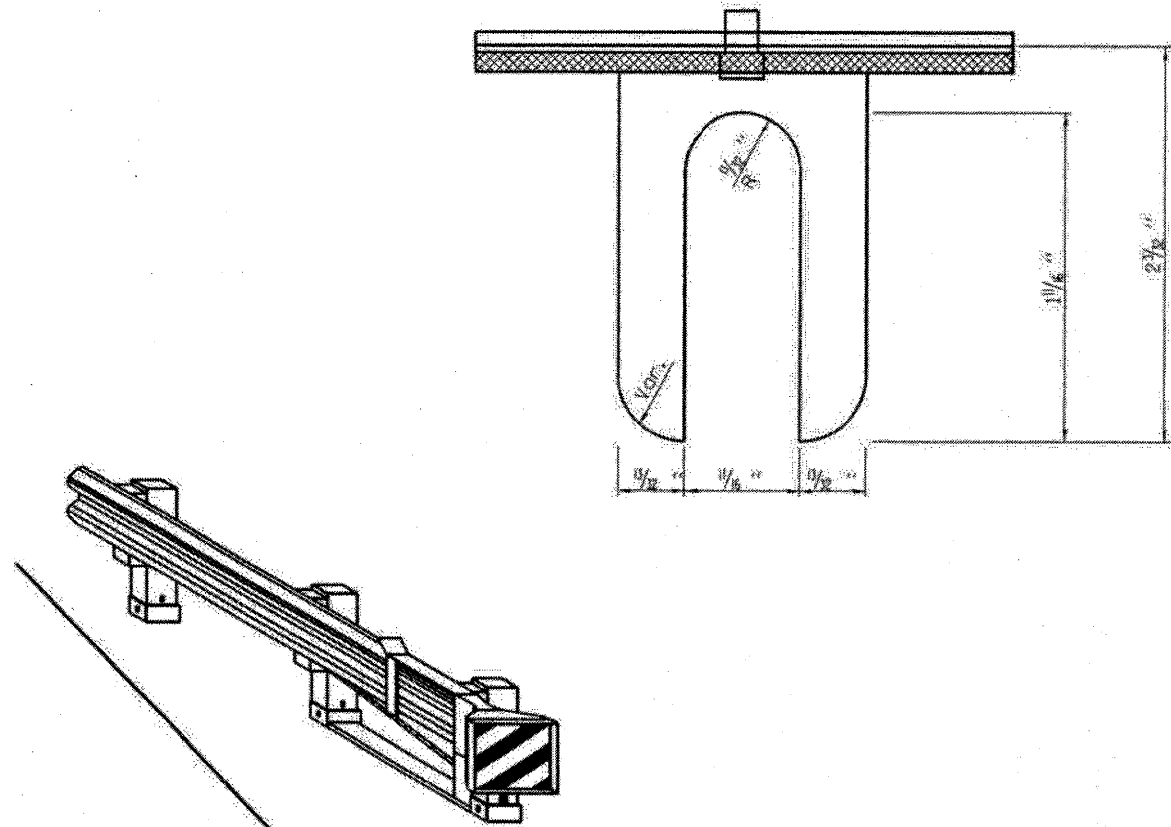
LOCATE PROPOSED WOOD SERVICE POLE ALONG ROW FENCE

SCHEDULE OF QUANTITIES - DMS LOCATION 9

UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	130.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	10.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	680.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
CELLULAR MODEM	EACH	1.0
CLOSED-CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	185.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1.0
GUARDRAIL MARKERS, TYPE A	EACH	3.0
TERMINAL MARKER - DIRECT APPLIED	EACH	1.0

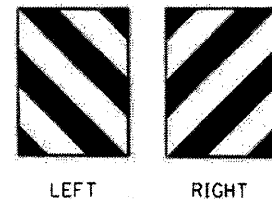
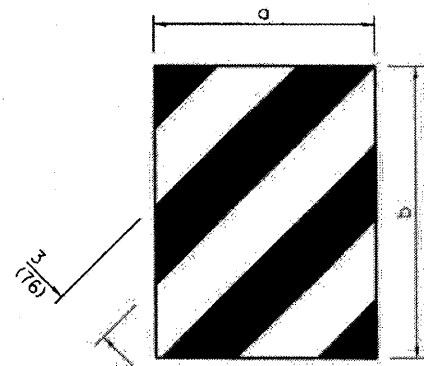
LOCATION 9
I-80 WB M.P. 83.60 STA. 130+00

NOTES:
THE CONTRACTOR SHALL SUBMIT COMPLETE ELECTRICAL DESIGN DETAILS AND CALCULATIONS SEALED BY AN ILLINOIS LICENSED ELECTRICAL ENGINEER TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE ORDERING OF ANY MATERIALS.



REFLECTOR MARKER TYPE A

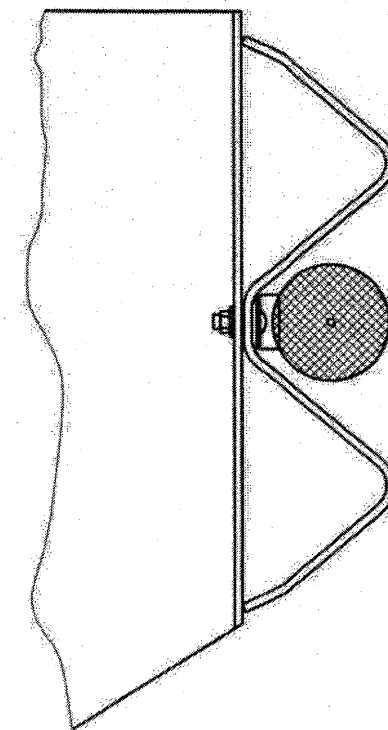
CASE I



DIMENSION	CASE I
a	*
b	*

* The width and height (a, b) of the terminal marker shall be within approximately 1 (25) of the outer edge of the terminal end, with a minimum reflective area of 288 sq. in. (0.18 m²).

TERMINAL MARKER DETAILS
Color: Black / Yellow reflectorized



TYPICAL MOUNTING WITH REFLECTOR

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TERMINAL MARKER AND
REFLECTOR MARKER DETAILS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D3 OVD MESSAGE SG - 2012	VAR	50	50
			CONTRACT NO. 66B28	
ILLINOIS				