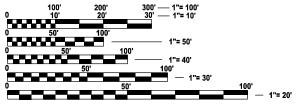
#### **INDEX OF SHEETS**

- COVER SHEET
- GENERAL NOTES, HIGHWAY STANDARDS, HMA MIXTURE TABLE
- 3 TO 5 SUMMARY OF QUANTITIES
- HOT-MIX ASPHALT STABILIZATION TYPICAL SECTIONS
- DYNAMIC MESSAGE SIGN SITE PLAN 1 LOCATION MM 108.5 DYNAMIC MESSAGE SIGN SITE PLAN 2 LOCATION MM 119.5
- LINEAR DELINEATOR APPLICATION FOR GUARDRAIL DETAIL
- DMS ELECTRIC SERVICE INSTALLATION AERIAL, REMOTE DISCONNECT POWER PEDESTAL DETAILS
- POLE MOUNTED EQUIPMENT CABINET DETAIL
- DMS ELECTRIC SERVICE COORDINATION
- 14 TO 16 BUTTERFLY DESIGN STRUCTURES ALTERNATE PLAN & ELEVATION FOR DMS ALUMINUM TRUSS & STEEL POST 17 BUTTERFLY DESIGN STRUCTURE DAMPING DEVICE
- BUTTERFLY DESIGN STRUCTURES JUNCTURE DETAILS ALUMINUM TRUSS & STEEL POST
- BUTTERFLY DESIGN STRUCTURES TYPE II-F-A TRUSS SUPPORT POST FOR DMS ALUMINUM TRUSS & STEEL POST BUTTERFLY DESIGN STRUCTURES - ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS
- BUTTERFLY DESIGN STRUCTURES ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS ALUMINUM TRUSS & STEEL POST
- BUTTERFLY DESIGN STRUCTURES HANDRAIL DETAILS ALUMINUM TRUSS & STEEL POST
- BUTTERFLY DESIGN STRUCTURES DRILLED SHAFT ALUMINUM TRUSS & STEEL POST









**DMS LOCATION** MM 108.5

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

 $\circ$ 

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123

PROJECT ENGINEER: JUNIOR SENAT, P.E. **UNIT CHIEF: RON WOODSHANK DISTRICT 3 NO. (815) 434-6131** 

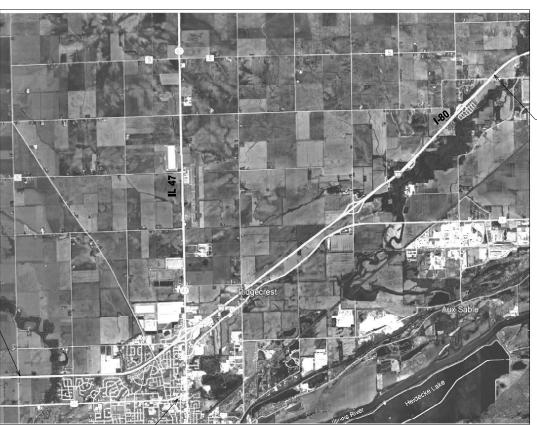
**CONTRACT NO. 66P73** 

# STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

# **PROPOSED HIGHWAY PLANS**

FAI ROUTE 80 ( I-80 ) SECTION D3 OVD MESSAGE SG - 2024 **DMS INSTALLATION GRUNDY COUNTY** 

C-93-129-24



GROSS LENGTH = 8780.64 FT. = 1.663 MILE NET LENGTH = 8780.64 FT. = 1.663 MILE



#### D-93-090-24

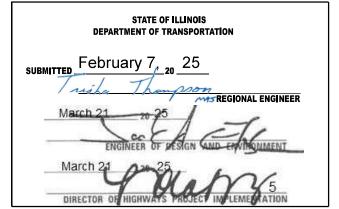
ILLINOIS CONTRACT NO. 66P73



# **FUNCTIONAL CLASSIFICATION**

INTERSTATE

ADT (2023) P.V. S.U. M.U. 65.1% 3.7% 31.2%



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## **GENERAL NOTES**

- THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO COORDINATE
   THE ELECTRIC SERVICE WORK. CONTACT MELISSA HUGHES FROM comed:
   MELISSA.HUGHES@COMED.COM, 815-206-9895.
- 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.
- 3. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES AND STRUCTURES.
- NO TREE REMOVAL OVER 3 INCH DIAMETER AT 4 FEET ABOVE GROUND SHALL OCCUR FROM APRIL 1ST TO SEPTEMBER 30TH DUE TO POTENTIAL PRESENCE OF ENDAGERED SPECIES
- 5. CELLULAR MODEMS TO BE PROVIDED BY THE DEPARTMENT.
- DMS SIGNS SHALL BE EQUIPPED WITH TWO AMBER FLASHING BEACONS. THE COST OF THE DMS.

## **HIGHWAY STANDARDS:**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001006	DECIMAL OF INCH & FOOT
630001-13	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
725001-01	OBJECT AND TERMINAL MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24"(600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701400-12	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701901-10	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720021-03	SIGN PANELS EXTRUDED ALUMINUM TYPE
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814006-03	DOUBLE HANDHOLES
836001-05	LIGHT POLE FOUNDATION
838001-01	BREAKAWAY DEVICES

### **COMMITMENTS:**

SCALE:

NO COMMITMENTS

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	QUALITY MANAGEMENT PROGRAM (QMP)	
MIXTURE TYPE	AIR VOIDS @ Ndes	
HOT-MIX ASPHALT STABILIZATION AT STEEL PLATE BEAM GUARDRAIL		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 6"	4% @ 70 GYR.	QCP

NOTE 1: THE UNIT USED TO CALCULATE ALL HMA BINDER MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

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6330 Belmont Road, Sulte 4B
Downers Grove, IL 60516

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL N	OTES. HIGH	HWAY	STANDARI	DS. &	нма	MIXTURE	TABLE	F.A.I RTE	SEC-	TION		COUNTY	TOTAL SHEETS	SHEET NO.
	,							80	D3 OVD MESSA	GE SG -	2024	GRUNDY	24	2
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CONSTRUCTION CODE

				DMS LOCATION	DMS LOCATIO		
				MM 108.5 MM			
				DMS	DMS		
CODE			TOTAL	0044	0044		
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL		
20100500	TREE REMOVAL, ACRES	ACRE	1	1			
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	26		26		
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	137.5		137.5		
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1		1		
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1		1		
67100100	MOBILIZATION	L SUM	1	0.5	0.5		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	0.5	0.5		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	60	30	30		
72400210	REMOVE AND RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	1		1		
72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	1	1		
73301805	OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	76	38	38		
73301900	OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	16	8	8		
73400100	CONCRETE FOUNDATIONS	CU YD	2.82		2.82		
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	18.6	9.3	9.3		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

 SUMMARY OF QUANTITIES
 F.A.I. RTE.
 SEC

 80
 D3 OVD MESSA

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 TO STA.

CONSTRUCTION CODE

DMS LOCATION DMS LOCATION

				MM 108.5	MM 119.5
				DMS	DMS
CODE		0.000.000.00	TOTAL	0044	0044
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
73700200	REMOVE CONCRETE FOUNDATION - GROUND MOUNT	EACH	2		2
78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	2		2
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2	1	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1384	340	1044
81028320	UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	310	155	155
81400300	DOUBLE HANDHOLE	EACH	2	1	1
04700400	ELECTRIC CARLE IN CONDUIT COOK (M.B. TVDE LICE) 2.4/C.NO. 2	FOOT	1200	250	1020
81702400	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 2	FOOT	1380	350	1030
83060830	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	2	1	1
83600356	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8 5/8" X 6'	EACH	2	1	1
X0320023	CLOSED CIRCUIT TELEVISION DOME CAMERA, HD	EACH	2	1	1
X0323920	POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	2	1	1
X0323923	SUPPORT EQUIPMENT AND MAINTENANCE	L SUM	1	0.5	0.5
X0325485	TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	2	1	1
V0220042	CAT 5 ETHERNET CARLE	FOOT	430	210	210
X0326812	CAT 5 ETHERNET CABLE	FOOT	420	210	210

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Downers Grove, IL 60516
PLOT SCAL

\* SPECIALTY ITEM

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES
SHEET 2 OF 3

SHEET OF SHEETS STA. TO STA.

SCALE:

## **100% STATE**

CONSTRUCTION CODE

				DMS LOCATION	DMS LOCATION
300		20	VI.	MM 108.5	MM 119.5
				DMS	DMS
CODE			TOTAL	0044	0044
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
X1400088	POWER PEDESTALS	EACH	2	1	1
X6350204	LINEAR DELINEATOR PANELS, 4 INCH	EACH	4		4

\* SPECIALTY ITEM

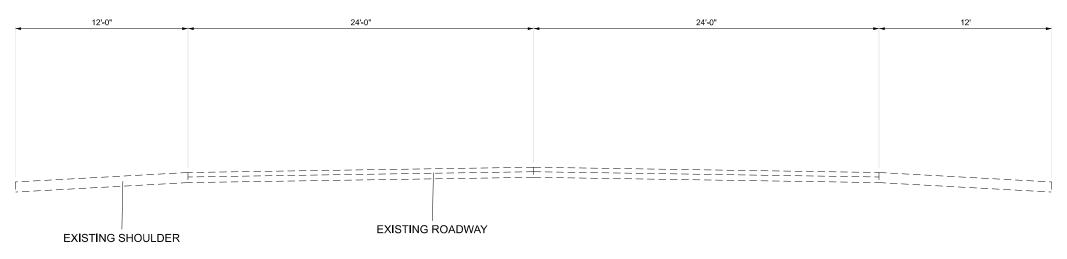
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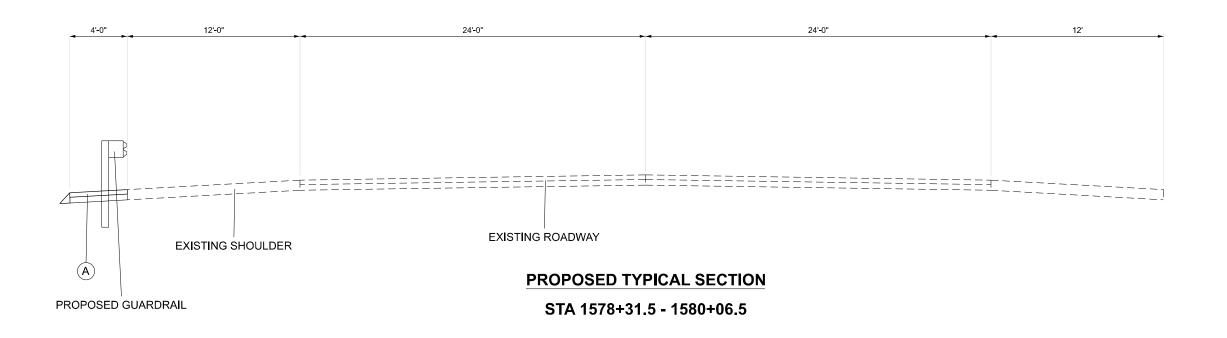
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# **EXISTING TYPICAL SECTION STA 1578+31.5 - 1580+06.5**



# LEGEND

A) HOT-MIX ASPHALT BINDER COURSE IL-19.0, N70 - 6"

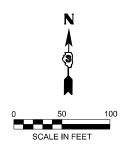
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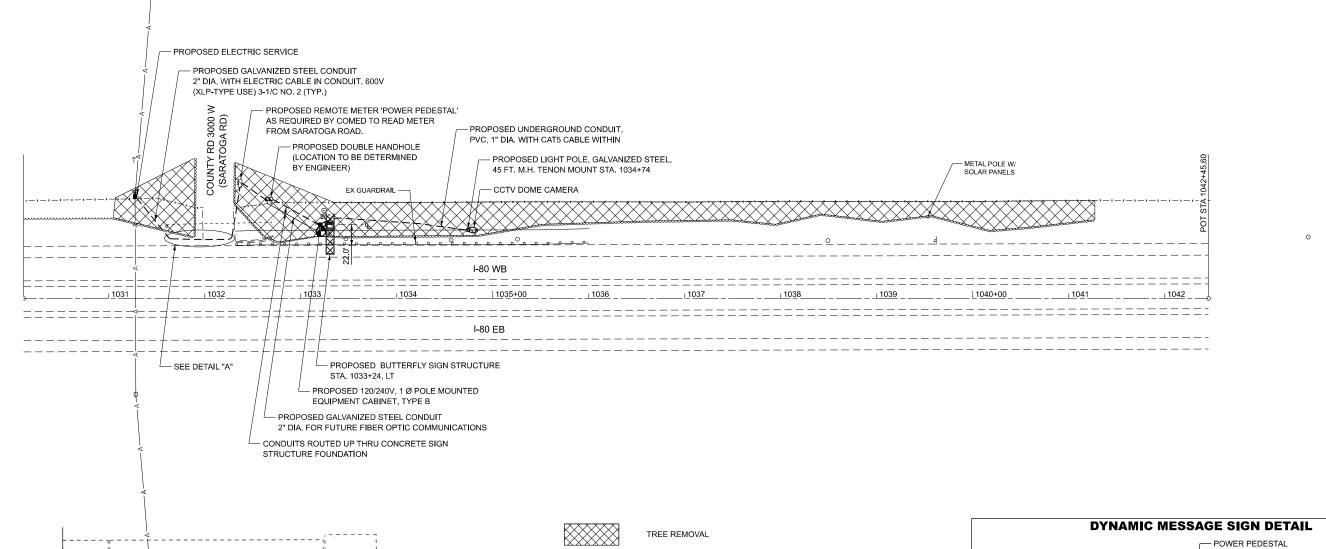
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TYPICAL SECTIONS							
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SCHEDULE OF QUANTITIES - DMS SITE 1 (I-80 WB MM 108.5)				
TREE REMOVAL, ACRES	ACRE	1		
MOBILIZATION	L SUM	0.5		
TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	0.5		
CHANGEABLE MESSAGE SIGN	CAL DA	30		
TERMINAL MARKER - DIRECT APPLIED	EACH	1		
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE IIFF-A	FOOT	38		
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	8		
DRILLED SHAFT CONCRETE FOUNDATIONS	CUYD	9.3		
ELECTRIC SERVICE INSTALLATION	EACH	1		
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	340		
DOUBLE HANDHOLE	EACH	1		
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3/C NO. 2	FOOT	350		
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1		
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1		
POWER PEDESTALS	FACH	1		

	DYNAMIC M	ESSAGE S	SIGN DETAIL	
	#	Pow	VER PEDESTAL  DMS	— POLE MOUNTED EQUIPMENT CABINET
COMED UTILITY POLE  ELECTRIC CABLE, IN 2" DIA GALVANIZED STEE		<del>[</del>	NEC REQUIRMEN	E N ACCORDANCE WITH

D	ET	Al	L "	<b>A</b> "
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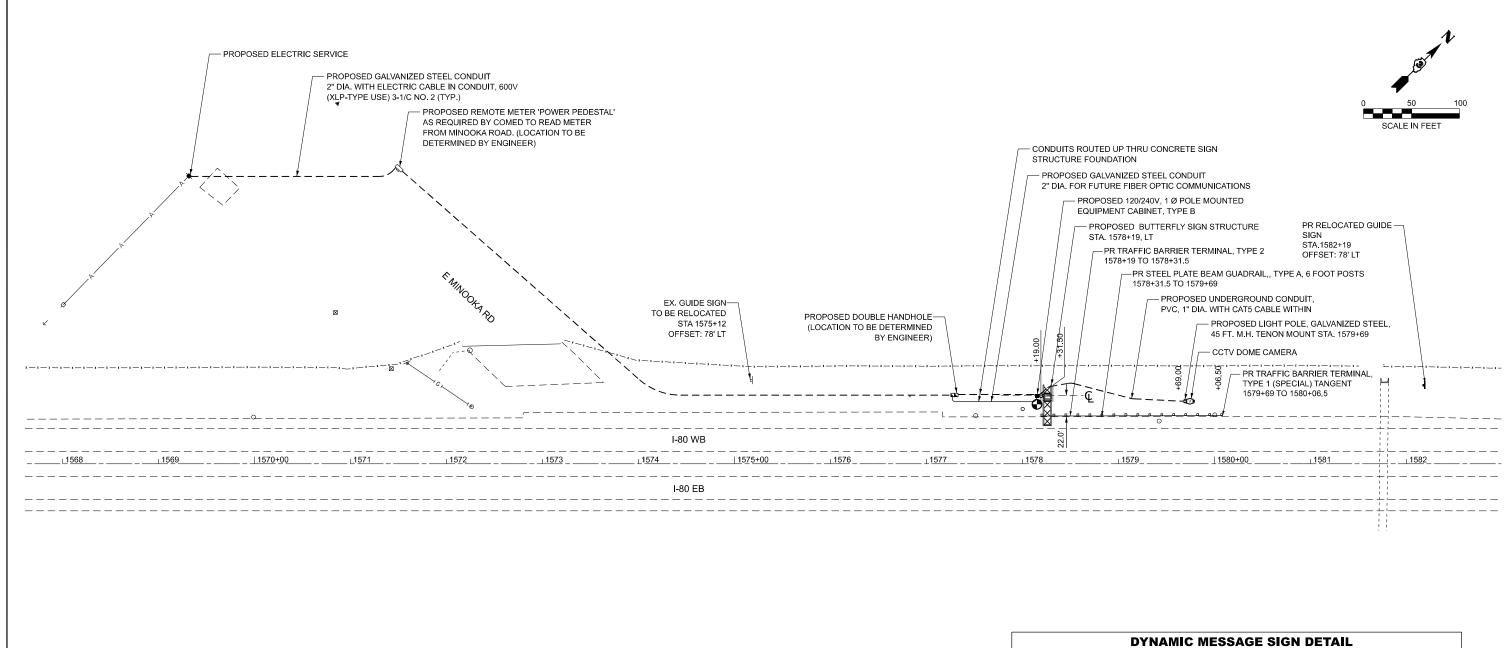
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PLOT DATE = 02/06/2025	DATE	-	01-31-2025	REVISED	-

-2" RGS CONDUIT DIRECTIONAL BORED 3' SOUTH OF THE BOTTOM OF SLOPE WALL AT 3' DEPTH (COST INCLUDED IN CONDUIT PAY ITEM)

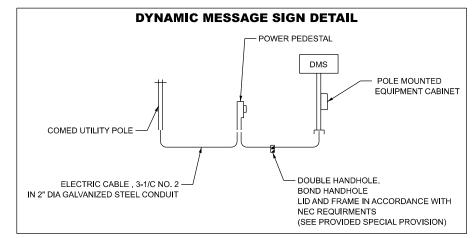
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SCALE: 1"=50'

DYNAMIC MESSAGE SIGN SITE PLAN 1					F.A.I RTE				COUNTY	TOTAL SHEETS
	LOCATI	ON MM	108 5		80	D3 OVD MESS/	AGE SG -	2024	GRUNDY	24
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SHEET 1	OF 1	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	PROJECT	



SCHEDULE OF QUANTITIES - DMS SITE 2 (I-80 WB MM 119.5)					
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	137.5			
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1			
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1			
MOBILIZATION	LSUM	0.5			
TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	0.5			
CHANGEABLE MESSAGE SIGN	CAL DA	30			
RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	1			
TERMINAL MARKER - DIRECT APPLIED	EACH	1			
OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE III-F-A	FOOT	38			
OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY, TYPE A	FOOT	8			
CONCRETE FOUNDATIONS	CU YD	2.82			
DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	9.3			
REMOVE CONCRETE FOUNDATION - GROUND MOUNTED	EACH	2			
GUARDRAIL REFLECTORS, TYPE A	EACH	2			
ELECTRIC SERVICE INSTALLATION	EACH	1			
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	1044			
DOUBLE HANDHOLE	EACH	1			
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3/C NO. 2	FOOT	1030			
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1			
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1			
POWER PEDESTALS	EACH	1			



	Inc
6330 Belmont Road, Suite 4B	
	AMES Engineering, CONSULTING ENGINEERS 6330 Belmont Road, Suite 4B

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STATE	OF ILLINOIS
DEPARTMENT	OF TRANSPORTATION

SCALE: 1"=50'

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	LOCAT	ом мм	110 5		80	D3 OVD MESSAGE SG	- 2024	GRUNDY	24	8
LOCATION MM 119.5								CONTRACT	NO. 661	73
SHEET 1	OF 1	SHEETS	STA.	TO STA.	ILLINOIS FED. AID			AID PROJECT		

# LINEAR DELINEATOR APPLICATION TO STANDARD GALVANIZED GUARDRAIL

LINEATOR DELINEATOR SHALL BE APLLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS

782-5

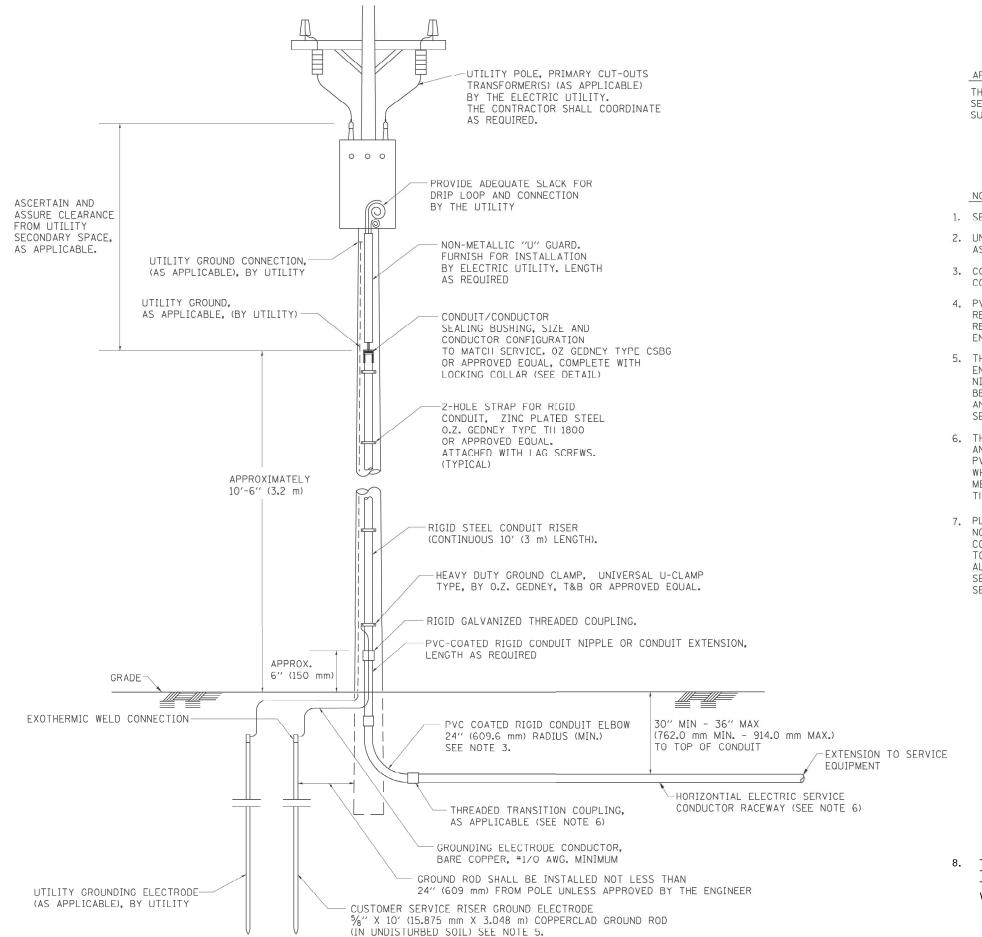
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Downers Grove, IL 60516

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DEPARTMENT OF TRANSPORTATION

LINEAR DE	ELINEA	TOR A	PPLICA	TION	FOR GUARDRAIL
			DETAIL		
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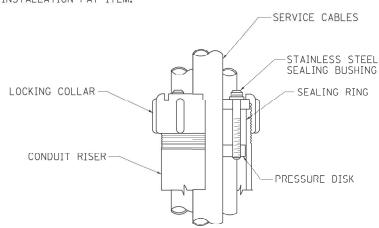


#### APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY MOUNTED SERVICE EQUIPMENT.

#### NOTES

- 1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- 2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY TIEM.
- 3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- 4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- 5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- 6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- 7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS, THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



#### SEALING BUSHING DETAIL

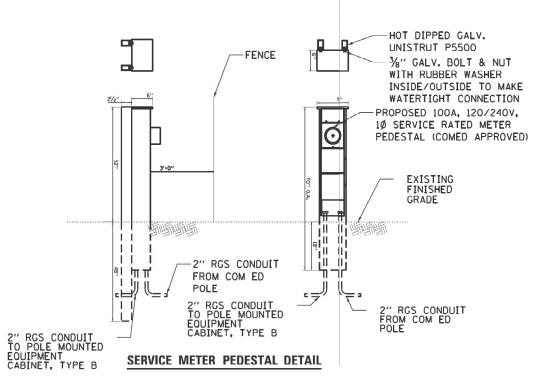
8. THE ELECTRIC SERVICE INSTALLATION SHALL CONFORM TO COMED REQUIREMENTS. THE CONTRACTOR SHALL VERIFY COMED ELECTRIC SERVICE REQUIREMENTS PRIOR TO BIDDING AND CONSTRUCTION AND COORDINATE THE SERVICE INSTALLATION WITH COMED. THERE WILL BE NO ADDITIONAL COMPENSATION ALLOWED.

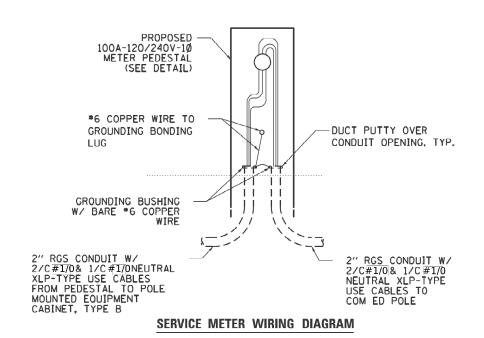
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6330 Belmont Road, Suite 4B Downers Grove, IL 60516

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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ALI	AERIAL, REMOTE DISCONNECT											CONTRACT	NO. 6	6D79
SHEET 1	OF	1	SHEETS	STA	TO S	T A				71.1.7	NOTE FED A	ID DDO IECT		





### NOTES:

- 1. ALL WORK SHALL CONFORM TO THE COM ED BOOK OF "INFORMATION & REQUIREMENTS FOR THE SUPPLY OF ELECTRIC SERVICE."
- 2. ALL MATERIAL ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR "POWER PEDESTALS". THE HORIZONTAL SERVICE CONDUIT & WIRING FROM UTILITY POLE TO PEDESTAL, AND FROM PEDESTAL TO SIGN STRUCTURE SHALL BE PAID FOR SEPARATELY.

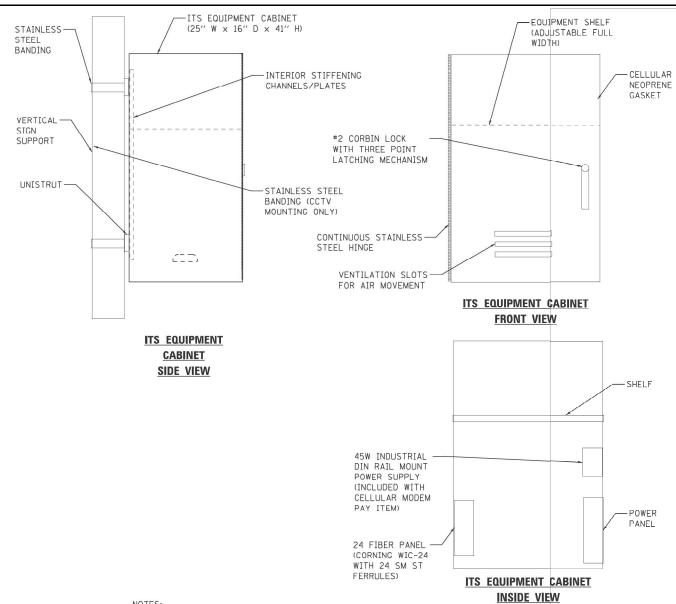
Δ	AMES Engineering, Inc.
	6330 Belmont Road, Suite 4B Downers Grove, IL 60516

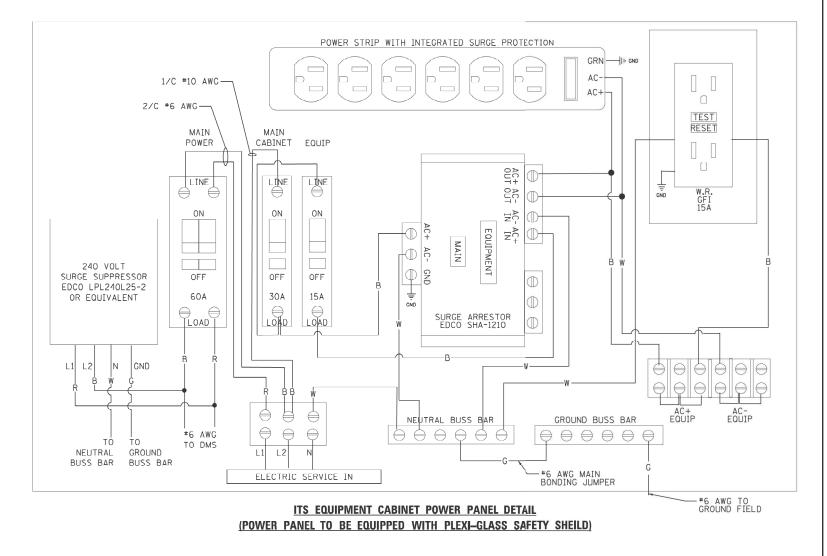
USER NAME = msomer	DESIGNED	-	MH / SH	REVISED -
	DRAWN	-	MD / SR	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED	-	BL / JR	REVISED -
PLOT DATE = 02/05/2025	DATE	-	01-31-2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

DO	WED DE		. DETA		F.A.I RTE	SECTION			COUNTY	TOTAL SHEETS	SHEE NO.
POV	WER PE	EDESTA	LDEIA	ILS	80	D3 OVD MESSAGE S	SG <b>-</b> 2	024	GRUNDY	24	11
									CONTRAC	T NO. 66F	P73
SHEET	OF	SHEETS	STA.	TO STA.		ILLIN	NOIS	FED. AIC	PROJECT		





#### NOTES:

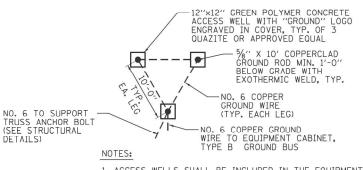
- 1. THE ITS EQUIPMENT CABINET SHALL BE A NEMA TYPE 3R CABINET WITH MINIMUM OUTSIDE DIMENSIONS OF 41" (H) X 25" (W) X 18" (D). THE CABINET SHALL BE CONSTRUCTED FROM .125" THICK ALUMINUM AND HAVE A NATURAL FINISH.
- 2. THE CABINET SHALL BE FURNISHED WITH ONE ADJUSTABLE HEIGHT SHELF, THREE POSITION DOOR 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 CONTRACTOR SHALL INSTALL ALL DIN RAIL MOUNTED EQUIPMENT IN THE CABINET.
- 5. ALL ITEMS SHOWN ON THIS DRAWING SHALL BE INCLUDED IN THE EQUIPMENT CABINET PAY ITEM (INCLUDING ALL UNISTRUT, MTG. BRACKETS, CONDUIT/WIRE
- 6. ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION. OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 2-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS, NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS, INTERNAL CABINET WIRING SHALL BE IDENTIFIED AS INDICATED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END, IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.

- 7. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED: R = REDBL = BLUEW = WHITEB = BLACKY = YELLOWG = GREEN
- 8. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- 9. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE \*12AWG STRANDED UNLESS OTHERWISE INDICATED.
- 10. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

SCALE:

11. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".





80

1. ACCESS WELLS SHALL BE INCLUDED IN THE EQUIPMENT CABINET PAY ITEM.

# **GROUND FIELD DETAIL (TYP.)**

AMES Engineering, Inc. CONSULTING ENGINEERS
6330 Belmont Road, Suite 4B
Downers Grove, IL 60516

DESIGNED - MH/SH REVISED DRAWN -MD / SR REVISED CHECKED -BL/JR REVISED PLOT DATE = 02/05/2025 DATE 01-31-2025 REVISED

STATE OF ILLINOIS

POLE MOUNTED EQUIPMENT CABINET DETAIL SHEETS STA.

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D3 OVD MESSAGE SG - 2024	GRUNDY	24	12
	CONTRACT	NO. 66	73
ILLINOIS FED AIR	D PROJECT		

**DEPARTMENT OF TRANSPORTATION** 

ComEd. powering lives **COMMERCIAL & INDUSTRIAL** LOAD INFORMATION
FORM TO BE COMPLETED BY QUALIFIED ELECTRICAL PROFESSIONAL

MOTOR INFORMATION

Description	Qty	Voltage	Size (kVA)	Туре	Full Load Amps	P.F. at Peak	Starter FLA Coefficient	Welds Per Minute	Cycles Per Weld	Hour Pe Day Use
					-					

**COMMERCIAL & INDUSTRIAL** PROJECT INFORMATION

Project name: DOT Digital Message Sign		Site address: I-80 West Bound at MM 119.5				
Contact name:		City: Minooka	Zip code: 60447			
Contact email:	Contact phone:	Total number of service entrance locations:				
Electrical permit #:	Date of groundbreaking:	Total number of switches (Points of Service):				
Date ComEd can begin work:	Preferred service date:	Total number of meters requested:				
Legal name of entity (electric con		Tua I.D 371354673	Existing ComEd Account #, 0993594866			
Corporation Partners		Other: State of Illinois	033334000			
PRINCIPLE(S) to sign contracts fo	r service, easements, etc.					
Property owner.		Phone.				
201 IOA		1000				

MAILING ADDRESS FOR CONTRACTS Address: 700 East Norris Drive

MAILING ADDRESS FOR ELECTRIC BI	LLS				
Company: IL Dept of Transportation Dist. 3	Email:	Address: 700 East Norris Drive			
Phone:	Fax:	City: Ottawa	State:	Zip code: 61350	

**COMMERCIAL & INDUSTRIAL** 

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an Evelve Company

ComEd.

Consed. powering lives

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PROJECT INFORMATION

PROJECT CONTACTS						
Consulting engineer: Mohammed Hyder		Firm name: AMES Engineering Inc.				
Email: Mohammed.Hyder@ani	esengineeringinc.com	Address. 6330 Belmont Road, Sui	le 4B			
Phone: (630) 737-1987	Fax:	City: Downers Grove	State:	Zip code: 60516		
General contractor:		Firm name:				
Email:		Address:				
Phone:	Fax:	City:	State:	Zip code		
Electrical contractor:		Firm name:				
Email		Address:				
Phone:	Fax:	City:	State:	Zip code		
Other:	Role:	Firm name:				
Email		Address:				
Phone:	Fax:	City:	State:	Zip code:		

The following documents may be required (items are required for non overhead services)

■ Plat of Survey with legal description of property (for easement, if required)
■ Site Plan showing building relative to property lines—mark service entrance locatio
■ Civil drawings (showing water, sewer, gas, phone, electric, pavement, grading, etc.)
■ Complete electrical drawings and/or load detail sheets

	INFORMATION PROVIDED BY								
Date:		Print name:		Signature:					
07/02/2024		Mohammed Hyder	Digitally sloned by M Hyder Date: 2024.07.02 10:24:37 -06'00'	M Hyder					
Ľ			Diolativ sloned by M Hyder Date: 2024.07.02 10:24:37 -00'00'						

Zip code: 60450 Total square feet
Total square feet
r Lighting
IV 3-phase 4-wire rial equipment & approva
cial equip

		100		170	
Switch rating (%) 80	Number of accordary act	Conductor ma	Conductor material:		
LOAD INFORMATION (	all loads should be shown in kW, with a po	wer factor of .85 used for co	nversion from KVA)		
Category	Description	1-Phase Connected Load	1-Phase Diversified Capacity*	3-Phase Connected Load	3-Phase Diversified Capacity*
Lighting					
Appliances					
Receptacle					
Process Heat					
Water Heat					
Motors**					
HVAC/Heating					
HVAC/Cooling					
Ventilation-All Year					
Other	Digital Message Sign	12			
Total		12	0	0	0

\*Diversity connected load per Chicago Electrical Code in the City of Chicago and applicable areas, diversity per National Electrical Code in all other areas.

\*\*Please provide mechanical switchboard schools!\*\*

ComEd. powering lives

**COMMERCIAL & INDUSTRIAL LOAD INFORMATION** FORM TO BE COMPLETED BY QUALIFIED ELECTRICAL PROFESSIONAL

Equipment Гуре	Qty	Voltage	HP	Starting Amps	Full Load Amps	Starter Type	Starter FLA Coefficient	# of Starts Per Day	# of Starts Per Hour
						-			

Description	Qty	Voltage	Size (kVA)	Type	Full Load Amps	P.F. at Peak	Starter FLA Coefficient	Welds Per Minute	Cycles Per Weld	Hour Per Day Use

**COMMERCIAL & INDUSTRIAL PROJECT INFORMATION** 

SITE INFORMATION						
Project name: IDOT Digital Message Sign		Site address: I-80 West Bound at MM 10	8.5			
Contact name.		Morris Zip code: 60450				
Contact email:	Contact phone:	Total number of service entrance locations:				
Electrical permit #:	Date of groundbreaking:	Total number of switches (Points of Service):				
Date ComEd can begin work:	Preferred service date:	Total number of meters requ	ested:			
		·				
Legal name of entity (electric consultinois Department of Transports		Tax I.D.: Existing ComEd Account #: 371354673 9848754936				
Corporation Partnershi	107.000	Other: State of Illinois	984875493	0		
Corporation Partnershi	b Dane Liobinetor 5	Other.	_			
PRINCIPLE(S) to sign contracts for s	service, easements, etc.					
Property owner:		Phone:				
Building owner:		Phone:				
		Phone:				
Building manager:		r none.				
	<b>S</b>	FROMV.				
MAILING ADDRESS FOR CONTRACTS Company:	S Email:	Address: 700 East Norris Drive				
MAILING ADDRESS FOR CONTRACTS Company:		Address	State:	Zip code: 61350		
MAILING ADDRESS FOR CONTRACTS Company: IL Dept of Transportation Dist. 3 Phone:	Email: Fax:	Address: 700 East Norris Drive City:				
MAILING ADDRESS FOR CONTRACTS Company: IL Dept of Transportation Dist. 3 Phone:  MAILING ADDRESS FOR ELECTRIC B Company:	Email: Fax:  ILLS Email:	Address: 700 East Norris Drive City:				
MAILING ADDRESS FOR CONTRACTS Company: IL Dept of Transportation Dist. 3 Phone: MAILING ADDRESS FOR ELECTRIC B	Email: Fax:  ILLS Email:	Address: 700 East Norris Drive City: Ollowa				

COMMERCIAL & INDUSTRIAL Page 3

**COMMERCIAL & INDUSTRIAL** PROJECT INFORMATION

onsulting engineer: ohammed Hyder  meni. ohammed Hyder@amesengineeringinc.com hone:		te 4B				
ohammed.Hyder@amesengineeringinc.com hone: Fax:	6330 Belmont Road, Sui	te 4B				
		Address. 6330 Belmont Road, Suite 4B				
30) /3/-190/	City: Downers Grove	Zip code: 60516				
eneral contractor:	Firm name:					
mail:	Address:	Address:				
hone: Fax:	City:	State:	Zip code:			
lectrical contractor:	Firm name:					
mail:	Address.					
hone: Fax:	City:	State:	Zip code:			
ther. Role:	Firm name:	'				
mail:	Address:					
hone: Fax:	City:	State:	Zip code:			

Signature.		Print name:	Date:
M Hyder	Digitally signed by M Hyder Date: 2024.07.02 10:24:37 -05'00'	Mohammed Hyder	07/02/2024

AMES Engineering, Inc.

DESIGNED - MH / SH JSER NAME = msomer REVISED -DRAWN - MD/SR REVISED -CHECKED - BL/JR REVISED -PLOT DATE = 02/05/2025 DATE - 01-31-2025 REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  DMS ELECTRIC SERVICE COORDINATION " FOR INFORMATION ONLY" SHEET OF SHEETS STA.

SECTION COUNTY 80 D3 OVD MESSAGE SG - 2024 GRUNDY 24 13 CONTRACT NO. 66P73

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

clearance to sign, walkway support or truss.

#### TYPICAL ELEVATION Looking in Direction of Traffic

Sign support structures may be subject to damaging vibrations and oscillations when 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

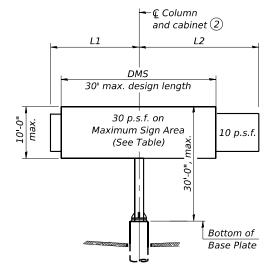
Structure Number	Station	Total Butterfly Length (L)	Elev. A1	Elev. A2	Dim. D1	Dim. D2	Ds	Total Sign Area	Access door and walkway location (Right or Left end)
3F032I080L119.5	1578+19	38'-0"	553.26	-	22'-0"	-	10'-0"	300	Left
3F032I080L108.5	1033+24	38'-0"	564.84	-	22'-0"	-	10'-0"	300	Left

#### TOTAL BILL OF MATERIAL

	=	
ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE III-F-A	Foot	76
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	16
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	18.6

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

Mamimum 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.

- 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.
- 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

fc = 3,500 p.s.i.

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

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

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W\* (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 Concrete Sealer in accordance with the Standard Specifications.

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

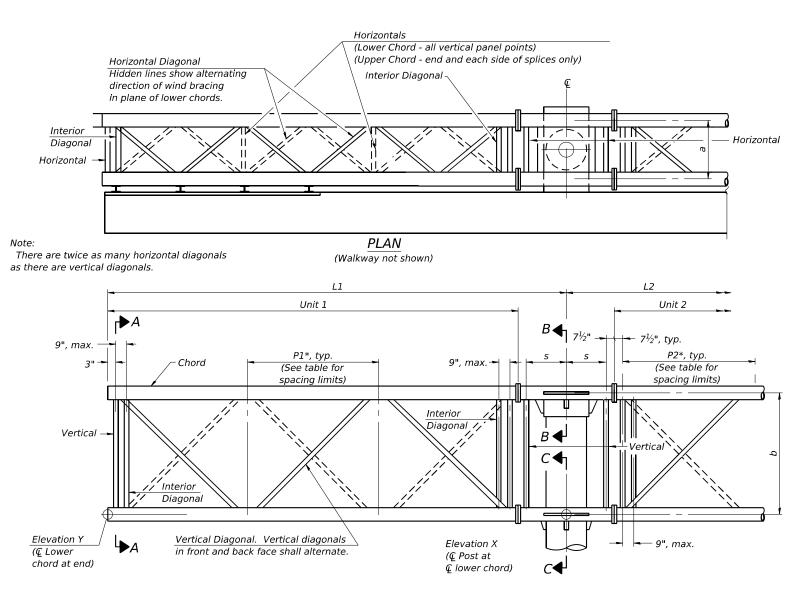
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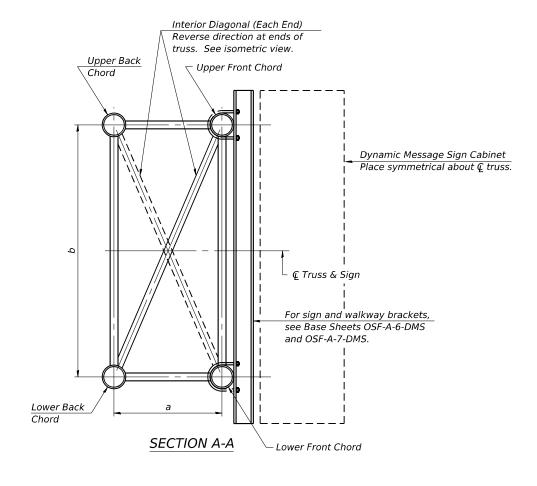
5-15-2023

KUHN & TRELLO	USER NAME = myoung	DESIGNED - PDA	REVISED -
CONSULTING ENGINEERS A Limited Liability Company 109 N. 7th Street, 3rd Floor		CHECKED - MJT	REVISED -
	PLOT SCALE = \$SCALE\$	DRAWN - PDA	REVISED -
Phone: 217-679-0644 Professional Design Firm No. 184-006516	PLOT DATE = 1/31/2025	CHECKED - MJT	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  **BUTTERFLY SIGN STRUCTURES - ALTERNATE PLAN & ELEVATION** FOR DMS - ALUMINUM TRUSS & STEEL POST SHEET 1 OF 10 SHEETS

COUNTY GRUNDY 24 14 80 D3 OVD MESSAGE SG - 2024 CONTRACT NO. 66P73





#### **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)*	Ch	Low. ord Wall	Vertical Ho	rizontals;
III-F-A	36"	84"	21"	48" min. to 66" max.	7"	3/8"	3½"	3/8"

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

	T				1			1
Structure Number	Station	Truss Type	L1	L2	Number of Panels Unit 1	Panel Length (P1)*	Number of Panels Unit 2	Panel Length (P2)*
3F032I080L119.5	1578+19	III-F-A	22'-6"	15'-6"	4	4'-93/4"	3	4'-1"
3F032I080L108.5	1033+24	III-F-A	22'-6"	15'-6"	4	4'-9 <sup>3</sup> / <sub>4</sub> "	3	4'-1"

OSF-A-2-DMS

5-15-2023

-	KUHN & TRELLO	USER NAME = myoung	DESIGNED - PDA	REVISED -
	CONSULTING ENGINEERS A Limited Liability Company 109 N. 7th Street, 3rd Floor		CHECKED - MJT	REVISED -
2		PLOT SCALE = \$SCALE\$	DRAWN - PDA	REVISED -
1	Phone: 217-679-0044 Professional Design Firm No. 184-006516	PLOT DATE = 1/31/2025	CHECKED - MJT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET 2 OF 10 SHEETS

F.A.I. RTE. SECTION RESEARCH RESEARCH RESEARCH RESEARCH RTE. SECTION RESEARCH RESEA

 
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS NO.

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 D3 OVD MESSAGE SG - 2024
 GRUNDY
 24
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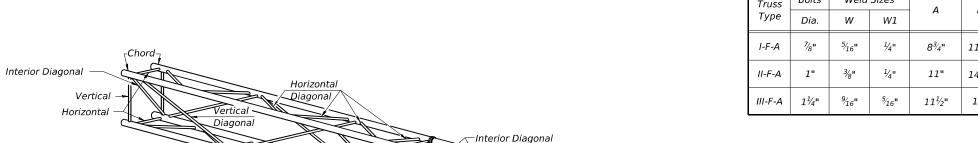
 CONTRACT NO. 66P73

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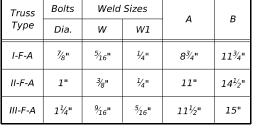
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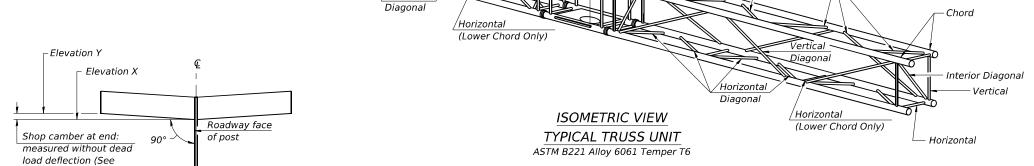
#### SHOP CAMBER TABLE

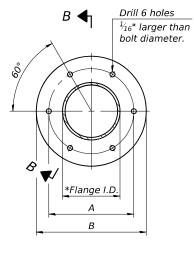
Unit Length L1 or L2	Shop Camber at End
15'	1½"
16'-17'	13/4"
18'-20'	2"
21'-22'	21/4"
23'-25'	2½"
26'-27'	23/4"
28'-30'	3"
31'-32'	31/4"
33'-35'	3½"



Horizontal Diagonal



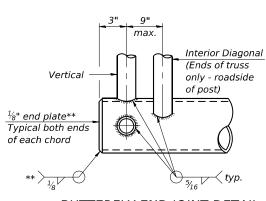




#### SPLICING FLANGE

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

\* To fit O.D. of Chord with maximum gap of  $\frac{1}{16}$ ".



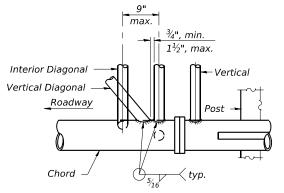
elevation of typical unit)

CAMBER DIAGRAM

(For Fabrication Only)

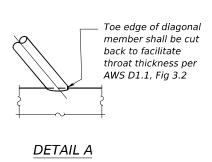
# BUTTERFLY END JOINT DETAIL

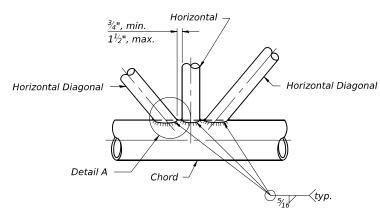
\*\* Contractor may alternatively use standard aluminum drive-fit cap to close ends.  $\frac{1}{2}$ " Ø Drain hole in end plate / drive-fit сар.



/Horizontal

POST END JOINT DETAIL





TRUSS INTERIOR JOINT DETAIL

See Table & Note 1See Table High strength bolts with locknuts or (if members interfere) threaded studs with two locknuts. Use 1½"-stainless steel washers under head and nut. See table. SECTION B-B

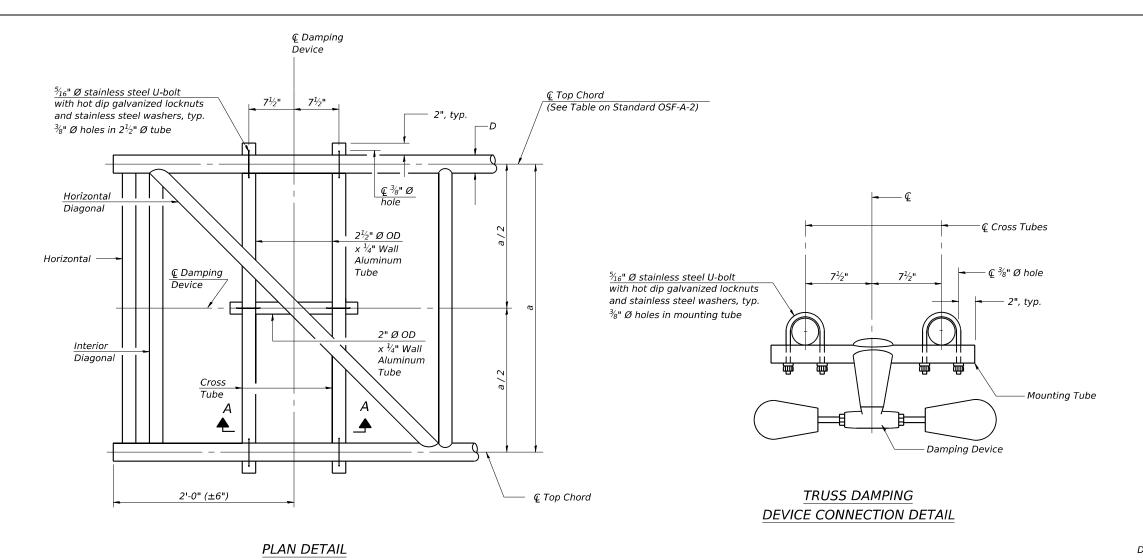
> (1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining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

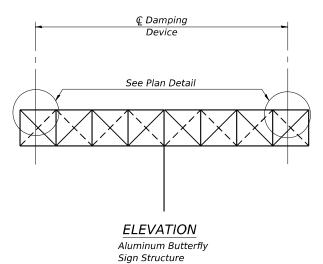
OSF-A-2A

5-15-2023

⊴:	KUHN & TRELLO	U
Ř	CONSULTING ENGINEERS A Limited Liability Company	
ž	109 N. 7th Street, 3rd Floor Springfield, IL 62701 Phone: 227:679-0044	Ρ
≝	Professional Design Firm No. 184-006-16	PI

L O	USER NAME = myoung	DESIGNED - PDA	REVISED -
ERS pany		CHECKED - MJT	REVISED -
1001	PLOT SCALE = \$SCALE\$	DRAWN - PDA	REVISED -
4 5 1 6	PLOT DATE = 1/31/2025	CHECKED - MJT	REVISED -





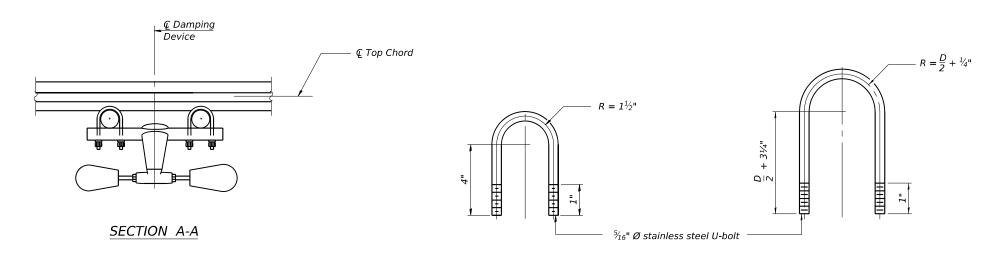
#### GENERAL NOTES

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



DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL
(Typical)

REVISED

REVISED

REVISED

REVISED

TOP CHORD TO CROSS TUBE

U-BOLT DETAIL

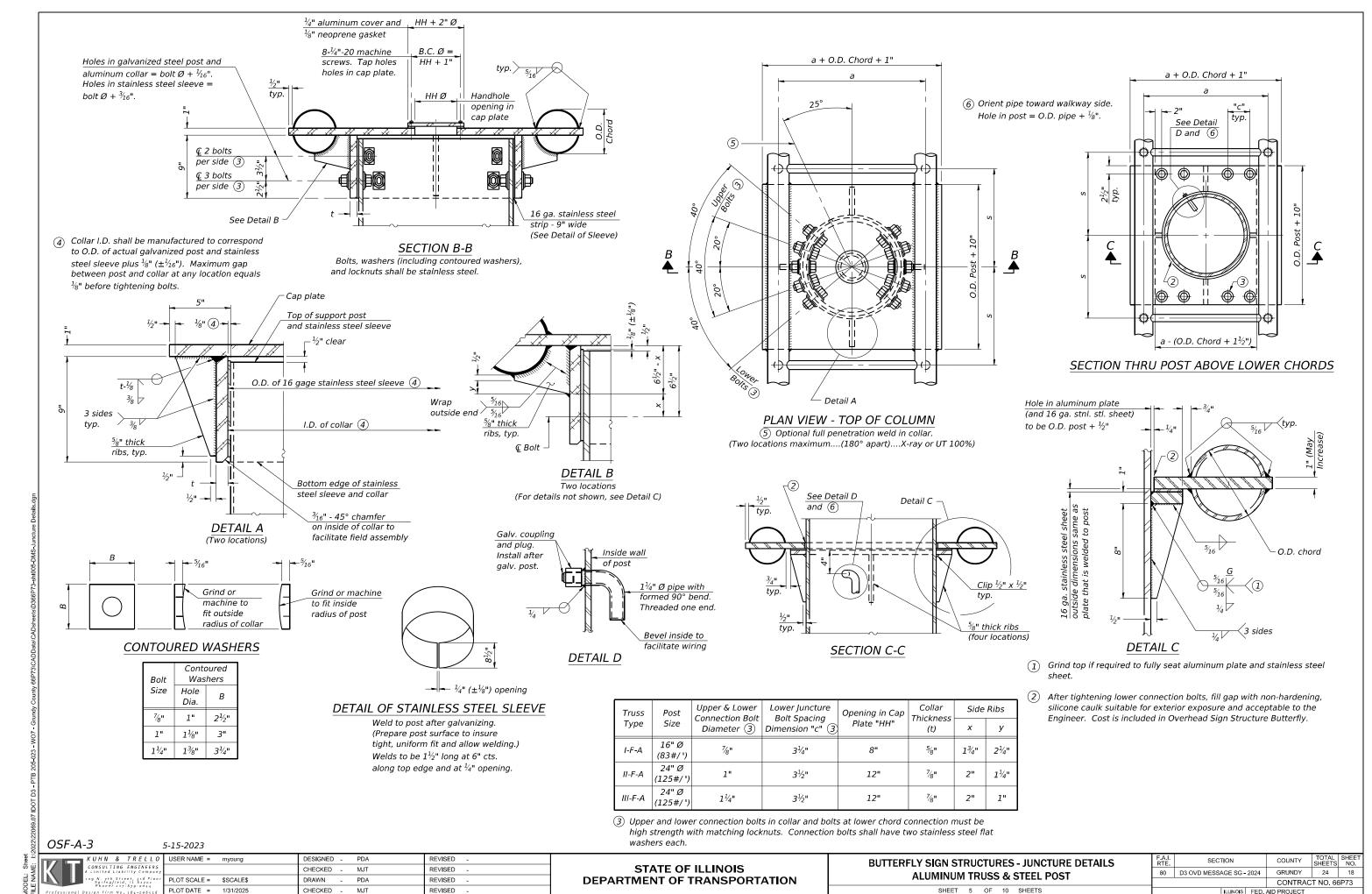
(Typical)

OSF-A-D

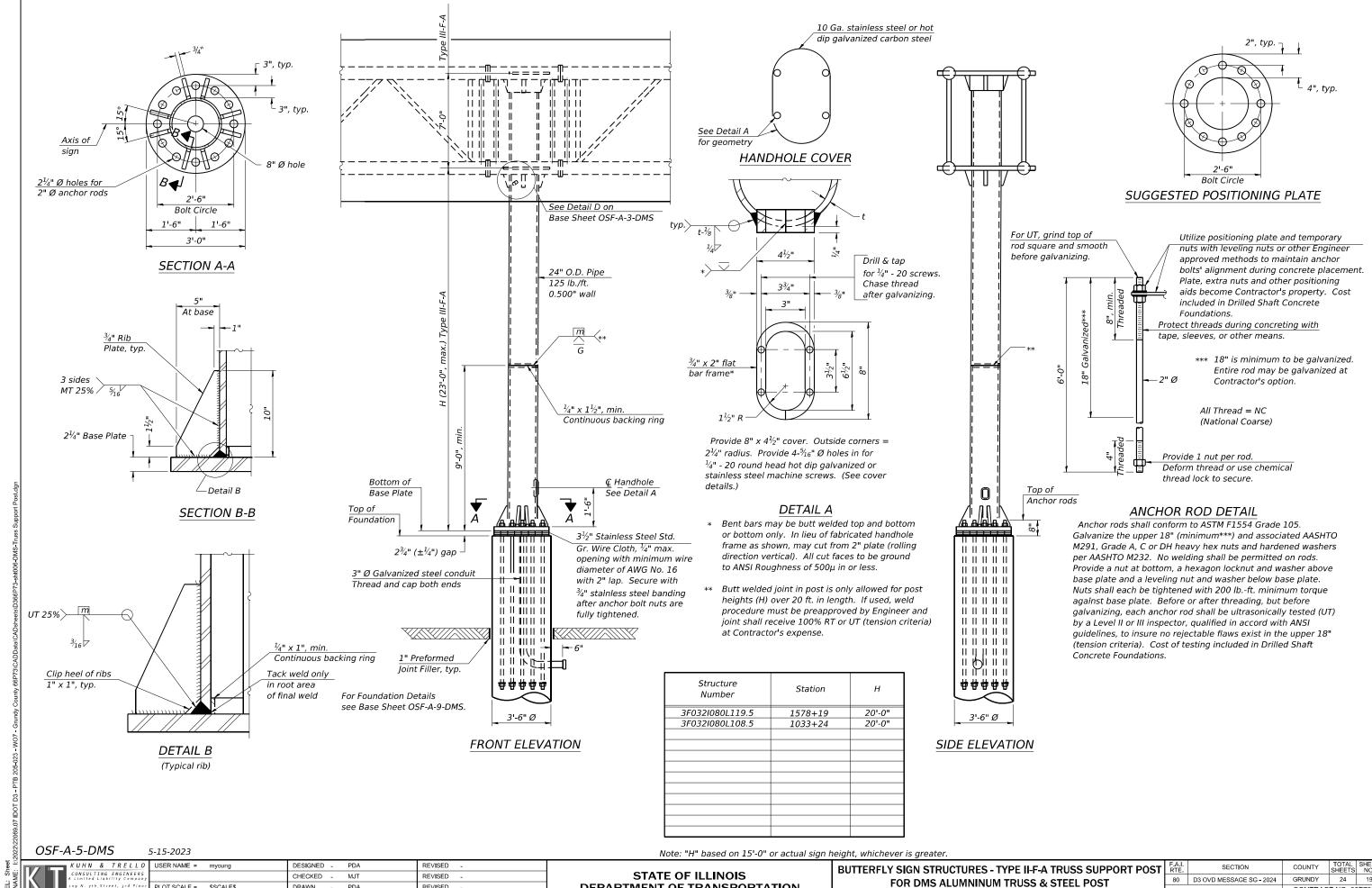
5-15-2023

KUHN & TRELLO	USER NAME = myoung	DESIGNED -	PDA
CONSULTING ENGINEERS A Limited Liability Company		CHECKED -	MJT
109 N. 7th Street, 3rd Floor Springfield, IL 62701 Phone: 217-679-0044	PLOT SCALE = \$SCALE\$	DRAWN -	PDA
Phone: 217-679-0044 Professional Design Firm No. 184-006516	PLOT DATE = 1/31/2025	CHECKED -	MJT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

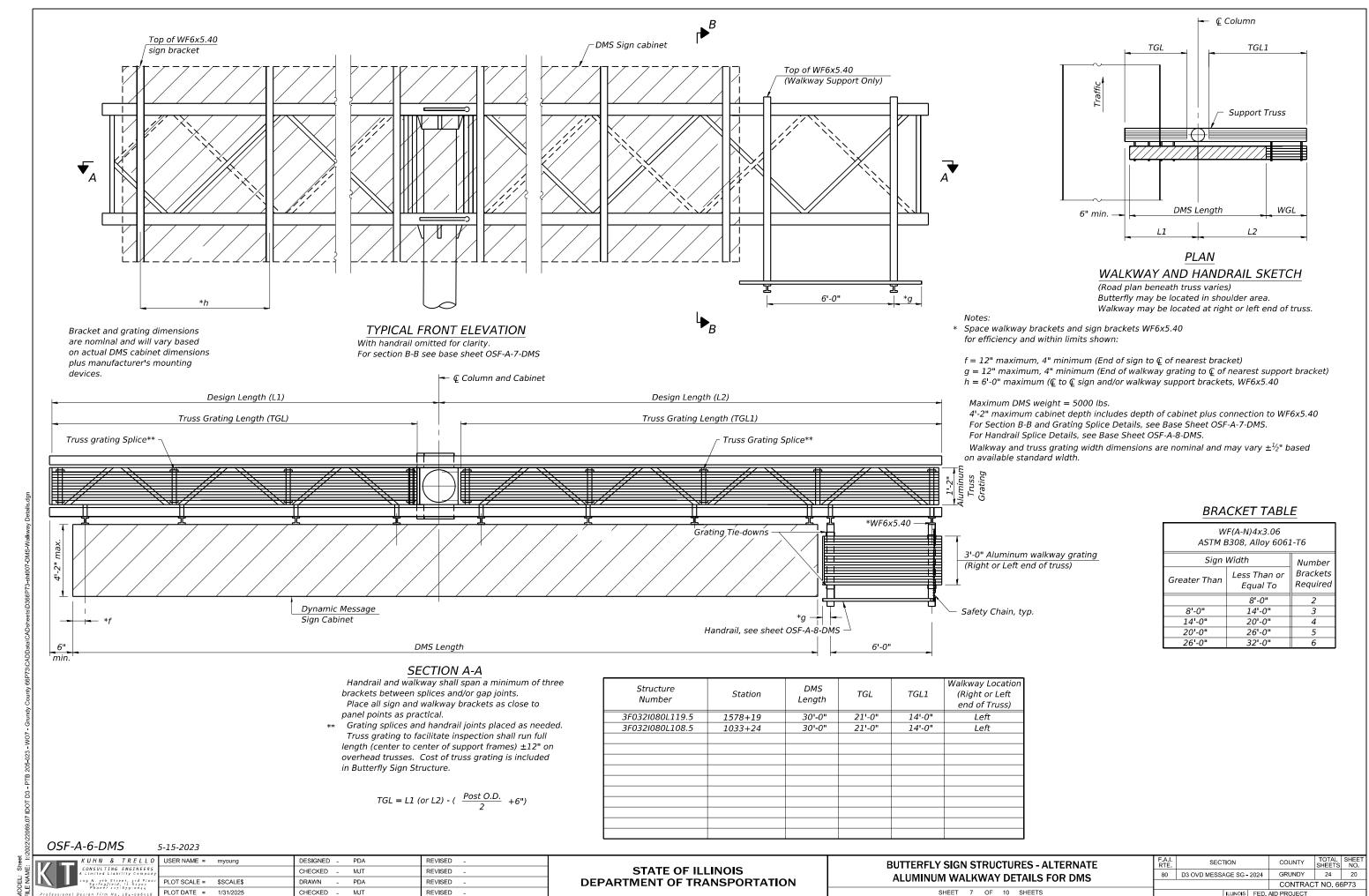


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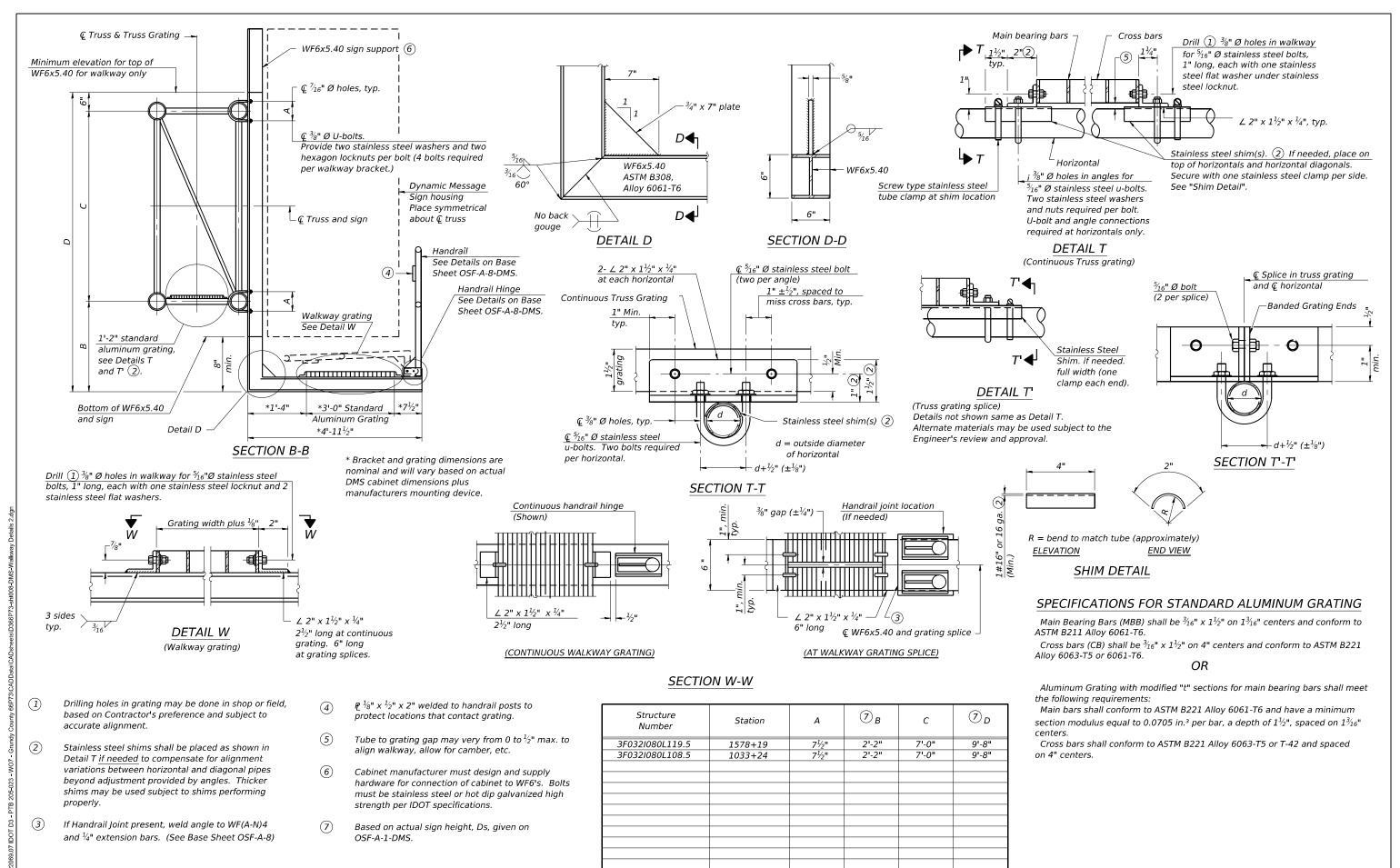


PLOT SCALE = \$SCALE\$ DRAWN REVISED PLOT DATE = 1/31/2025 CHECKED -REVISED **DEPARTMENT OF TRANSPORTATION** 

FOR DMS ALUMNINUM TRUSS & STEEL POST CONTRACT NO. 66P73 SHEET 6 OF 10 SHEETS



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OSF-A-7-DMS

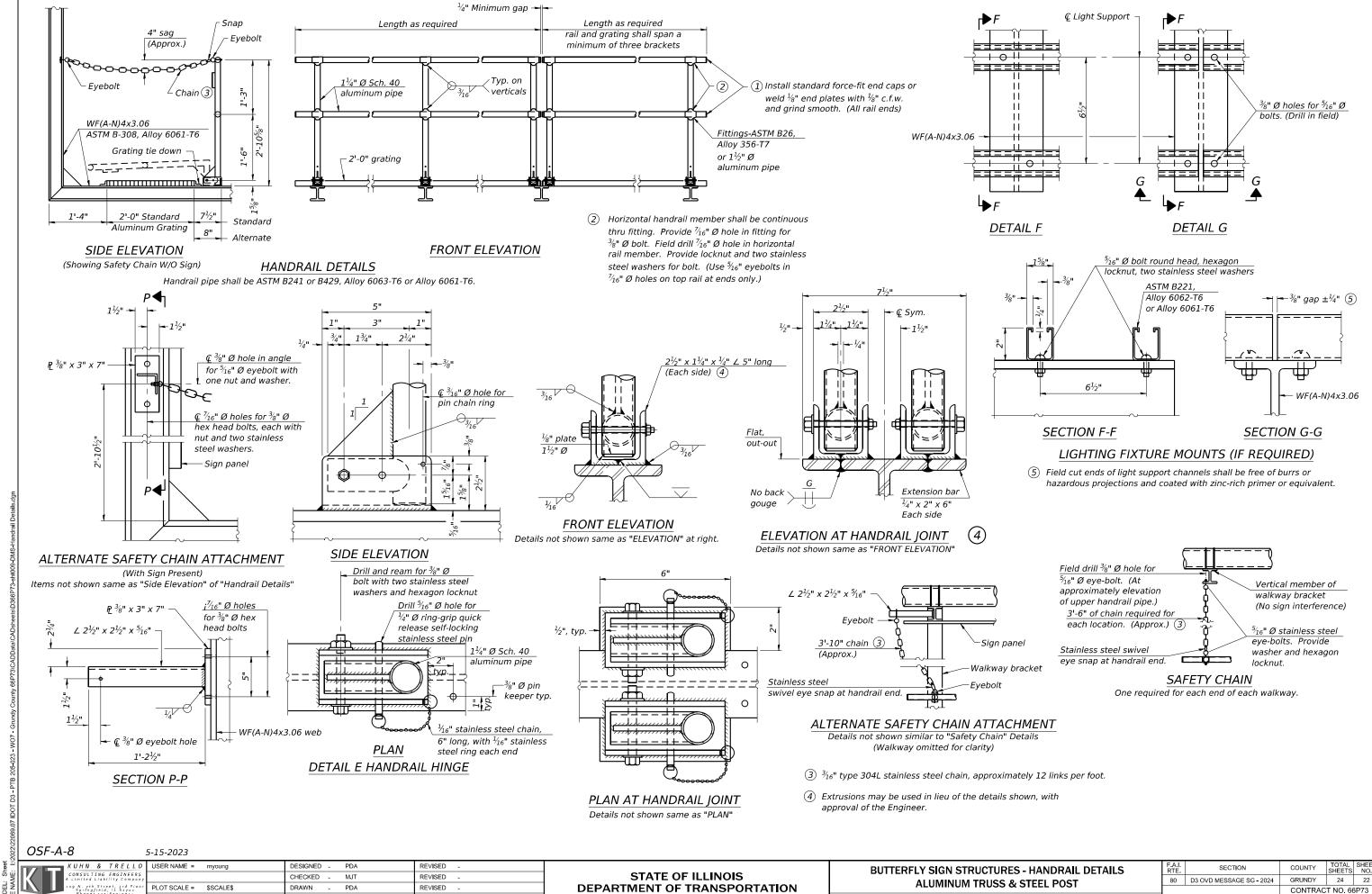
5-15-2023

KUHN & TRELLO USER NAME = myoung DESIGNED -PDA REVISED CHECKED -MJT REVISED PLOT SCALE = \$SCALE\$ DRAWN PDA REVISED PLOT DATE = 1/31/2025 CHECKED -REVISED MJT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET 8 OF 10 SHEETS



SHEET 9 OF 10 SHEETS

1/31/2025

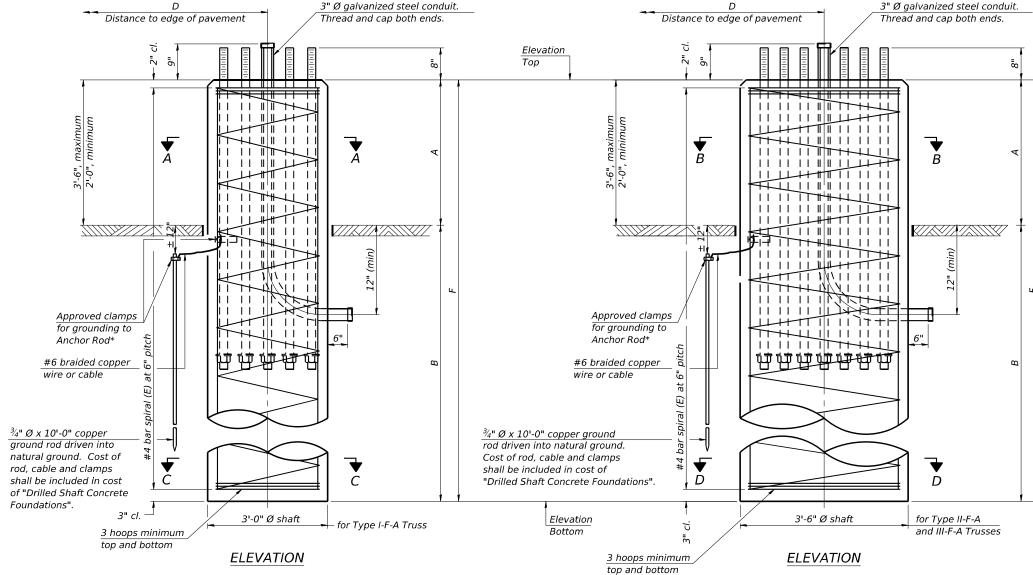
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PLOT DATE = 1/31/2025

CHECKED -

MJT

REVISED



Truss

Туре

I-F-A

II-F-A

III-F-A

Post Base

Sheet

OSF-A-4

OSF-A-5

OSF-A-5

FOUNDATION DESIGN TABLE Anchor Rods Maximum Cantilever Total Sign Area Diameter Depth Circle Diameter No. Length (ft) (sq ft) (in) 200 3.0 17'-6" 22 30 400 3.5 22'-0" 12 30 35 400 3.5 24'-0" 12

		/
10 #0 v/F) bars		
10-#9 v(E) bars equally spaced		Anchor Rod
		Circle Diameter
1	• 0	<u> </u>
T.	We will be a second	# <del></del>
\		
`		<b>/</b>
		* For details of anchor rods
	Т	and positioning templates see
	SECTION A-A	Truss Support Post Base Sheets OSF-A-4 and OSF-A-5.
	3'-0" Ø shaft	Sheets Osl A 4 and Osl A 3.
		∕−#4 bar spiral (E)
		" I bul spriar (2)
12-#8 v(E) bars		
equally spaced		Anchor Rod
<b>/</b> : / */		Circle Diameter
<b>1</b> 1/:	<u></u> _^	
1 1	<b>Q</b> * ~ ~	<b>_</b>
\ . \\*\ <del>\</del>		= ## +
\		<i>•</i> <b>1 1</b>
( )	$\mathcal{L}$	
_		* For details of anchor rods
311 -1	$\setminus egin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	and positioning templates see Truss Support Post
3" cl/		Base Sheets OSF-A-4 and
	SECTION B-B	
3" cl. ¬	3'-6" Ø shaft	
	3 0 D Share	
	10-#9 v(i	F) hars
	equally s	paced
	<b>,</b> / /	
	_ 📥	
	·   <del>-                                   </del>	spiral (E)
	<b>y</b> /	
ı		#4 bar spiral (E)
SECTION C-	C	
3'-0" Ø shaft		
		\\ \tag{\tau} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
	\	•
		] ]
		· · · · · · · · · · · · · · · · · · ·
	\ <b>X</b>	12-#8 v(E) bars
		equally spaced
3"	cl	
	SECTIO	, ארט ט

3'-6" Ø shaft

\_#4 bar spiral (E)

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

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

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

FOUNDATION DATA TABLE									
Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	А	В	F	Class DS Concrete Cubic Yards
3F032I080L119.5	1578+19	III-F-A	3'-6"	554.45	528.45	2'-0"	24'-0"	26'-0"	9.3
3F032I080L108.5	1033+24	III-F-A	3'-6"	564.66	538.66	2'-0"	24'-0"	26'-0"	9.3

OSF-A-9

NOTES:

5-15-2023

KUHN & TRELLO USE	SER NAME = myoung	DESIGNED - PDA	REVISED -
CONSULTING ENGINEERS A Limited Liability Company 109 N. 7th Street, 3rd Floor		CHECKED - MJT	REVISED -
	LOT SCALE = \$SCALE\$	DRAWN - PDA	REVISED -
Phone: 217.679.0044 Professional Design Firm No. 184-006516 PLO	LOT DATE = 1/31/2025	CHECKED - MJT	REVISED -
110.110.000			

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

SECTION COUNTY **BUTTERFLY SIGN STRUCTURES - DRILLED SHAFT** 80 D3 OVD MESSAGE SG - 2024 GRUNDY 24 23 **ALUMINUM TRUSS & STEEL POST** CONTRACT NO. 66P73 SHEET 10 OF 10 SHEETS

Illinois Department of Transportation					OIL BORING LO		Page <u>1</u> of <u>1</u>			
<b>ROUTE</b> FAI 80 (I-80)	DESC	RIPTION	1	I-8	0 in Grundy County - MP 109.2	L	OGG	D BY	Larry	Myers
SECTION D3 OVD MESSAGE S	G - 2024	LOCAT	ION	NW 1/	4, <b>SEC.</b> 31, <b>TWP.</b> 34N, <b>RNG.</b> 7E, 3 <sup>rd</sup> 1de 41.37824, <b>Longitude</b> -88.47925	PM,				
COUNTY Grundy DF	RILLING M	IETHOD			llow Stem Auger HAMMER			ME A	utoma	tic
STRUCT. NO.   Station   1   Station   1033+21   Offset   48.0 ft.Lt.	_	L O W	U C S	M O I S T	Surface Water Elev. Stream Bed Elev.  Groundwater Elev.: First Encounter  Dry	ft	D E P T H	B L O W S	U C S Qu	M O I S T
Offset 48.0 ft Lt.  Ground Surface Elev. 565.50	ft (fi		(tsf)	(%)	Upon Completion Dry After Hrs.	ft	(ft)	(/6")	(tsf)	(%)
Cored Concrete Shoulder, Augered Black Silty Clay Loam Fill					Hard Gray Silty Loam Till, Potential Cobble/Boulder (continued)		_	6 12 18	>4.5 P	10
Very Stiff Gray and Brown Silty Clay Loess	563.00	3 3	2.0	22	Hard Black and Gray Silty Clay, Silty Clay Loam Till Interbedded	543.5	0	9	7.1	16
	561.00	3	Р				_	22	S	
Loose Brown Loamy Fine Sand to Course Gravel	560.00	-5 5					-25	6		
Very Stiff to Hard Brown and Gray Silty Clay Loam Till		6 3	3.5 P	16			$\equiv$	18 21	8.1 S	14
		3 5 6	4.1 S	18			-	6 12 18	7.4 S	14
Lland Cray Cilly Clay Lagra Till	556.00	10				535.5	0 20			
Hard Gray Silty Clay Loam Till		6 7 8	4.6 S	16	Hard Gray Clay and Silt Layered With Some Silty Clay	333.3	0 -30	5 10 18	7.1 S	19
5 100 100 100 100 100 100 100 100 100 10	_	3 4	4.2	12				6	6.9	15
	1	5	S				-35	16	S	
OVASE DOM	-	5 6	4.4 S	15		529.0	0	6 12 20	7.4 S	14
Hard Gray Silty Loam Till, Potential Cobble/Boulder	548.50	9		40	End of Boring	-20.0				
Cobble/Boulder at 18'	_	13 16	>4.5 P	13			_			

Page <u>1</u> of <u>1</u> Illinois Department of Transportation **SOIL BORING LOG** Date 8/28/24 LOGGED BY Larry Myers ROUTE FAI 80 (I-80) DESCRIPTION I-80 in Grundy County - MP 119.2 
 SECTION
 D3 OVD MESSAGE SG - 2024
 LOCATION
 NE 1/4, SEC. 4, TWP. 34N, RNG. 8E, 3<sup>rd</sup> PM, Latitude
 A1.4548, Longitude -88.31688
 COUNTY Grundy DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic STRUCT. NO. Surface Water Elev. E L C
P O S
T W
H S Qu E L C P O S Stream Bed Elev. 530.4 ft ▼ H S Qu T BORING NO. Groundwater Elev.: 1578+19 First Encounter Station 
 Offset
 55.1 ft Lt.

 Ground Surface Elev.
 552.92
 Upon Completion
After \_\_\_\_ Hrs. 529.9 **ft**∑ ft (ft) (/6") (tsf) (%) (ft) (/6") (tsf) (%) Augered Black Silty Clay Loam, Black Silty Clay Loam Fill Medium Brown Fine Sand to Fine 10 Limestone Gravel and Oversize Fill from 1' to 3.5' 530.92 Medium Gray Fine Sand to Fine 547.92 -5 527.92 -25 Very Stiff Gray Silty Clay Loam Till Fill Dense Gray Fine Sand to Course 4 2.0 16 Gravel with Some Sand Layers - Free Water 10 36 545.92 Very Stiff to Hard Brown Clay/Loam Till with Large Gravel Pieces 12 3.0 13 10 11 4.0 11 18 7 3.5 12 15 538.42 Medium Brown Fine Sand to Fine Gravel 10 30 516.42 End of Boring

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)

USER NAME = msomer	DESIGNED	-	MH / SH	REVISED	-
	DRAWN	-	MD / SR	REVISED	-
PLOT SCALE = \$SCALE\$	CHECKED	-	BL/JR	REVISED	-
PLOT DATE = 02/05/2025	DATE	-	01-31-2025	REVISED	-

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

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SCALE:

BBS, form 137 (Rev. 8-99)

				F.A.I RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
SOIL BORING LOGS			80	D3 OVD MESSAGE SG - 2024	GRUNDY	24	24			
							CONTRAC	T NO. 66	73	
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT				

BBS, form 137 (Rev. 8-99)

AMES Engineering, Inc.
CONSULTING ENGINEERS
6330 Belmont Road, Suite 4B
Downers Grove, IL 60516