09-19-14 LETTING ITEM 074

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	1
*EFFINGHAM, CUMBERLAND, CLARK & LAWRENCE	ILLINOIS	CONTRACT NO. 74643		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
SECTION D7 ITS 2014

FURNISH & ERECT OVERHEAD MESSAGE BOARD SIGN TRUSSES

VARIOUS COUNTIES

C-97-004-14

EFFINGHAM COUNTY LOCATION MAP
F.A.I. 70 ON SHEET NO. 6

EFFINGHAM COUNTY LOCATION MAP
F.A.I. 57 ON SHEET NO. 7

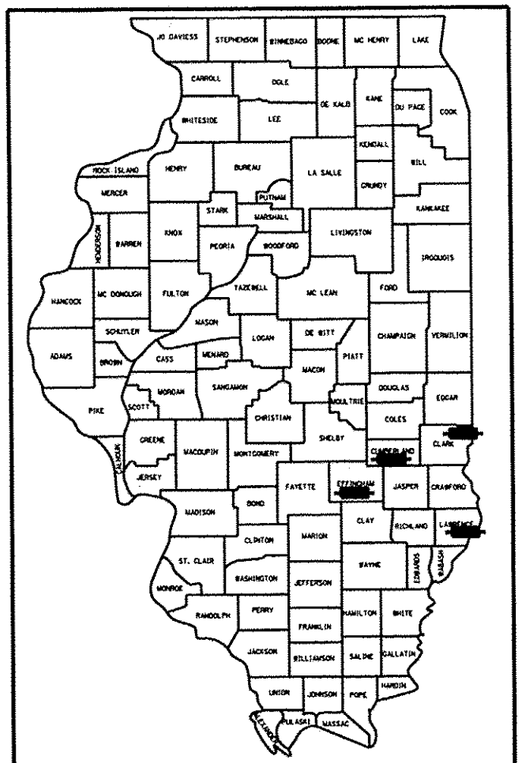
CUMBERLAND COUNTY LOCATION MAP
F.A.I. 57 ON SHEET NO. 8

CUMBERLAND COUNTY LOCATION MAP
F.A.I. 70 ON SHEET NO. 9

CLARK COUNTY LOCATION MAP
F.A.I. 70 ON SHEET NO. 10

LAWRENCE COUNTY LOCATION MAP
FAP 327 (US 50) ON SHEET NO. 11

D-97-002-14



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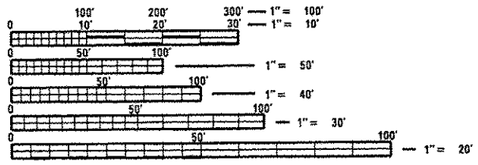

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811
CONTACT CSX RAILWAY FOR LOCATES WITHIN RR ROW

PROJECT ENGINEER MATT WEIDNER
PROJECT MANAGER DEWAYNE SEACHRIST

CONTRACT NO. 74643

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 22 20 14
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 27 20 14
John D. Baranzelli, P.E. /bs
ENGINEER OF DESIGN AND ENVIRONMENT

June 27 20 14
Omer Osman, P.E. /bs
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

HIGHWAY STANDARDS

001006	DECIMAL OF AN INCH AND OF A FOOT
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
635006-03	REFLECTOR AND TERMINAL MARKER REPLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATINS, 2L, 2W, DAY ONLY
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THEN 15' AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45MPH
701400-07	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701406-08	LANE CLOSURE FREEWAY/EXPRESSWAY DAY OPERATIONS ONLY
701428	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701606-09	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-09	URBAN LANE CLOSURE, MULTILANE, INTERSECTION
701901-03	TRAFFIC CONTROL DEVICES
814006-02	DOUBLE HANDHOLES
878001-09	CONCRETE FOUNDATION DETAILS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	2
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. 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.

2. 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.

3. EXISTING UTILITY LOCATION INFORMATION IS NOT SHOWN ON THE PLAN SHEETS. 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 VERIFY EXISTING FIELD CONDITIONS AND TERRIAN PRIOR TO COMMENCING WORK ON THE PROJECT.

4. 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.

5. ELECTRICAL WORK SHALL CONFORM WITH NATIONAL, STATE, AND LOCAL CODES.

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

7. 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. COMMUNICATION VAULTS SHALL BE INSTALLED AT 2000 FT INTERVALS, OR AS SPECIFIED BY THE ENGINEER.

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

9. REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, AND ISLANDS DAMAGED DUE TO CONTRACTOR OPERATIONS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE UNDERGROUND CONDUIT PAY ITEMS.

10. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 3 FT. MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES AND DIRECTIONAL DRILLING BELOW THE CSX TRANSPORTATION RAILWAY.

11. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT CASING FOR UNDERGROUND UTILITIES AND DIRECTIONAL DRILLING BELOW THE CSX TRANSPROATAION RAILWAY.

12. 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.

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

14. 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.

15. THE LOCATIONS FOR CAMERA POLES AND CONCRETE FOUNDATIONS ARE PROVIDED FOR REFERENCE ONLY. THE ENGINEER OF TRAFFIC SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.

16. SPLICING INTO EXISTING FIBER SHALL BE PAID FOR SEPERATELY IN ACCORDANCE WITH ARTICLE 109.05.

17. THE CONTRACTOR SHALL INSTALL A #12 (XLP-TYPE USE) TRACER WIRE ALONG WITH THE FIBER OPTIC CABLE FOR LOCATING PURPOSES. THE TRACER WIRE SHALL BE CONTINUOUS AND BE ACCESSIBLE FROM THE HANDHOLES. THE COST OF FURNISHING AND INSTALLING THE TRACER WIRE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE FIBER OPTIC CABLE IN CONDUIT PAY ITEM.

18. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED TO ATTACH THE CONDUITS AND JUNCTION BOXES TO THE STRUCTURE, INCLUDING, BUT NOT LIMITED TO UNI-STRUT, BRACKETS, SEAL-TITE, LBS, FITTINGS, HARDWARE, AND OTHER MISCELLANEOUS ITEMS. THESE ITEMS WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO STRUCTURE PAY ITEM.

19. CONDUIT ATTACHMENT BRACKETS SHALL BE INSTALLED AT 8 FT. SPACINGS (MAXIMUM) ON STRUCTURES.

20. ALL CONDUIT ATTACHMENT BRACKETS SHALL BE FULLY GALVANIZED AND ALL HARDWARE SHALL BE EITHER GALVANIZED OR STAINLESS STEEL.

21. THE CONTRACTOR SHALL FURNISH AND INSTALL EXPANSION/DEFLECTION COUPLINGS (OR OTHER EQUIPMENT AND METHODS AS APPROVED BY THE ENGINEER) FOR ALL BRIDGE JOINTS AS REQUIRED AND DIRECTED BY THE ENGINEER.

22. ALL SEAL-TITE CONDUIT SHALL BE NON-METALLIC AND SHALL INCLUDE CONNECTORS WITH INTERGRAL STAINLESS STEEL KELLUM GRIPS AT THE ENDS FOR INCREASED STRENGTH AND DURABILITY.

23. THE CONTRACTOR SHALL GROUND ALL EXPOSED STEEL CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN THE CONTINUITY OF THE GROUND SYSTEM WHEN USING NON-METALLIC BY INSTALLING A #6 GROUNDING CONDUCTOR INSIDE THE SEAL-TITE AND BONDING THIS WIRE TO THE GALVANIZED STEEL CONDUITS AT EACH END. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE GALVANIZED STEEL CONDUIT PAY ITEMS.

24. THE CONTRACTOR SHALL INSTALL THREAD LOCKER ON ALL ATTACHED CONDUIT THREADED CONNECTIONS TO PREVENT LOOSENING THROUGH VIBRATION.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING FIELD TILE AND UNDERDRAIN LOCATIONS. THE CONTRACTOR SHALL MAKE AN EFFORT TO MINIMIZE DAMAGE TO THESE FACILITIES DURING THE INSTALLATION OF CONDUIT AND COMMUNICATION VAULTS. IN THE EVENT THAT THESE FACILITIES ARE DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING REPAIRS TO THESE ITEMS TO RESTORE FUNCTIONALITY TO THE SATISFACTION OF THE ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR UNDERGROUND CONDUIT.

26. THE CONTRACTOR, AT HIS OPTION AND WITH THE APPROVAL OF THE DEPARTMENT, MAY ELECT TO DIRECTIONALLY BORE CONDUIT UNDER A STRUCTURE.

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MOWING, BRUSH AND SHRUB REMOVAL, AND SHALL DISPOSE OF ALL REMOVED ITEMS OFF OF THE JOB SITE. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICES FOR THE CONDUIT PAY ITEMS.

28. THE CONTRACTOR SHALL PLAN AND CONDUCT CONDUIT AND FIBER INSTALLATION OPERATIONS TO MINIMIZE THE NUMBER OF INTERSTATE AND ROAD LANE CLOSURES AND TO MINIMIZE TRAFFIC DISRUPTIONS AND DELAYS FOR THE MOTORING PUBLIC.

29. IF HANDHOLES ARE PLACED IN SIDEWALK THEY SHALL BE FLUSH, WITHOUT A VERTICAL DISCONTINUITY OF GREATER THEN A 1/4" OR LONGITUDINAL GAP GREATER THEN 1/2" AND SHALL NOT BE INSTALLED MONOLITHICALLY WITH THE SIDEWALK.

COMMITMENTS

1. ALL EXCAVATED MATERIAL SHALL REMAIN ON SITE OR BE DISPOSED AS OF DIRECTED BY THE ENGINEER ACCORDING TO ARTICAL 202.03.

2. ALL WORK REQUIRED FOR HORIZONTAL DIRECTIONAL DRILLING (HDD) UNDER CSX TRANSPORATION RAILWAY SHALL BE ACCORDING TO SECTION 107.12 OF THE STANDARD SPECIFICATIONS FOR PROTECTION OF RAILROAD TRAFFIC AND PROPERTY.

3. THE CONTRACTOR SHALL PROVIDE TO THE CSX TRANSPORTATION THE DRILLER'S QUALIFICATIONS, A HDD PLAN INCLUDING CONDUIT SPECIFICATIONS FOR CARRIER AND CASING, A DETAILED FRACTURE MITIGATION PLAN, A SURVEY GRID LINE FOR TRACKING AND FINAL DOCUMENTATION OF THE ACTUAL LOCATION OF THE CONDUIT PLACED DURING THE DRILLING OPERATION, AND ALL OTHER INFORMATION REQUIRED FOR APPROVAL BY THE RAILROAD.

4. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE AREA LOCATED INSIDE THE PERMANENT EASEMENT AND RIGHT OF WAY LIMITS SHOWN IN THE PLANS. EXCEPT FOR THE PROPOSED CONSTRUCTION OF THE REQUIRED GRID SURVEY LINE, THE MONITORING, TRACKING AND DOCUMENTATION OF THE HDD, THE CONTRACTOR'S OPERATIONS SHALL NOT INVOLVE ENCROACHMENT OF EQUIPMENT, BORE PITS, OR HANDHOLES ONTO THE CSX RAILROAD RIGHT OF WAY.

5. SOME EXISTING STRUCTURE INFORMATION USED IN THESE PLANS WERE DEVELOPED FROM OFFICE RECORDS OR OTHERWISE HISTORICAL DATA. FINAL PLACEMENT OF BORE PITS AND HANDHOLES SHALL BE DETERMINED BY THE ENGINEER AS TO NOT ENCROACH ON CSX TRANSPORTATION RAILROAD RIGHT OF WAY OR INTO THE RAILROAD'S ZONE OF INFLUENCE.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE:
APPLICATION: STABILIZED SUBBASE-HOT MIX ASPHALT (VARIABLE DEPTH)
PG GRADE: PG 64-22
DESIGN AIR VOIDS: 4.0% @ Ndesign = 30
MIXTURE COMPOSITION: IL-19.0L
FRICTION AGGREGATE: N/A

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	07 ITS 2014	*	72	3
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

ITS FUNDS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION CODE 100% STATE 0021 RURAL EFFINGHAM	100% STATE 0021 RURAL CUMBERLAND	100% STATE 0021 RURAL CLARK	100% STATE 0021 RURAL LAWRENCE
	X0327763	ELECTRICAL WORK, IDOT DISTRICT 7 HEADQUARTERS	L SUM	1	1			
	42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	200	200			
	44000600	SIDEWALK REMOVAL	SQ FT	200	200			
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT	FOOT	3287.5	1312.5	1337.5	637.5	
		POSTS						
*	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	15	6	6	3	
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL)	EACH	15	6	6	3	
		TANGENT						
	67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.17	0.17
	73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A	FOOT	386	152	152	82	
		(5'-0" X 7'-0")						
	73301805	OVERHEAD SIGN STRUCTURE - BUTTERFLY, TYPE	FOOT	37.5				37.5
		III-F-A						
	73301810	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	168	82	86		
	73301900	OVERHEAD SIGN STRUCTURE WALKWAY - BUTTERFLY,	FOOT	7				7
		TYPE A						
	73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	115.8	42.1	42.8	21.6	9.3

* SPECIALTY ITEMS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	-	72	4
* EFFINGHAM & CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE ILLINOIS FED. AID PROJECT				

ITS FUNDS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION CODE 100% STATE 0021 RURAL EFFINGHAM	100% STATE 0021 RURAL CUMBERLAND	100% STATE 0021 RURAL CLARK	100% STATE 0021 RURAL LAWRENCE
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	60	24	24	12	
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	15	6	6	3	
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	6	2	2	1	1
	81028350	UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	15,025	14,725	300		
	81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	400	400			
	81028370	UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	3635	1130	2070	245	190
	81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA.,	FOOT	55	55			
		GALVANIZED STEEL						
	81300550	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO	EACH	8	8			
		STRUCTURE, 12" X 12" X 6"						
	81300948	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO	EACH	1	1			
		STRUCTURE, 24" X 24" X 10"						
	81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE	FOOT	18,280	17,025	1255	980	760
		USE) 1/C NO. 6						
	87301795	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	10,755	3570	5880	735	570
	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	122	122			
	87900100	DRILL EXISTING FOUNDATION	EACH	3	3			
	87900200	DRILL EXISTING HANDHOLE	EACH	28	28			

* SPECIALTY ITEMS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	5
* EFFINGHAM & CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE (ILLINOIS) FED. AID PROJECT				

ITS FUNDS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION CODE 100% STATE 0021 RURAL EFFINGHAM	100% STATE 0021 RURAL CUMBERLAND	100% STATE 0021 RURAL CLARK	100% STATE 0021 RURAL LAWRENCE
X0323909	DATA NETWORK PORT ADAPTER	EACH	2	1	1		
X0323920	POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	6	2	2	1	1
X0323923	SUPPORT EQUIPMENT AND MAINTENANCE	L SUM	1	0.33	0.33	0.17	0.17
X0324597	CLOSED CIRCUIT TELEVISION CABINET	EACH	8	8			
X0324603	CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING TSC CABINET	EACH	10	10			
X0325077	FIBER OPTIC UTILITY MARKER	EACH	27	27			
X0325485	TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	6	2	2	1	1
X0325922	CELLULAR MODEM	EACH	4	1	1	1	1
X0326252	COMPUTER WORKSTATION	EACH	5	5			
X0326253	LCD MONITOR	EACH	11	11			
X0326254	LAPTOP COMPUTER	EACH	3	3			
X0326255	APPLICATION SERVER	EACH	1	1			
X0326258	NETWORK SECURITY APPLIANCE	EACH	1	1			
X0326260	ETHERNET SWITCH (MATERIAL ONLY)	EACH	1	1			

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	6
* EFFINGHAM & CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE ILLINOIS FED. AID PROJECT				

ITS FUNDS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION CODE 100% STATE 0021 RURAL EFFINGHAM	100% STATE 0021 RURAL CUMBERLAND	100% STATE 0021 RURAL CLARK	100% STATE 0021 RURAL LAWRENCE
X0326263	EQUIPMENT CABINET	EACH	1	1			
X0326267	VIDEO SERVER	EACH	4	4			
X0326812	CAT 5 ETHERNET CABLE	FOOT	435	435			
X7010410	SPEED DISPLAY TRAILER	CAL MO	16	8	5	3	
X0326905	CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	14	10	2	1	1
X0327121	CAMERA POLE, 55 FT	EACH	5	5			
X3120005	STABILIZED SUBBASE - HOT-MIX ASPHALT (VARIABLE DEPTH)	TON	340	160	180		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.33	0.33	0.17	0.17
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1	1			
X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	18,770	18,420	350		
X8710050	FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	19	18	1		
Z0033052	COMMUNICATIONS VAULT	EACH	29	25	2	1	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1			

* SPECIALTY ITEMS

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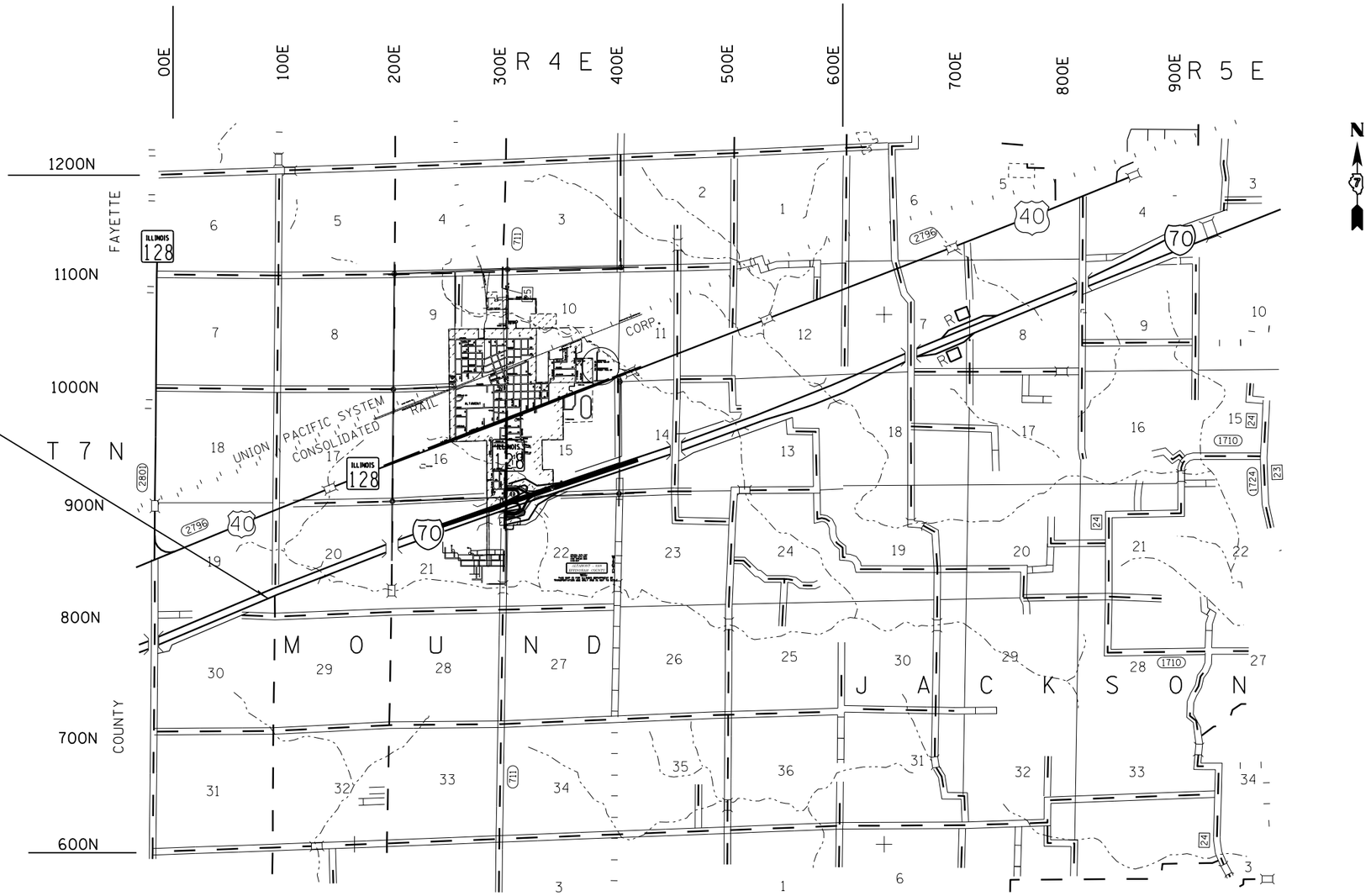
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	7
* EFFINGHAM & CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE ILLINOIS FED. AID PROJECT				



LOCATION 1
FAI 70 (EB)
STA. 1365+00
SN 7S025I070R80.40
EFFINGHAM COUNTY
UTILITY PROVIDER:
SOUTHWESTERN ELECTRIC

LOCATION F.A.I.70 (I–70)

EFFINGHAM COUNTY

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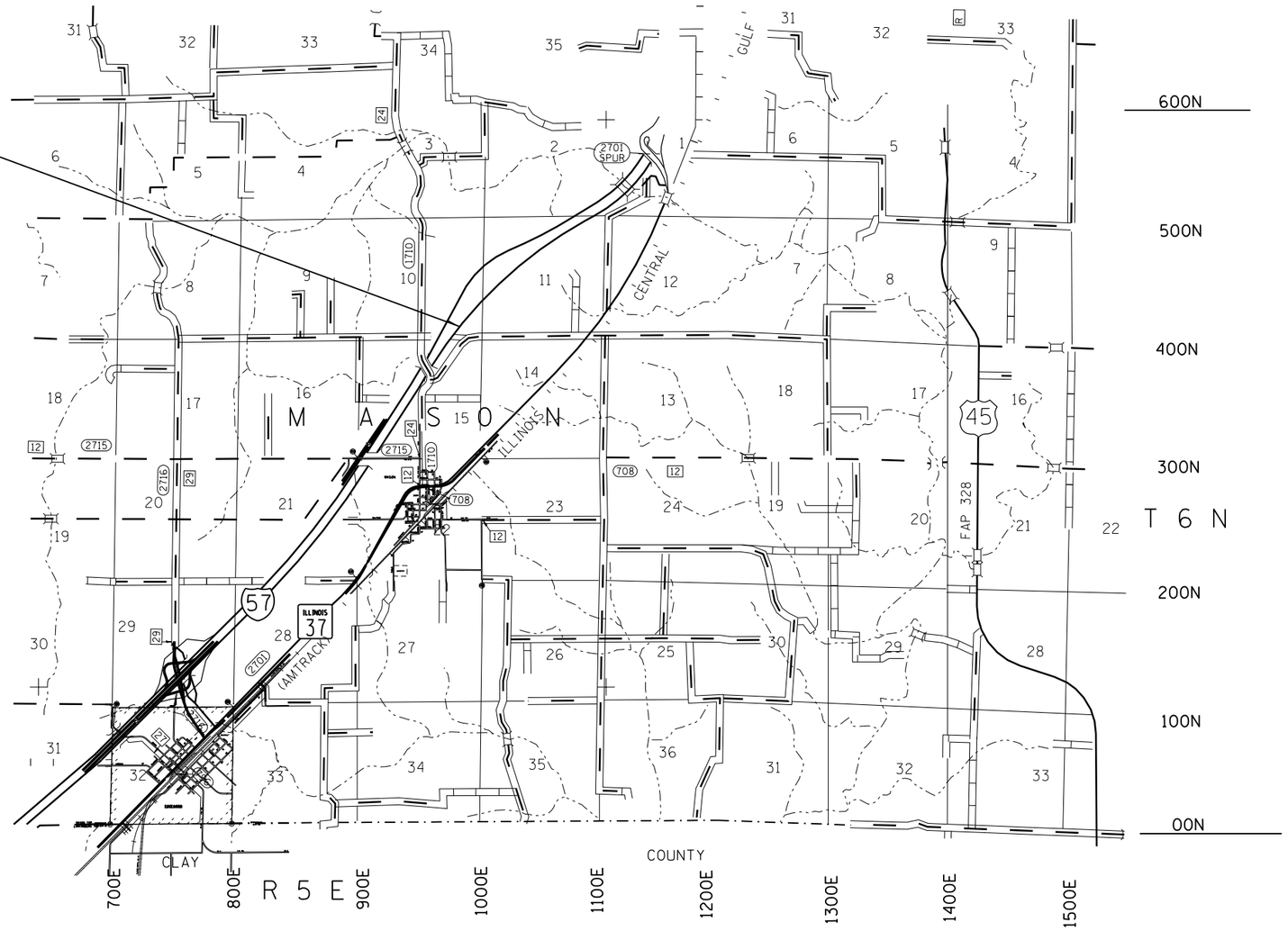
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT LOCATION MAP
EFFINGHAM COUNTY (LOCATION 1)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	8
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

LOCATION 2
FAI 57 (NB)
STA. 4500+00
SN 7S025I057R148.4
EFFINGHAM COUNTY
UTILITY PROVIDER:
SOUTHWESTERN ELECTRIC



LOCATION F.A.I.57 (I–57)

EFFINGHAM COUNTY

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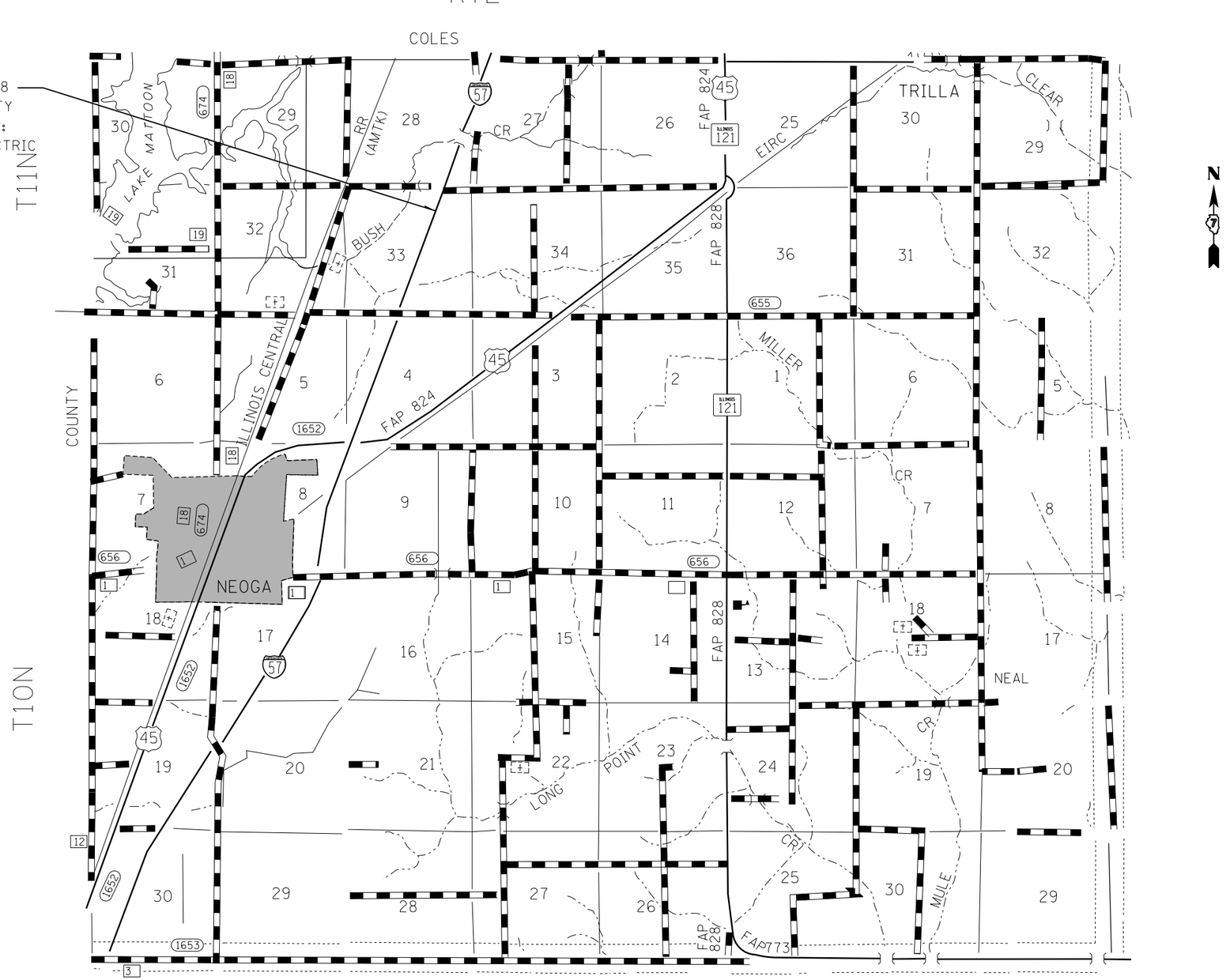
	PLOT SCALE = 100.0000 ' / in.	DRAWN -	REVISED -					
Default	PLOT DATE = 5/22/2014	CHECKED -	REVISED -					
		DATE -	REVISED -		SCALE:	SHEET OF SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	9
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

LOCATION 3
FAI 57 (SB)
STA. 217+50
SN 7S018I057L178.8
CUMBERLAND COUNTY
UTILITY PROVIDER:
COLES-MOULTRIE ELECTRIC



LOCATION F.A.I.57 (I–57)

CUMBERLAND COUNTY

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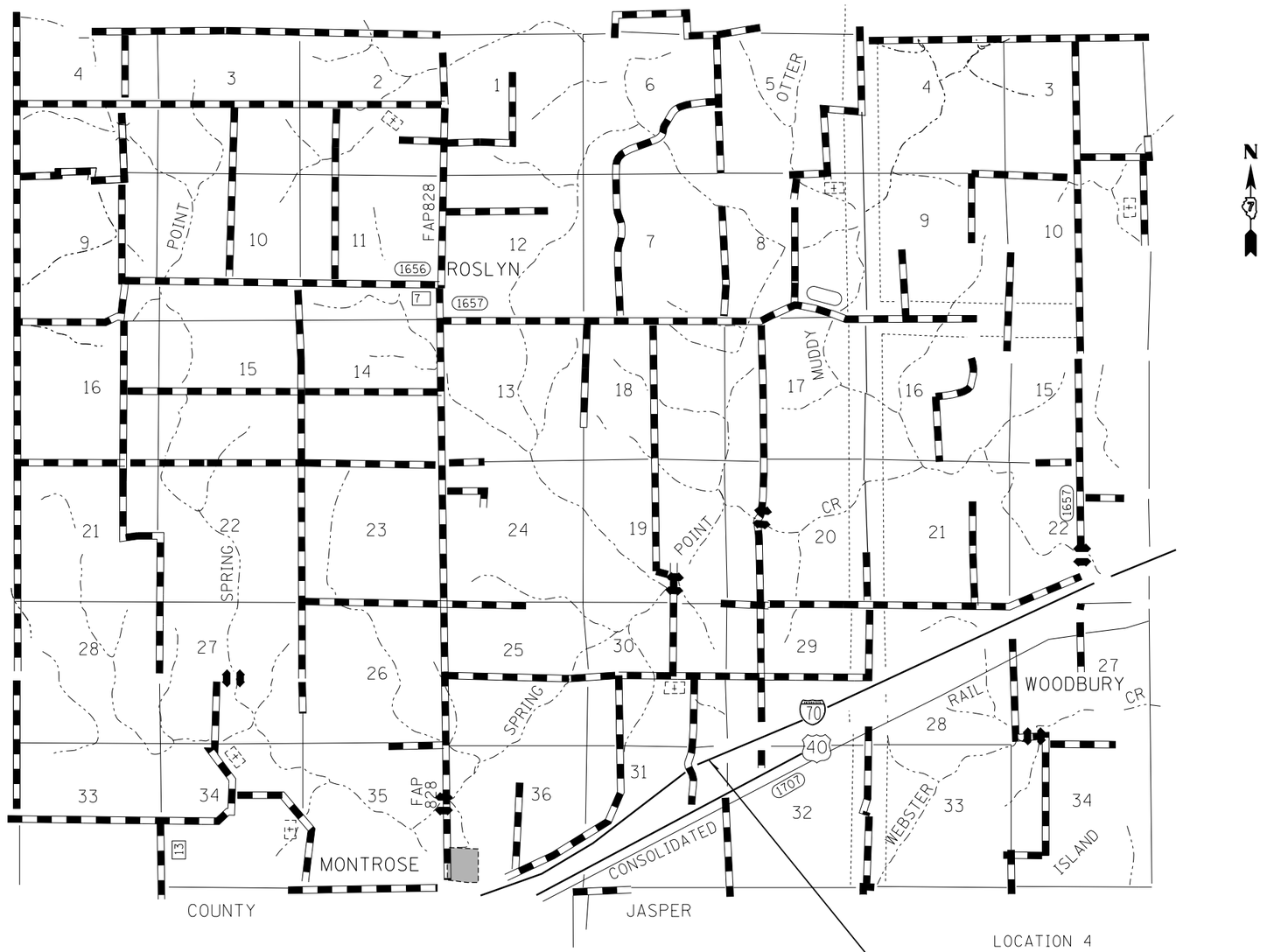
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT LOCATION MAP
CUMBERLAND COUNTY (LOCATION 3)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	10
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



LOCATION F.A.I.70 (I–70)

CUMBERLAND COUNTY

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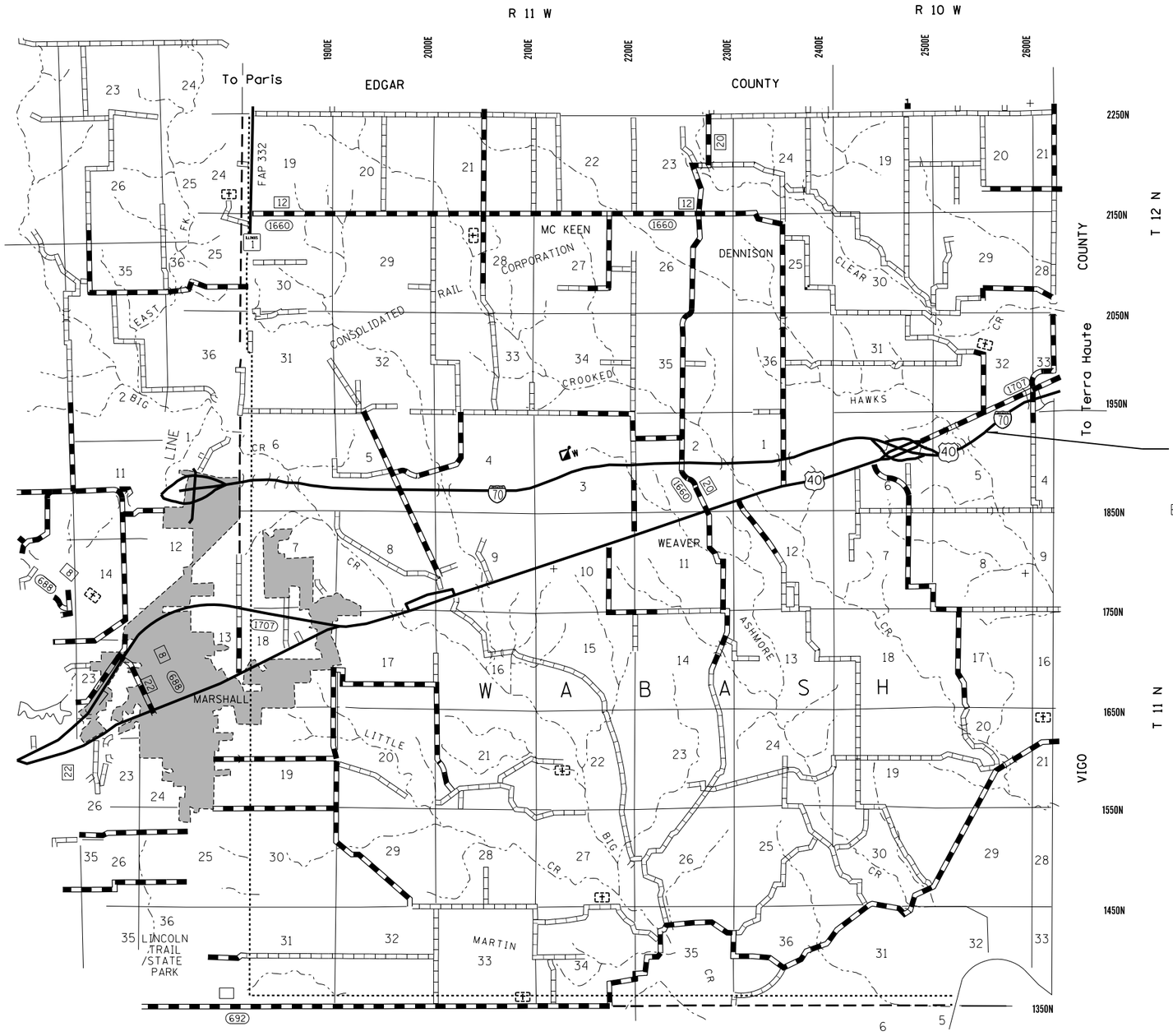
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT LOCATION MAP
CUMBERLAND COUNTY (LOCATION 4)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	11
* EFFINGHAM, CUMBERLAND			CONTRACT NO. 74643	
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



LOCATION 5
FAI 70 (WB)
STA. 515+51
SN 7S012I070L155.0
CLARK COUNTY
UTILITY PROVIDER:
ENSTAR POWER CO-OP.

LOCATION F.A.I.70 (I–70)

CLARK COUNTY

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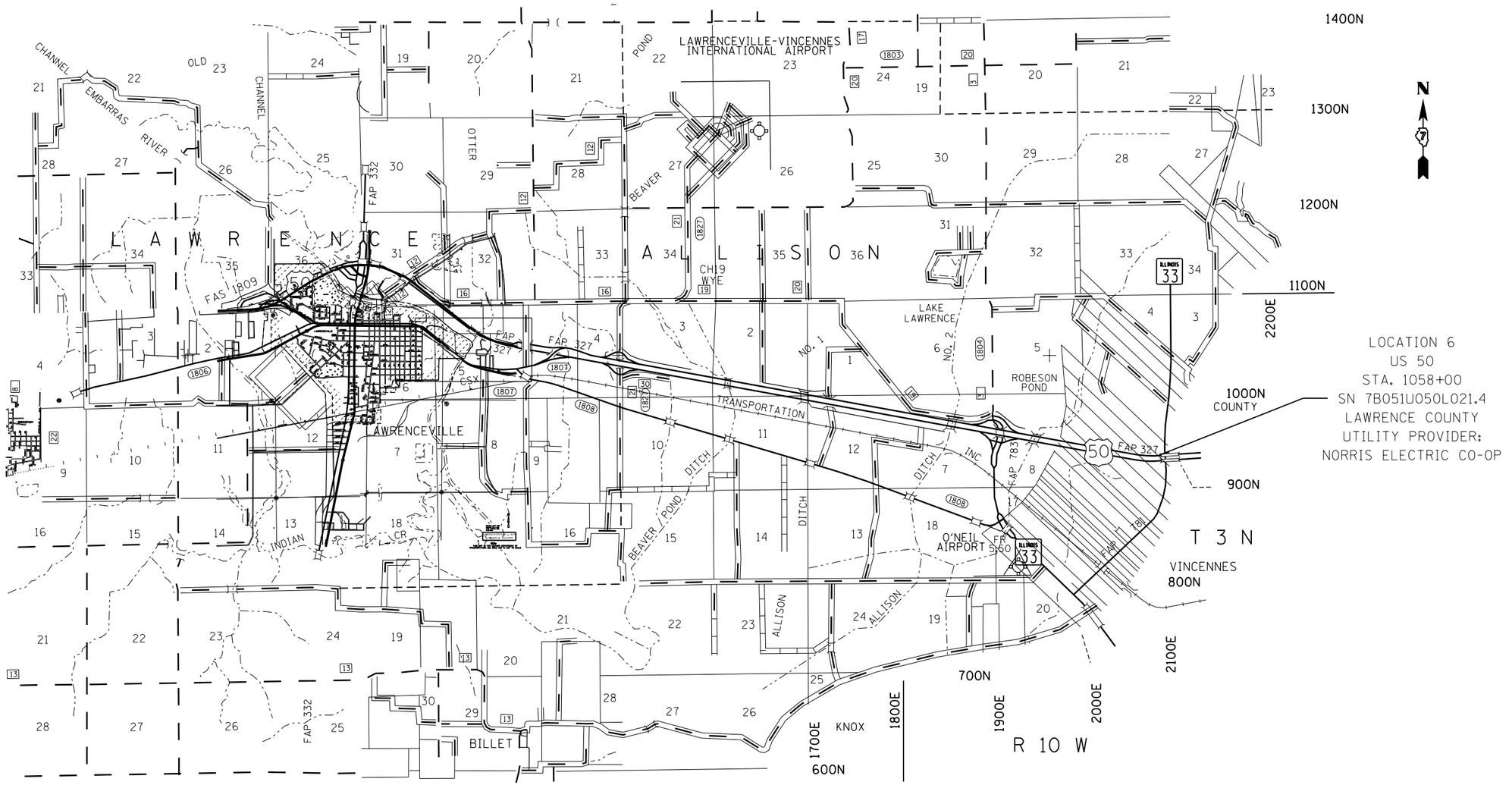
		DRAWN -	REVISED -					VAR	D7 ITS 2014	•	72	12
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -		SCALE:	SHEET OF SHEETS	STA. TO STA.	CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



LOCATION 6
US 50
STA. 1058+00
SN 7B051U050L021.4
LAWRENCE COUNTY
UTILITY PROVIDER:
NORRIS ELECTRIC CO-OP

LOCATION FAP 327 (US 50)

LAWRENCE COUNTY

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Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT LOCATION MAP
LAWRENCE COUNTY (LOCATION 6)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	13
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

LCD MONITOR - QTY. 7.0 EACH

NOTE 1: THE CONTRACTOR SHALL INSTALL ONE PROPOSED LCD CABLE TELEVISION READY MONITOR ON THE WALL OF THE COMMUNICATIONS/RADIO CENTER. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

NOTE 2: THE CONTRACTOR SHALL INSTALL TWO PROPOSED LCD MONITORS ON THE WALL OF THE COMMUNICATIONS /RADIO CENTER. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

NOTE 3: THE CONTRACTOR SHALL INSTALL TWO PROPOSED LCD MONITORS ON THE WALL OF THE OPERATIONS CONFERENCE AREA. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

NOTE 4: THE CONTRACTOR SHALL INSTALL TWO PROPOSED LCD MONITORS ON THE WALL OF THE OFFICE OF THE TRAFFIC OPERATIONS ENGINEER. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

ELECTRICAL WORK, IDOT DISTRICT 7 HEADQUARTERS - 1.0 LUMP SUM

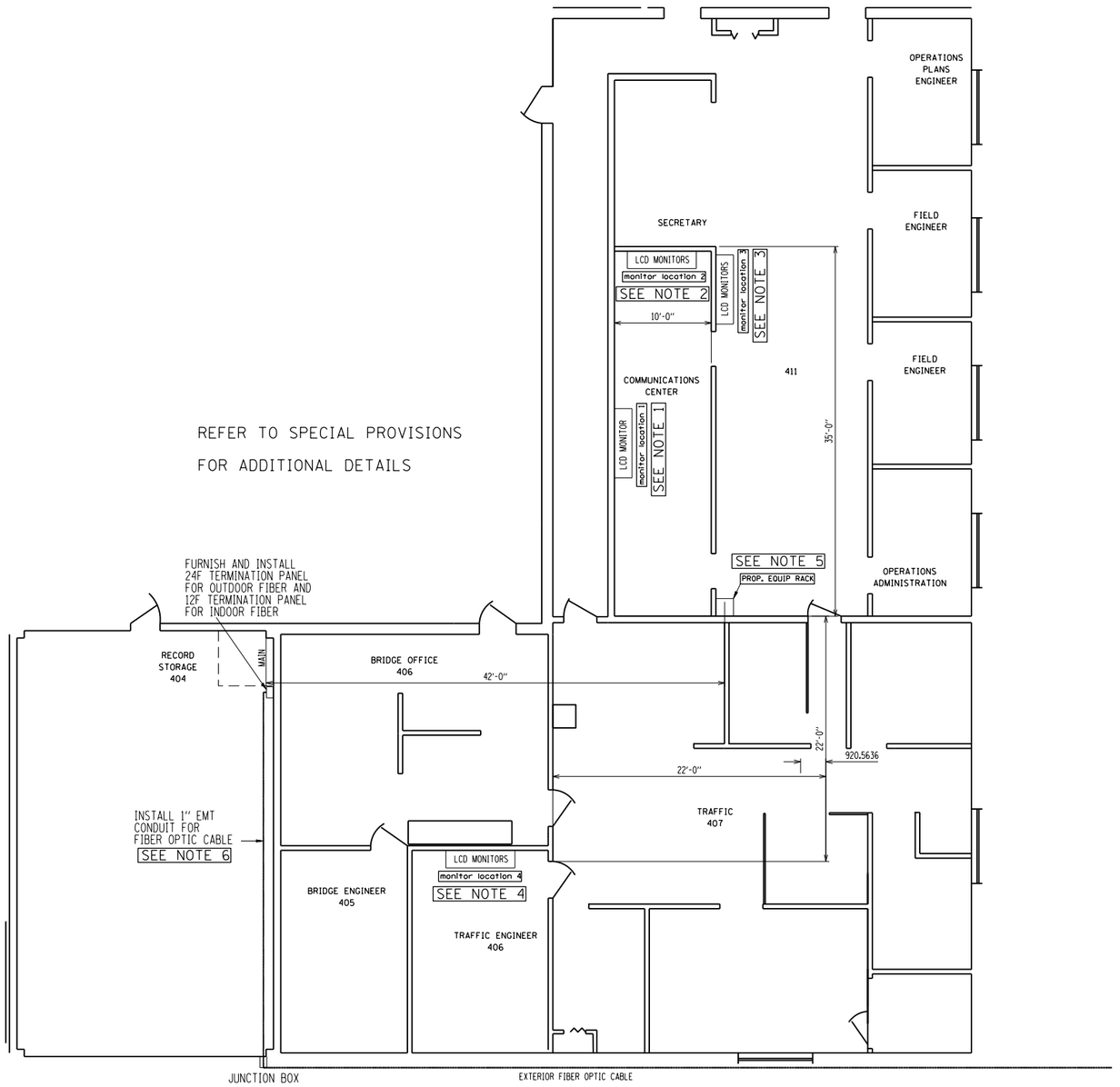
NOTE 5: THE CONTRACTOR SHALL INSTALL ITS EQUIPMENT CABINET IN THE OPERATIONS CONFERENCE AREA. THE CONTRACTOR SHALL FURNISH AND INSTALL HARDWARE WITH THE REQUIREMENTS THAT IS SUITED FOR THE INSTALLATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER. THE EQUIPMENT CABINET SHALL BE INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED IN INSTALLED INSIDE WIREGUARD.

NOTE 6: THE CONTRACTOR SHALL INSTALL 1" DIAMETER EMT CONDUIT INSIDE THE DISTRICT 7 HEADQUARTERS FOR FIBER OPTIC CABLES. FROM THE EXTERIOR JUNCTION BOX TO THE PROPOSED EQUIPMENT RACK.

NOTE 7: ALL WORK SHALL CONFORM TO THE ELECTRICAL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL ALSO OBTAIN ALL NECESSARY PERMITS BEFORE BEGINNING ANY ELECTRICAL WORK.

ALL CEILINGS HAVE CEILING TILES AND ARE ACCESSIBLE.

REFER TO SPECIAL PROVISIONS FOR ADDITIONAL DETAILS



IDOT DISTRICT 7 OPERATIONS HEADQUARTERS
400 WEST WABASH, EFFINGHAM IL

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Default	PLOT DATE = 6/26/2014	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT DISTRICT 7 HEADQUARTERS
OPERATIONS BUILDING WORK

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	14
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

LCD MONITOR - QTY. 4.0 EACH

NOTE 1: THE CONTRACTOR SHALL INSTALL ONE PROPOSED LCD MONITOR ON THE WALL OF THE OFFICE OF THE TRAFFIC SIGNAL SYSTEMS ENGINEER. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

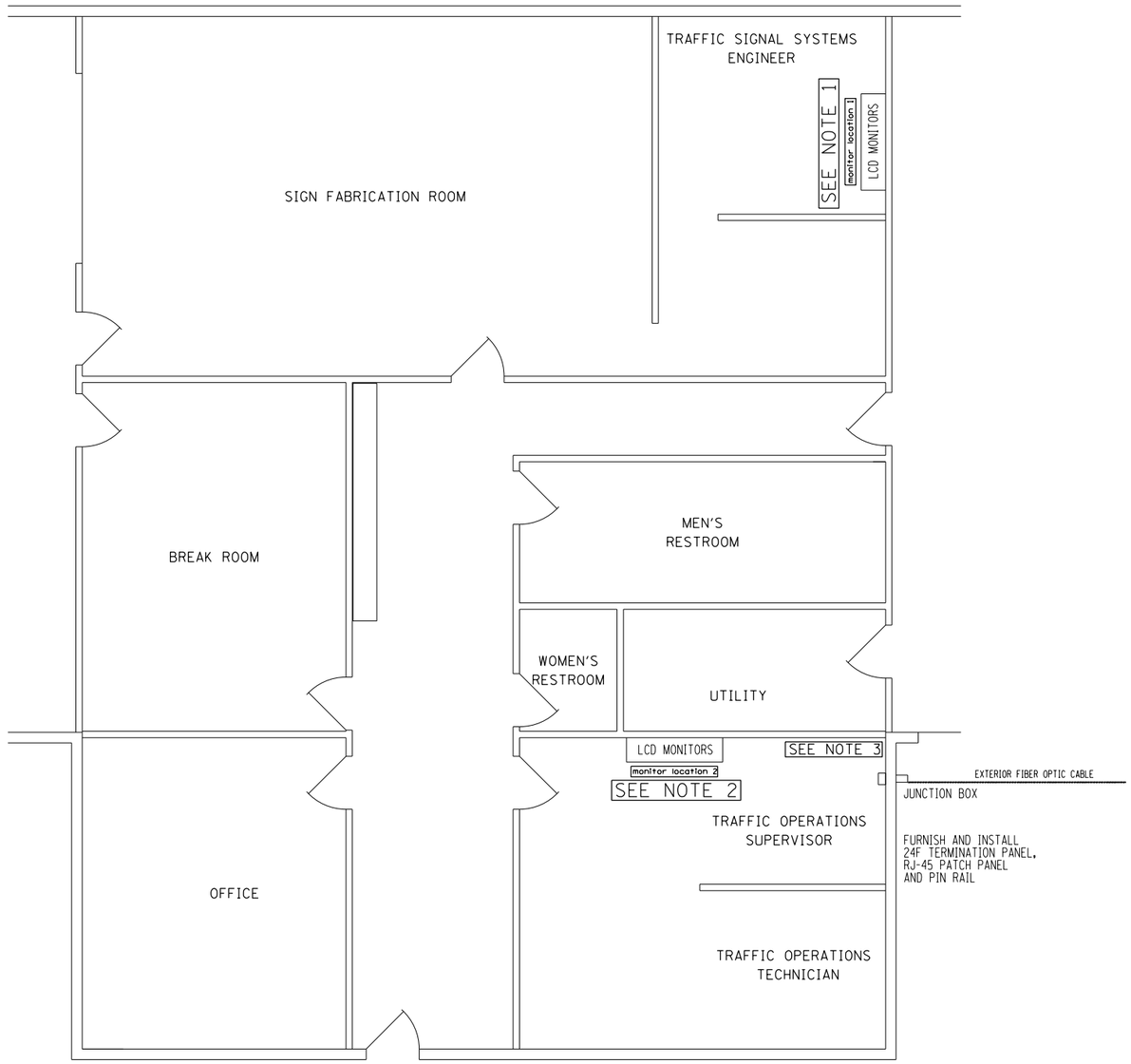
NOTE 2: THE CONTRACTOR SHALL INSTALL TWO PROPOSED LCD MONITORS ON THE WALL OF THE OFFICE OF THE TRAFFIC OPERATIONS SURERVISOR/TRAFFIC OPERATIONS TECHNICIAN. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL ANCHORS AND HARDWARE THAT IS SUITED FOR THE INSTALLATION AND RATED FOR THE WEIGHT OF THE LCD MONITORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LCD BRACKET MOUNT MANUFACTURER. THE MONITORS SHALL BE MOUNTED HORIZONTALLY AND INSTALLED TO THE SATISFACTION OF THE ENGINEER. ALL EXPOSED CABLES SHALL BE NEATLY TRAINED AND INSTALLED INSIDE WIREGUARD.

ELECTRICAL WORK, IDOT DISTRICT 7 SIGN SHOP

NOTE 3: THE CONTRACTOR SHALL INSTALL THREE CAT5E CABLES FROM THE RJ-45 PATCH PANEL TO MONITOR LOCATION 1 AND THREE CAT5E CABLES FROM THE RJ-45 PATCH PANEL TO MONITOR LOCATION 2. THESE CABLES WILL BE USED TO TRANSMIT NETWORK DATA TO THE PROPOSED WORKSTATIONS. SEE SPECIAL PROVISION FOR ADDITIONAL DETAILS.

NOTE 4: ALL WORK SHALL CONFORM TO THE ELECTRICAL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL ALSO OBTAIN ALL NECESSARY PERMITS BEFORE BEGINNING ANY ELECTRICAL WORK.

THE CEILING TILES ARE ACCESSIBLE.



REFER TO SPECIAL PROVISIONS FOR ADDITIONAL DETAILS

IDOT DISTRICT 7 SIGN SHOP
ROUTE 40 WEST EFFINGHAM, IL

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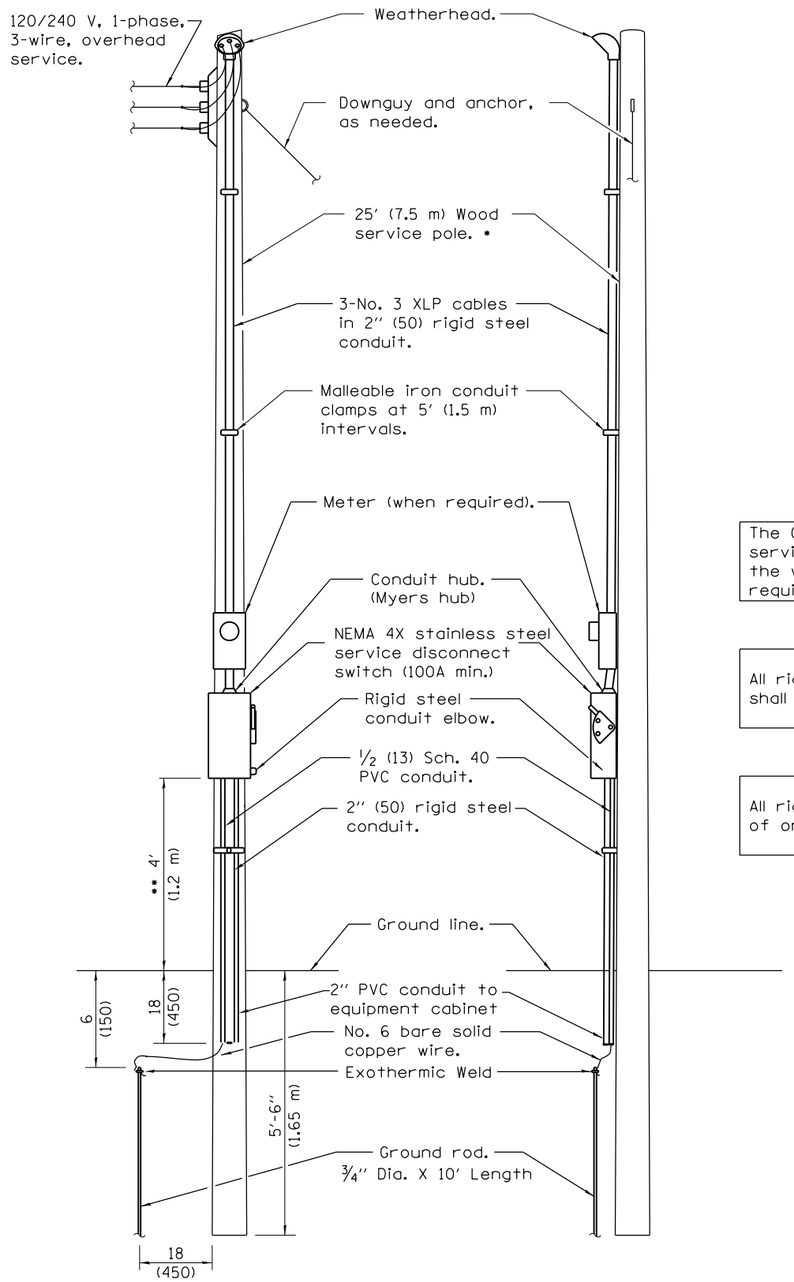
Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IDOT DISTRICT 7 SIGN SHOP
OFFICE BUILDING WORK

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	15
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



FRONT **SIDE**

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).

All rigid conduit, clamps, and hardware shall be galvanized

All rigid conduit shall extend a minimum of one foot below ground

ELECTRIC SERVICE INSTALLATION

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

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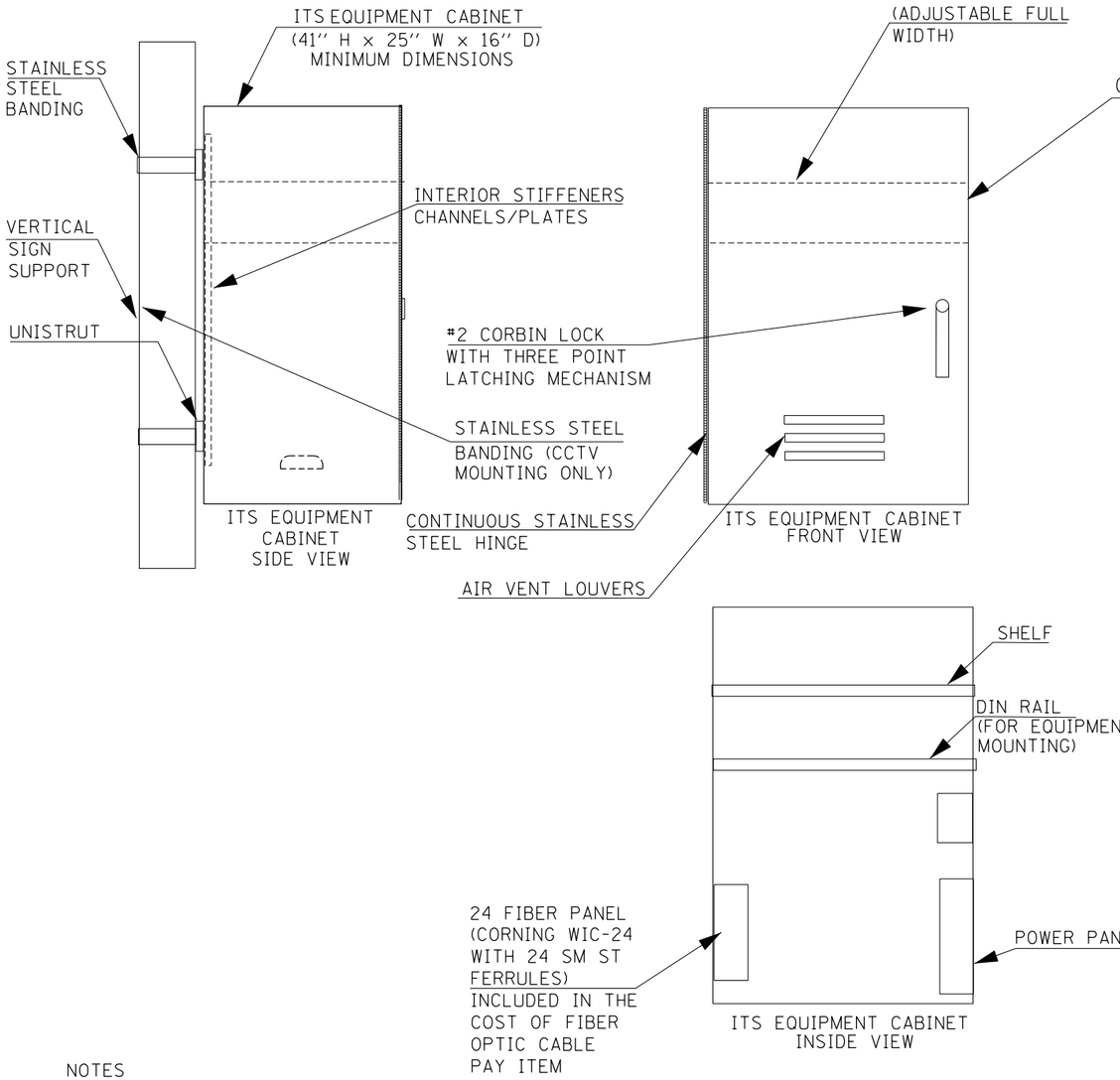
Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

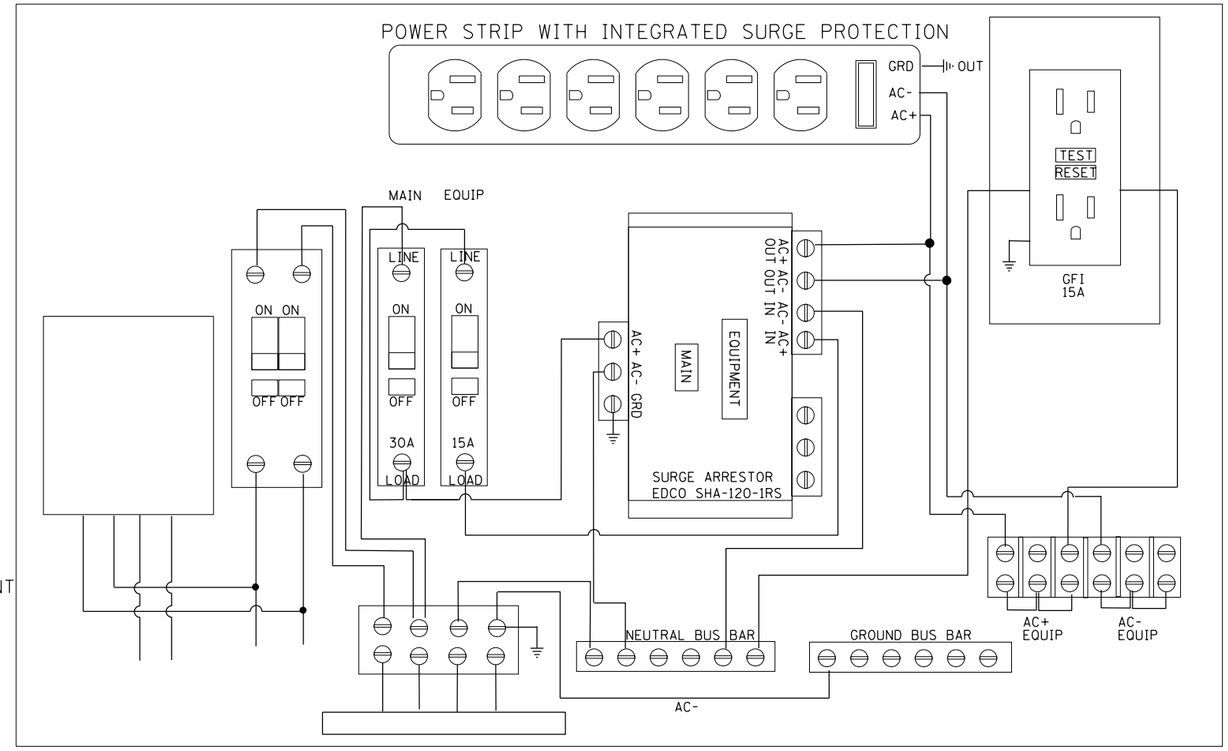
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRIC SERVICE INSTALLATION DETAIL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	16
* EFFINGHAM CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE ILLINOIS FED. AID PROJECT				





ITS EQUIPMENT CABINET POWER PANEL DETAIL
(POWER PANEL TO BE EQUIPPED WITH PLEXI-GLASS SAFETY SHIELD)

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. (ETHERNET SWITCHES, POWER SUPPLIES, ETC.)
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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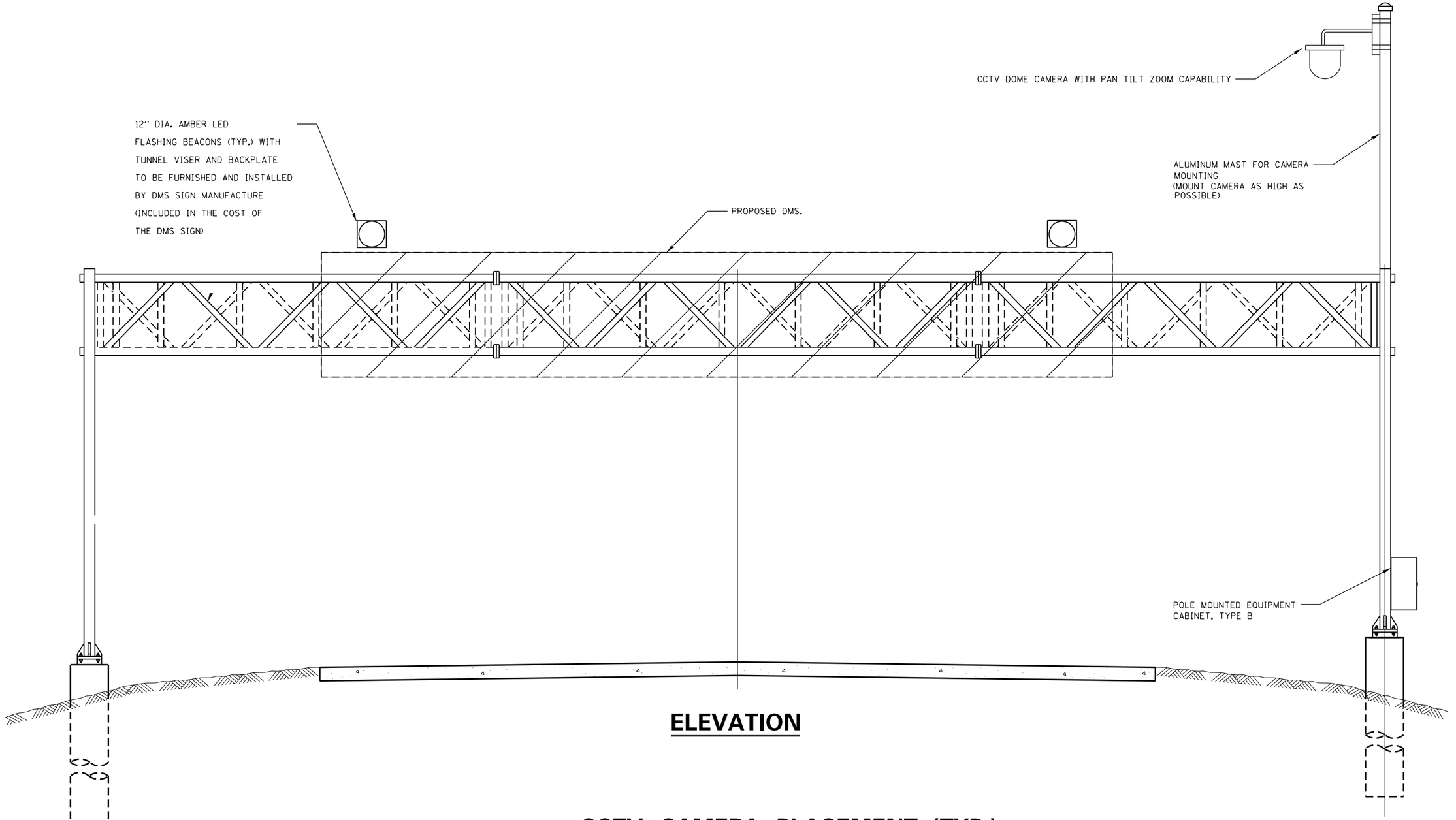
Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

POLE MOUNTED EQUIPMENT CABINET, TYPE B DETAIL

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	17
* EFFINGHAM, CUMBERLAND,		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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.

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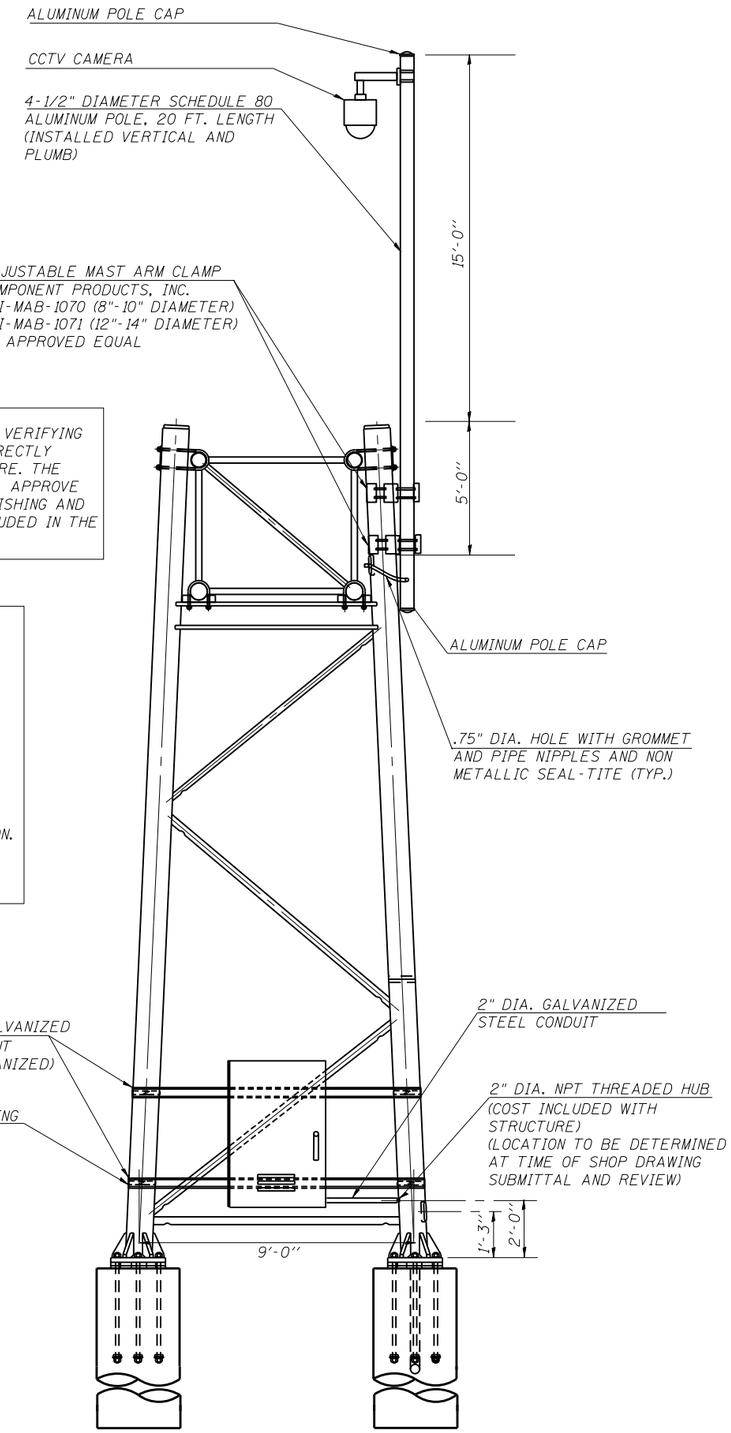
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS & CCTV CAMERA DETAIL FOR OVERHEAD SIGN STRUCTURE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	18
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

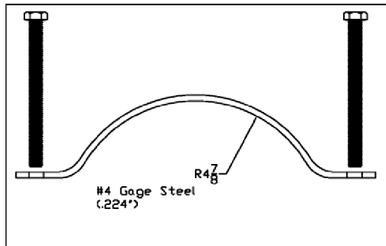


THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE CAMERA MAST COMPONENTS FIT CORRECTLY AND ARE COMPATIBLE WITH THE SIGN STRUCTURE. THE MANUFACTURER OF THE SIGN STRUCTURE SHALL APPROVE THE CAMERA MAST DESIGN. THE COST OF FURNISHING AND INSTALLING THE CAMERA MAST SHALL BE INCLUDED IN THE COST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

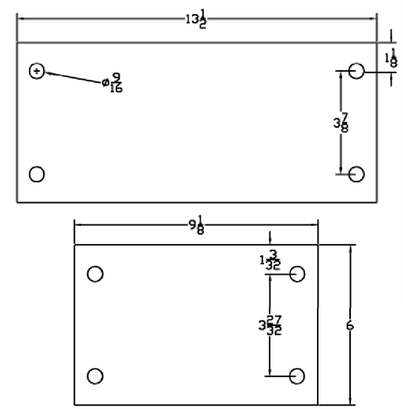
THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GALVANIZED STEEL UNISTRUT, BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ONTO THE SIGN STRUCTURE VERITCAL SUPPORTS. THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR ALL MATERIALS AND DETAIL DRAWINGS FOR PROPOSED MOUNTING METHODS PRIOR TO COMMENCING 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.

THE CONTRACTOR SHALL SUBMIT CABINET MOUNTING DETAILS TO THE DEPARTMENT FOR REVIEW PRIOR TO ORDERING MATERIALS.

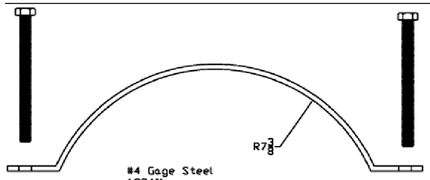
SIDE ELEVATION



Hardware
4 Pieces 1/2-13 x 5-1/2" Long Bolts
4 Pieces 1/2-13 x 4" Long Bolts
8 Pieces 1/2" Lock Washers
8 Pieces 1/2-13 Hex Nuts



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



Hardware
4 Pieces 1/2-13 x 5-1/2" Long Bolts
4 Pieces 1/2-13 x 4" Long Bolts
8 Pieces 1/2" Lock Washers
8 Pieces 1/2-13 Hex Nuts

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

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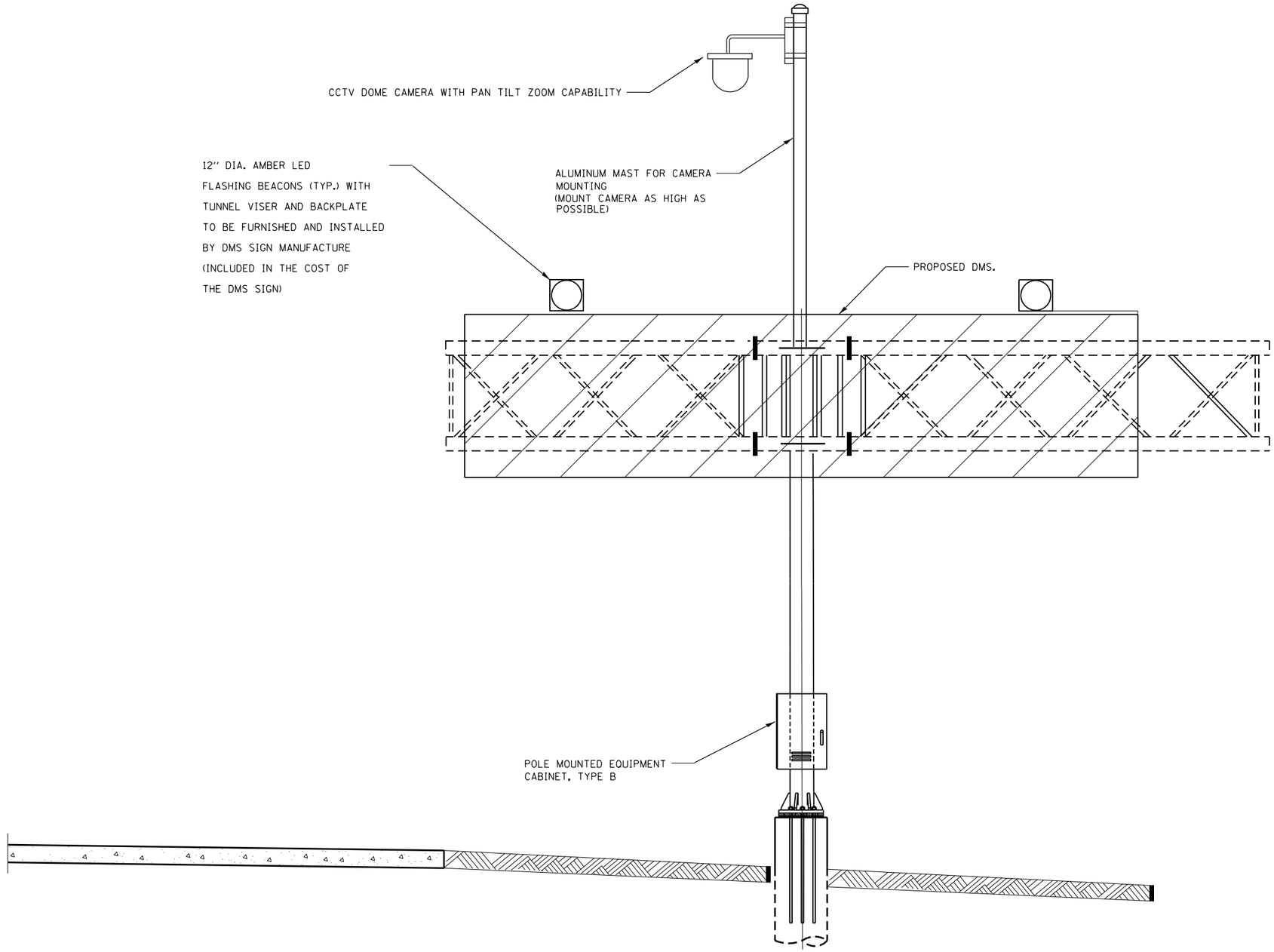
Default	PLOT DATE = 6/26/2014	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS & CCTV CAMERA DETAIL FOR OVERHEAD SIGN STRUCTURE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	19
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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.

ELEVATION

CCTV CAMERA PLACEMENT (TYP.)

BUTTERFLY SIGN STRUCTURE

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		DRAWN -	REVISED -
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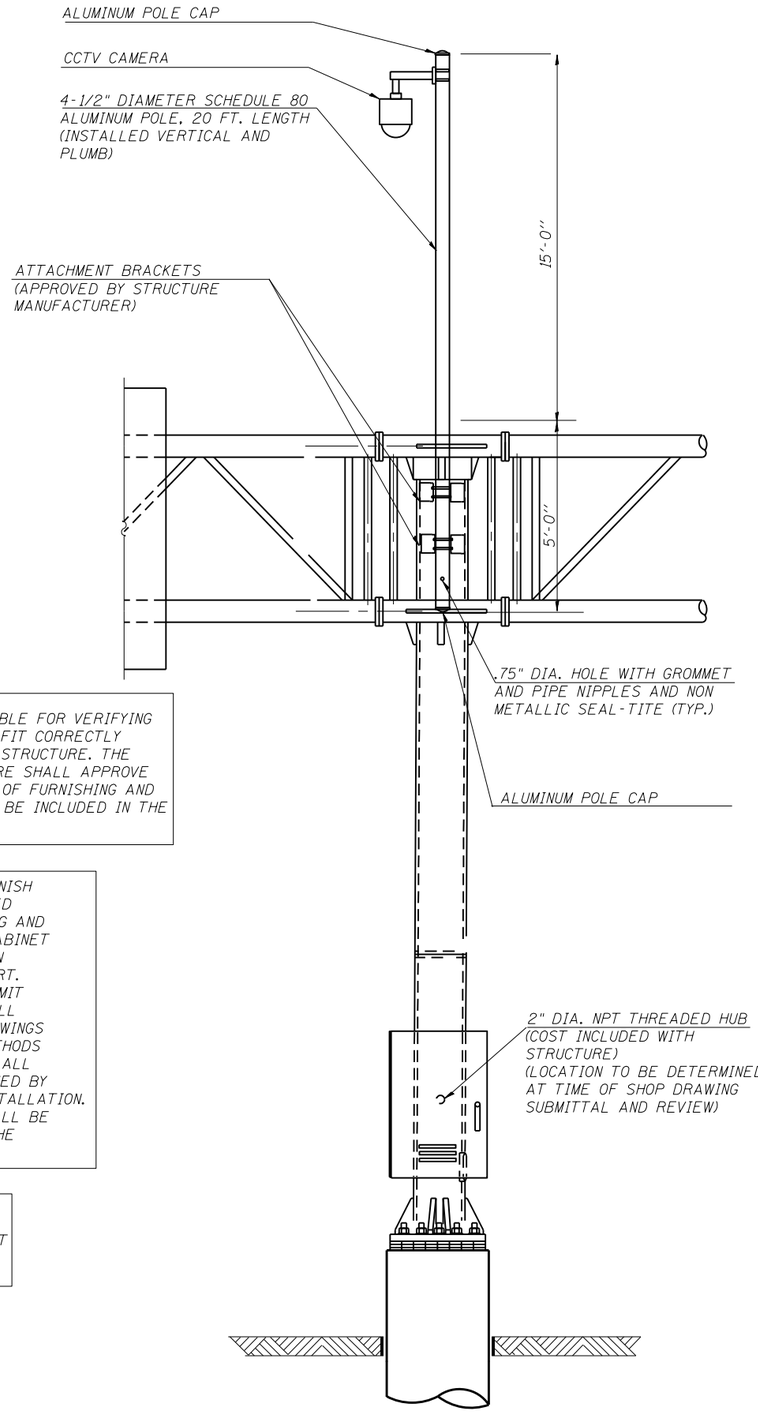
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

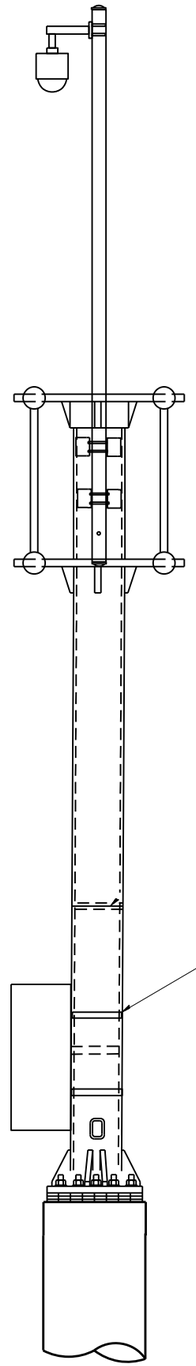
PROPOSED DMS & CCTV CAMERA DETAIL FOR BUTTERFLY TRUSS SIGN STRUCTURE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	20
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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 VERITCAL 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.

THE CONTRACTOR SHALL SUBMIT CABINET MOUNTING DETAILS TO THE DEPARTMENT FOR REVIEW PRIOR TO ORDERING MATERIALS.

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		DRAWN -	REVISED -
	PLOT SCALE = 5000.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURE III-F-A
TRUSS SUPPORT POST – 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	D7 ITS 2014	•	72	21
• EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS			

FIBER OPTIC CABLE TERMINATION NOTES (SINGLE MODE CABLE)

1. THE PROPOSED FIBER OPTIC CABLE SHALL BE TERMINATED AS SHOWN ON THE FIBER OPTIC LINE/TERMINATION DIAGRAM WITH ST CONNECTORS.

2. ALL CABLE SPLICES AND TERMINATIONS SHALL BE FUSION SPLICED.

3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR FIBER OPTIC CABLE TERMINATION, INCLUDING, BUT NOT LIMITED TO, BREAKOUT KITS, FANOUT KITS, ENCLOSURES, WEATHERPROOF SPLICE BOOTS, SPLICE SLEEVES, CONNECTORS, INTERCONNECT CENTERS, ETC.

4. ALL ST CONNECTORS SHALL BE FUSION SPLICED UTILIZING PRE-FORMED CABLES WITH CONNECTORS THAT ARE FUSION SPLICED TO THE PROPOSED FIBER.

5. THE CONTRACTOR SHALL INSTALL 60 FT OF SLACK CABLE INSIDE EACH PROPOSED COMMUNICATION VAULT THAT IS INSTALLED ADJACENT TO AN EXISTING CMS COMMUNICATION VAULT FOR SPLICING INTO THE EXISTING CMS FIBER.

6. SPLICING OF PROPOSED FIBER OPTIC CABLES INTO EXISTING CMS FIBER TO BE DONE BY OTHERS. THIS WORK WILL BE PAID FOR SEPERATELY IN ACCORDANCE WITH ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

7. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLY WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE BID PRICE FOR THE PROPOSED FIBER OPTIC CABLE. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THIS WORK.

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	PLOT DATE = 6/26/2014	DATE -	REVISED -

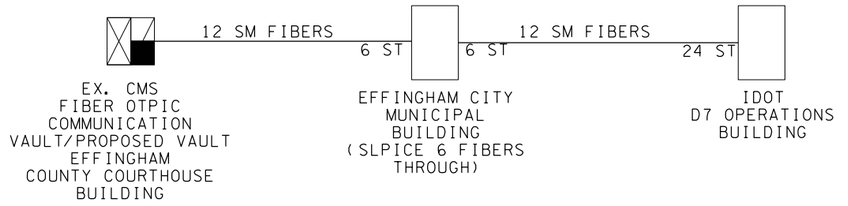
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED FIBER OPTIC CABLE TERMINATION NOTES

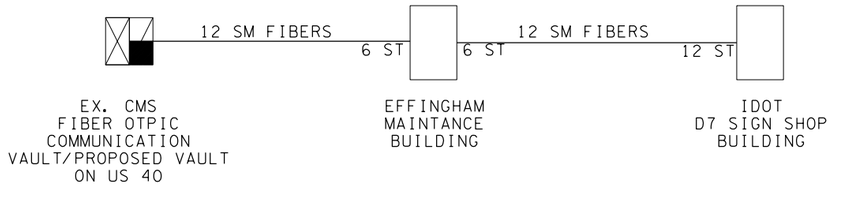
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	22
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS			

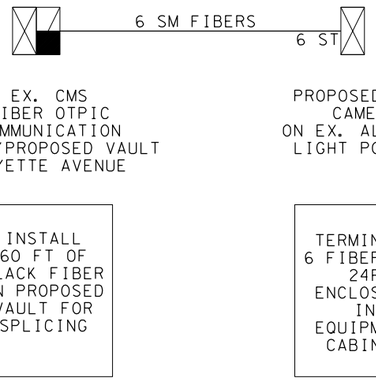
PROPOSED FIBER OPTIC TERMINATION (24 SINGLE MODE)
EFFINGHAM COUNTY COURTHOUSE TO IDOT DISTRICT 7 OPERATIONS BUILDING



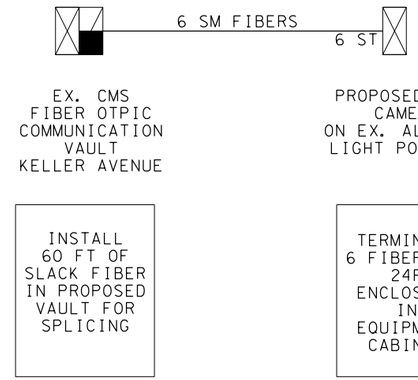
PROPOSED FIBER OPTIC TERMINATION (24 SINGLE MODE)
EFFINGHAM COUNTY COURTHOUSE TO IDOT DISTRICT 7 OPERATIONS BUILDING



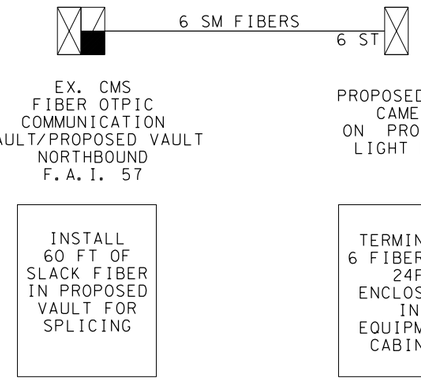
PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY FAYETTE AVENUE



PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY KELLER DRIVE



PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY F.A.I. 57 TRI LEVEL RAMP



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	PLOT DATE = 6/26/2014	DATE -	REVISED -

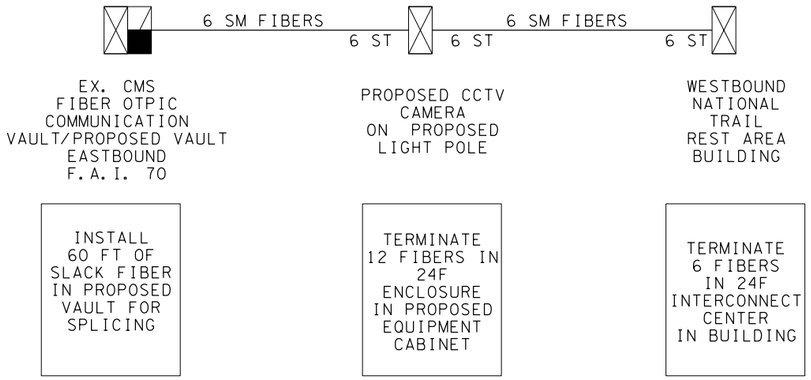
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED FIBER OPTIC TERMINATION DIAGRAM

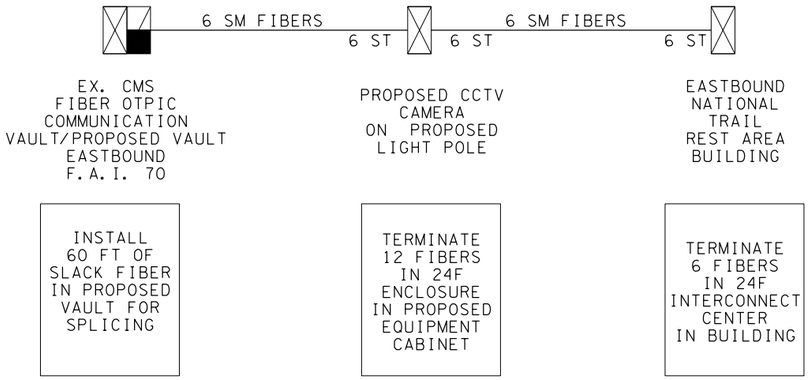
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	23
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS			

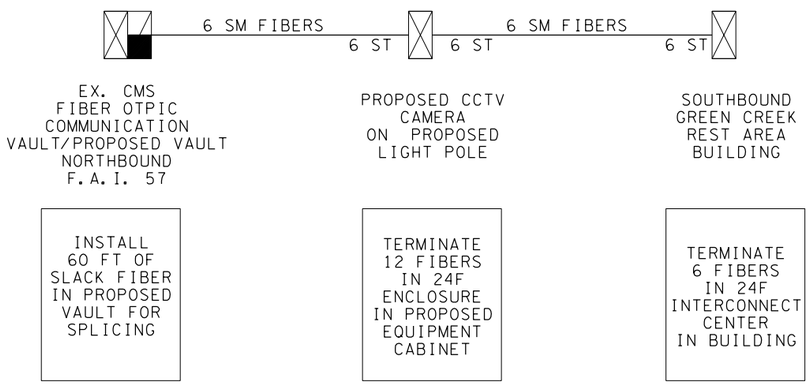
PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY WESTBOUND NATIONAL TRAIL REST AREA



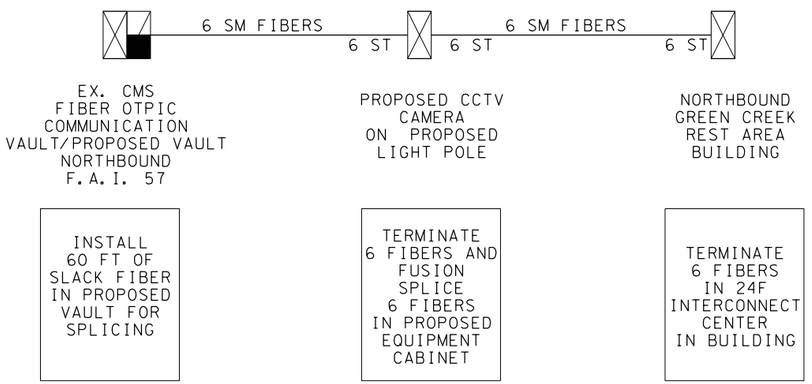
PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY EASTBOUND NATIONAL TRAIL REST AREA



PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY SOUTHBOUND GREEN CREEK REST AREA



PROPOSED FIBER OPTIC TERMINATION (6 SINGLE MODE)
EFFINGHAM COUNTY NORTHBOUND GREEN CREEK REST AREA



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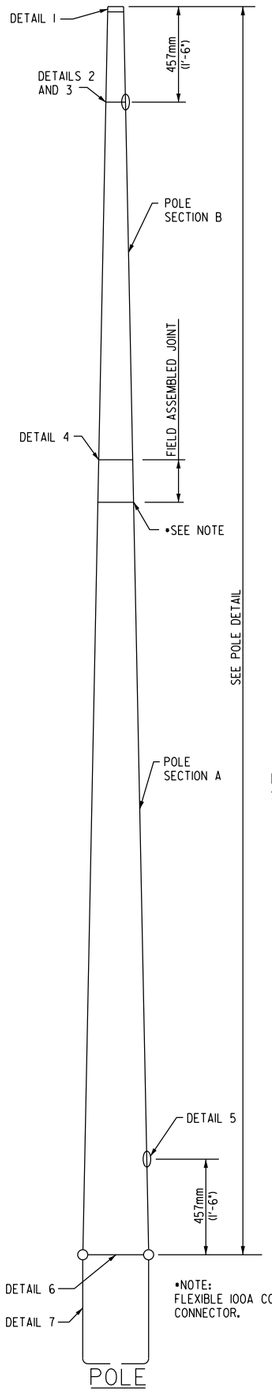
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED FIBER OPTIC TERMINATION DIAGRAM

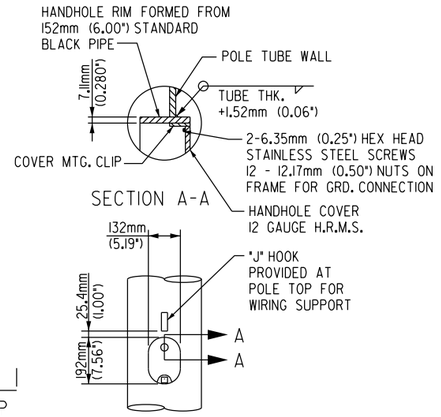
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	24
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS			

APPROVED CAMERA POLE DRAWING: VALMONT, DRAWING NUMBER IL122179P1



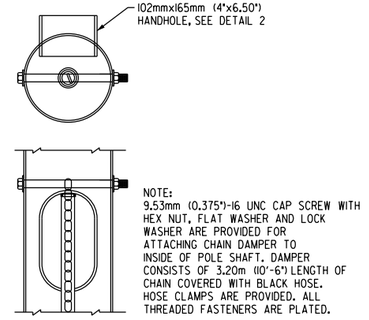
POLE



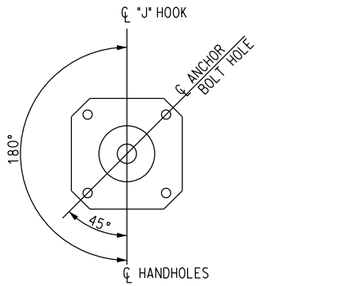
DETAIL 1
POLE TOP

CAST POLE TOP CAP HELD IN PLACE WITH 3 SET SCREWS

DETAIL 2
HANDHOLE



DETAIL 3
INTERNAL CHAIN DAMPER

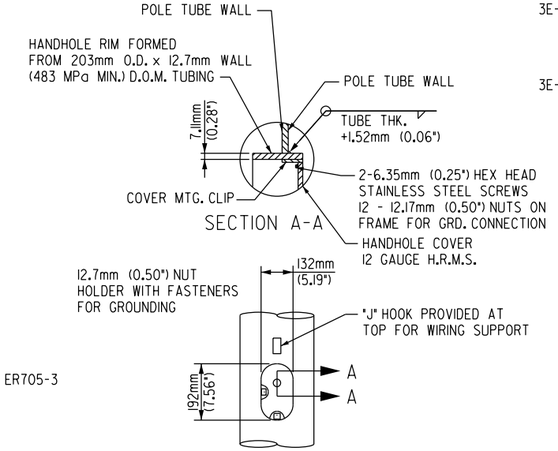


ALL ANGLES MEASURED CLOCKWISE FROM HANDHOLES AS VIEWED FROM SMALL END OF THE POLE

NOTES:

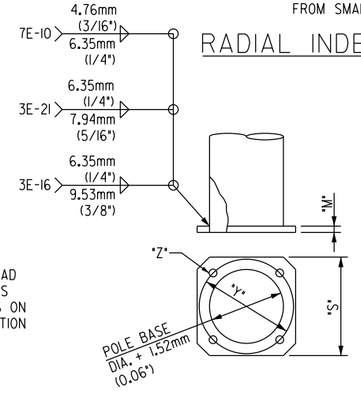
1. DESIGN SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS FOR 90 MPH WIND LOAD AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, JANUARY 1, 2002.
2. THE EXPOSED LENGTH OF THE ANCHOR BOLT BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHOULD NOT EXCEED ONE BOLT DIAMETER.

DETAIL 4
WELD REINFORCEMENT
SECTION B OF POLE ONLY

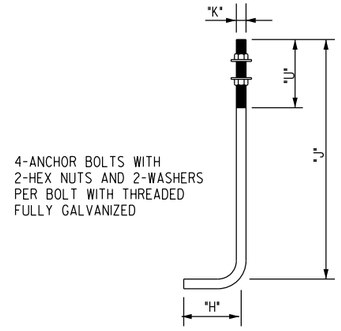


DETAIL 5
HANDHOLE

RADIAL INDEX



DETAIL 6
POLE BASE



4-ANCHOR BOLTS WITH 2-HEX NUTS AND 2-WASHERS PER BOLT WITH THREADED FULLY GALVANIZED

DETAIL 7
ANCHOR BOLT

POLE DATA																
ITEM	QTY.	MOUNTING HEIGHT m (ft)	POLE TUBE SEC.	POLE TUBE BASE DIA. mm (in)	POLE TUBE LENGTH m (ft)	POLE TUBE TOP DIA. mm (in)	POLE TUBE THICK OR GAUGE mm. (in/no.)	POLE TUBE MIN. SLIP mm (in)	POLE BASE SQUARE "S" mm (in)	POLE BASE BOLT CIRCLE "Y" mm (in)	POLE BASE THK "M" mm (in)	POLE BASE SLOT "Z" mm (in)	ANCHOR BOLT DIA. "K" mm (in)	ANCHOR BOLT LENGTH "J" mm (in)	ANCHOR BOLT HOOK "H" mm (in)	ANCHOR BOLT THREAD LENGTH "U" mm (in)
1	1	13.72 (45.00)	A	330 (13.00)	13.72 (45.00)	170 (6.70)	6.07 (3)	N.A.	457 (18.00)	432 (17.00)	38 (1.50)	44x62 (1.75x2.44)	38 (1.50)	1372 (54.00)	152 (6.00)	203 (8.00)
2	1	16.76 (55.00)	A	406 (16.00)	10.27 (33.70)	287 (11.28)	4.8 (0.1875)	443 (17.45)	622 (24.50)	597 (23.50)	38 (1.50)	44x62 (1.75x2.44)	38 (1.50)	1372 (54.00)	152 (6.00)	203 (8.00)
			B	305 (12.00)	7.27 (23.87)	220 (8.66)	4.55 (7)									

MATERIAL DATA		
COMPONENT	ASTM DESIGNATION •	MIN. YIELD MPa (ksi)
SHAFTS OVER 330mm (13.00") DIA.	A572 GR. 65	448 (65)
SHAFTS TO 330mm (13.00") DIA.	A595 GR. A	379 (55)
ANCHOR BOLTS	F1554 GR55	379 (55)
BASE PLATE	A36	248 (36)
GALVANIZING	A123 & A153	
FLAT WASHERS	F436	

•METRIC EQUAL

MATERIAL DATA		
COMPONENT	ASTM DESIGNATION •	MIN. YIELD MPa (ksi)
ANCHOR BOLT NUTS	A563 GR. A	
H. H. COVER	C1010 STEEL	
H. H. FRAME	A36	248 (36)
POLE TOP	B26	

•METRIC EQUAL

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		DRAWN -	REVISED -
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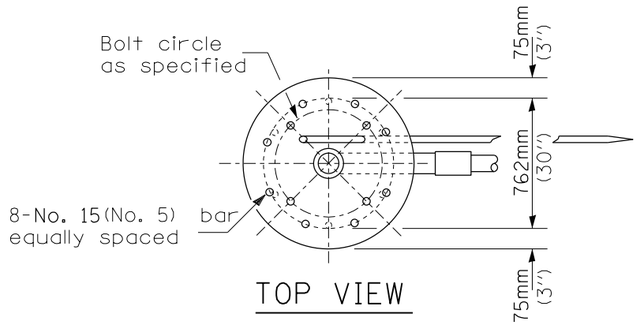
	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

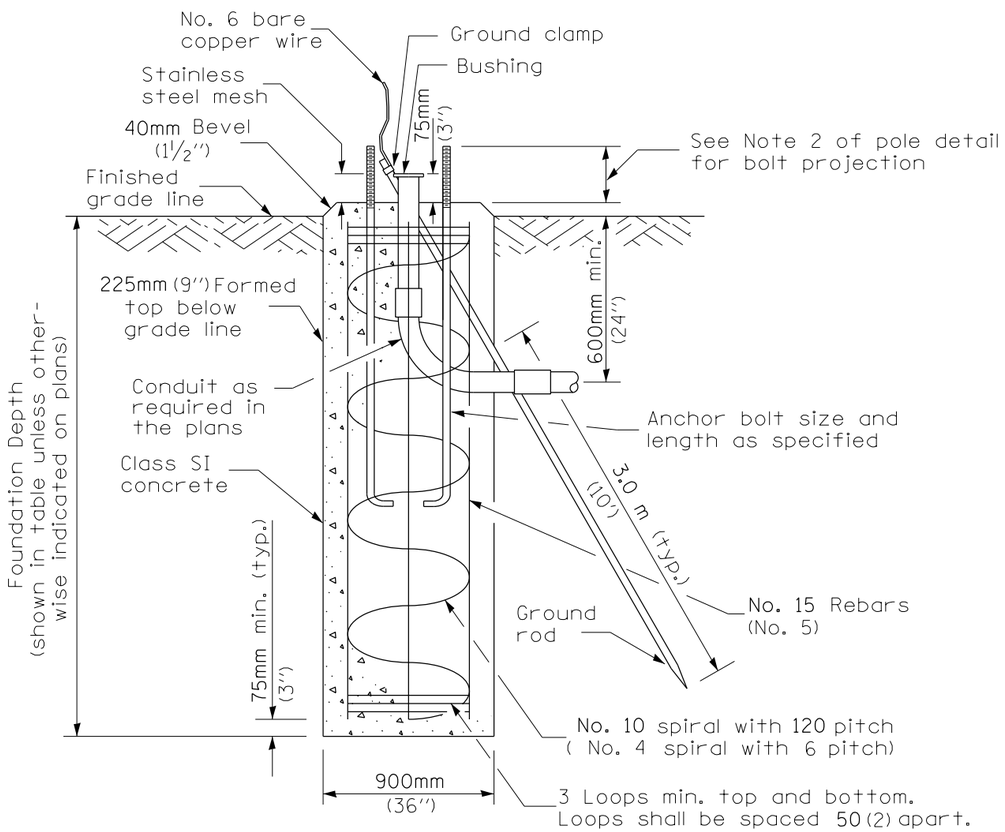
CCTV CAMERA POLE DETAIL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	25
• EFFINGHAM, CUMBERLAND			CONTRACT NO. 74643	
CLARK & LAWRENCE	ILLINOIS			



TOP VIEW



Pole Height	Foundation depth
13.7m (45')	4.4m (14'-6")
16.8m (55')	6.2m (20'-4")

Notes:

1. The Engineer shall determine the class of soil during excavation. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 100 kPa (1.0 tsf). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.

2. The anchor bolts and raceways shall be properly secured in place.

3. Concrete shall be class "SI" Concrete and the foundation must be cured for ten (10) days before the pole is erected.

4. The cable trench shall be backfilled and firmly compacted before the pole is erected.

5. For sloping grades, the foundation design depth shall be increased by the corresponding cross slope shaft depth increase factor given by:
   A. Cohesive soil - cross slope shaft increase factor 0.009 x (slope angle) + 1.0
   B. Granular soil - cross slope shaft increase factor 0.00005 x (slope angle) + 1.0

6. Install grounding system in accordance with Section 806 of the IDOT Standard Specifications.

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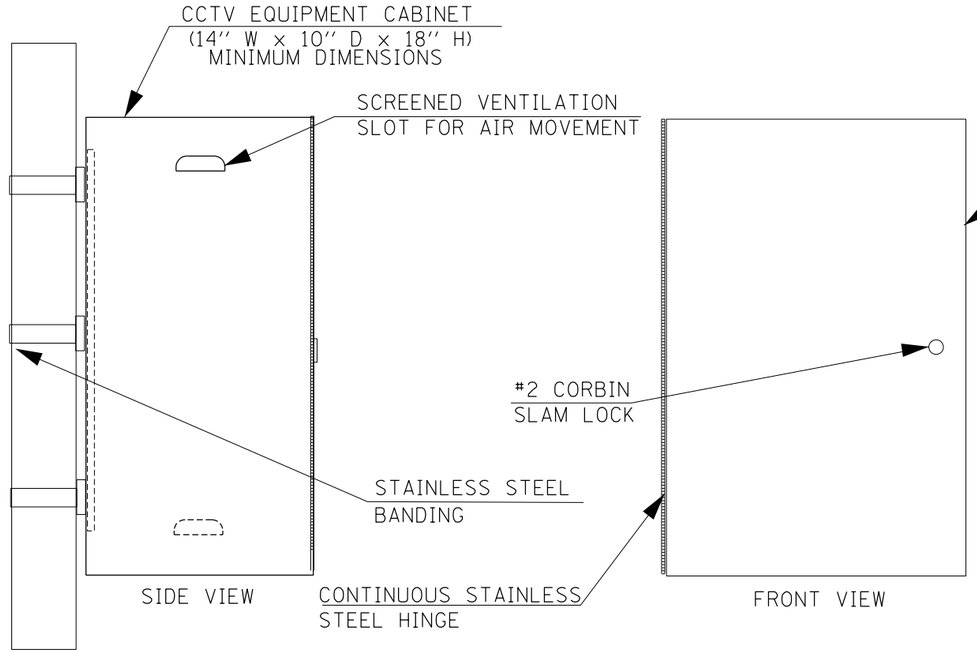
	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

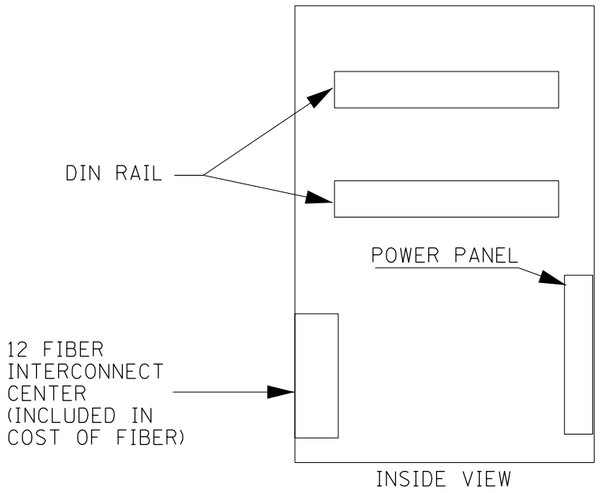
CCTV CAMERA POLE CONCRETE FOUNDATION DETAIL

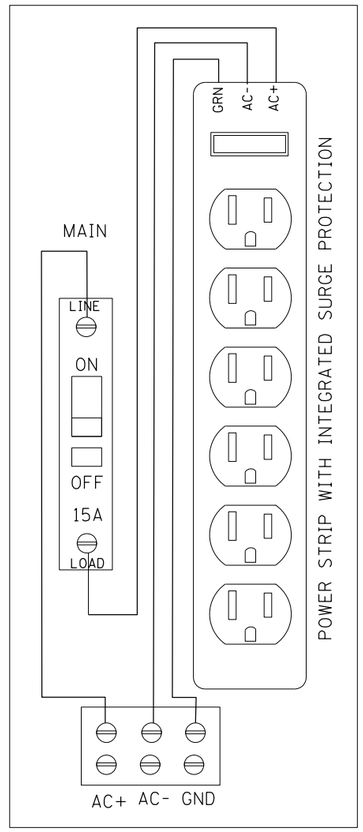
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	26
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS			



THE CONTRACTOR SHALL FURNISH AND INSTALL ALL BRACKETING AND HARDWARE REQUIRED FOR CABINET INSTALLATION ON THE EXISTING POLE.





ITS EQUIPMENT CABINET POWER PANEL DETAIL
(TERMINAL STRIP TO BE EQUIPPED WITH PLEXI-GLASS SAFETY SHIELD)

NOTES

1. THE ITS EQUIPMENT CABINET SHALL BE A NEMA TYPE 3R CABINET WITH MINIMUM OUTSIDE DIMENSIONS OF 20'' (H) X 14'' (W) X 10'' (D) (NOMINAL). THE CABINET SHALL BE CONSTRUCTED FROM .125'' THICK ALUMINUM AND HAVE A NATURAL FINISH.
2. THE CABINET SHALL BE EQUIPPED WITH A #2 CORBIN SLAM LOCK, AND ALL STAINLESS STEEL HARDWARE.

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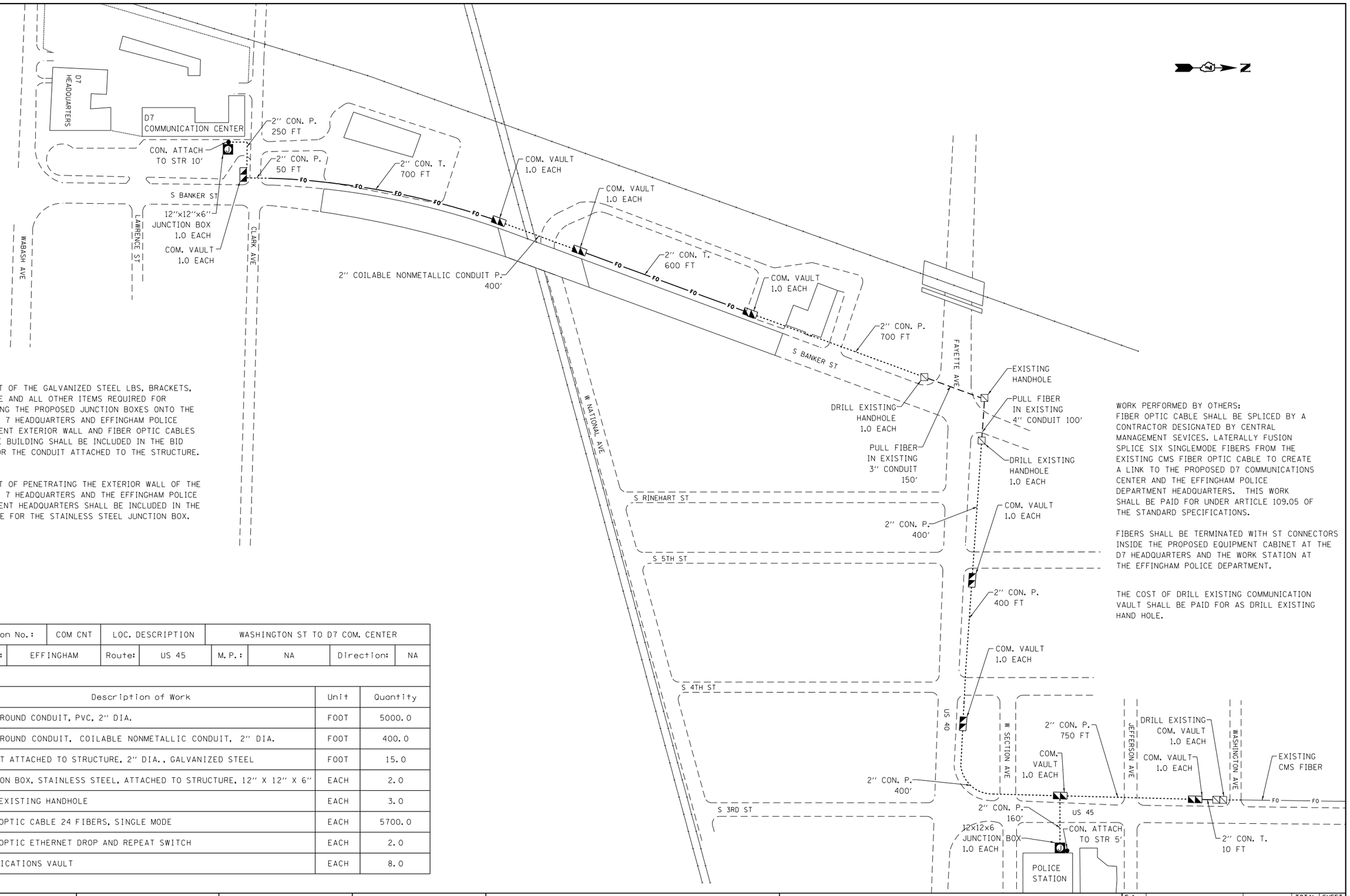
		DRAWN -	REVISED -			VAR	D7 ITS 2014	•	72	27
	PLOT SCALE = 5000.0000 ' / in.	CHECKED -	REVISED -			* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
	PLOT DATE = 6/26/2014	DATE -	REVISED -		SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.	CLARK & LAWRENCE	ILLINOIS			



THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARDWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOXES ONTO THE DISTRICT 7 HEADQUARTERS AND EFFINGHAM POLICE DEPARTMENT EXTERIOR WALL AND FIBER OPTIC CABLES INTO THE BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURE.

THE COST OF PENETRATING THE EXTERIOR WALL OF THE DISTRICT 7 HEADQUARTERS AND THE EFFINGHAM POLICE DEPARTMENT HEADQUARTERS SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOX.

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED D7 COMMUNICATIONS CENTER AND THE EFFINGHAM POLICE DEPARTMENT HEADQUARTERS. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED EQUIPMENT CABINET AT THE D7 HEADQUARTERS AND THE WORK STATION AT THE EFFINGHAM POLICE DEPARTMENT.

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

Location No.:	COM CNT	LOC. DESCRIPTION	WASHINGTON ST TO D7 COM. CENTER				
County:	EFFINGHAM	Route:	US 45	M. P.:	NA	Direction:	NA

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	5000.0
UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	400.0
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	15.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	2.0
DRILL EXISTING HANDHOLE	EACH	3.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	EACH	5700.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2.0
COMMUNICATIONS VAULT	EACH	8.0

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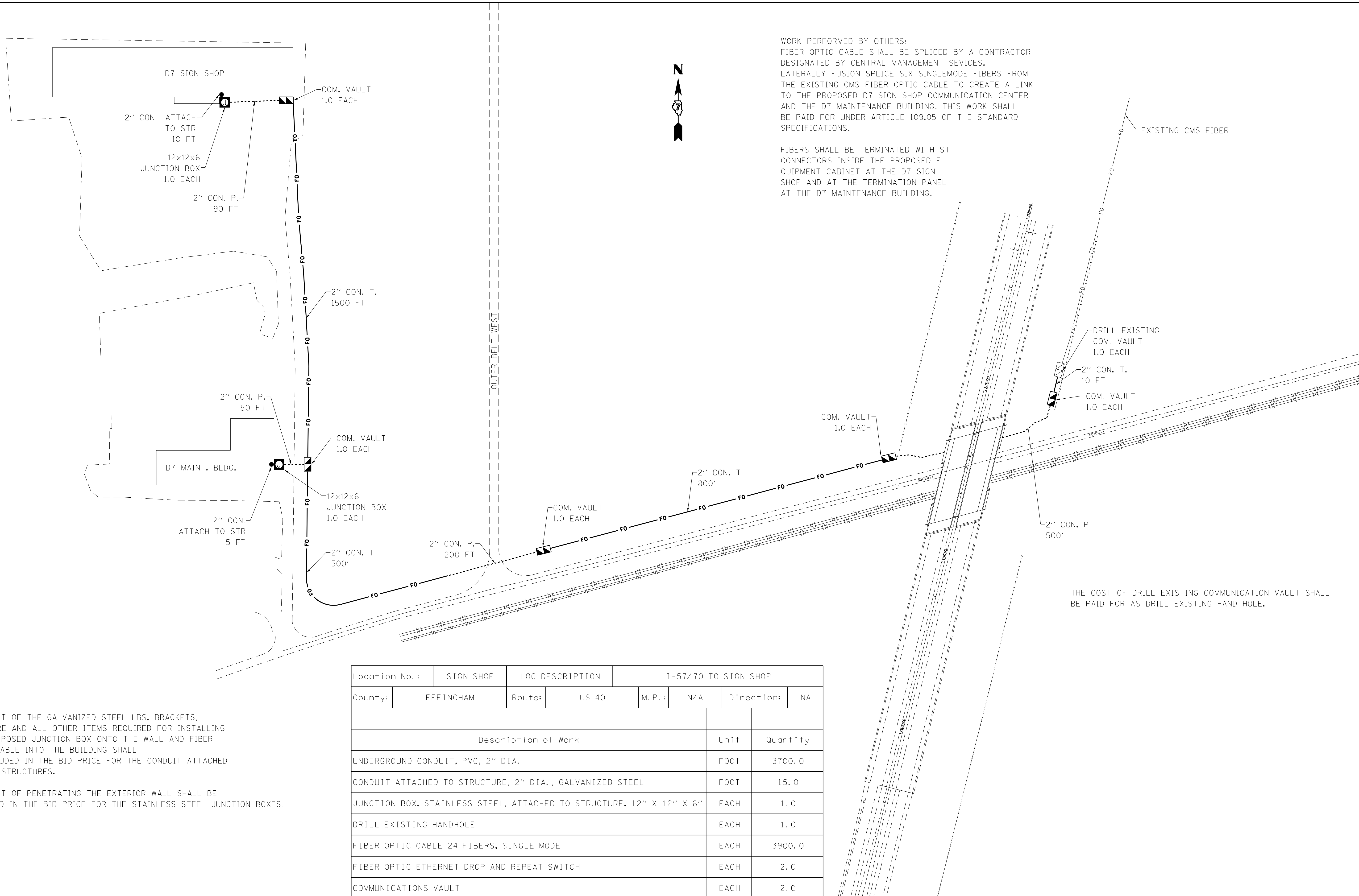
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US 45 TO D7 OFFICE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	28
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			



WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED D7 SIGN SHOP COMMUNICATION CENTER AND THE D7 MAINTENANCE BUILDING. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED E QUIPMENT CABINET AT THE D7 SIGN SHOP AND AT THE TERMINATION PANEL AT THE D7 MAINTENANCE BUILDING.

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARDWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOX ONTO THE WALL AND FIBER OPTIC CABLE INTO THE BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURES.

THE COST OF PENETRATING THE EXTERIOR WALL SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOXES.

Location No.:	SIGN SHOP	LOC DESCRIPTION	I-57/70 TO SIGN SHOP
County: EFFINGHAM	Route: US 40	M.P.: N/A	Direction: NA

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2'' DIA.	FOOT	3700.0
CONDUIT ATTACHED TO STRUCTURE, 2'' DIA., GALVANIZED STEEL	FOOT	15.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12'' X 12'' X 6''	EACH	1.0
DRILL EXISTING HANDHOLE	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	EACH	3900.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2.0
COMMUNICATIONS VAULT	EACH	2.0

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

West Yard/Sign Shop and I57/70 Bridge over Rt 40

SCALE: | SHEET OF SHEETS | STA. TO STA.

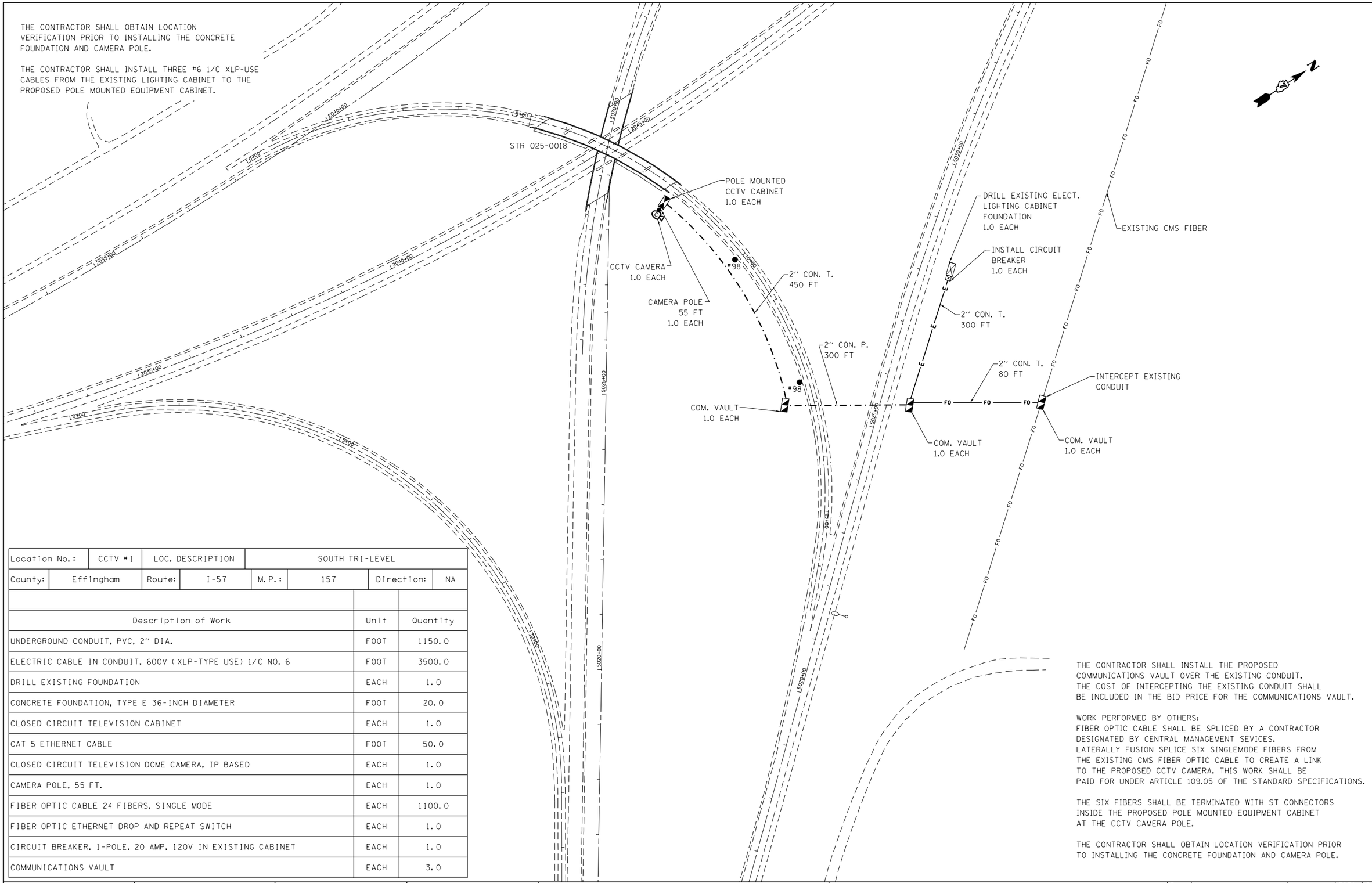
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	29

CONTRACT NO. 74643

ILLINOIS FED. AID PROJECT

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

THE CONTRACTOR SHALL INSTALL THREE #6 1/C XLP-USE CABLES FROM THE EXISTING LIGHTING CABINET TO THE PROPOSED POLE MOUNTED EQUIPMENT CABINET.



Location No.:	CCTV #1	LOC. DESCRIPTION	SOUTH TRI-LEVEL				
County:	Effingham	Route:	I-57	M.P.:	157	Direction:	NA

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	1150.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	3500.0
DRILL EXISTING FOUNDATION	EACH	1.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT.	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	EACH	1100.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	3.0

THE CONTRACTOR SHALL INSTALL THE PROPOSED COMMUNICATIONS VAULT OVER THE EXISTING CONDUIT. THE COST OF INTERCEPTING THE EXISTING CONDUIT SHALL BE INCLUDED IN THE BID PRICE FOR THE COMMUNICATIONS VAULT.

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES.
LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

THE SIX FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

South Trilevel and I57/70 Interchange
(CCTV Camera Location #1)

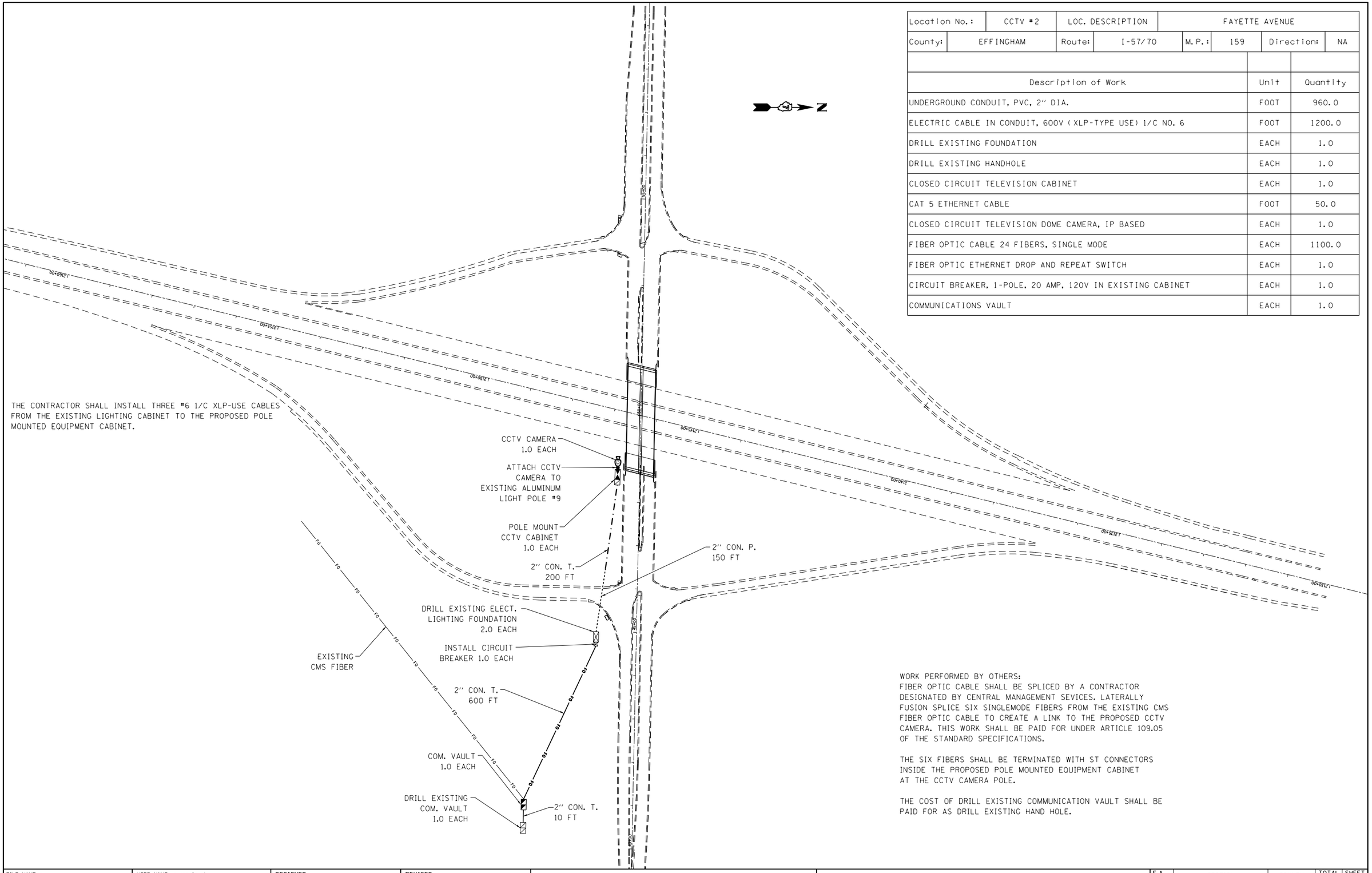
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	30
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

Location No.:	CCTV #2	LOC. DESCRIPTION	FAYETTE AVENUE

County:	EFFINGHAM	Route:	I-57/70	M.P.:	159	Direction:	NA

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	960.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1200.0
DRILL EXISTING FOUNDATION	EACH	1.0
DRILL EXISTING HANDHOLE	EACH	1.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	EACH	1100.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0



WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

THE SIX FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE.

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

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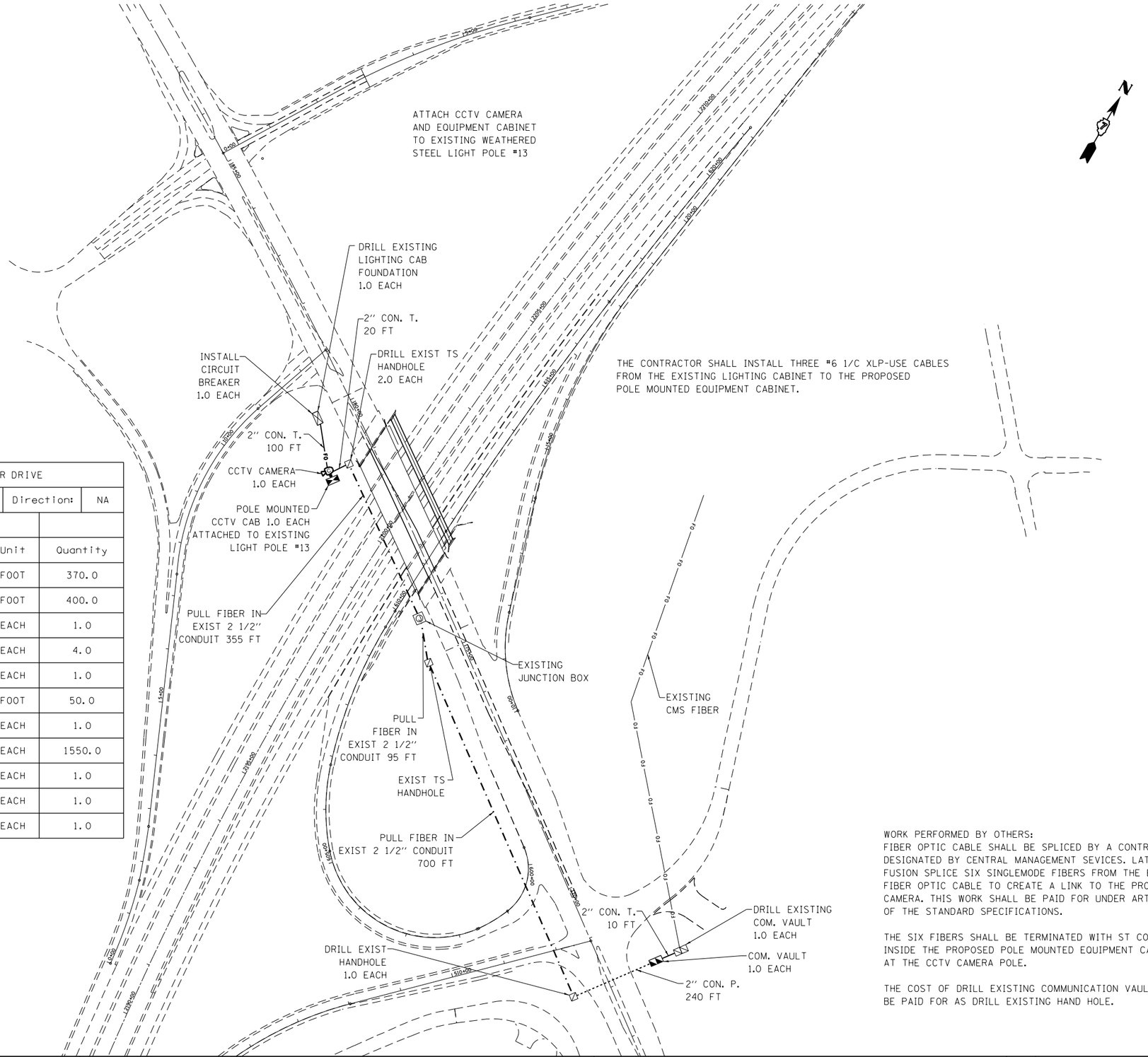
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Fayette ave and I57/70 Interchange
(CCTV Location #2)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	31
		CONTRACT NO. 74643		
	ILLINOIS	FED. AID PROJECT		



Location No.:	CCTV #3	LOC. DESCRIPTION	KELLER DRIVE				
County:	EFFINGHAM	Route:	I-57/70	M.P.:	160	Direction:	NA

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	370.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	400.0
DRILL EXISTING FOUNDATION	EACH	1.0
DRILL EXISTING HANDHOLE	EACH	4.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	50.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	EACH	1550.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

THE SIX FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE.

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

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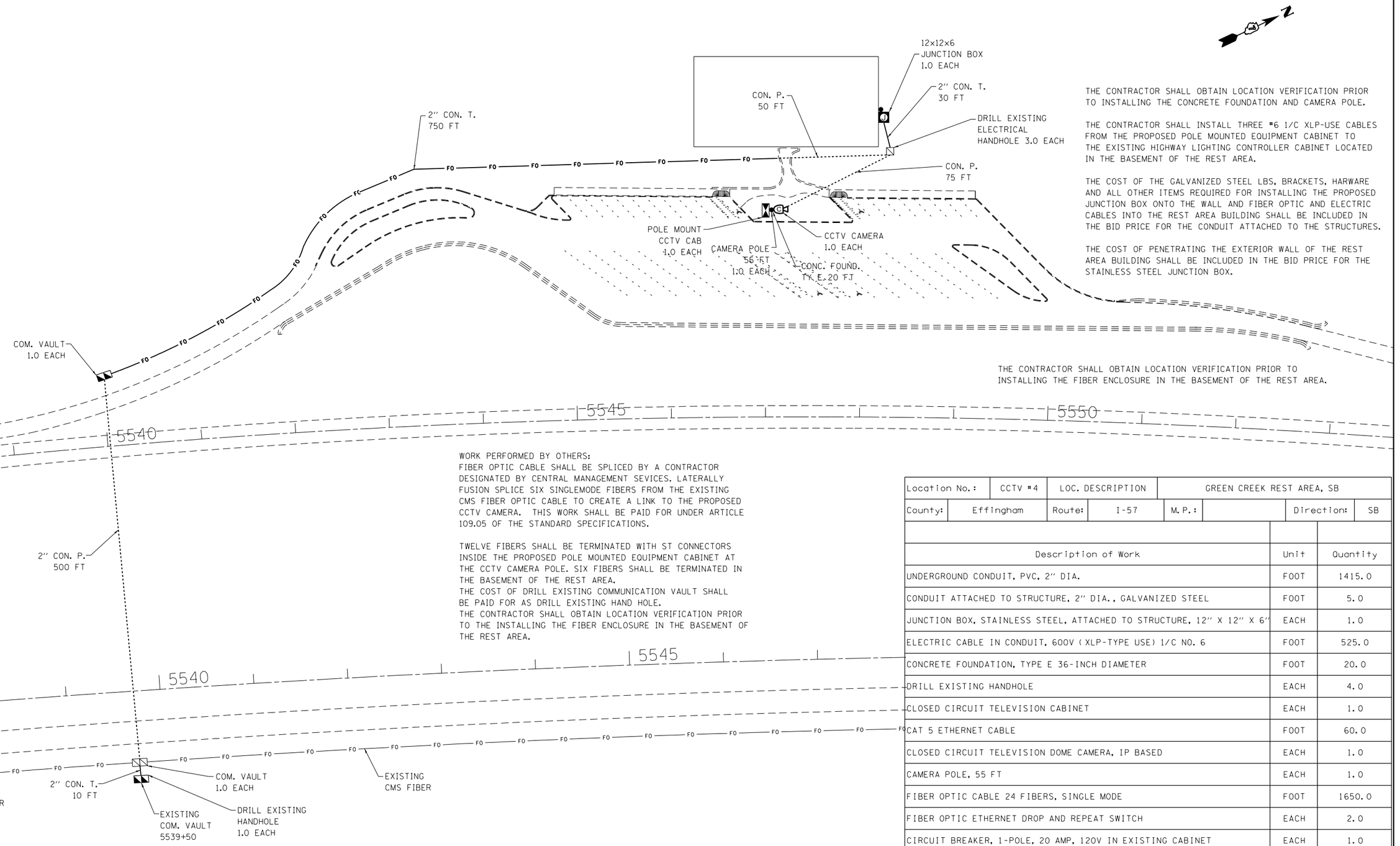
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Keller Drive and I57/70 Interchange
(CCTV Location #3)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	32
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			



THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

THE CONTRACTOR SHALL INSTALL THREE #6 1/C XLP-USE CABLES FROM THE PROPOSED POLE MOUNTED EQUIPMENT CABINET TO THE EXISTING HIGHWAY LIGHTING CONTROLLER CABINET LOCATED IN THE BASEMENT OF THE REST AREA.

THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOX ONTO THE WALL AND FIBER OPTIC AND ELECTRIC CABLES INTO THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURES.

THE COST OF PENETRATING THE EXTERIOR WALL OF THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOX.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

TWELVE FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE. SIX FIBERS SHALL BE TERMINATED IN THE BASEMENT OF THE REST AREA.
THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.
THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO THE INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

Location No.:	CCTV #4	LOC. DESCRIPTION	GREEN CREEK REST AREA, SB				
County:	Effingham	Route:	I-57	M.P.:		Direction:	SB

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	1415.0
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	5.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	525.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
DRILL EXISTING HANDHOLE	EACH	4.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	60.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	1650.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	2.0

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Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTHBOUND GREEN CREEK REST AREA
(CCTV Location #4)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	33
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

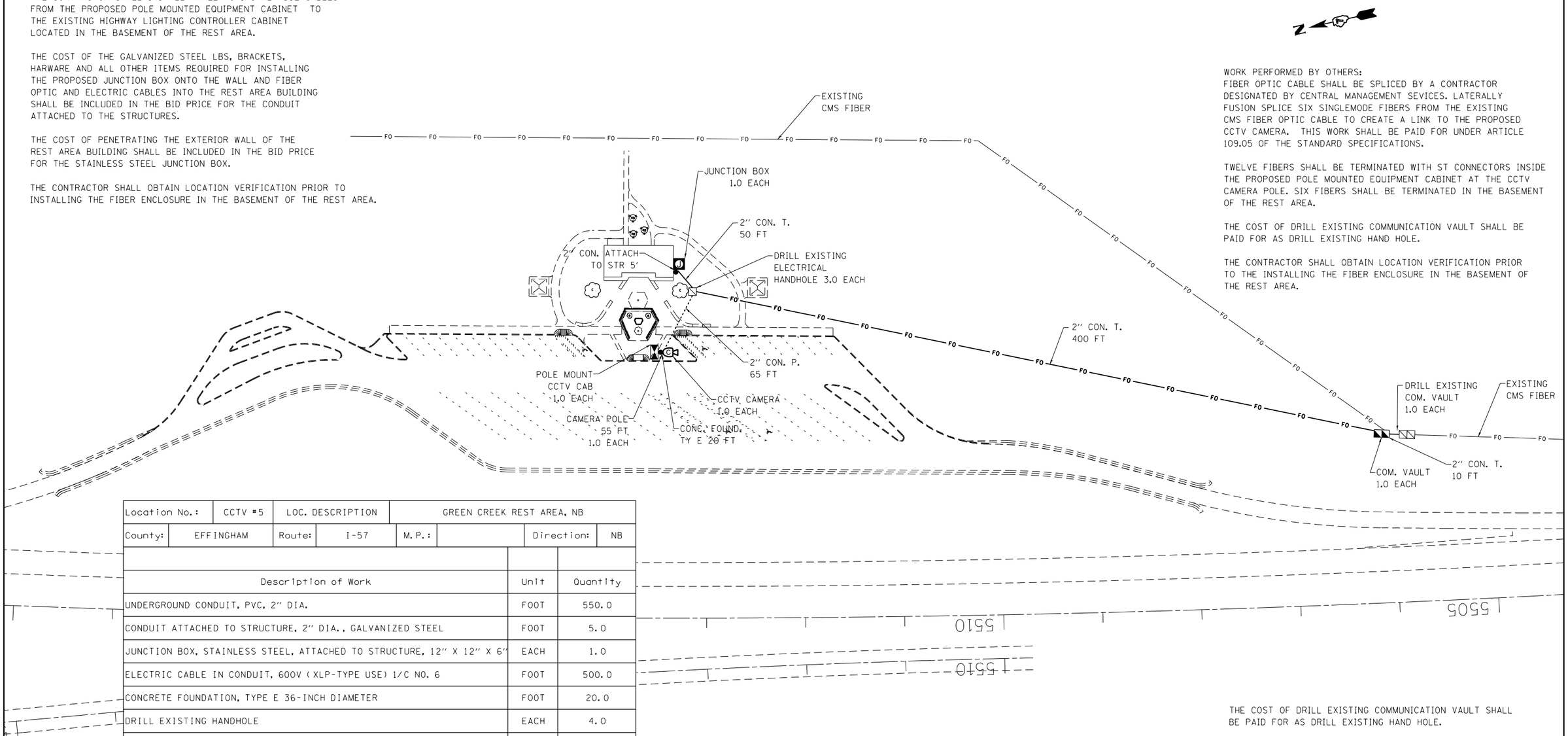
THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

THE CONTRACTOR SHALL INSTALL THREE #6 1/C XLP-USE CABLES FROM THE PROPOSED POLE MOUNTED EQUIPMENT CABINET TO THE EXISTING HIGHWAY LIGHTING CONTROLLER CABINET LOCATED IN THE BASEMENT OF THE REST AREA.

THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOX ONTO THE WALL AND FIBER OPTIC AND ELECTRIC CABLES INTO THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURES.

THE COST OF PENETRATING THE EXTERIOR WALL OF THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOX.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.



WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

TWELVE FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE. SIX FIBERS SHALL BE TERMINATED IN THE BASEMENT OF THE REST AREA.

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO THE INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

Location No.:	CCTV #5	LOC. DESCRIPTION	GREEN CREEK REST AREA, NB				
County:	EFFINGHAM	Route:	I-57	M.P.:		Direction:	NB

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	550.0
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	5.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	500.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
DRILL EXISTING HANDHOLE	EACH	4.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	60.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	700.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	1.0

THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTHBOUND GREEN CREEK REST AREA
(CCTV Location #5)

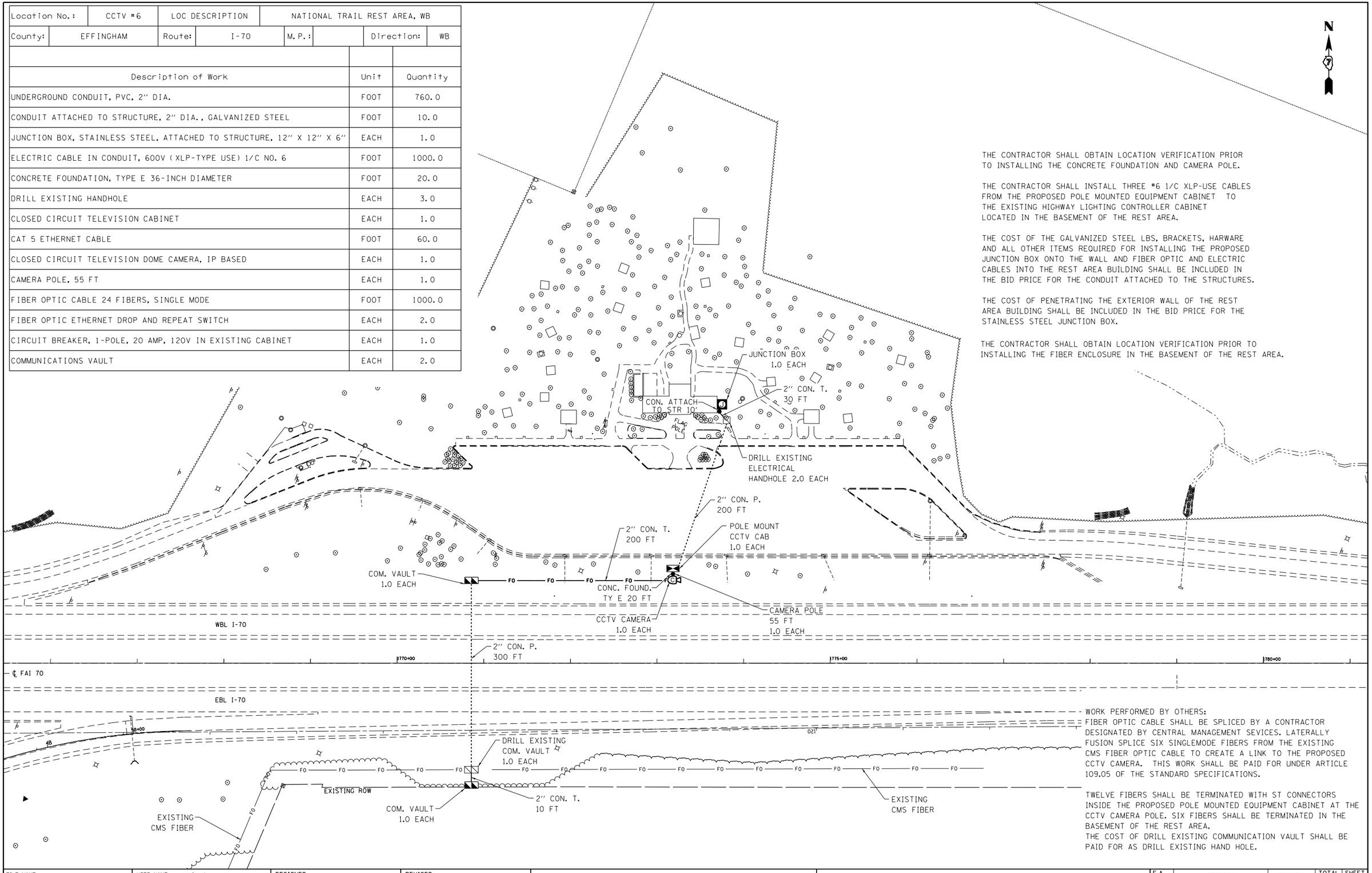
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	34
		CONTRACT NO. 74643		
	ILLINOIS	FED. AID PROJECT		

Location No.:	CCTV #6	LOC DESCRIPTION	NATIONAL TRAIL REST AREA, WB

County:	EFFINGHAM	Route:	I-70	M.P.:		Direction:	WB

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	760.0
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	10.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1000.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	20.0
DRILL EXISTING HANDHOLE	EACH	3.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	1.0
CAT 5 ETHERNET CABLE	FOOT	60.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
CAMERA POLE, 55 FT	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	1000.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	2.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	1.0
COMMUNICATIONS VAULT	EACH	2.0



THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

THE CONTRACTOR SHALL INSTALL THREE #6 1/C XLP-USE CABLES FROM THE PROPOSED POLE MOUNTED EQUIPMENT CABINET TO THE EXISTING HIGHWAY LIGHTING CONTROLLER CABINET LOCATED IN THE BASEMENT OF THE REST AREA.

THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOX ONTO THE WALL AND FIBER OPTIC AND ELECTRIC CABLES INTO THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURES.

THE COST OF PENETRATING THE EXTERIOR WALL OF THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOX.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

TWELVE FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE CCTV CAMERA POLE. SIX FIBERS SHALL BE TERMINATED IN THE BASEMENT OF THE REST AREA.
THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE PAID FOR AS DRILL EXISTING HAND HOLE.

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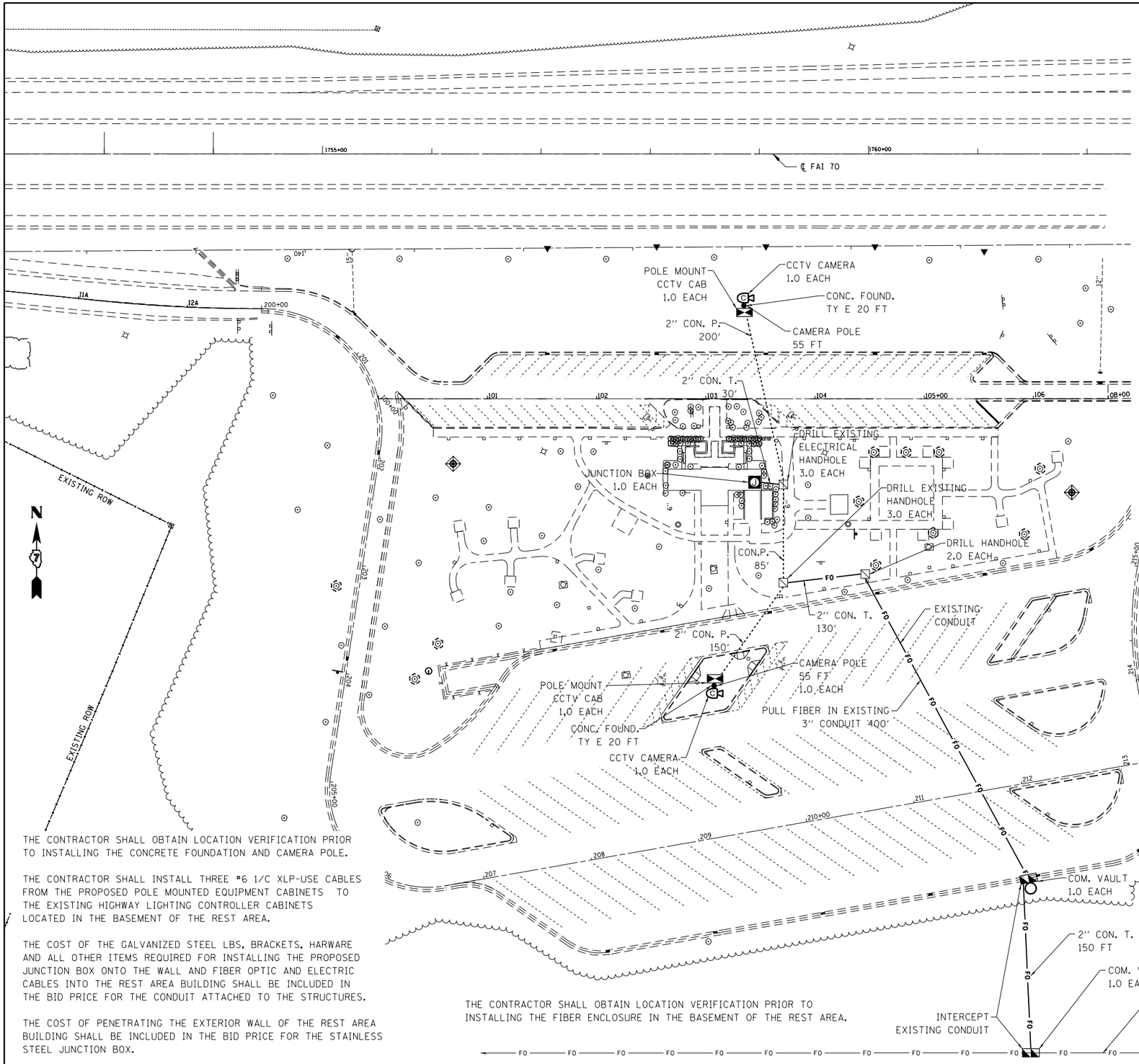
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WB NATIONAL TRAIL REST AREA
(CCTV Location #6)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	35
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			



Location No.:	CCTV #7	LOC. DESCRIPTION	NATIONAL TRAIL REST AREA, EB
County: EFFINGHAM	Route: I-70	M.P.:	Direction: EB

Description of Work	Unit	Quantity
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	750.0
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	5.0
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 24" X 24" X 10"	EACH	1.0
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1800.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	40.0
DRILL EXISTING HANDHOLE	EACH	8.0
CLOSED CIRCUIT TELEVISION CABINET	EACH	2.0
CAT 5 ETHERNET CABLE	FOOT	115.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	2.0
CAMERA POLE, 55 FT	EACH	2.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	1600.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	3.0
CIRCUIT BREAKER, 1-POLE, 20 AMP, 120V IN EXISTING CABINET	EACH	2.0
COMMUNICATIONS VAULT	EACH	2.0

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE CONCRETE FOUNDATION AND CAMERA POLE.

THE CONTRACTOR SHALL INSTALL THREE #6 1/C XLP-USE CABLES FROM THE PROPOSED POLE MOUNTED EQUIPMENT CABINETS TO THE EXISTING HIGHWAY LIGHTING CONTROLLER CABINETS LOCATED IN THE BASEMENT OF THE REST AREA.

THE COST OF THE GALVANIZED STEEL LBS, BRACKETS, HARWARE AND ALL OTHER ITEMS REQUIRED FOR INSTALLING THE PROPOSED JUNCTION BOX ONTO THE WALL AND FIBER OPTIC AND ELECTRIC CABLES INTO THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE CONDUIT ATTACHED TO THE STRUCTURES.

THE COST OF PENETRATING THE EXTERIOR WALL OF THE REST AREA BUILDING SHALL BE INCLUDED IN THE BID PRICE FOR THE STAINLESS STEEL JUNCTION BOX.

THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

THE CONTRACTOR SHALL INSTALL THE PROPOSED COMMUNICATIONS VAULTS OVER THE EXISTING CONDUIT. THE COST OF INTERCEPTING THE EXISTING CONDUIT SHALL BE INCLUDED IN THE BID PRICE FOR THE COMMUNICATIONS VAULTS.

WORK PERFORMED BY OTHERS:
FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SEVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED CCTV CAMERA. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

TWELVE FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET AT THE SOUTH CCTV CAMERA POLE. TWELVE FIBERS SHALL BE TERMINATED IN THE BASEMENT OF THE REST AREA AND SIX FIBERS SHALL BE TERMINATED AT THE NORTH CCTV CAMERA POLE. THE COST OF DRILL EXISTING COMMUNICATION VAULT SHALL BE AID FOR AS DRILL EXISTING HAND HOLE.
THE CONTRACTOR SHALL OBTAIN LOCATION VERIFICATION PRIOR TO THE INSTALLING THE FIBER ENCLOSURE IN THE BASEMENT OF THE REST AREA.

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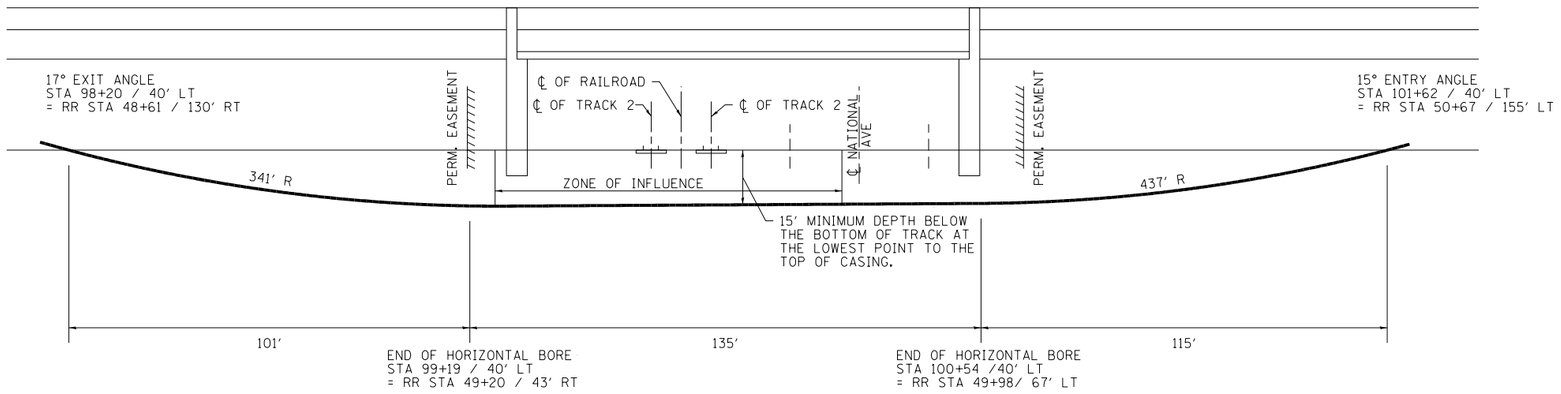
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EB NATIONAL TRAIL REST AREA
(CCTV Location #7)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	36
		CONTRACT NO. 74643		
	ILLINOIS	FED. AID PROJECT		



WORK ON RAILROAD PROPERTY SHALL CONFORM TO CSX TRANSPORTATION'S RULES, REGULATIONS AND GUIDELINES.

A RAILROAD REPRESENTATIVE MUST BE ON SITE DURING THE BORE.

ALL DRILL HEADS NEEDED FOR EACH SOIL CONDITIONS INDICATED ON THE BORE LOGS SHALL BE ON SITE PRIOR TO COMMENCEMENT OF THE BORE.

THE HORIZONTAL DIRECTIONAL DRILLING OPERATIONS SHALL PROCEED FROM START TO FINISH WITHOUT INTERRUPTION UNTIL THE DRILLING IS COMPLETE AND THE PIPE IS PULLED INTO PLACE.

THE BORE SHALL BE TRACKED CONSTANTLY, WITH THE LOCATION AND DEPTH MARKED EVERY 10 FEET.

BORE PITS SHALL BE LOCATED OUTSIDE OF THE RAILROAD ZONE OF INFLUENCE.

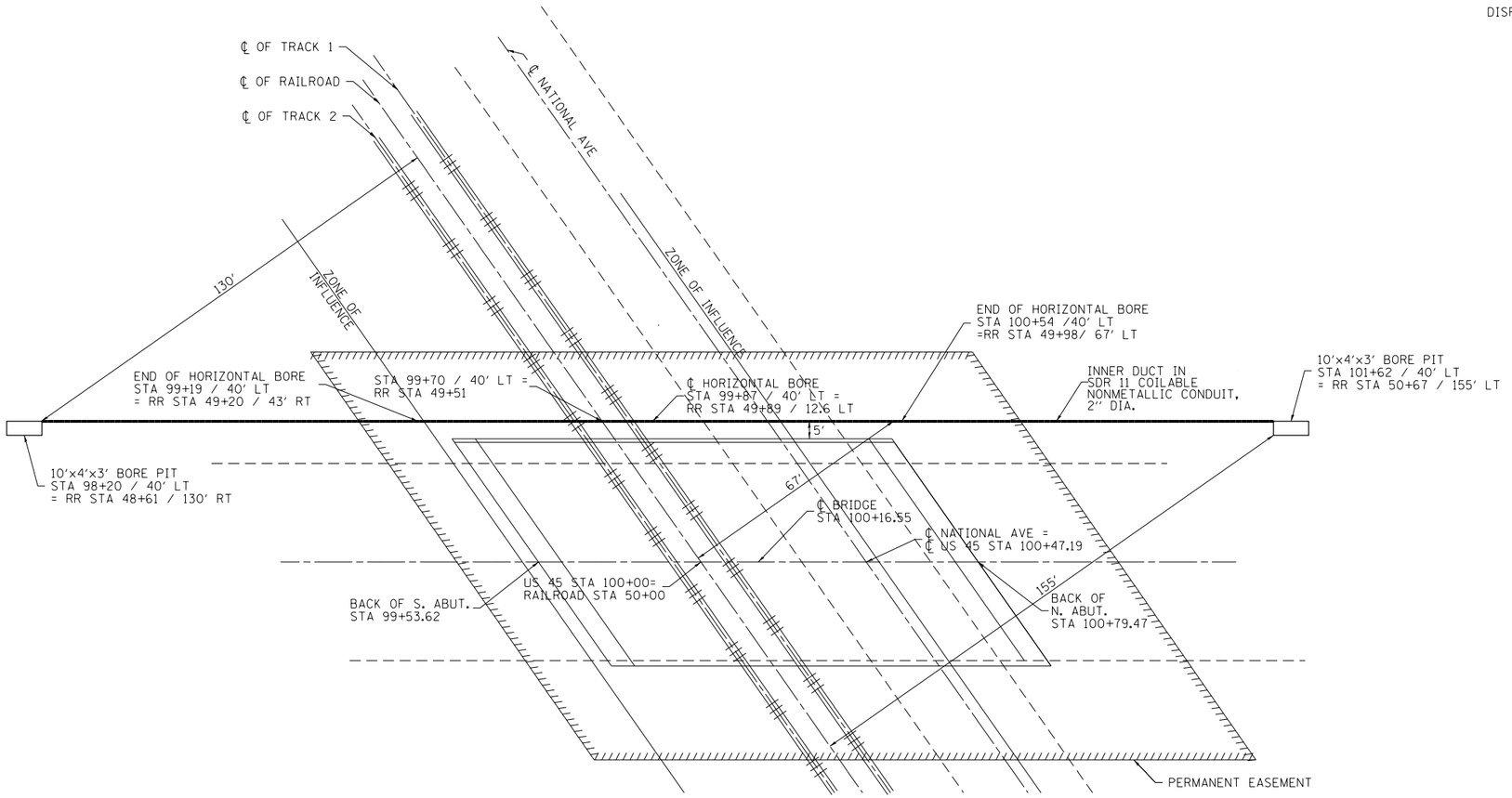
CASING IS REQUIRED FOR THE RAILROAD BORE.

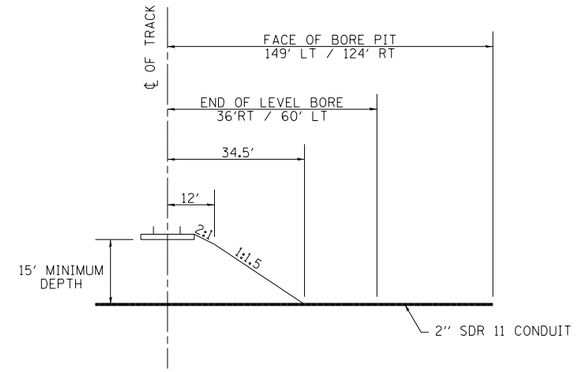
CASING PIPE SHALL MEET THE STANDARDS OF CSX TRANSPORTATION (E80 LOADING)

THE DIAMETER OF THE BORE HOLE SHALL NOT EXCEED THE MAXIMUM OF 1.5 TIMES THE OUTSIDE DIAMETER OF THE PIPE.

SLURRY SHALL INCLUDE BENTONITE.

EXCESS SLURRY AND OTHER WASTE PRODUCES OF THE BORE SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 WITHOUT ADDITIONAL COMPENSATION.





ZONE OF INFLUENCE
34.5' FROM NEAREST TRACK

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		DRAWN -	REVISED -				D7 ITS 2014	VARIOUS	72	37
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 74643		
Default	PLOT DATE = 7/16/2014	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	SEC. 94-00073-02-BR	EFFINGHAM	106	53
FED. ROAD DIST. NO.		PROJECT		

Sheet 2 of 12

CENTRAL ILLINOIS DRILLING COMPANY
1908 OAKWOOD AVE.
BLOOMINGTON, ILLINOIS 61704
(309) 662-5868

LOG OF BORING

CONTRACTED WITH Hanson Engineers BORING NO. 6
PROJECT NAME Future Overpass CONTRACT NO.
LOCATION Sta 100 + 85
DATUM ___ HAMMER WT. 140# HAMMER DROP 30" HOLE DIA. 8"
SURFACE ELEV. 591.2 CORE DIA. ___ CASING ___
DATE STARTED 3-3-94 COMPLETED 3-3-94 DRILLING METHOD HSA

ELEV.	DESCRIPTION	STRATA DEPTH	DEPTH SCALE	SAMPLES BLOWS FT.	NO.	TYPE	RECOV.	QP	NOTES
591.2		0.0	30						#A 6" blk. claye silt, root hairs, 4" wh. lt. gr. f. crushed wh. rock w/f.c. sand fill moist
590.3	See #A	0.9							
	Blk. brn. clayey silt, w/tr. f. sand, w/coal f.c. gravel			2-2-2	1	ss	15"	1.2	
585.4	fill moist	5.8	5						WATER 3-3-94
584.3	Brn. clayey silt, w/ tr. f. sand, occas. f. gravel moist	6.9		1-2-1	2	ss	17	0.7	DD 23.0' 1:15pm BAR DRY 1:45pm AAR 27.1' 2:00pm
581.5	Lt. brn. lt. gr. clayey silt, w/tr. f. sand, occas. f. gravel till moist	9.7		3-5-7	3	ss	18	2.5	DWL 14.7' 11:00am 3-4-94
	Lt. gr. lt. brn. clayey silt, w/f. sand, occas. f. gravel, silt seams		10	3-4-4	4	ss	18	1.3	Redrilled B#6A to 13.0' Pushed 3"T 11.0'-13.0' 24" recovery
				3-3-4	5	ss	18	0.8	
			15	3-4-6	6	ss	18	1.4	
				2-3-4	7	ss	18	3.8	
572.0	till moist	19.2	20	16-27-34	8	ss	18	4.5+	
	Brn. gr. silty clay, w/tr. f. sand, occas. f. gravel								

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LOG OF BORING

CONTRACTED WITH Hanson Engineers BORING NO. 6
PROJECT NAME Future Overpass CONTRACT NO.
LOCATION Sta 100 + 85
DATUM ___ HAMMER WT. 140# HAMMER DROP 30" HOLE DIA. 8"
SURFACE ELEV. ___ CORE DIA. ___ CASING ___
DATE STARTED 3-3-94 COMPLETED 3-3-94 DRILLING METHOD HSA

ELEV.	DESCRIPTION	STRATA DEPTH	DEPTH SCALE	SAMPLES BLOWS FT.	NO.	TYPE	RECOV.	QP	NOTES
			30						
568.4	till moist	22.8							
	Gr. brn. weathered shale, w/sandstone, occas. lt. gr. sandstone seams		25	11-12-17	9	ss	18"	3.5	
565.5	moist	25.7							
	Brn. gr. weathered shale								
563.3	moist	27.9							
	Gr. shale, w/tr. clay		30	22-30-42	10	ss	18	3.0	
558.3	moist	32.9							
	gr. shale			100/6"	11	ss	6	--	
553.9	dry-moist	37.3		100/4"	12	ss	4	--	
	END OF BORING 37.3'								

CENTRAL ILLINOIS DRILLING COMPANY
1908 OAKWOOD AVE.
BLOOMINGTON, ILLINOIS 61704
(309) 662-5868

LOG OF BORING

CONTRACTED WITH Hanson Engineers BORING NO. 7
PROJECT NAME Future Overpass CONTRACT NO.
LOCATION Sta 98 + 92
DATUM ___ HAMMER WT. 140# HAMMER DROP 30" HOLE DIA. 8"
SURFACE ELEV. 583.4 CORE DIA. ___ CASING ___
DATE STARTED 3-3-94 COMPLETED 3-3-94 DRILLING METHOD HSA

ELEV.	DESCRIPTION	STRATA DEPTH	DEPTH SCALE	SAMPLES BLOWS FT.	NO.	TYPE	RECOV.	QP	NOTES
583.4		0.0	30						#A Dk. brn. clay silt, w/tr. f. sand, root hairs moist
582.6	See #A	0.8							
581.8	Lt. brn. clayey silt, w/tr. f. sand moist	1.9		3-4-6	1	ss	18"	1.5	
	Lt. brn. lt. gray clayey silt, w/tr. f. sand, occas. f. gravel		5	3-4-5	2	ss	18	1.5	WATER 3-3-94
				3-5-6	3	ss	18	1.5	DD 12.0' 8:40am BAR 14.9' 9:55am AAR 5.5' 10:15am
573.4	till moist	10.0	10	3-4-5	4	ss	18	0.9	DWL 4.6' 10:15am 3-4-94
	Lt. brn. lt. gr. clayey silt, w/f. sand, occas. f. gravel			2-3-3	5	ss	17	0.5	Redrilled B#7A pushed 3" T, 6.0'-8.0' 23" recovery
570.8	till moist	12.6							
	Lt. gr. lt. brn. silty f.c. sand, w/f. gravel, occas. clayey silt seams wet	15.2	15	5-35-54	6	ss	18	2.5	
568.2	Lt. brn. sandstone, w/f. sand, tr. silt moist	16.8		14-11-12	7	ss	18	2.5	
566.8	Lt. gr. sandy silt, w/sandstone, occas. clayey silt pockets								
563.5	v. moist	19.9	20	16-26-41	8	ss	18	--	

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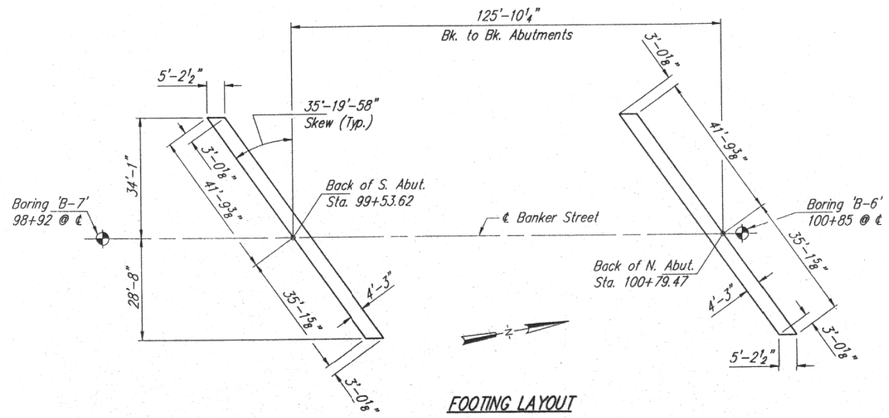
LOG OF BORING

CONTRACTED WITH Hanson Engineers BORING NO. 7
PROJECT NAME Future Overpass CONTRACT NO.
LOCATION Sta 98 + 92
DATUM ___ HAMMER WT. 140# HAMMER DROP 30" HOLE DIA. 8"
SURFACE ELEV. ___ CORE DIA. ___ CASING ___
DATE STARTED 3-3-94 COMPLETED 3-3-94 DRILLING METHOD HSA

ELEV.	DESCRIPTION	STRATA DEPTH	DEPTH SCALE	SAMPLES BLOWS FT.	NO.	TYPE	RECOV.	QP	NOTES
			30						
	Lt. gr. f. sand, w/ silt, sandstone			45-47-53/5	9	ss	17"	--	
558.9	wet	24.5	25	14-22-30	10	ss	18	--	
	Gr. brn. sandy weathered shale, w/ sandstone								
556.0	moist	27.4							
	Lt. gr. shale		30	49-51/3"	11	ss	9	4.5+	
548.1	moist	35.3	35	30-70/3"	12	ss	9	3.0	
	END OF BORING 35.3'								
			40						



FOOTING LAYOUT

BORINGS & FOOTING LAYOUT
BANKER STREET over
CONRAIL RAILWAY
SECTION 94-00073-02-BR
EFFINGHAM, ILLINOIS
STATION 100+16.55

DESIGNED
CHECKED
DRAWN D.A.N.
CHECKED M.E.A.

HANSON ENGINEERS INCORPORATED
1525 SOUTH SIXTH STREET SPRINGFIELD, IL 62703

FILE NO. 91S2019
DATE 7-21-95

DESIGNED	M.E.A.	M.E.A.	
DRAWN	D.A.N.	D.A.B.	
REVIEWED	G.L.C.	G.L.C.	

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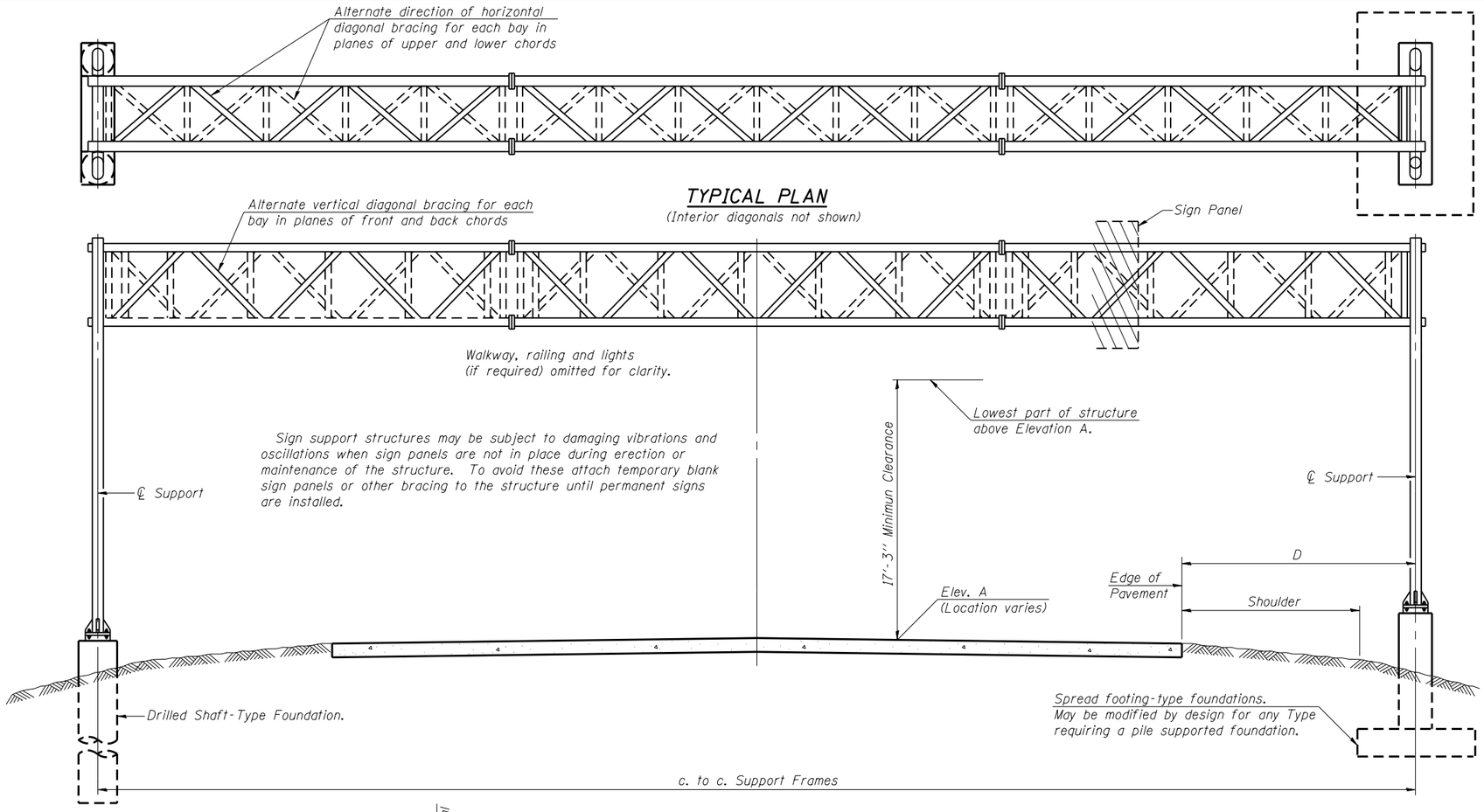
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RAILROAD HORIZONTAL DIRECTIONAL DRILLING DETAILS

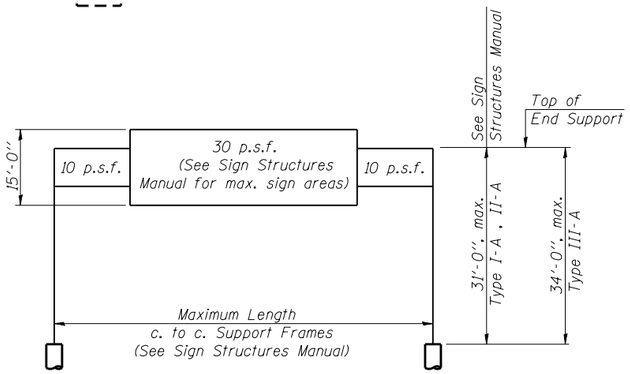
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D7 ITS 2014	VARIOUS	72	38
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			



TYPICAL PLAN

(Interior diagonals not shown)



DESIGN WIND LOADING DIAGRAM

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

TYPICAL ELEVATION

(Looking at Face of Signs**)

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

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
7S025I070R080.40	1365+00	III-A	74'-0"	624.32'	25'-0" RT	10'-0"	300 Sq Ft
					25'-0" LT		
7S025I057R148.4	4500+00	III-A	78'-0"	602.89'	30'-0" RT	10'-0"	300 Sq Ft
					24'-0" LT		
7S018I057L178.8	217+50	III-A	78'-0'	668.03'	25'-0" RT	10'-0"	300 Sq Ft
					29'-0" LT		
7S018I070L107.6	180+400	III-A	74'-0"	596.08'	24'-0" RT	10'-0"	300 Sq Ft
					26'-0" LT		
7S012I070L155.0	515+51	III-A	82'-0'	543.10'	26'-0" RT	10'-0"	300 Sq Ft
					32'-0" LT		

**Looking upstation for structures with signs both sides.

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

GENERAL NOTES

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

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

LOADING: 90 M.P.H. WIND VELOCITY

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

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

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

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

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

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

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

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

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

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

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

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	386
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	-
CONCRETE FOUNDATIONS	Cu. Yds.	-
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	115.8

OS-A-1 6-1-12

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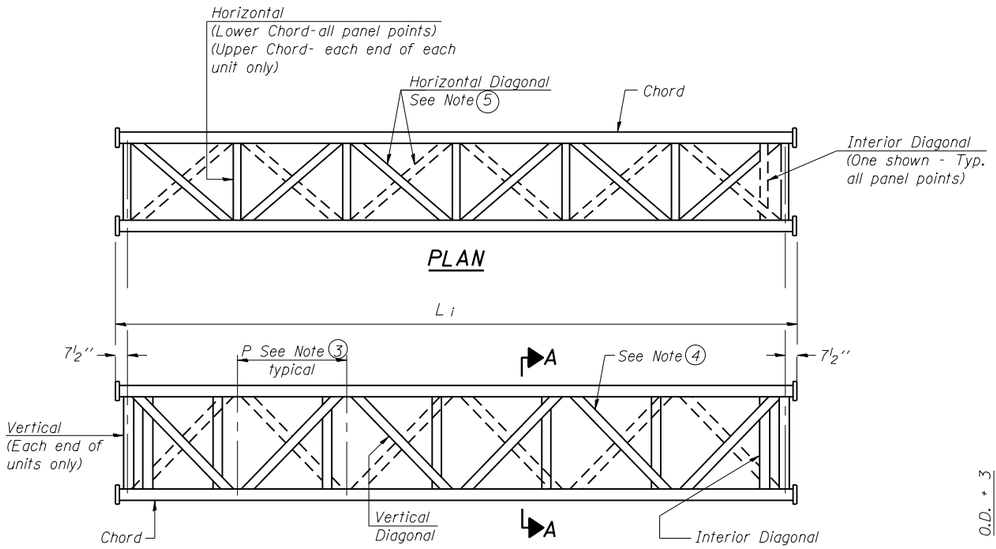
Default	PLOT DATE = 6/19/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

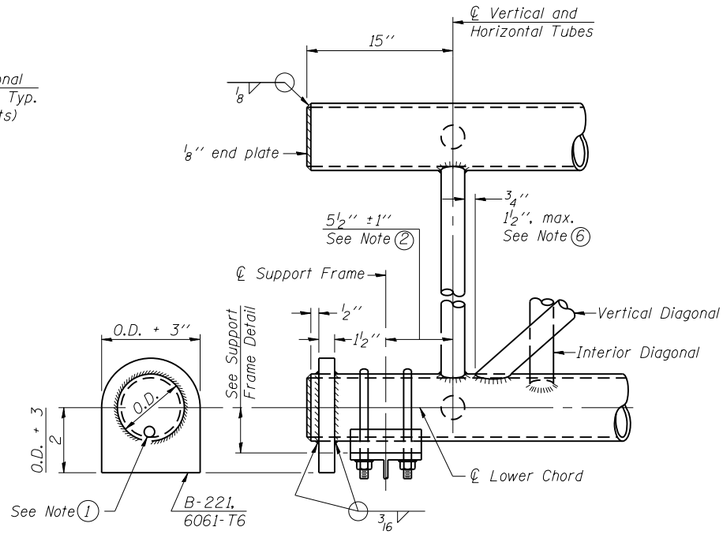
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	*	72	39
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

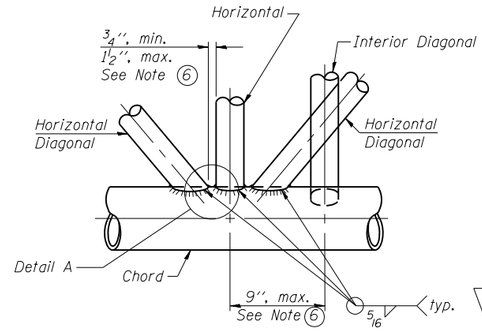


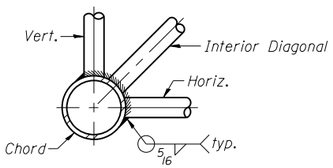
ELEVATION
TYPICAL INTERIOR UNIT

Even number of panels/interior unit required.

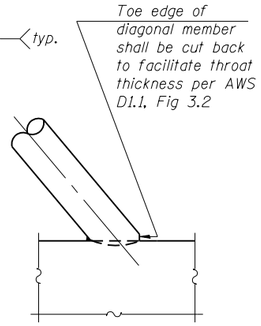


SUPPORT END DETAIL FOR EXTERIOR UNIT

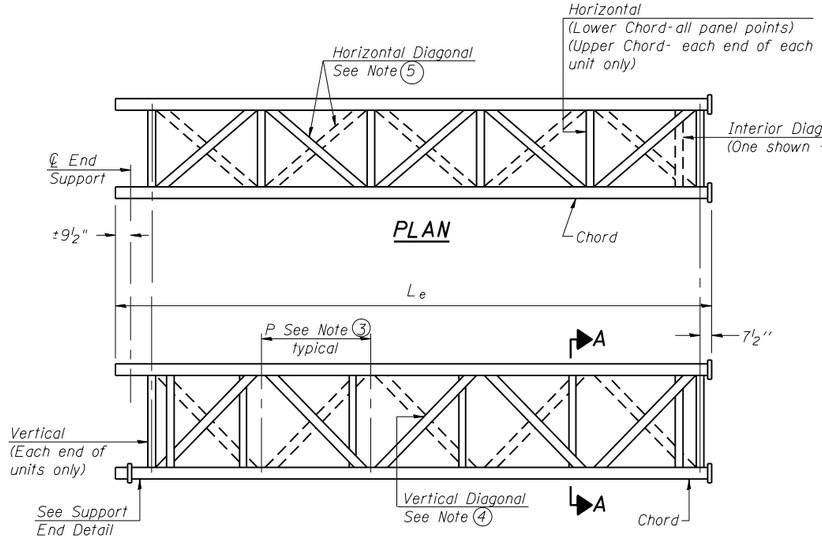




TYPICAL JOINT DETAILS

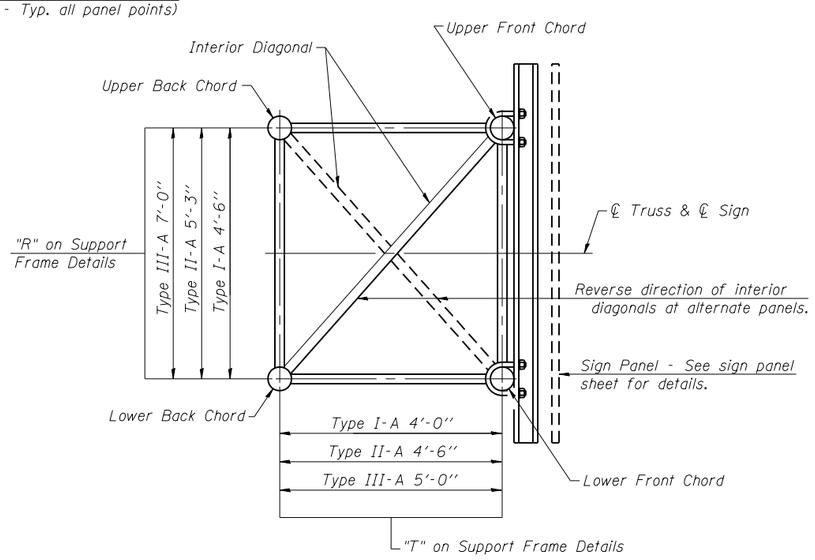


DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT

Even or odd number of panels/exterior units allowed.



SECTION A-A

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

OS-A-2 6-1-12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

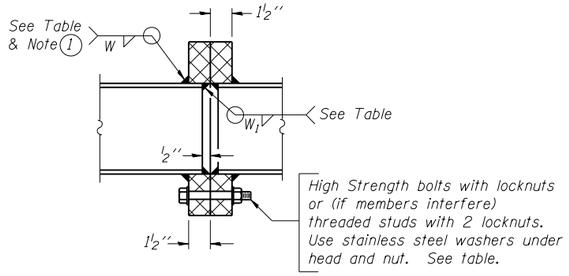
OVERHEAD SIGN STRUCTURES – ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	40
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

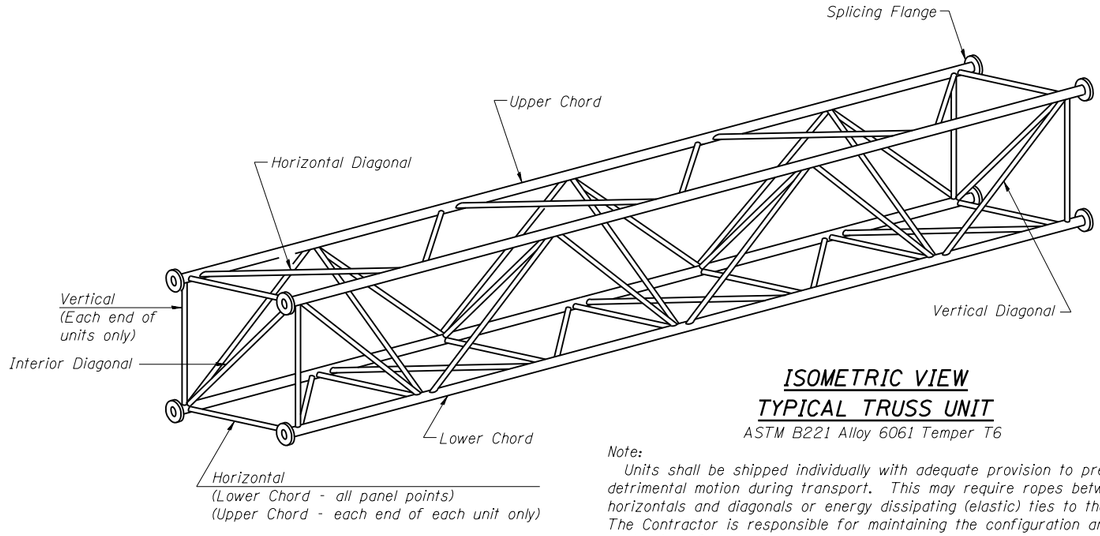
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L_e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L_I)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W_1		
7S025I070R080.40	1365+00	III-A	7	37'-9"	5'-1½"	0	-	-	-	7"	5/16"	3¼"	5/16"	1"	6"	1"	7/16"	5/16"	11½"	15"
7S025I057R148.4	4500+00	III-A	7	39'-9½"	5'-5"	0	-	-	-	7"	5/16"	3¼"	5/16"	1"	6"	1"	7/16"	5/16"	11½"	15"
7S018I057L178.8	217+50	III-A	7	39'-9½"	5'-5"	0	-	-	-	7"	5/16"	3¼"	5/16"	1"	6"	1"	7/16"	5/16"	11½"	15"
7S018I070L107.6	180+400	III-A	7	37'-9"	5'-1½"	0	-	-	-	7"	5/16"	3¼"	5/16"	1"	6"	1"	7/16"	5/16"	11½"	15"
7S012I070L155.0	515+51	III-A	5	26'-5½"	4'-11"	1	6	30'-9"	4'-11"	7"	5/16"	3¼"	5/16"	1"	6"	1"	7/16"	5/16"	11½"	15"



SECTION B-B

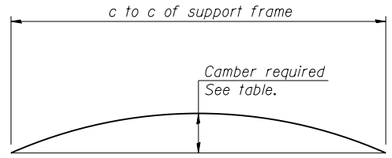
(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining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



ISOMETRIC VIEW
TYPICAL TRUSS UNIT

ASTM B221 Alloy 6061 Temper T6

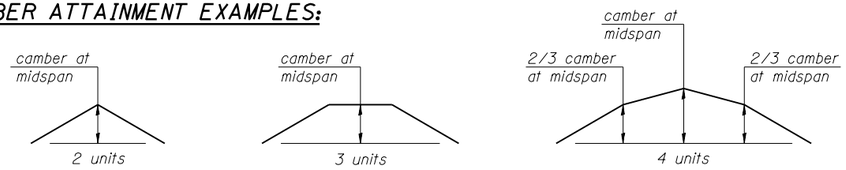
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection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



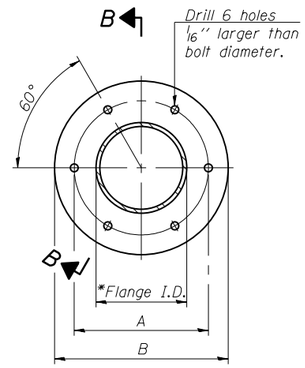
CAMBER DIAGRAM

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

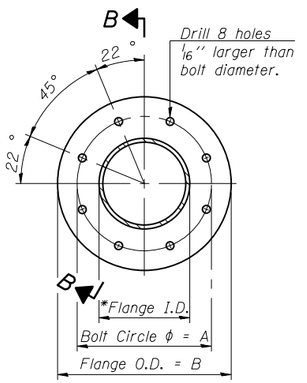
CAMBER ATTAINMENT EXAMPLES:



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



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



TRUSS TYPES II-A & III-A

SPLICING FLANGES

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

OS4-A-2 6-1-12

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DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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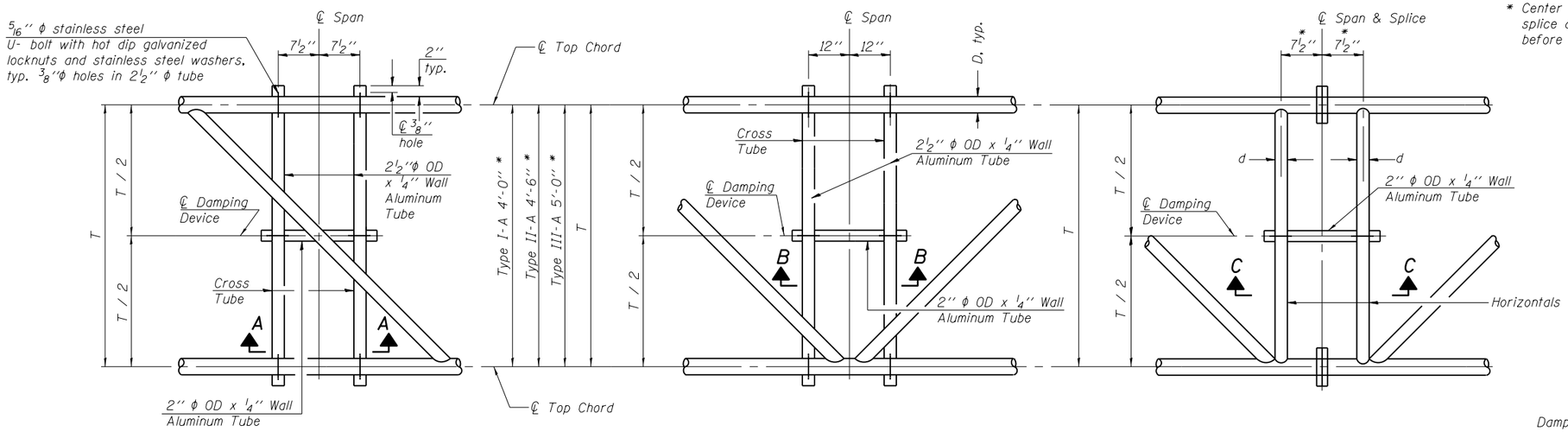
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



PLAN DETAIL "A"
℄ Span between Panel Points

PLAN DETAIL "B"
℄ Span at Panel Point

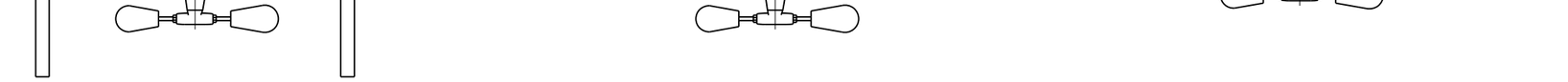
PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

* 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...

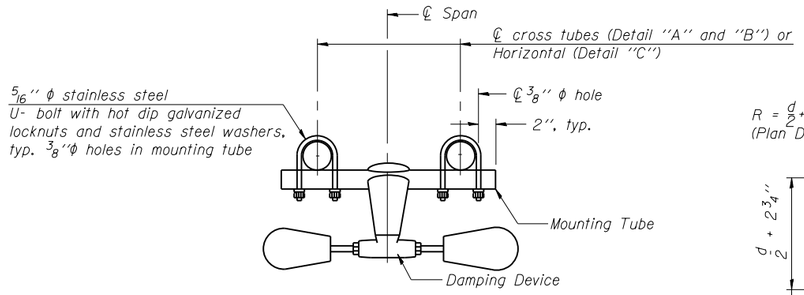
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



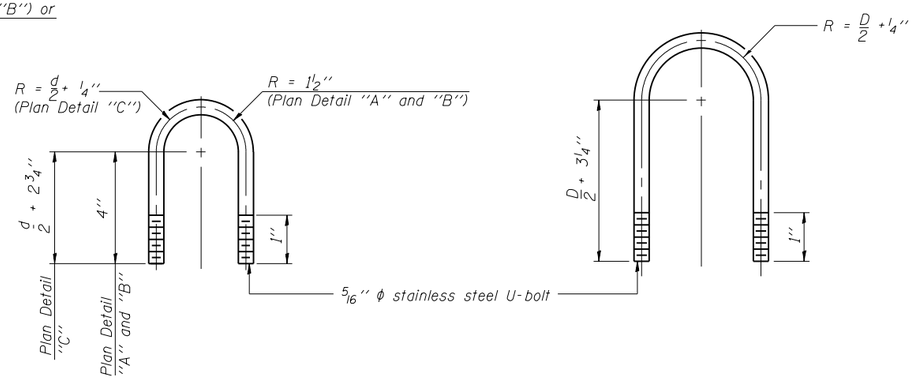
SECTION A-A

SECTION B-B

SECTION C-C

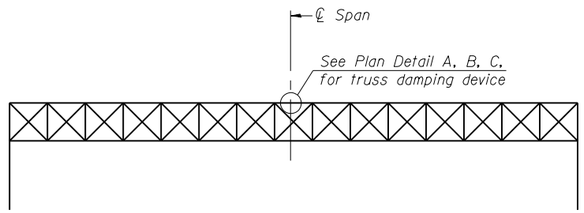


TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



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 6-1-12

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OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
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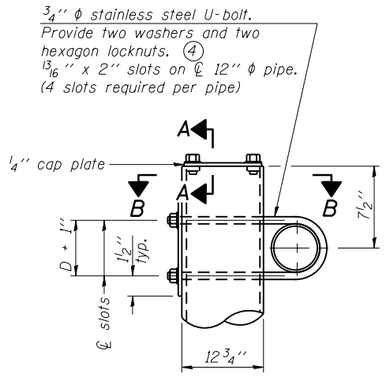
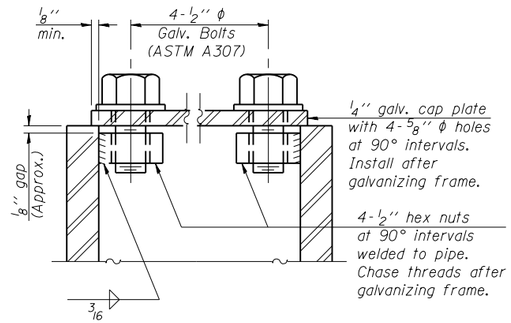
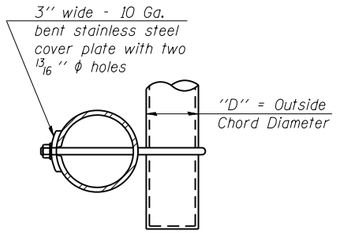


DETAIL A

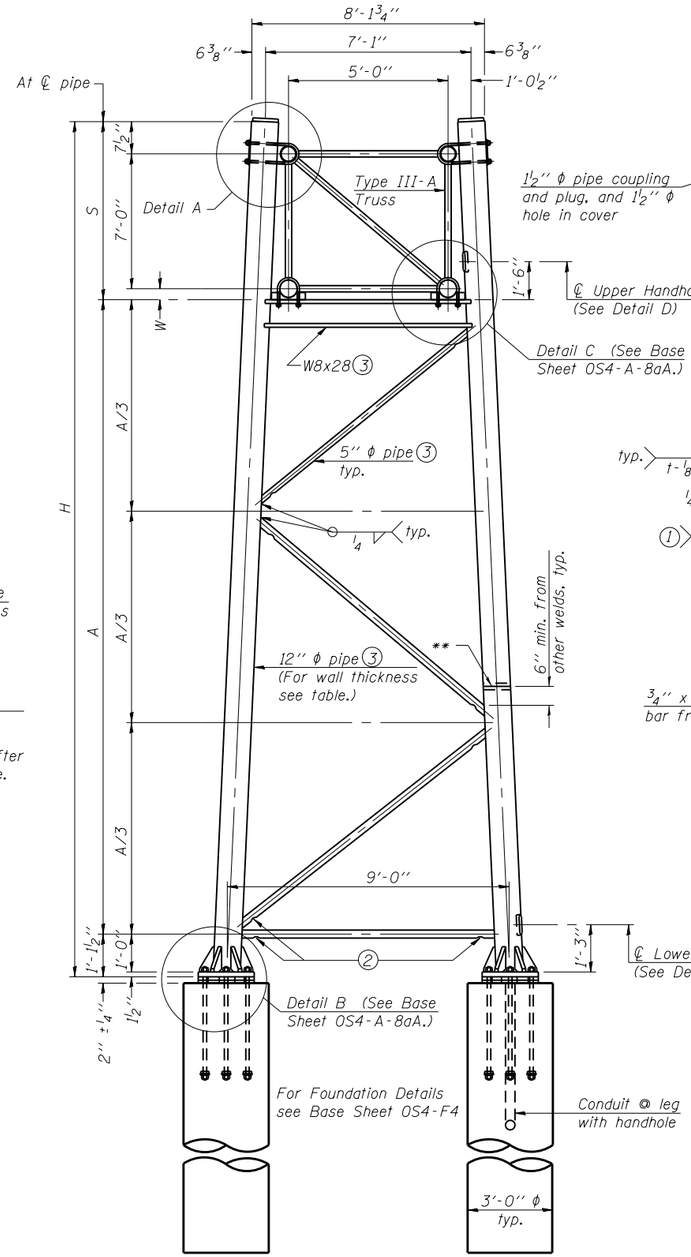


SECTION A-A

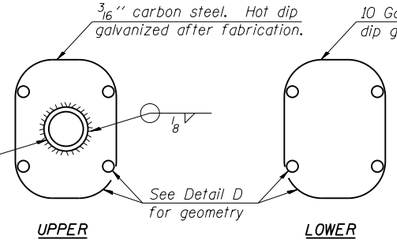
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



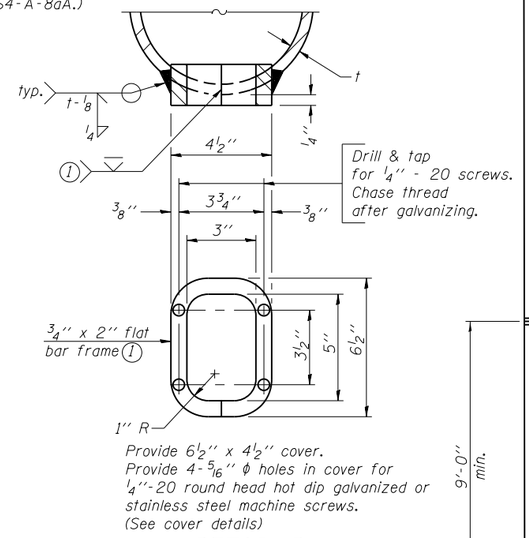
SECTION B-B



SIDE ELEVATION



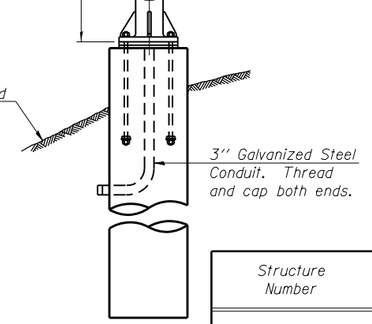
HANDHOLE COVERS



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

DETAIL D

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



END ELEVATION

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

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

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

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

(4) See General Notes for fasteners.

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

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

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

TRUSS SUPPORT DETAILS

(12" ϕ Pipe-Type III-A Truss

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

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
7S025I070R080.40	1365+00	X	X	0.33"	32'-0 7/8"	22'-10 1/2"
7S025I057R148.4	4500+00	X	X	0.33"	31'-3"	22'-1 1/4"
7S018I057L178.8	217+50	X	X	0.33"	30'-2 3/8"	21'-0 3/4"
7S018I070L107.6	180+400	X	X	0.33"	31'-0 1/4"	21'-10 1/2"
7012I070L155.0	515+51	X	X	0.33"	29'-10 7/8"	20'-9 1/8"

OS4-A-8a 6-1-12

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

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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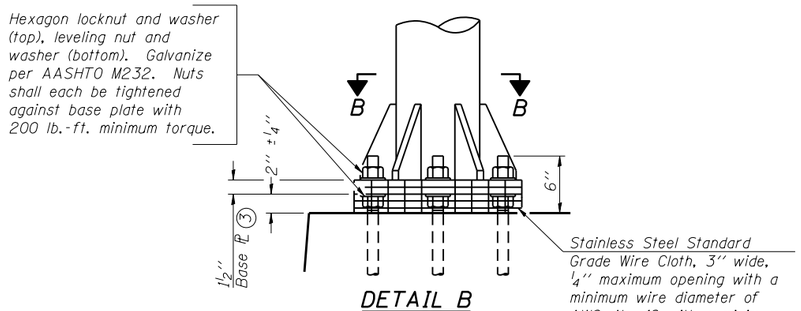
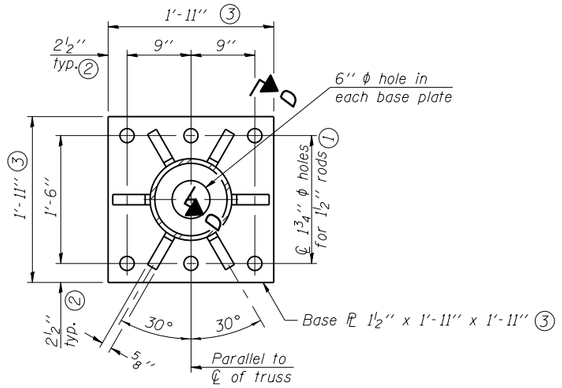
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS FED. AID PROJECT			

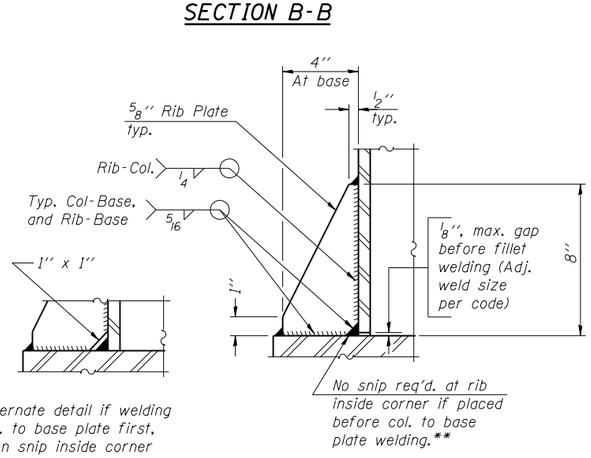


DETAIL B

Ribs shall be cut to fit slope of pipe.

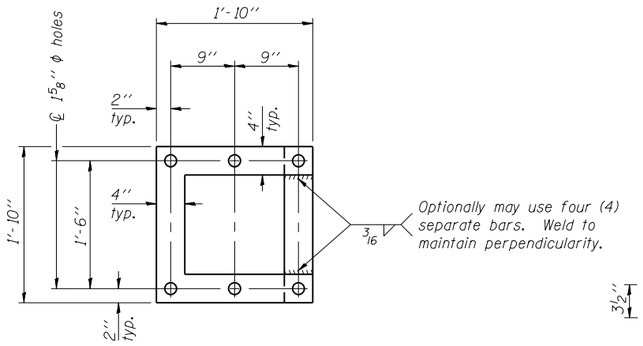


SECTION B-B

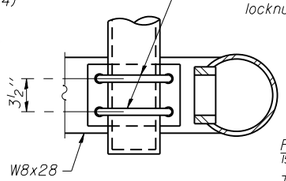


** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D

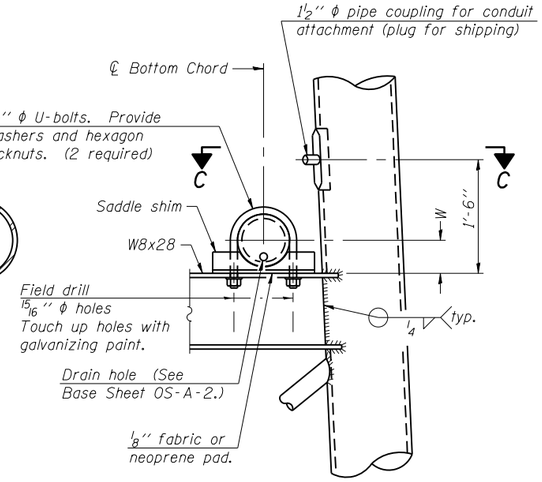


POSITIONING PLATE(S)

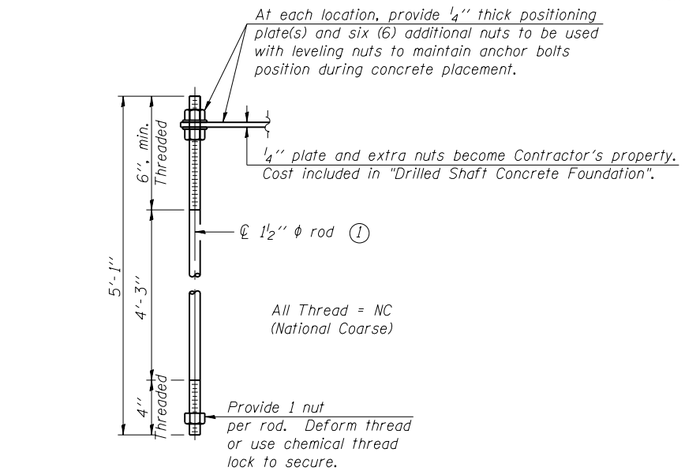


SECTION C-C

(Handhole cover not shown)

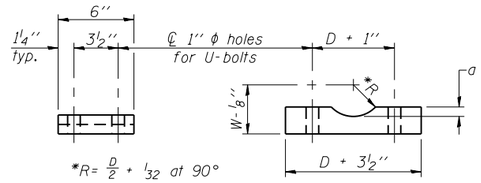


DETAIL C



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.



*R = D/2 + 1/32 at 90°

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

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

SADDLE SHIM DETAIL

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

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

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

① 1 3/4'' ϕ rod, 2'' ϕ holes

② 2 3/4'' edge distance

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

OS4-A-8aA 6-1-12

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DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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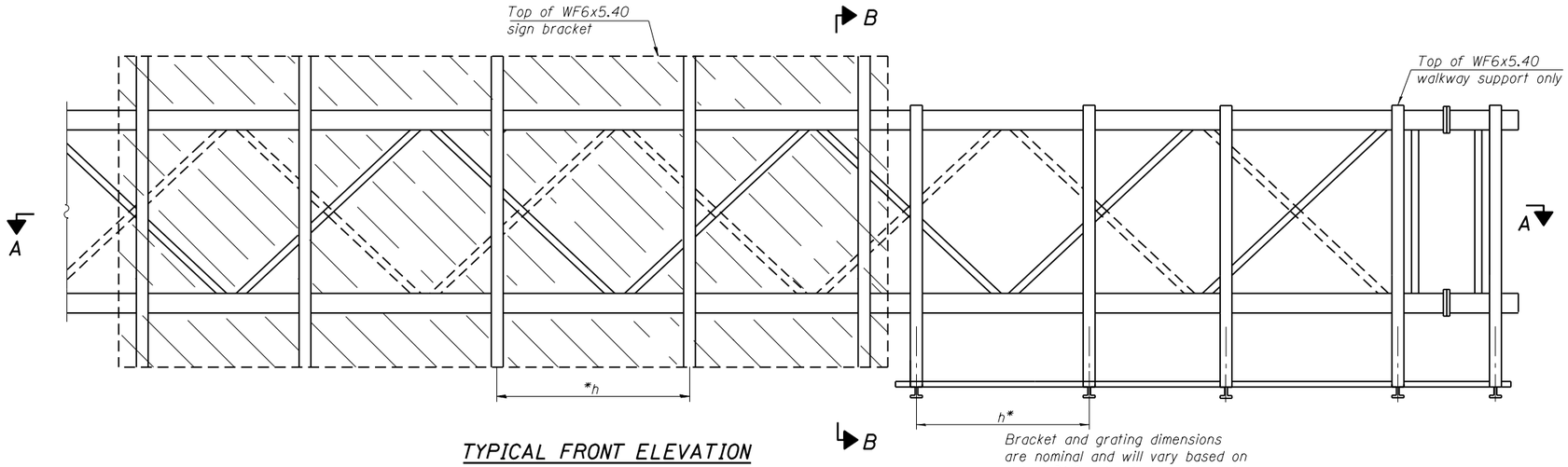
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

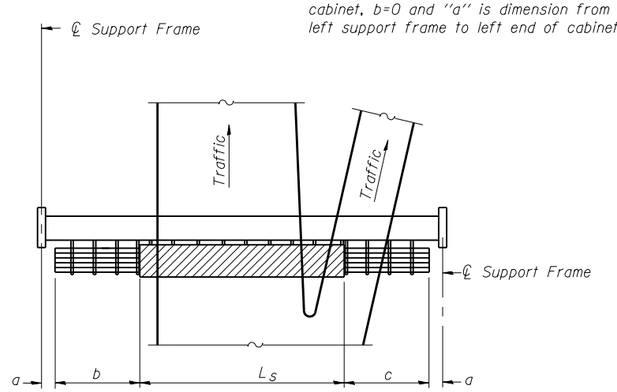


TYPICAL FRONT ELEVATION

With handrail omitted for clarity.

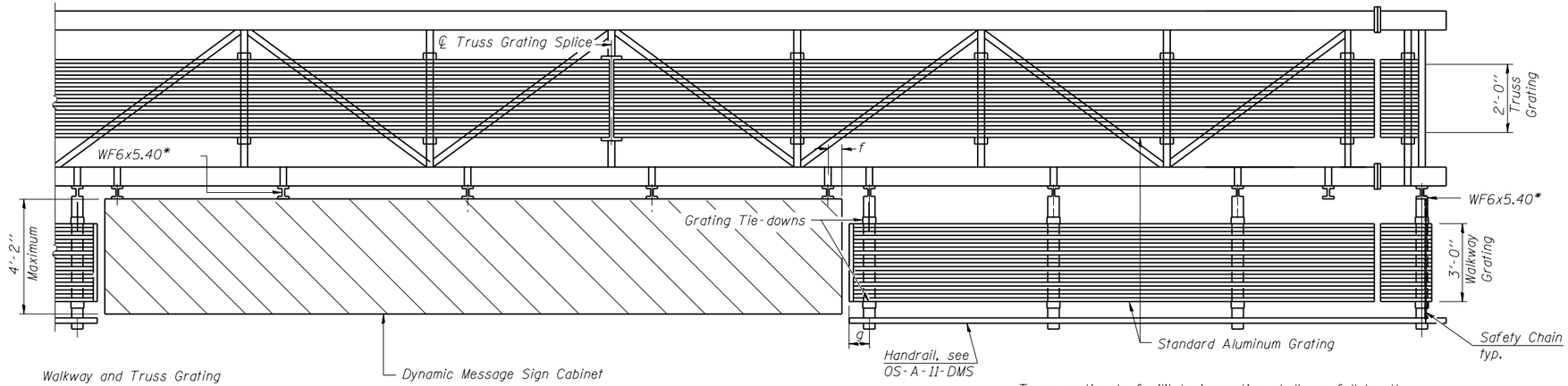
Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

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.



PLAN
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath truss varies)



Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

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".

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.

BRACKET TABLE

WF6x5.40 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	a	b	c	L_S	Walkway Grating and Handrail Lengths
7S025I070R080.40	1365+00	1'-6"	20'-6"	20'-6"	30'-0"	41'-0"
7S025I057R148.4	4500+00	1'-6"	22'-6"	22'-6"	30'-0"	45'-0"
7S018I057L178.8	217+50	1'-6"	22'-6"	22'-6"	30'-0"	45'-0"
7S018I070L107.6	180+400	1'-6"	20'-6"	20'-6"	30'-0"	41'-0"
7S012I070L155.0	515+51	1'-6"	24'-6"	24'-6"	30'-0"	49'-0"

Notes:
* Space walkway brackets WF6x5.40 for efficiency and within limits shown:

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

OS-A-9-DMS 6-1-12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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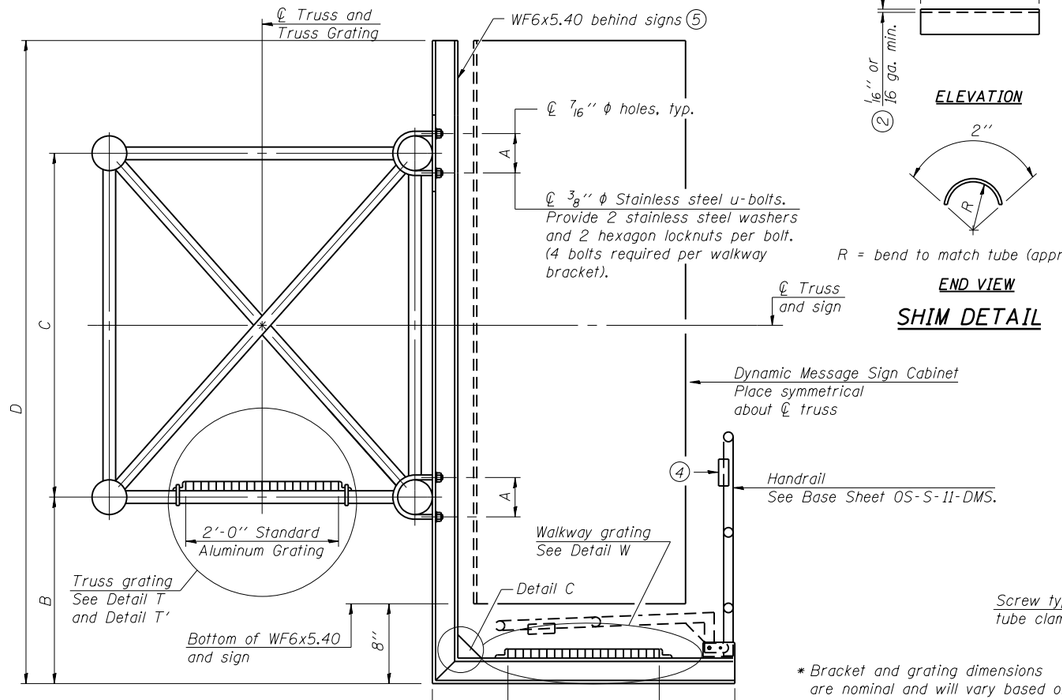
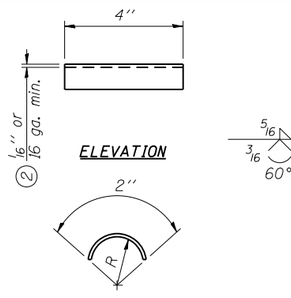
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS FED. AID PROJECT			

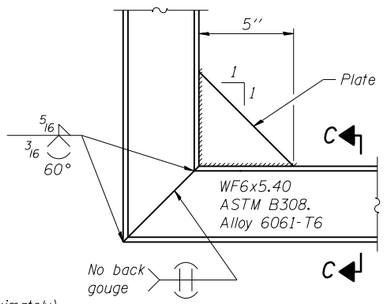


SECTION B-B

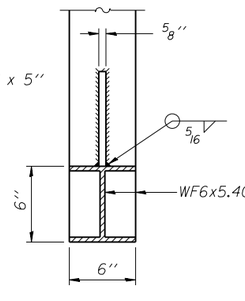
* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



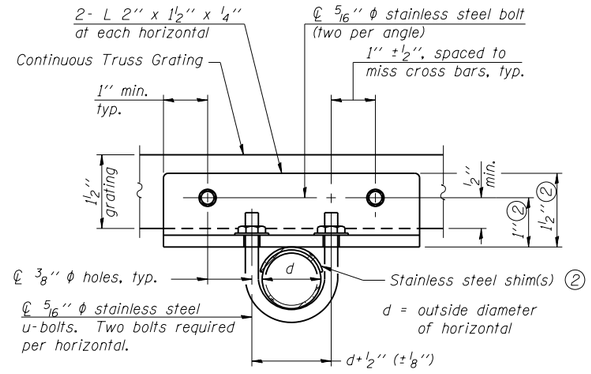
SHIM DETAIL



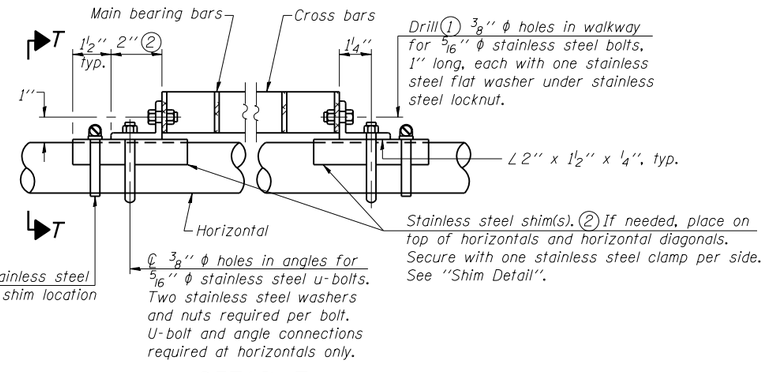
DETAIL C



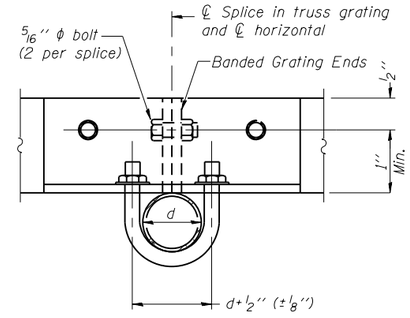
SECTION C-C



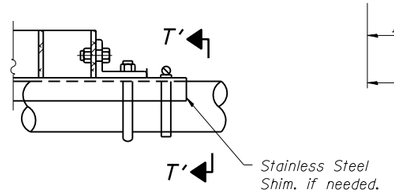
SECTION T-T



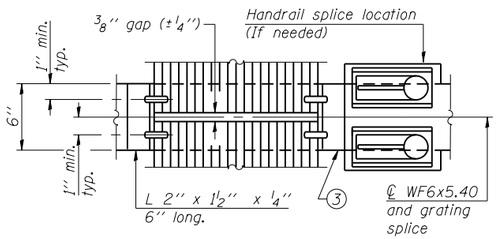
DETAIL T
(Continuous Truss grating)



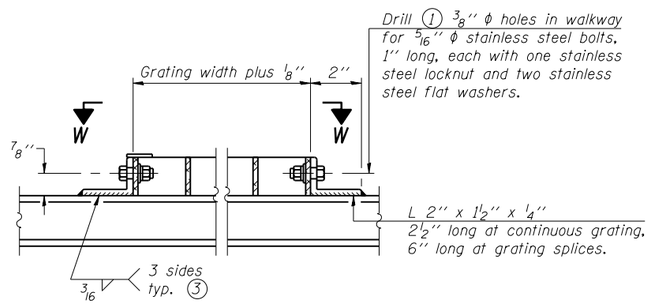
SECTION T'-T'



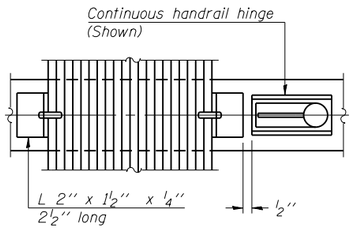
DETAIL T'
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



(AT WALKWAY GRATING SPLICE)



DETAIL W
(Walkway grating)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.

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

OR

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

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

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

Structure Number	Station	A	(6) B	C	(6) D
7S025I070R080.40	1365+00	7 1/2"	2'-2"	7'-0"	10'-8"
7S025I057R148.4	4500+00	7 1/2"	2'-2"	7'-0"	10'-8"
7S018I057L179.2	217+50	7 1/2"	2'-2"	7'-0"	10'-8"
7S018I070L107.6	180+400	7 1/2"	2'-2"	7'-0"	10'-8"
7S012I070L155.0	515+51	7 1/2"	2'-2"	7'-0"	10'-8"

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.

(3) If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)

(4) ℄ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(5) 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.

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

OS-A-10-DMS 6-1-12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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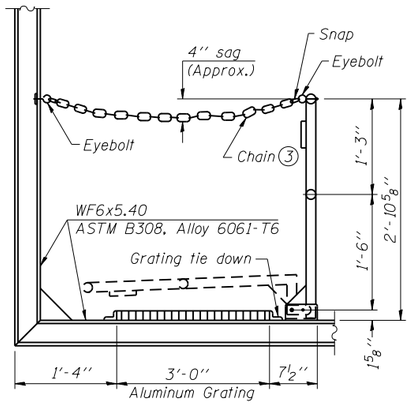
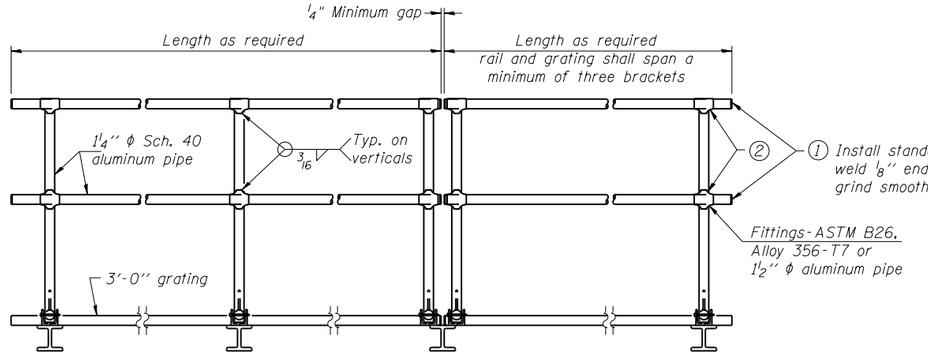
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

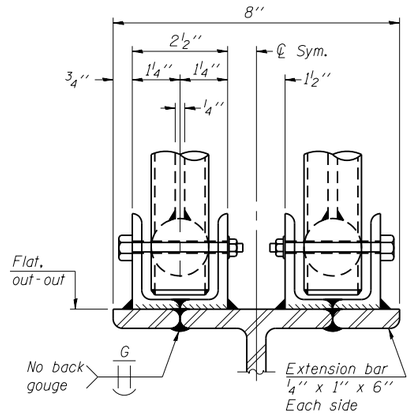


SIDE ELEVATION

(Showing safety chain w/o sign)



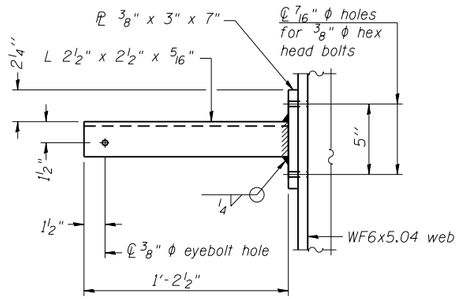
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT (4)

HANDRAIL DETAILS

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

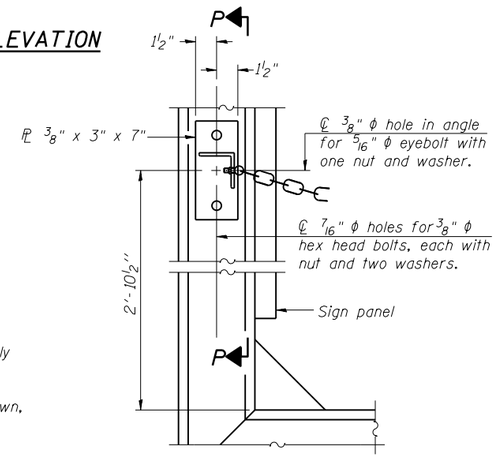


SECTION P-P

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

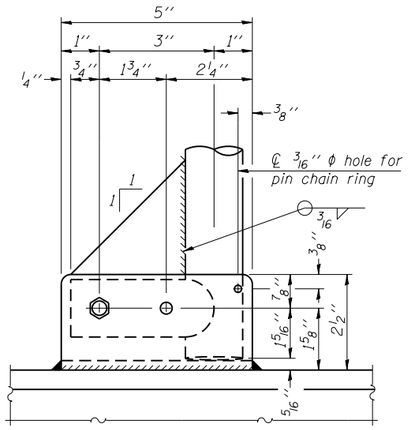
(3) 3/16'' type 304L stainless steel chain, approximately 12 links per foot.

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

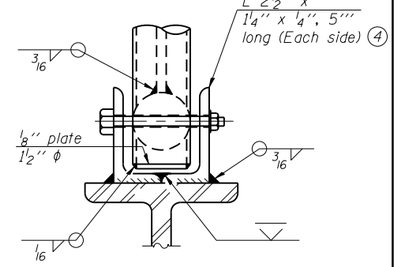


ALTERNATE SAFETY CHAIN ATTACHMENT

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

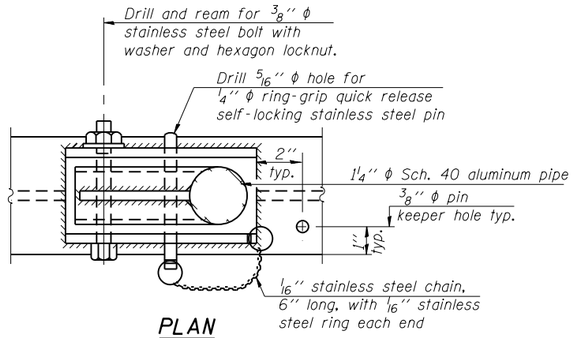


SIDE ELEVATION

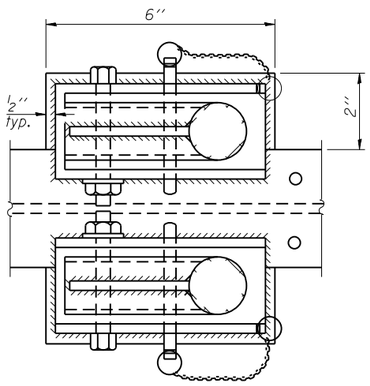


FRONT ELEVATION

See "ELEVATION" at right for dimensions.

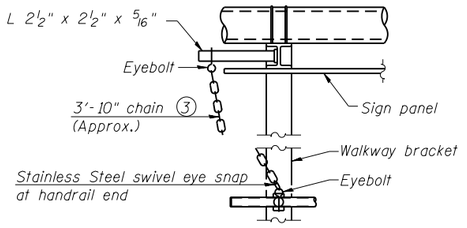


PLAN
DETAIL E HANDRAIL HINGE



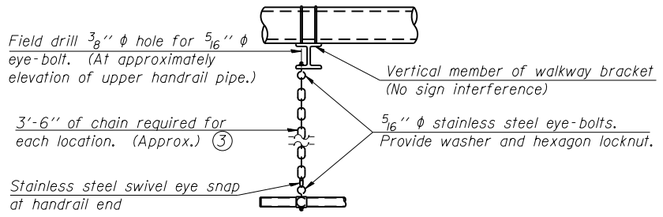
PLAN AT HANDRAIL JOINT

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-11-DMS 6-1-12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM HANDRAIL DETAILS FOR DMS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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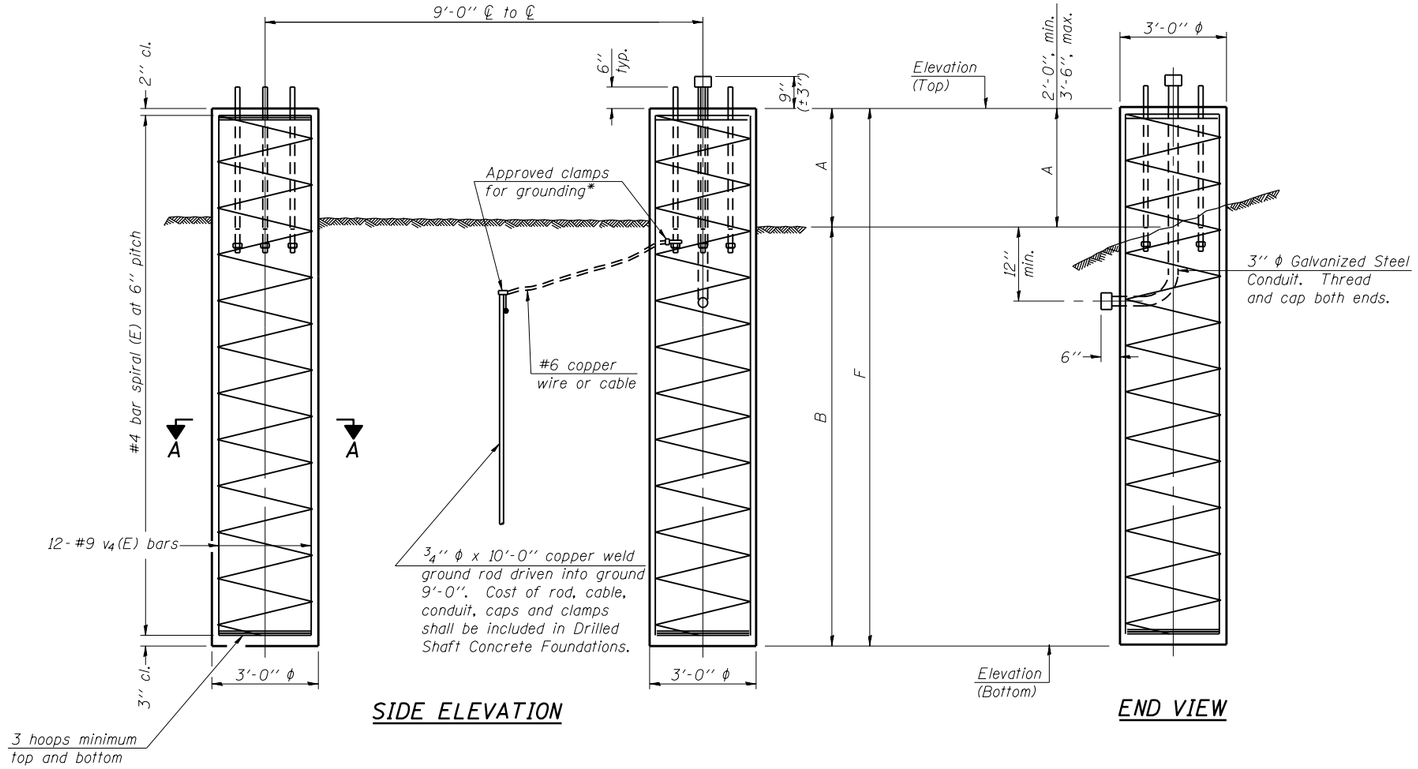
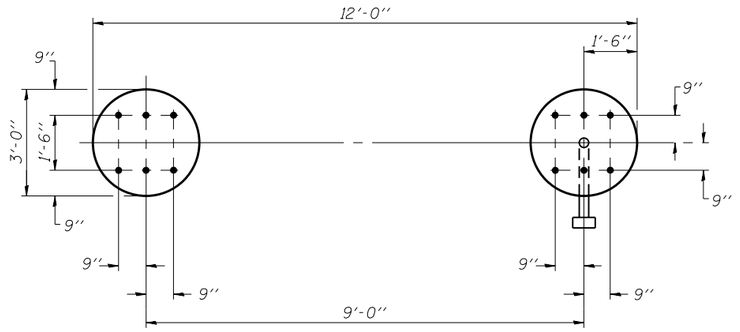
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



SIDE ELEVATION

END VIEW



PLAN

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

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

BAR LIST - EACH FOUNDATION

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

NOTES:

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

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

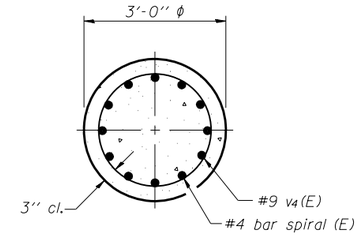
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

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

Concrete shall be placed monolithically, without construction joints.

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

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



SECTION A-A

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

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
7S025I070R080.40	1365+00	622.13'	602.13'	2'-0"	18'-0"	20'-0"	622.13'	602.06'	2'-1"	18'	20'-1"	21.1
7S025I057R148.4	4500+00	601.01'	580.87'	2'-1½"	18'-0"	20'-1½"	601.01'	581.01'	2'0"	18'	20'-0"	21.0
7S018I057L178.8	217+50	667.20'	647.20'	2'-0"	18'-0"	20'-0"	667.20'	646.61'	2'-7"	18'	20'-7"	21.3
7S018I070L107.6	180+400	594.94'	574.94'	2'-0"	18'-0"	20'-0"	594.94'	574.07'	2'-10½"	18'	20'-10½"	21.5
7S012I070L155.0	515+51	542.57'	521.16'	3'-5"	18'-0"	21'-5"	542.57'	522.57'	2'-0"	18'	20'-0"	21.6

OS4-F4 6-1-12

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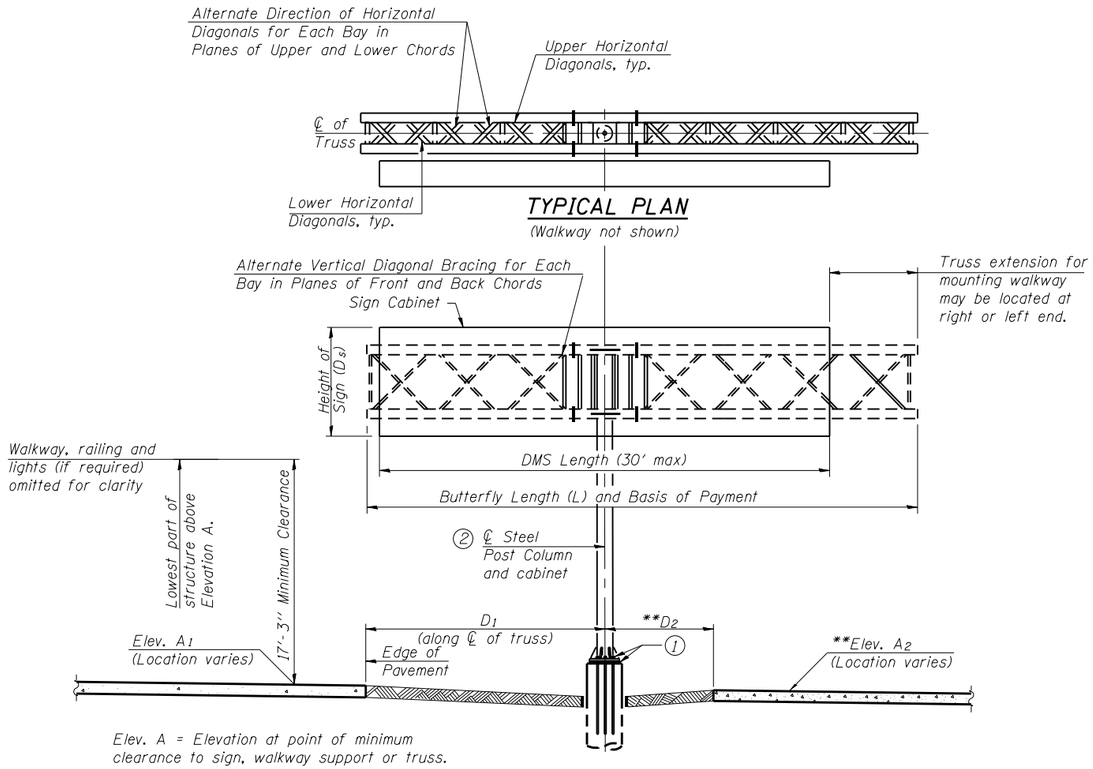
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	48
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

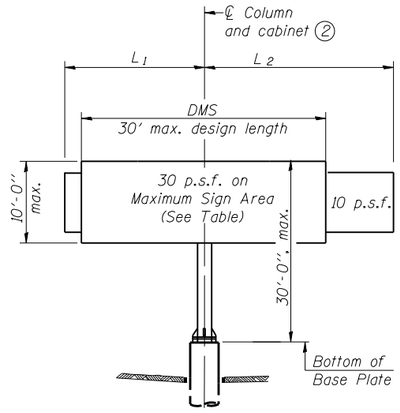


** Elevation A2 and dimension D2 not used when butterfly structure is mounted on right side of the shoulder.

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.

TRUSS TYPE	MAXIMUM TOTAL 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.

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.

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)
7B051U050L021.5	1063+06	37′-6″	469.60′	**	20′-0″	**	10′-0″	300 SFT	(FACING) RIGHT

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE BUTTERFLY TYPE III-F-A	Foot	37′-6″
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot	6′-0″
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	9.3

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.
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 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 6-1-12

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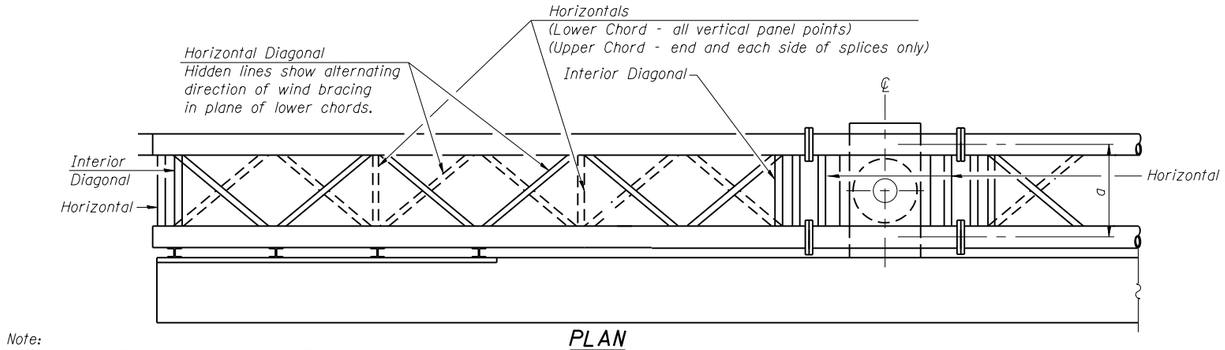
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET OF SHEETS | STA. TO STA.

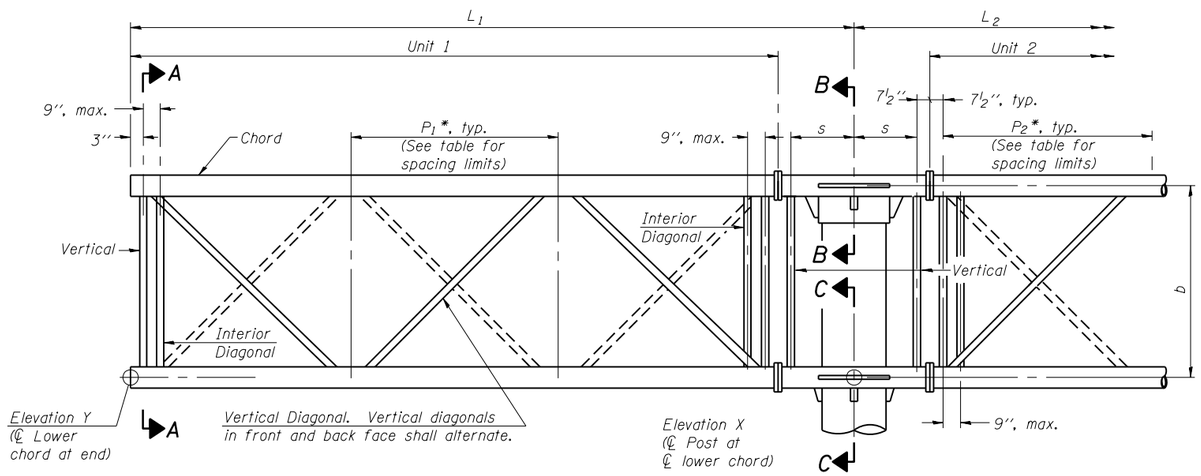
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	49
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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

PLAN

(Walkway not shown)

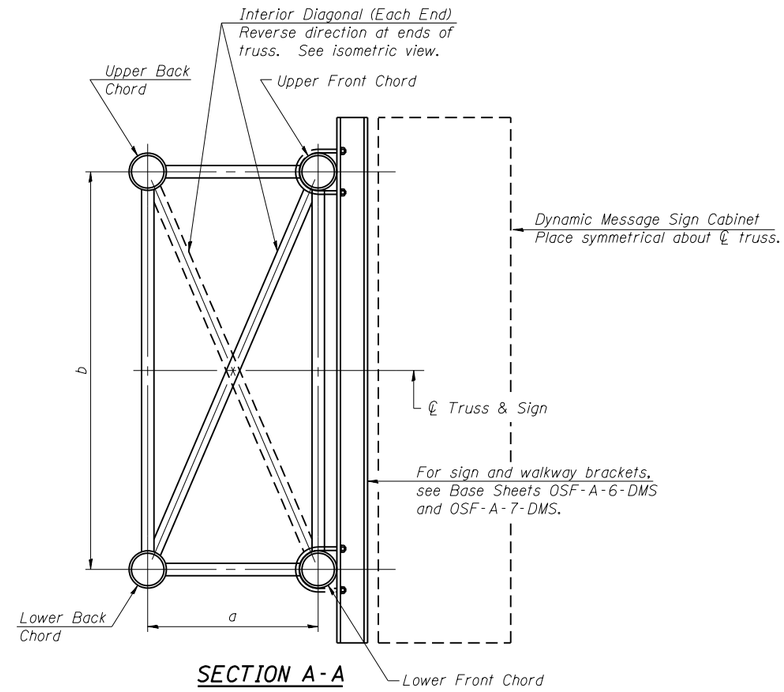


ELEVATION

(Sign and walkway omitted for clarity)

TYPICAL TRUSS UNIT

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



SECTION A-A

TRUSS UNIT TABLE

Truss Type	Dimension "a"	Dimension "b"	Dimension "s"	Limits for Panel Spacing (P)*	Up. & Low. Chord O.D.	Up. & Low. Chord Wall	Verticals; Horizontals; Vertical Horizontals; and Interior Diagonals	
III-F-A	36″	84″	21″	48″ min. to 66″ max.	7″	⅜″	3½″	⅜″

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

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)*
7B051U050L021.5	1063+06	III-F-A	15′-6″	22′-0″	3	49″	4	56″

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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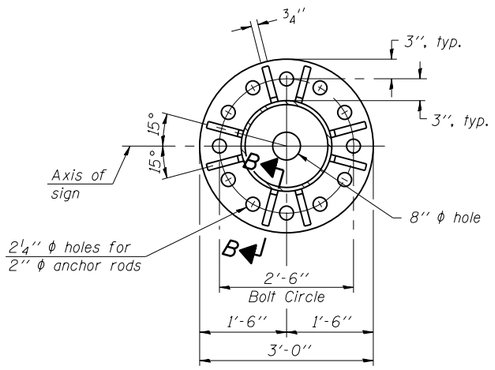
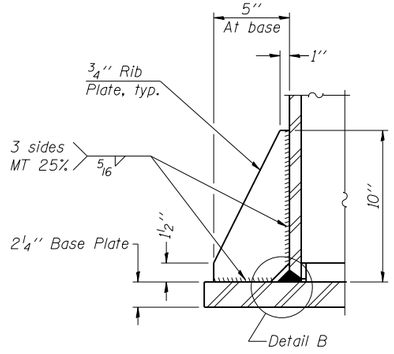
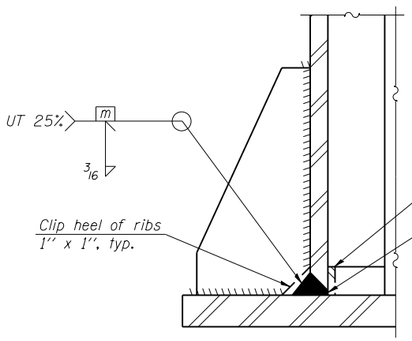
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



SECTION A-A

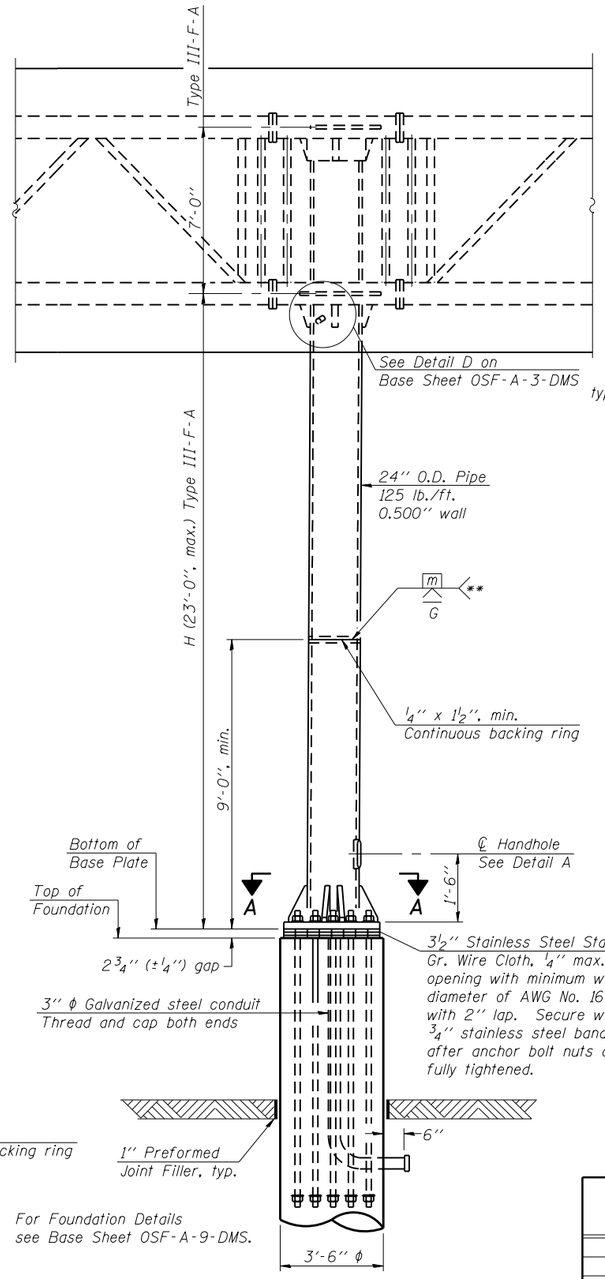


SECTION B-B



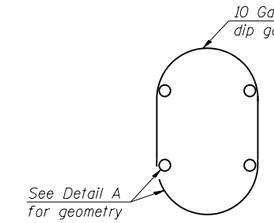
DETAIL B

(Typical rib)

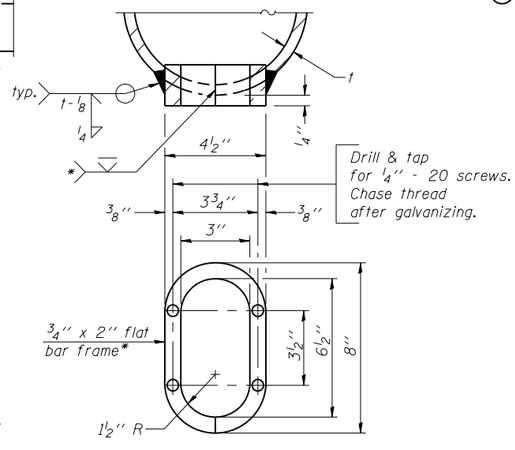


For Foundation Details see Base Sheet OSF-A-9-DMS.

FRONT ELEVATION



HANDHOLE COVER



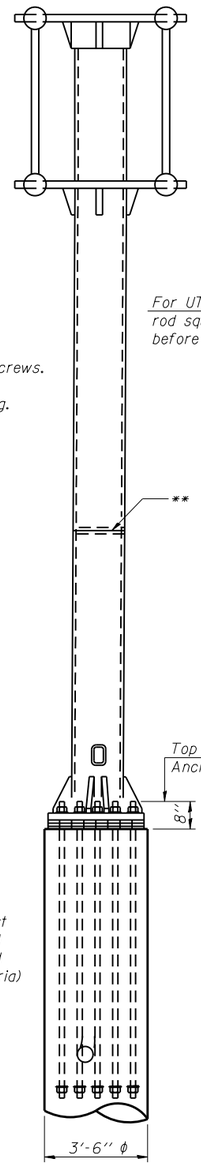
Provide 8'' x 4 1/2'' cover. Outside corners = 2 1/4'' radius. Provide 4 - 5/16'' ϕ holes in for 1/4'' - 20 round head hot dip galvanized or stainless steel machine screws. (See cover details.)

DETAIL A

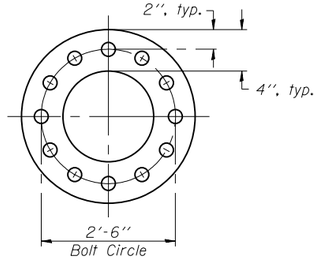
* Bent bars may be butt welded top and bottom or bottom only. In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

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

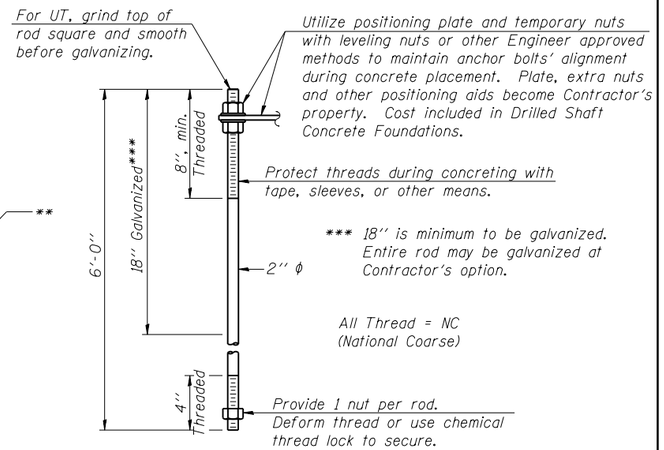
Structure Number	Station	H
7B051U050L021.5	1063+06	20'-3 1/2''



SIDE ELEVATION



SUGGESTED POSITIONING PLATE



ANCHOR ROD DETAIL

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

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

OSF-A-5-DMS 6-1-12

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BUTTERFLY SIGN STRUCTURES – TYPE III-F-A TRUSS SUPPORT POST FOR DMS ALUMNINUM TRUSS & STEEL POST

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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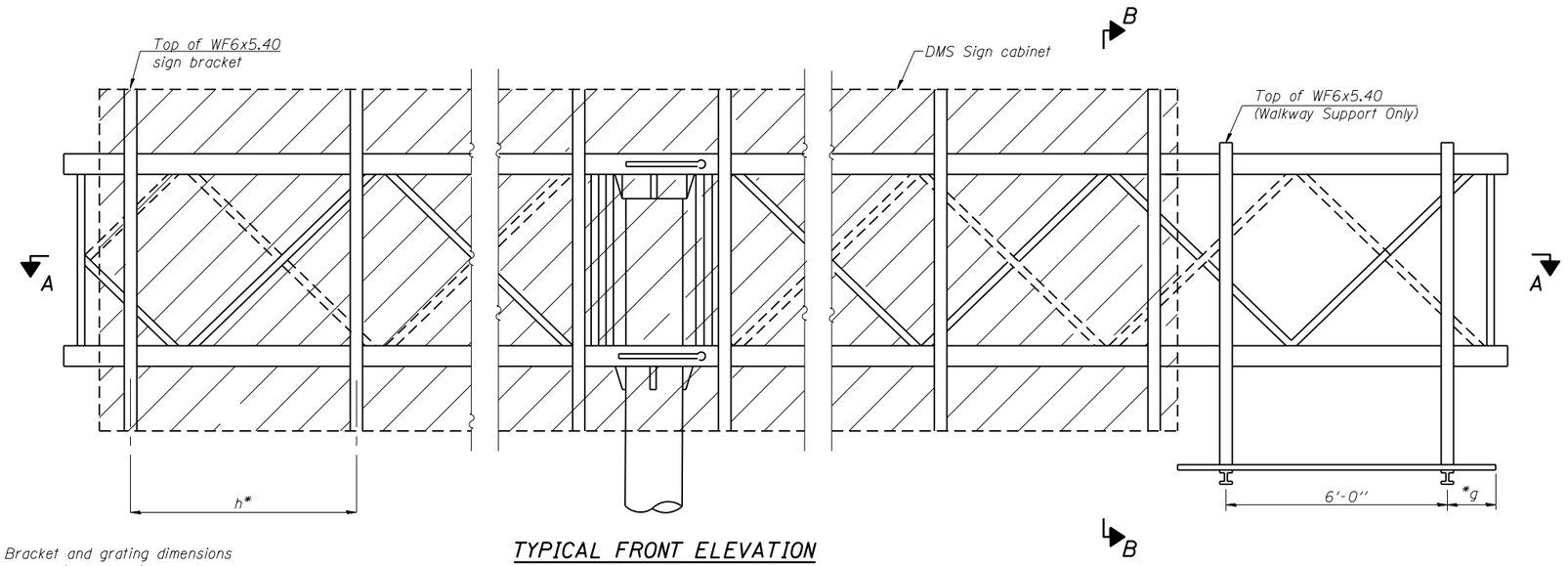
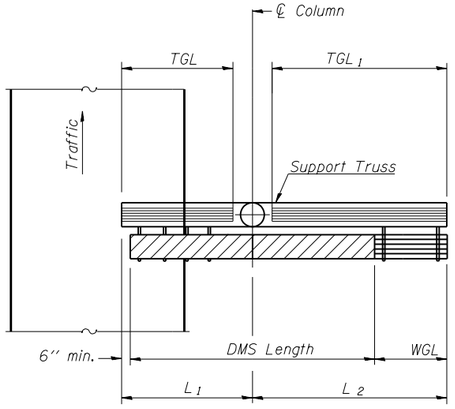
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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

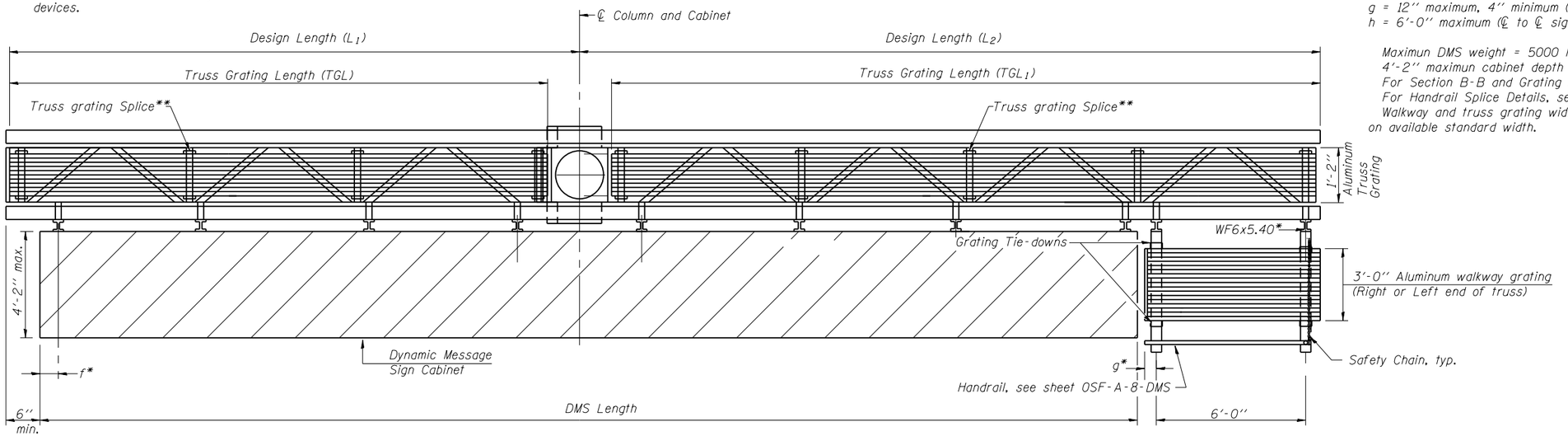
TYPICAL FRONT ELEVATION

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



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.



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.

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

Notes:
Space walkway brackets and sign brackets WF6x5.40 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF6x5.40

Maximun DMS weight = 5000 lbs.
4'-2" maximun 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 ±½" based on available standard width.

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)
7B051U050L021.5	1063+06	30'-0"	14'-0"	20'-6"	(FACING) RIGHT

OSF-A-6-DMS 6-1-12

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DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES – ALTERNATE
ALUMINUM WALKWAY DETAILS FOR DMS

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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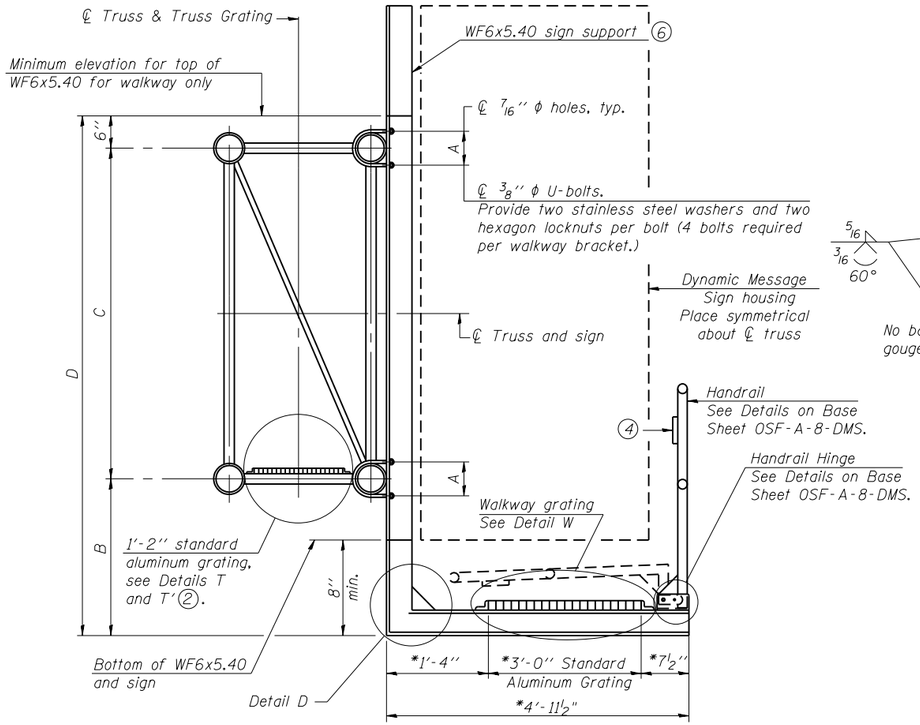
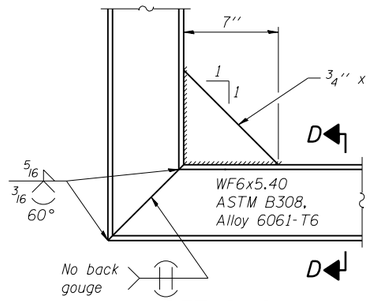
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS FED. AID PROJECT			

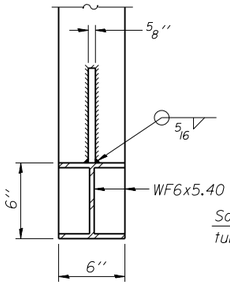


SECTION B-B

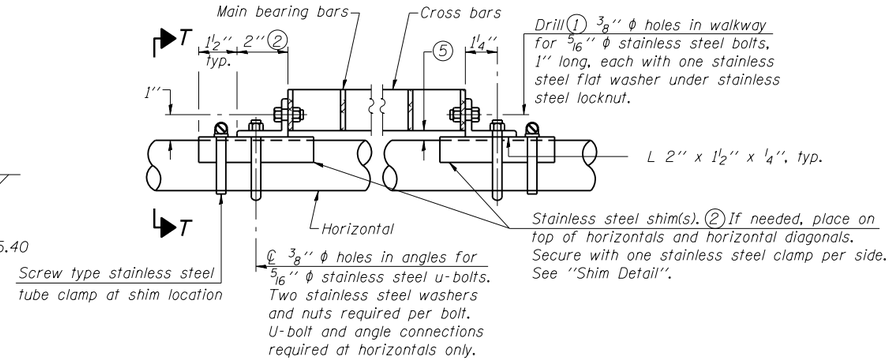
* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturers mounting device.



DETAIL D

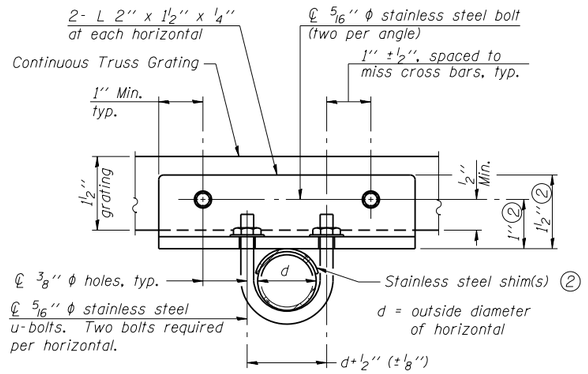


SECTION D-D

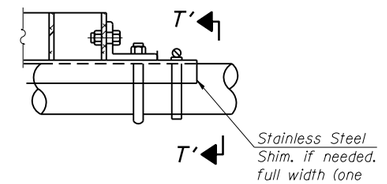


DETAIL T

(Continuous Truss grating)



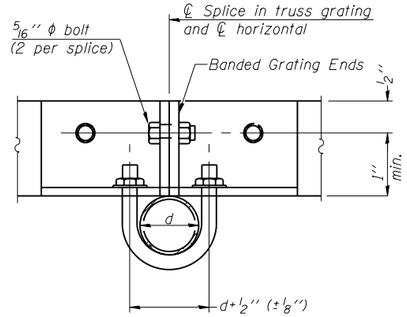
SECTION T-T



DETAIL T'

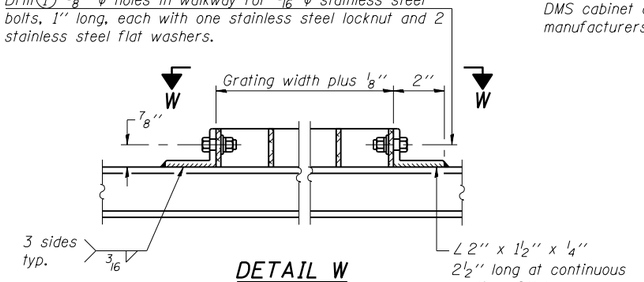
(Truss grating splice)

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



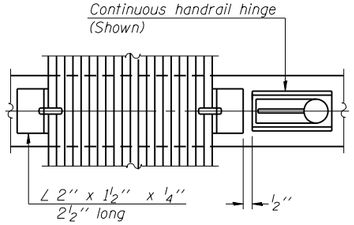
SECTION T'-T'

Drill (1) 3/8" ϕ holes in walkway for 5/16" ϕ stainless steel bolts, 1" long, each with one stainless steel locknut and 2 stainless steel flat washers.

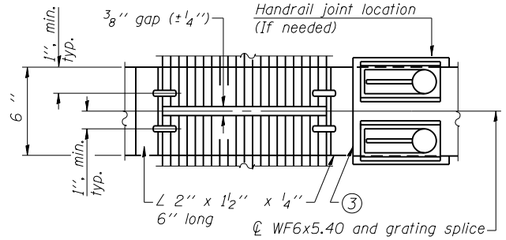


DETAIL W

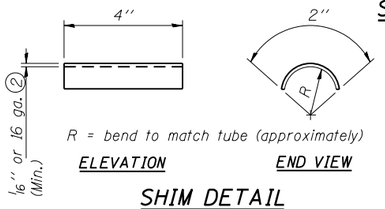
(Walkway grating)



(CONTINUOUS WALKWAY GRATING)



(AT WALKWAY GRATING SPLICE)



ELEVATION END VIEW

SHIM DETAIL

SECTION W-W

(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) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(5) Tube to grating gap may very 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
7B051U050L021.5	1063+06	7 1/2"	2'-2"	7'-0"	9'-8"

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars (MBB) shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.

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

OR

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

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

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

OSF-A-7-DMS 6-1-12

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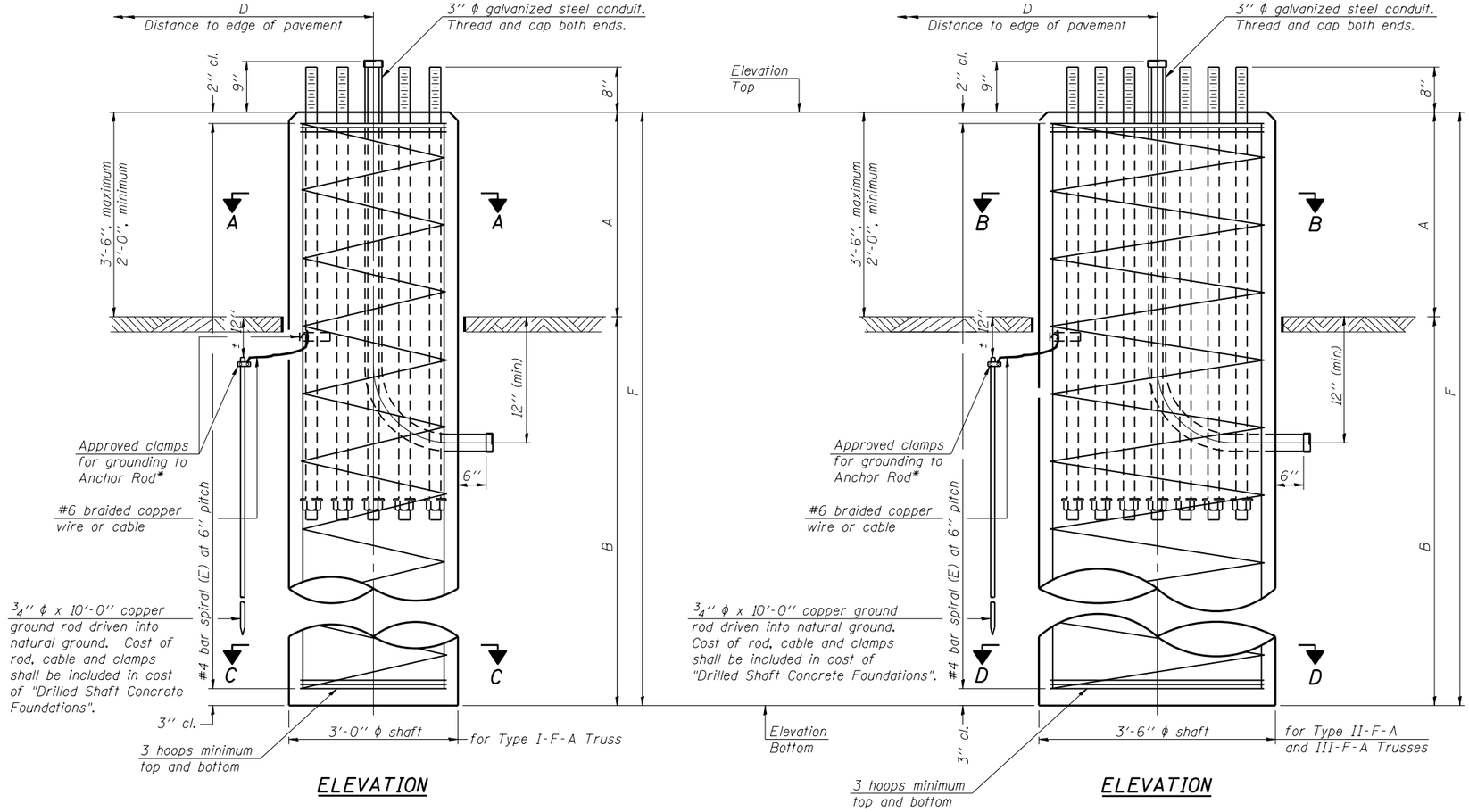
BUTTERFLY SIGN STRUCTURES – ALTERNATE WALKWAY
DETAILS FOR DMS – ALUMINUM TRUSS & STEEL POST

SCALE: | SHEET OF SHEETS | STA. TO STA.

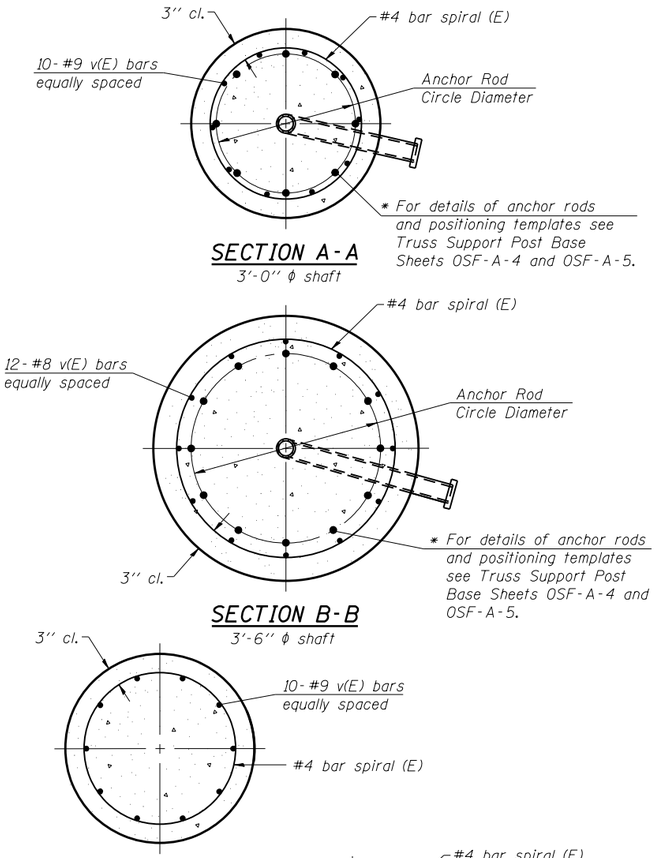
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	53
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

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



ELEVATION

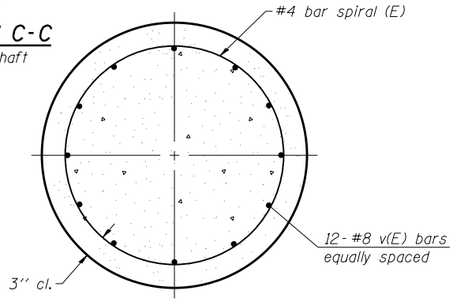
ELEVATION



SECTION A-A
3'-0'' ϕ shaft

SECTION B-B
3'-6'' ϕ shaft

SECTION C-C
3'-0'' ϕ shaft



SECTION D-D
3'-6'' ϕ shaft

NOTES:

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

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

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

Concrete shall be placed monolithically, without construction joints.

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

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

FOUNDATION DESIGN TABLE

Truss Type	Post Base Sheet	Maximum CantileverLength (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods		Anchor Rod Circle Diameter (in)
						No.	Diameter (in)	
I-F-A	OSF-A-4	25	200	36"	17'-6"	8	2	22
II-F-A	OSF-A-5	30	400	42"	22'-0"	12	2	30
III-F-A	OSF-A-5	35	400	42"	24'-0"	12	2	30

FOUNDATION DATA TABLE

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	A	B	F	Class DS Concrete Cubic Yards
7B051U050L021.5	1063+06	III-F-A	42''	471.00'	445.00'	2'-0''	24'-0''	26'-0''	9.3

OSF-A-9 8-21-13

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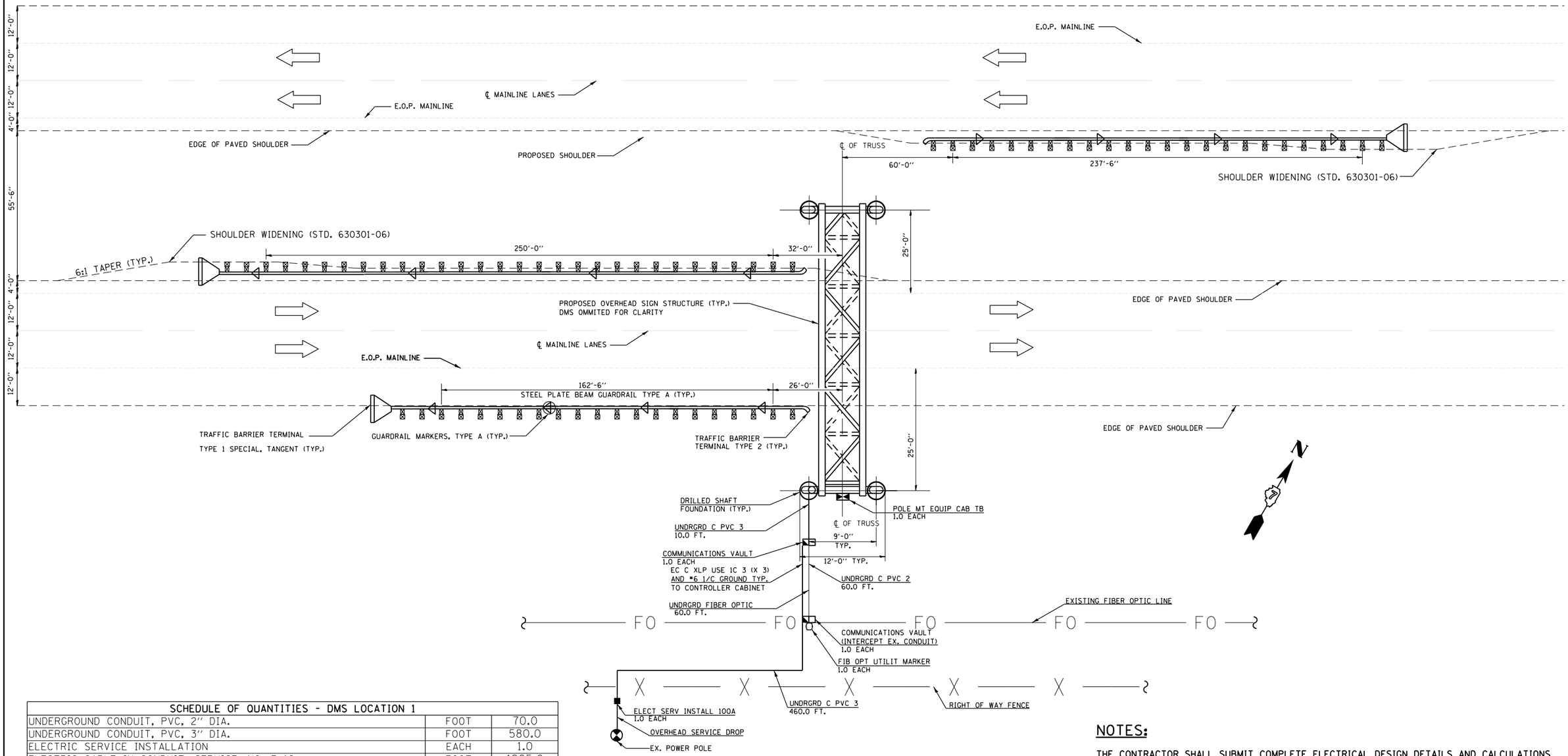
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTTERFLY SIGN STRUCTURES – DRILLED SHAFT ALUMINUM TRUSS & STEEL POST

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	54
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



SCHEDULE OF QUANTITIES - DMS LOCATION 1		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	70.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	580.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	1905.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	635.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	120.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	2.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	650.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	12.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0
FIBER OPTIC UTILITY MARKER	EACH	1.0
STABILIZED SUBBASE - HOT-MIX ASPHALT (VARIABLE DEPTH)	TON	160.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
DATA NETWORK PORT ADAPTER	EACH	1.0

LOCATE PROPOSED WOOD SERVICE POLE ALONG FENCE ON IDOT ROW

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 INSTALL THE PROPOSED COMMUNICATIONS VAULT OVER THE EXISTISNG CONDUIT. THE COST OF INTERCEPTING THE EXISTING CONDUIT SHALL BE INCLUDED IN THE BID PRICE FOR THE COMMUNICATIONS VAULT. FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SERVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED DYNAMIC MESSAGE SIGN. THE SIX FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET TYPE B AT THE SIGN STRUCTURE. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

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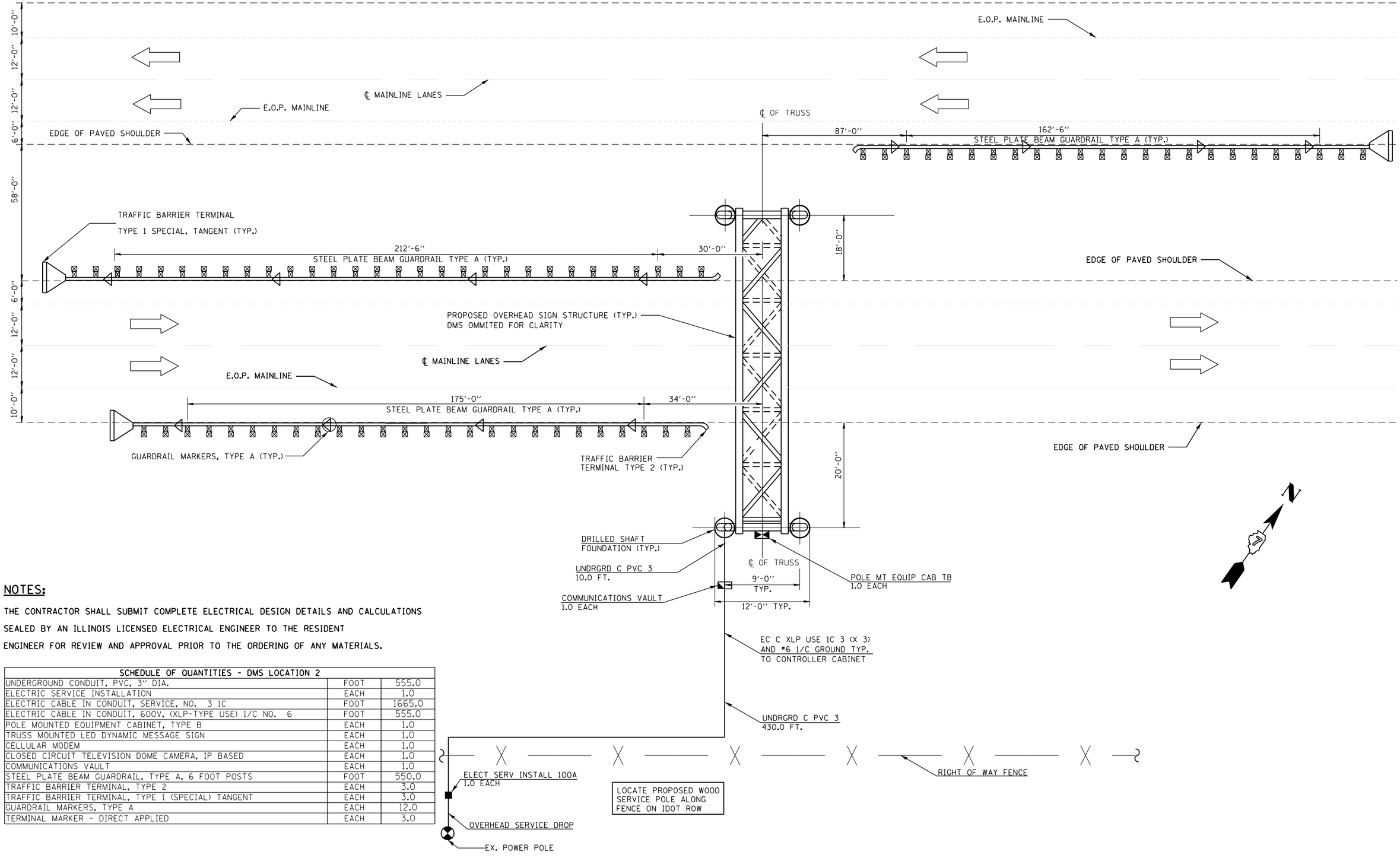
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 1)
EFFINGHAM COUNTY I-70 EB M.P. 80.40 STA. 1365+00

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	55
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS FED. AID PROJECT			



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, 3" DIA.	FOOT	555.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	1665.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	555.0
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	550.0
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	12.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

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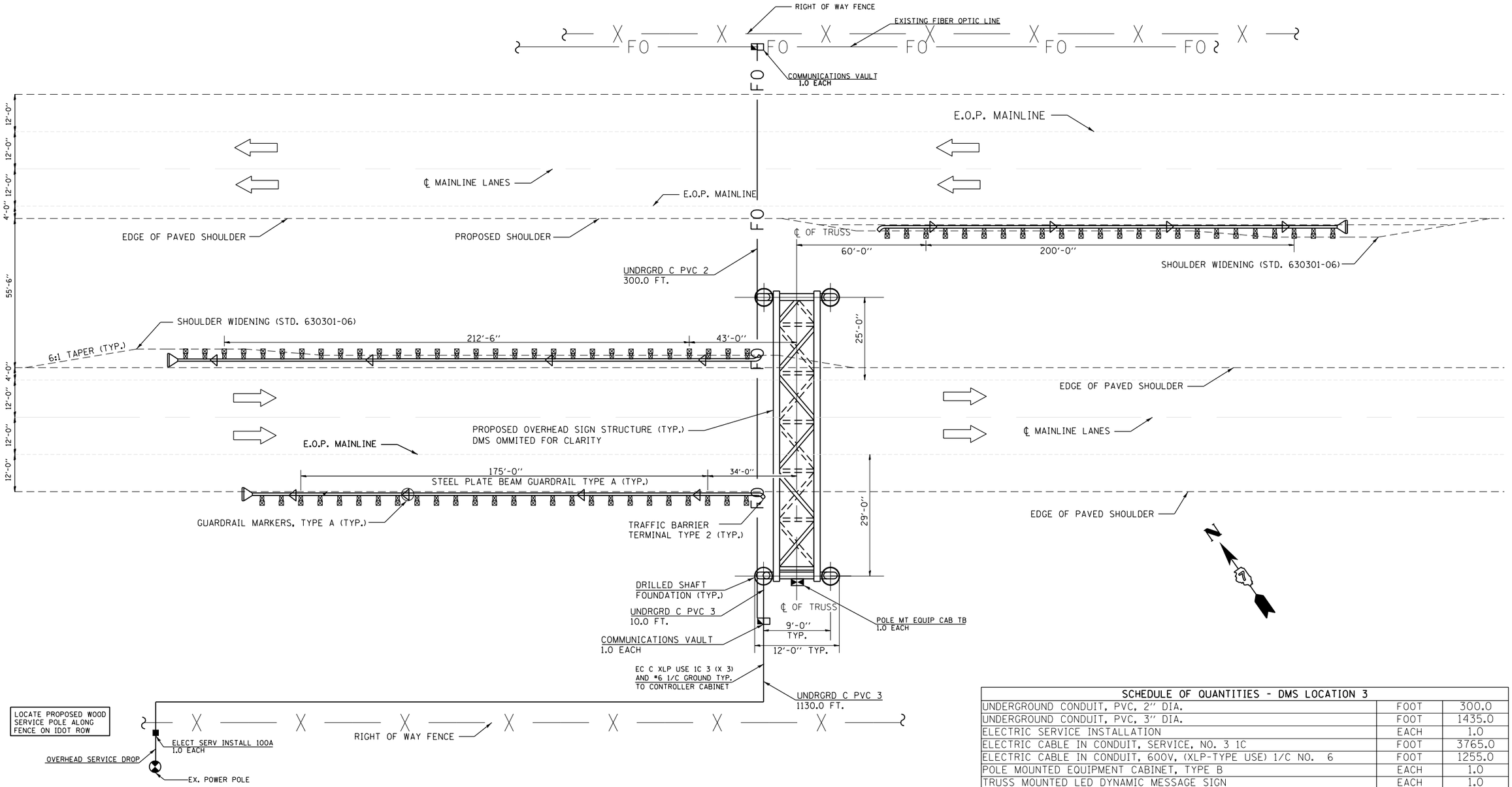
Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 2)
EFFINGHAM COUNTY I-57 NB M.P. 148.80 STA. 4500+00

SCALE: NTS | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	56
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



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 INSTALL THE PROPOSED COMMUNICATIONS VAULT OVER THE EXISTISNG CONDUIT. THE COST OF INTERCEPTING THE EXISTING CONDUIT SHALL BE INCLUDED IN THE BID PRICE FOR THE COMMUNICATIONS VAULT.

FIBER OPTIC CABLE SHALL BE SPLICED BY A CONTRACTOR DESIGNATED BY CENTRAL MANAGEMENT SERVICES. LATERALLY FUSION SPLICE SIX SINGLEMODE FIBERS FROM THE EXISTING CMS FIBER OPTIC CABLE TO CREATE A LINK TO THE PROPOSED DYNAMIC MESSAGE SIGN. THE SIX FIBERS SHALL BE TERMINATED WITH ST CONNECTORS INSIDE THE PROPOSED POLE MOUNTED EQUIPMENT CABINET TYPE B AT THE SIGN STRUCTURE. THIS WORK SHALL BE PAID FOR UNDER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

SCHEDULE OF QUANTITIES - DMS LOCATION 3		
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	300.0
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	1435.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	3765.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	1255.0
POLE MOUNTED EQUIPMENT CABINET, TYPE B	EACH	1.0
TRUSS MOUNTED LED DYNAMIC MESSAGE SIGN	EACH	1.0
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	350.0
CLOSED CIRCUIT TELEVISION DOME CAMERA, IP BASED	EACH	1.0
COMMUNICATIONS VAULT	EACH	2.0
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	587.5
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	12.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0
FIBER OPTIC UTILITY MARKER	EACH	1.0
STABILIZED SUBBASE - HOT-MIX ASPHALT (VARIABLE DEPTH)	TON	180.0
FIBER OPTIC ETHERNET DROP AND REPEAT SWITCH	EACH	1.0
DATA NETWORK PROT ADAPTER	EACH	1.0

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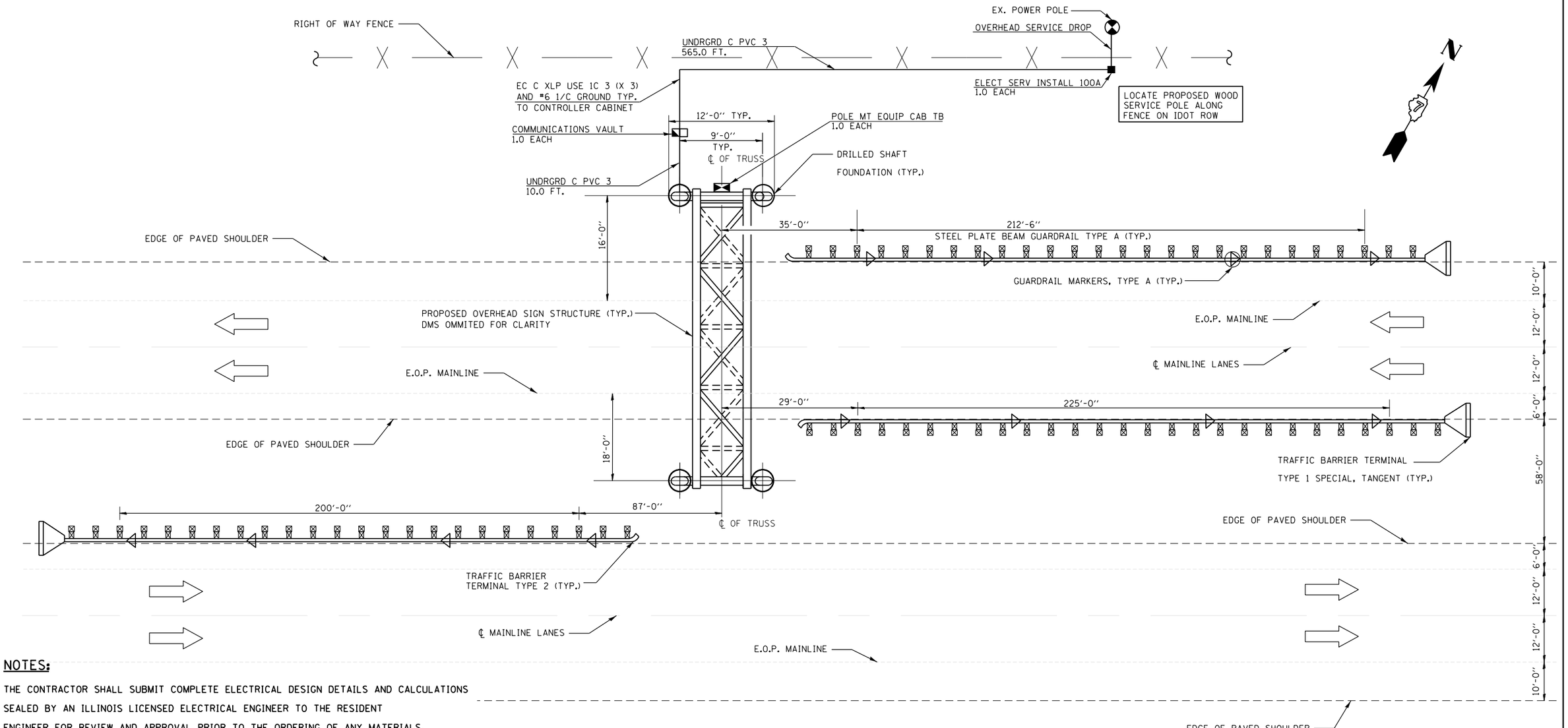
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 3)
CUMBERLAND COUNTY I-57 SB M.P. 178.8 STA. 217+50

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	57
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS FED. AID PROJECT			



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 4		
UNDERGROUND CONDUIT, PVC, 3'' DIA.	FOOT	635.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	2115.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	705.0
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	637.5
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	12.0
TERMINAL MARKER - DIRECT APPLIED	EACH	3.0

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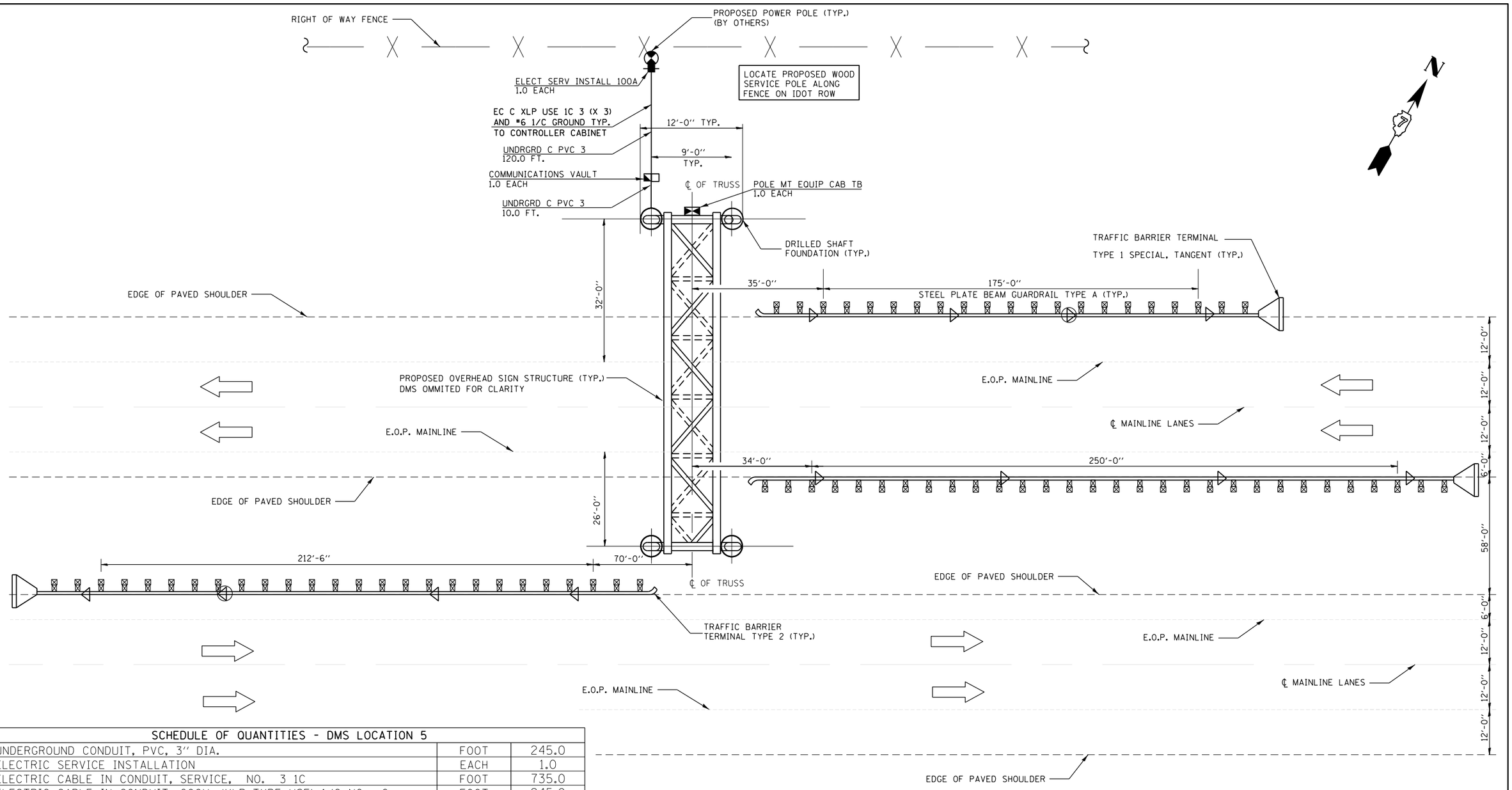
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 4)
CUMBERLAND COUNTY I-70 M.P. 107.60 STA. 180+400

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	58
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



SCHEDULE OF QUANTITIES - DMS LOCATION 5		
UNDERGROUND CONDUIT, PVC, 3'' DIA.	FOOT	245.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	735.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	245.0
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	637.5
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	3.0
TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3.0
GUARDRAIL MARKERS, TYPE A	EACH	12.0
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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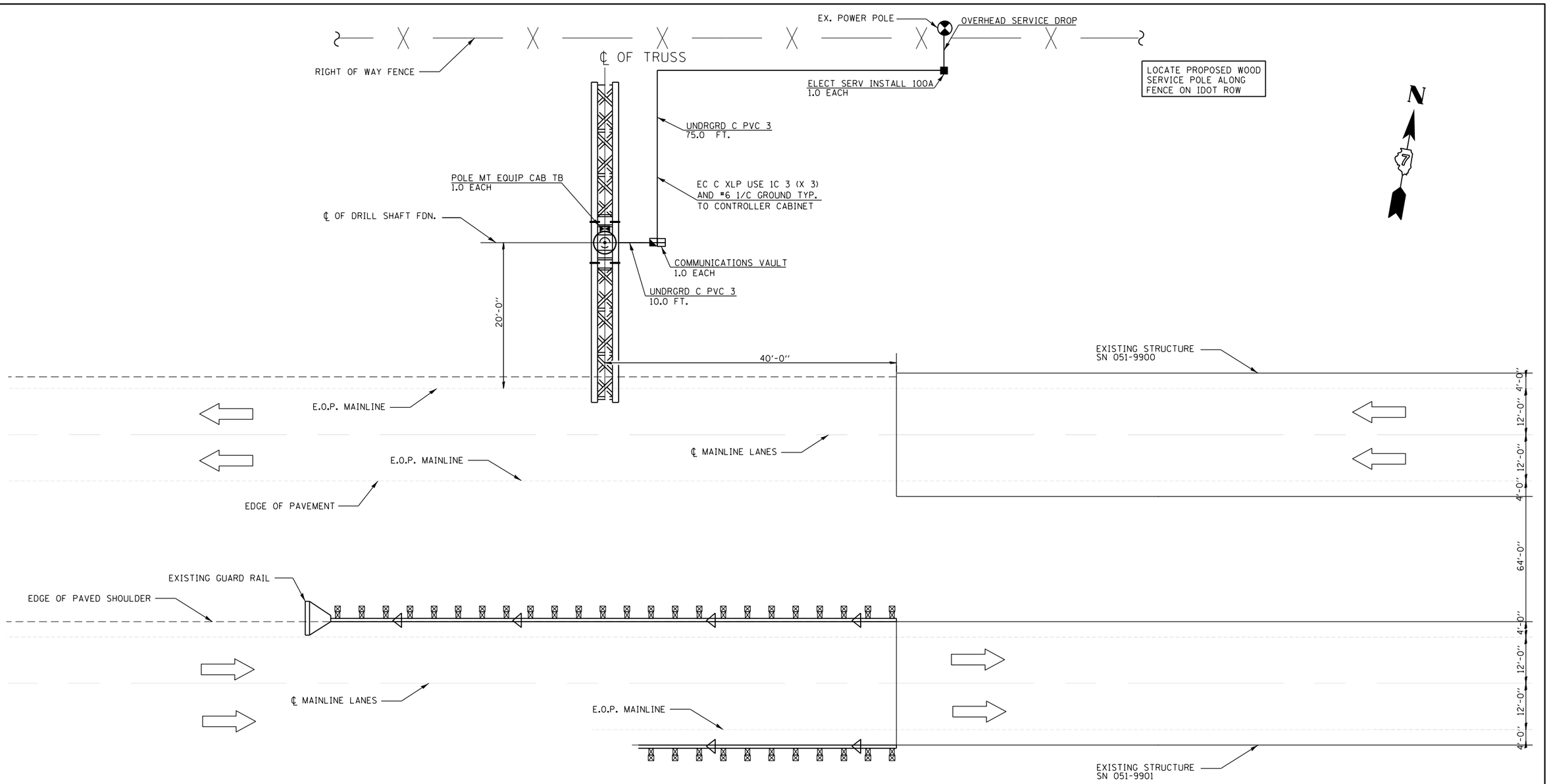
Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 5)
CLARK COUNTY I-70 WB M.P. 155.00 STA. 517+00

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	59
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		



SCHEDULE OF QUANTITIES - DMS LOCATION 6		
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	190.0
ELECTRIC SERVICE INSTALLATION	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 3 1C	FOOT	570.0
ELECTRIC CABLE IN CONDUIT, 600V, (XLP-TYPE USE) 1/C NO. 6	FOOT	190.0
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

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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Default	PLOT DATE = 6/26/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED DMS INSTALLATION (LOCATION 6)
LAWRENCE COUNTY US 50 WB M.P. 21.50 STA. 1063+06

SCALE: NTS | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D7 ITS 2014	•	72	60
* EFFINGHAM, CUMBERLAND		CONTRACT NO. 74643		
CLARK & LAWRENCE	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 3/11/14

ROUTE FAI 70 (I-70) DESCRIPTION Message Board Sign Truss - I-70 EB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SW, SEC. 20, TWP. 7N, RNG. 4E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S025I070R80.4
Station 1365+02

BORING NO. 1 South
Station 1365+02
Offset 58.0ft Rt
Ground Surface Elev. 621.00 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 72 Hrs. 616.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				9.5" asphalt shoulder.
620.20				
				Soil/aggregate mixture.
619.70				
				Stiff, damp, gray, SILTY CLAY.
	3			
	4	1.48	25	
	4	B		
				▼
-5	4			
	6	1.65	25	
	6	B		
614.00				
	3			Medium, damp, brown mottled gray, CLAY w/ Silt.
	3	0.82	20	
	3	B		
611.50				
-10	3			Medium, damp, brown, LOAM.
	2	0.82	24	
	3	B		
609.00				
	2			Medium, damp, brown marbled gray, CLAY.
	3	0.91	20	
	3	B		
606.50				
-15	2			Very soft, very damp, brown, SILTY LOAM.
	0	0.12	23	
605.30	5	B		
				Hard, damp, brown, CLAY LOAM TILL.
	8			
	15	4.80	10	
	22	S		
-20	10			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	17	6.55	8	Hard, damp, brown, CLAY LOAM TILL. (continued)
	23	S		
599.00				
	22			Very dense, damp, gray, fine grained, SAND. 9% passing #200 sieve.
	38		13	
	49			
-25	31			
	38		11	8% passing #200 sieve.
595.40	42			
595.00				Gray, CLAY LOAM TILL. Pocket Penetrometer +4.5 tsf.
				Extent of exploration.
				Location: I-70 EB MP 80.4 1.5 miles West of Altamont
-30				
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

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Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/11/14

ROUTE FAI 70 (I-70) DESCRIPTION Message Board Sign Truss - I-70 EB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SW, SEC. 20, TWP. 7N, RNG. 4E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S025I070R80.4
Station 1365+02

BORING NO. 2 North
Station 1365+02
Offset 25.0ft Rt
Ground Surface Elev. 621.05 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 72 Hrs. 616.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
				9.5" asphalt shoulder.
620.15				
				Soil/aggregate mixture.
619.75				
				Very stiff to medium, damp, brown mottled gray, CLAY.
	3			
	4	2.47	22	
	5	B		
				▼
-5	4			
	5	2.89	27	
	7	B		
	3			
	3	1.65	29	
	4	B		
-10	2			
	3	0.87	23	
	5	B		
609.05				
	2			Medium, damp, gray mottled brown, SILTY CLAY.
	3	0.66	18	
	5	B		
606.55				
-15	1			Soft, very damp, brown, SANDY LOAM.
	1	0.33	20	
	3	B		
604.05				
	18			Hard, damp, gray, SANDY CLAY LOAM TILL.
	20	7.86	8	
	26	S		
601.55				
-20	18			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	Description
	25	6.76	8	Hard, very moist, gray, CLAY LOAM TILL. (continued)
	29	S		
	12			
	17	8.04	8	
	21	B		
-25	13			
	17	7.42	8	
595.05	23	B		
				Extent of exploration.
				Location: I-70 EB MP 80.4 1.5 miles West of Altamont
-30				
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\EFFINGHAM CO (025)\025-0000 (7S025I070R80.4 SIGN TRUSS) SOIL 2014.GPJ Data Template D6TEMPLT.GDT Date Printed 3/17/14
Latitude N 39 deg 03 min 04.997 sec Longitude W 88 deg 47 min 58.174 sec Datum Job Number

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		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

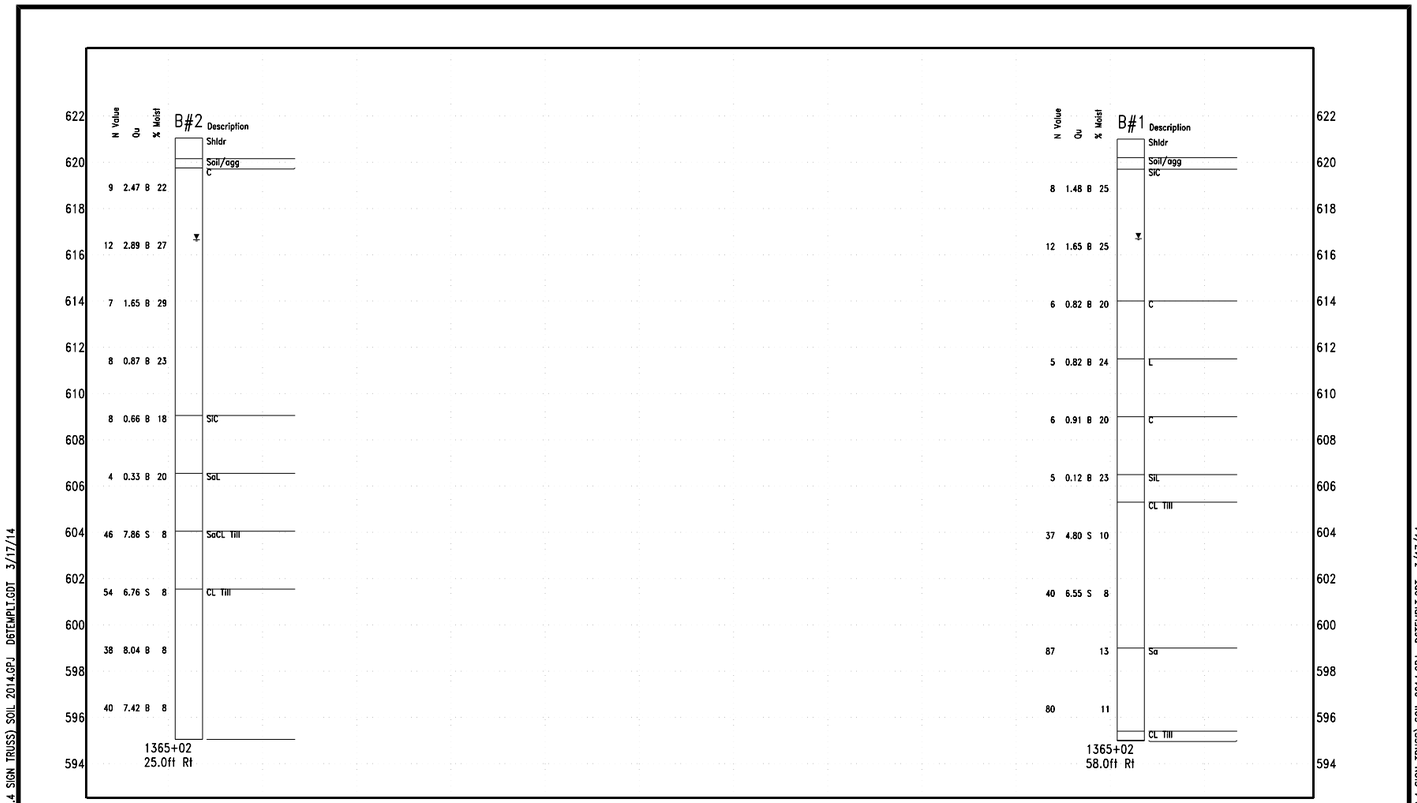
BORING LOG - LOCATION 1
I-70 EB M.P. 80.40 STA. 1365+00

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	61
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Structure Number 7S025I070R80.4 Message Board Sign Truss – I–70 EB
Located in the SW of Section 20, Township 7N, Range 4E of the 3 P.M.



NOT TO HORIZONTAL SCALE

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Illinois Department of Transportation
Division of Highways
IDOT

Groundwater
▽ First Encounter
▼ Completion
▼ after (refer to log) hours

Abbreviations
WOH – Sampler Advanced by Weight of Hammer, WOP – Weight of Pipe
B.S. – Before Seating

SUBSURFACE DATA PROFILE

Route: FAI 70 (I–70)

Section: D7 ITS 2014

County: Effingham

TEST FENCE 2 025-0000 (7S025I070R80.4 SIGN TRUSS) SOIL 2014.GPJ DSTEMPLT.GDT 3/17/14

TEST FENCE 2 025-0000 (7S025I070R80.4 SIGN TRUSS) SOIL 2014.GPJ DSTEMPLT.GDT 3/17/14

FILE NAME = c:\pw_work\pwidot\steffenmk\d0360593\D774643-sht-Boring.dgn	USER NAME = steffenmk	DESIGNED –	REVISED –
		DRAWN –	REVISED –
	PLOT SCALE = 100.0000 ' / in.	CHECKED –	REVISED –
Default	PLOT DATE = 5/22/2014	DATE –	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG – LOCATION 1
I–70 EB M.P. 80.40 STA. 1365+00

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	62
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 11/4/13

ROUTE FAI 57 (I-57) DESCRIPTION Overhead Sign Truss LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SE, SEC. 10, TWP. 6 N, RNG. 5 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S025I057R148.4
Station

BORING NO. 1 (Median)
Station 4500+00
Offset 10.0ft Rt
Ground Surface Elev. 95.43 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion 85.9 ft
After 24 Hrs. 91.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3" topsoil. 95.13				I-57 NB Mile Marker 148.4			
Very stiff, damp, brown, CLAY LOAM.	6						
	6 8	2.68 B	20				
90.93							
-5 Medium, damp, brown marbled gray, SILTY CLAY.	3			-25			
	4 4	0.78 B	19				
88.43							
Very stiff, damp, brown/gray/black, CLAY LOAM.	3						
	4 5	2.47 B	19				
85.93							
-10 Stiff, damp, brown, SANDY CLAY. 85.43	7			-30			
Brown, very sandy, CLAY SHALE, pokerchipped.	31 42	1.81 B	22				
83.43							
Very dense, moist, brown to gray, SANDSTONE. Samples pokerchipped.	8						
	30 50/4"		14				
-15	50/4" 50/1" 50/0"		13	-35			
77.93	50/4" 50/1" 50/1"		14				
Extent of exploration. Benchmark: Centerline of NB I-57, Sta 4500+00, assumed elevation = 100.00'.							
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\EFFINGHAM CO (025)\025-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template DGTEMPLT.GDT Date Printed 11/18/13
Latitude N 38 deg 37 min 16.130 sec Longitude W 88 deg 58 min 29.184 sec Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 11/4/13

ROUTE FAI 57 (I-57) DESCRIPTION Overhead Sign Truss LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SE, SEC. 10, TWP. 6 N, RNG. 5 E, 3 PM

COUNTY Effingham DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S025I057R148.4
Station

BORING NO. 2 (E Shldr)
Station 4500+00
Offset 87.0ft Rt
Ground Surface Elev. 97.11 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 24 Hrs. 92.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3" topsoil. 96.81				I-57 NB Mile Marker 148.40			
Very stiff, damp, brown, CLAY.	4						
	5 8	2.06 B	25				
92.61							
-5 Medium, damp, gray marbled brown, CLAY LOAM. 92.11	3			-25			
Very soft, brown, SILTY LOAM.	4 3	0.62 B	22				
90.11							
Stiff, damp, brown/gray/black, SILTY CLAY LOAM.	3						
	3 4	1.38 S	23				
87.61							
-10 Very stiff, damp, brown marbled gray, SANDY CLAY LOAM TILL.	12			-30			
	7 11	2.23 S	17				
86.31							
Brown, SANDSTONE.							
85.11							
Very dense, damp, brown to gray, very sandy, CLAY SHALE.	45						
	50/5" 50/4"		17				
-15	50/5"			-35			
	50/2" 50/0"		23				
79.71	50/4" 50/1" 50/0"		13				
Extent of exploration. Benchmark: Centerline of NB I-57, Sta 4500+00, assumed elevation = 100.00'.							
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\EFFINGHAM CO (025)\025-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template DGTEMPLT.GDT Date Printed 11/18/13
Latitude W 88 deg 37 min 16.102 sec Longitude N 38 deg 58 min 29.157' sec Datum Job Number

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		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG - LOCATION 2
I-57 NB M.P. 148.4 STA. 4500+00

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	63
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Structure Number 7S025I057R148.4 Overhead Sign Truss
Located in the SE of Section 10, Township 6 N, Range 5 E of the 3 P.M.

NOT TO HORIZONTAL SCALE

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Illinois Department of Transportation
Division of Highways
IDOT

Groundwater
▽ First Encounter
▽ Completion
▼ after (refer to log) hours

Abbreviations
WOH – Sampler Advanced by Weight of Hammer, WOP – Weight of Pipe
B.S. – Before Seating

SUBSURFACE DATA PROFILE

Route: FAI 57 (I-57)

Section: D7 ITS 2014

County: Effingham

TEST FENCE 2 025-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

TEST FENCE 2 025-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

FILE NAME = c:\pw_work\pwidot\steffenmk\d0360593\D774643-sht-Boring.dgn	USER NAME = steffenmk	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG – LOCATION 2
I-57 NB M.P. 148.4 STA. 4500+00

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	64
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 10/29/13

ROUTE FAI 57 (I-57) DESCRIPTION Overhead Sign Truss LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 33, TWP. 11 N, RNG. 7 E, 3 PM

COUNTY Cumberland DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S018I057L178.8
Station

BORING NO. 1 (Median)
Station 217+50
Offset 1.0ft Lt
Ground Surface Elev. 665.08 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 645.6 ft
▼ Upon Completion 653.6 ft
▼ After 168 Hrs. 653.6 ft

DEPTH (ft)		BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	3" topsoil. 664.78			
	Stiff, damp, gray, CLAY.			
		7		
		7	1.75	18
		8	PP	
	660.58			
-5	Medium, damp, gray/brown, SILTY CLAY.	3		
		4	0.74	21
		4	B	
		3		
		3	0.74	25
		3	B	
	655.58			
-10	Medium to stiff, damp, brown, CLAY.	3		
		2	0.74	18
		3	B	
	▽▼▼			
		3		
		7	1.03	24
		10	B	
	650.58			
-15	Hard, very moist, brown, SANDY CLAY LOAM TILL.	27		
		50/4"	5.99	8
		50/4"	S	
	648.08			
	Dense, wet, brown, fine grained, SAND. 7% passing #200 sieve.	17		
		17		22
		16		
	▽			
	645.08	10		
-20				

DEPTH (ft)		BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	Medium to very dense, wet, brown, fine grained, SAND. 7% passing #200 sieve.	8		28
		9		
		9		
	7% passing #200 sieve.	20		20
		20		
-25		18		
	6% passing #200 sieve.	26		21
		27		
	638.08			
	Hard, damp, brown, SILTY CLAY SHALE.	5		
		8	4.33	19
		11	B	
-30		25		
		47	4.15	11
	634.28	50/4"	S	
	Extent of exploration.			
	Benchmark: Top of ROW marker, E side of I-57, Sta 214+50 = 665.41' elevation.			
	I-57 SB Mile Marker 178.8			
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CUMBERLAND CO (018)\018-0000 (2) SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 88 deg 25 min 17.679 sec Longitude N 39 deg 21 min 23.052 sec Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 10/29/13

ROUTE FAI 57 (I-57) DESCRIPTION Overhead Sign Truss LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 33, TWP. 11 N, RNG. 7 E, 3 PM

COUNTY Cumberland DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S018I057L178.8
Station

BORING NO. 2 (W Shldr)
Station 217+50
Offset 92.0ft Lt
Ground Surface Elev. 665.27 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 168 Hrs. 654.0 ft

DEPTH (ft)		BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	3" topsoil. 664.97			
	Very stiff, damp, brown marbled gray, CLAY.			
		4		
		5	2.5	19
		7	PP	
	660.77			
-5	Medium, damp, brown/gray, SILTY CLAY.	3		
		3	0.87	17
		4	B	
		2		
		3	0.99	20
		4	B	
-10		3		
		3	0.62	20
		3	B	
	▼			
	653.27			
	Hard, very moist, brown, SANDY CLAY LOAM TILL. Samples pokerchipped.	13		
		22	3.49	9
		27	S	
-15		22		
		29	6.98	9
		42	S	
		18		
		44	4.38	7
		50	S	
	645.27	30		
-20				

DEPTH (ft)		BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	Very dense, moist, gray, SANDY CLAY LOAM TILL. Samples pokerchipped.	45	5.82	7
		50/5"	S	
		30		
		44		7
	641.77	49		
	Extent of exploration.			
-25				
	Benchmark: Top of ROW marker, E side of I-57, Sta 214+50 = 665.41' elevation.			
	I-57 SB Mile Marker 178.8			
-30				
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CUMBERLAND CO (018)\018-0000 (2) SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 88 deg 25 min 18.228 sec Longitude N 39 deg 21 min 23.450 sec Datum Job Number

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		DRAWN -	REVISED -
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Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

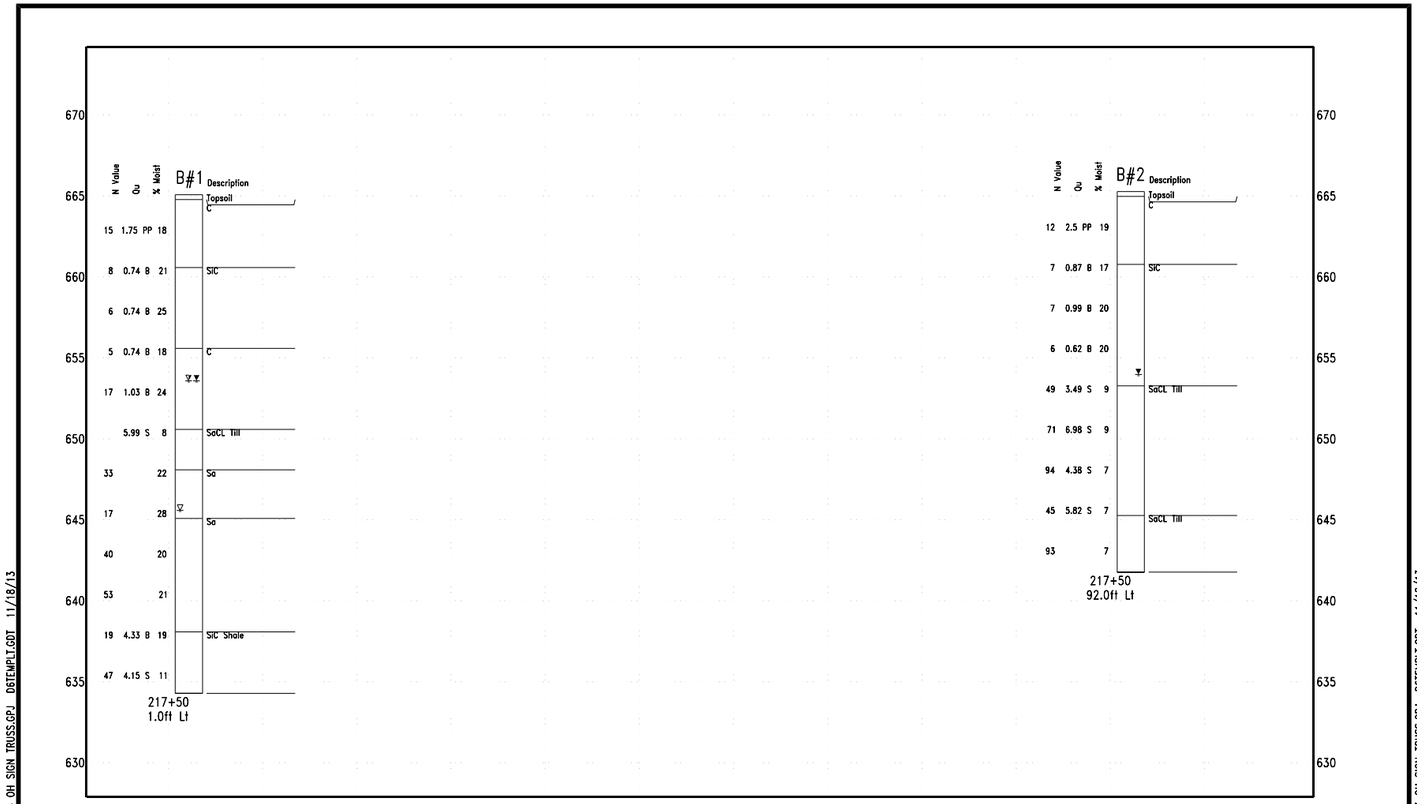
BORING LOG - LOCATION 3
I-57 SB M.P. 178.8 STA. 217+50

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	65
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Structure Number 7S018I057L178.8 Overhead Sign Truss
Located in the NE of Section 33, Township 11 N, Range 7 E of the 3 P.M.



NOT TO HORIZONTAL SCALE

Illinois Department of Transportation
Division of Highways
IDOT

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Groundwater
First Encounter
Completion
after (refer to log) hours

Abbreviations
WOH – Sampler Advanced by Weight of Hammer, WOP – Weight of Pipe
B.S. – Before Seating

SUBSURFACE DATA PROFILE

Route: FAI 57 (I-57)

Section: D7 ITS 2014

County: Cumberland

TEST FENCE 2 018-0000 (2) SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

TEST FENCE 2 018-0000 (2) SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

FILE NAME = c:\pw_work\pwidot\steffenmk\d0360593\D774643-sht-Boring.dgn	USER NAME = steffenmk	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG – LOCATION 3
I-57 SB M.P. 178.8 STA. 217+50

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	66
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 10/28/13

ROUTE FAI 70 (I-70) DESCRIPTION Overhead Sign Truss - I-70 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 31, TWP. 9 N, RNG. 8 E, 3 PM

COUNTY Cumberland DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S018I070L107.6
Station

BORING NO. 1 (Median)
Station 98+64
Offset 3.0ft Lt
Ground Surface Elev. 95.63 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 192 Hrs. 89.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				4" topsoil. 95.33
				Stiff to medium, damp, gray marbled brown, CLAY.
	3			
	4	1.5	19	
	4	PP		
-5	2			
	3	1.40	19	
	3	B		
	3			
	2	0.82	22	
	3	B		
-10	2			
	2	0.33	18	85.33
	3	B		Soft, very damp, brown, SANDY LOAM.
				83.63
	50/5"			Very dense, very moist, brown, SANDSTONE.
	50/2"		20	
	50/2"			
-15	50/5"			
	50/2"		19	
	50/1"			
				78.63
	41			Very dense, very moist, brown,
	50/3"		16	SANDY CLAY SHALE. 77.83
	50/1"			Extent of exploration.
-20				

Benchmark: Centerline of WB I-70 Sta 98+64 = assumed elevation 100.00'.

I-70 WB Mile Marker 107.60

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
-25			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CUMBERLAND CO (018)\018-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 88 deg 20 min 34.836 sec Longitude N 39 deg 11 min 04.989 sec Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Date 10/28/13

ROUTE FAI 70 (I-70) DESCRIPTION Overhead Sign Truss - I-70 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 31, TWP. 9 N, RNG. 8 E, 3 PM

COUNTY Cumberland DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S018I070L107.6
Station

BORING NO. 2 (N Shldr)
Station 98+64
Offset 85.0ft Lt
Ground Surface Elev. 99.62 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 192 Hrs. 85.6 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				16" asphalt shoulder on crushed aggregate base.
				97.62
	4			Very stiff, damp, brown/gray,
	7	2.47	17	CLAY.
	11	B		
-5	5			
	6	3.50	22	With trace Silt.
	7	B		
				92.62
	3			Medium, damp, brown marbled
	3	0.99	21	gray, SILTY CLAY.
	3	B		
-10	2			
	3	0.99	21	
	8	B		
	2			
	2	0.62	20	
	2	B		
				85.12
-15	1			Very soft, very damp, gray, SILT.
	14	0.16	30	84.02
	50/3"	B		Very dense, moist, brown, SANDSTONE.
	50/4"		13	
	50/1"			
	50/1"			
				79.72
-20	50/3"			

Benchmark: Centerline of WB I-70 Sta 98+64 = assumed elevation 100.00'.

I-70 WB Mile Marker 107.60

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	50/1"		
	50/1"		
-25			
-30			
-35			
-40			

Extent of exploration.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CUMBERLAND CO (018)\018-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 88 deg 20 min 35.063 sec Longitude N 39 deg 11 min 05.771 sec Datum Job Number

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		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

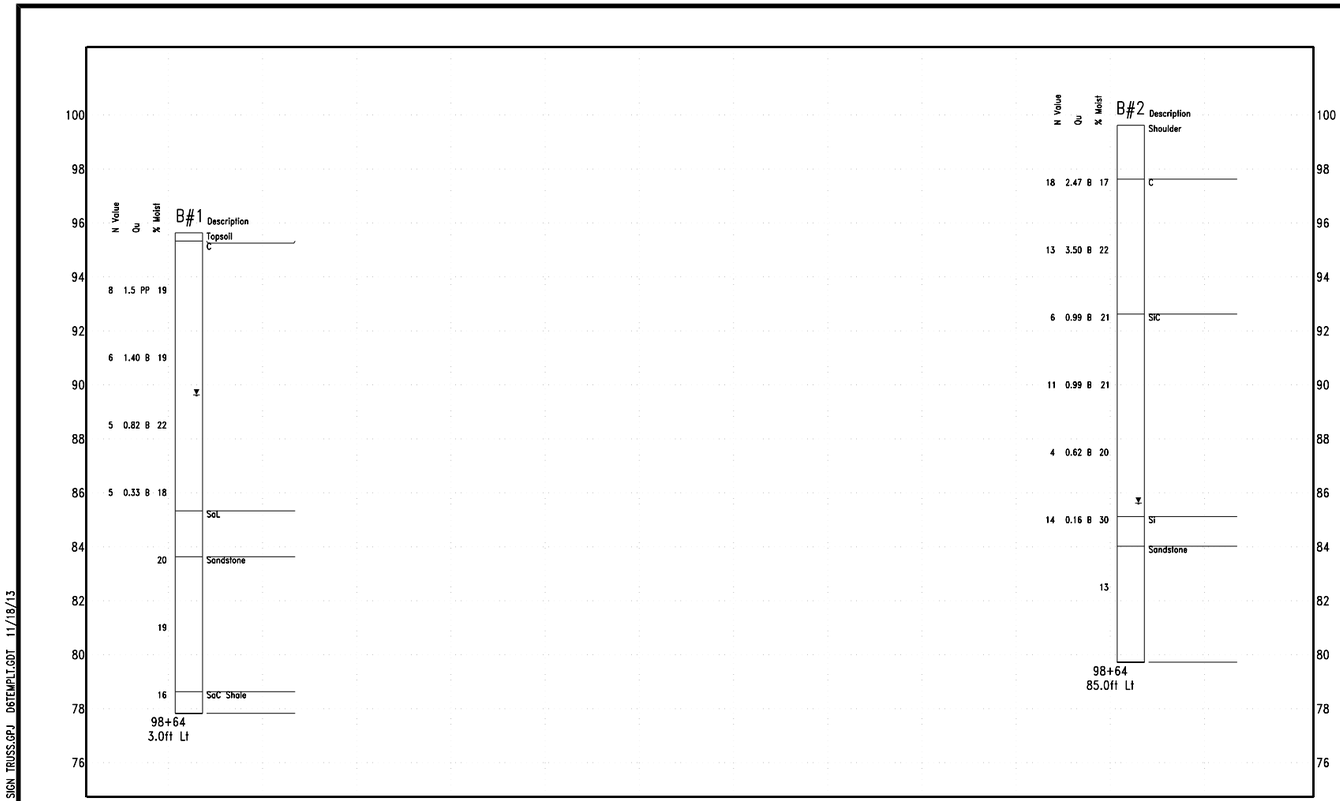
BORING LOG - LOCATION 4
I-70 WB M.P. 107.6 STA. 180+400

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	67
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Structure Number 7S018I070L107.6 Overhead Sign Truss – I-70 WB
Located in the NE of Section 31, Township 9 N, Range 8 E of the 3 P.M.



NOT TO HORIZONTAL SCALE

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Illinois Department of Transportation
Division of Highways
IDOT

Groundwater
▽ First Encounter
▼ Completion
▼ after (refer to log) hours

Abbreviations
WOH – Sampler Advanced by Weight of Hammer, WOP – Weight of Pipe
B.S. – Before Seating

SUBSURFACE DATA PROFILE

Route: FAI 70 (I-70)

Section: D7 ITS 2014

County: Cumberland

TEST FENCE 2 018-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

TEST FENCE 2 018-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

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Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG – LOCATION 4
I-70 WB M.P. 107.6 STA. 180+400

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	68
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 10/25/13

ROUTE FAI 70 (I 70) DESCRIPTION Overhead Sign Truss I-70 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 5, TWP. 11 N, RNG. 10 W, 3 PM

COUNTY Clark DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S012I070L155.0
Station

BORING NO. 1 (Median)
Station 515+62
Offset 7.0ft Lt
Ground Surface Elev. 540.48 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter 529.8 ft
▼ Upon Completion 529.4 ft
▼ After 264 Hrs. 533.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
4" topsoil. 540.18			
Very stiff, damp, brown, CLAY.			
	8		
	7	2.75	20
	6	PP	
535.98			
-5 Medium, damp, gray, SILTY CLAY LOAM w/ wood and organics.	3		
	3	0.74	21
	3	B	
▼			
	2		
No recovery this trip.	3		
	3		
530.98			
-10 Very stiff, damp, gray, CLAY LOAM.	10		
	10	3.71	9
529.78 ▽	12	S	
Brown, gravelly, SANDY LOAM. ▼			
	6		
527.78			
Hard, very moist, brown, CLAY LOAM TILL.	12	+4.5	13
	12	PP	
-15	50/5"		
	50/2"	+4.5	6
	50/2"	PP	
	35		
	50/5"	12.12	6
	50/4"	B	
-20	42		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
519.68	50/5"	7.60	7
Extent of exploration.	50/4"	S	
Benchmark: Chiseled square on existing North headwall of box culvert, West corner, Sta 517+00 = 542.21' elevation.			
-25 I-70 WB Mile Marker 155.0			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CLARK CO (012)\012-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 87 deg 32 min 36.528 sec Longitude N 39 deg 25 min 50.034 sec Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 10/25/13

ROUTE FAI 70 (I 70) DESCRIPTION Overhead Sign Truss I-70 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION NE, SEC. 5, TWP. 11 N, RNG. 10 W, 3 PM

COUNTY Clark DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S012I070L155.0
Station

BORING NO. 2 (N Shldr)
Station 515+48
Offset 92.0ft Lt
Ground Surface Elev. 538.56 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 264 Hrs. 538.1 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3" topsoil. 538.26 ▼			
Very dense, very moist, brown, CLAY LOAM TILL.			
	16		
535.56	30		6
Very sandy, brown, SANDY LOAM w/ gravel.	46		
534.06			
-5 Hard, very moist, gray, CLAY LOAM TILL.	45		
	34	11.52	6
	25	B	
	17		
	22	10.69	9
	26	S	
-10	18		
	20	9.38	8
	34	S	
	9		
	21	7.66	9
	34	S	
-15	28		
	40	8.75	7
	50/5"	S	
	28		
	45	11.06	7
	50/5"	S	
-20	24		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Hard, very moist, gray, CLAY LOAM TILL. (continued) 517.66	41	11.52	7
	50/5"	B	
Extent of exploration.			
Benchmark: Chiseled square on existing North headwall of box culvert, West corner, Sta 517+00 = 542.21' elevation.			
-25 I-70 WB Mile Marker 155.0			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
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File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\CLARK CO (012)\012-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template D6TEMPLT.GDT Date Printed 11/18/13
Latitude W 87 deg 32 min 37.077 sec Longitude N 39 deg 25 min 50.459 sec Datum Job Number

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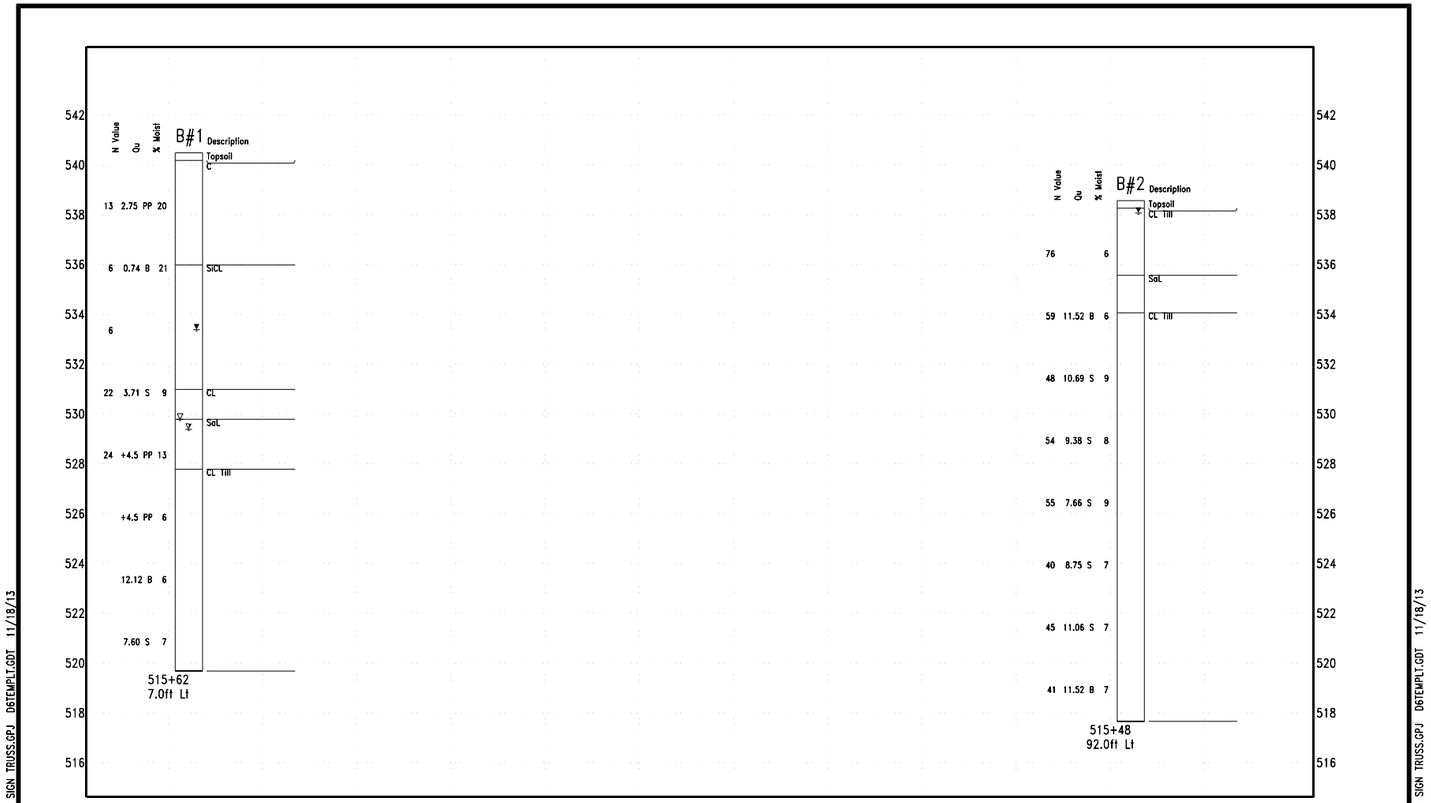
	PLOT SCALE = 100.0000 ' / in.	DRAWN -	REVISED -			
Default	PLOT DATE = 5/22/2014	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	
		DATE -	REVISED -			

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	69
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Structure Number 7S012I070L155.0 Overhead Sign Truss I-70 WB
Located in the NE of Section 5, Township 11 N, Range 10 W of the 3 P.M.



NOT TO HORIZONTAL SCALE

Illinois Department of Transportation
Division of Highways
IDOT

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Groundwater
▽ First Encounter
▼ Completion
14 HR ▽ after (refer to log) hours

Abbreviations
WOH - Sampler Advanced by Weight of Hammer, WOP - Weight of Pipe
B.S. - Before Seating

SUBSURFACE DATA PROFILE

Route: FAI 70 (I 70)
Section: D7 ITS 2014
County: Clark

TEST FENCE 2 012-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

TEST FENCE 2 012-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

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		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG - LOCATION 5
I-70 WB M.P. 155.0 STA. 515+51

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	70
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 10/22/13

ROUTE US 50 DESCRIPTION Overhead Sign Truss – US 50 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SE, SEC. 9, TWP. 3 N, RNG. 10 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S051U050L021.4
Station

BORING NO. 1 (Median)
Station 1058+19
Offset 11.0ft Lt
Ground Surface Elev. 480.98 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 24 Hrs. 472.8 ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
3" topsoil. 480.68				
Brown, CLAY.				
478.98				
Loose, damp, gray, SANDY LOAM. Sample pokerchipped and powdered, unable to test.		12		
		5		14
		4		
476.48				
Medium, damp, gray, SILTY LOAM.	-5	1		
		1	0.58	20
		2	B	
473.98				
Stiff, damp, gray, SILTY CLAY.		2		
		2	1.03	18
		3	B	
471.48				
Stiff, damp, gray marbled brown, CLAY.	-10	3		
		5	1.15	23
		8	B	
468.98				
Stiff, damp, gray marbled brown, SANDY CLAY LOAM.		10		
		19	1.84	17
		17	S	
466.48				
Very stiff, damp, brown, SILTY CLAY LOAM TILL.	-15	8		
		13	2.76	15
		38	S	
463.98				
Very dense, very moist, gray, SANDY CLAY SHALE. Sample pokerchipped and powdered, unable to test.		50/5"		
		50/1"		7
		50/1"		
461.48				
	-20	50/2"		8

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very dense, moist, gray, SANDSTONE. Sample pokkerchipped and powder. (continued)		50/0"		
		50/0"		
458.58				
Extent of exploration.		50/3"		7
		50/1"		
		50/1"		
Benchmark: Brass tablet on NW corner of WB US 50 bridge over the Wabash River (Indiana Dept of Transportation) = 468.60' elevation.	-25			
(Proposed location (Sta 1058+19) is 522' W of WB US 50 bridge West Abutment joint.)				
US 50 WB Mile Marker 21.40				
	-30			
	-35			
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
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File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\LAWRENCE CO (051)\051-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template DSTEMPLT.GDT Date Printed 11/18/13
Latitude W 87 deg 31 min 22.068 sec Longitude N 38 deg 42 min 25.889 sec Datum Job Number

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 10/22/13

ROUTE US 50 DESCRIPTION Overhead Sign Truss – US 50 WB LOGGED BY E. Sandschafer

SECTION D7 ITS 2014 LOCATION SE, SEC. 9, TWP. 3 N, RNG. 10 W, 3 PM

COUNTY Lawrence DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 7S051U050L021.4
Station

BORING NO. 2 (N Shldr)
Station 1058+19
Offset 82.0ft Lt
Ground Surface Elev. 480.57 ft

Surface Water Elev. N/A ft
Stream Bed Elev. N/A ft

Groundwater Elev.:
▽ First Encounter Dry ft
▼ Upon Completion Dry ft
▼ After 24 Hrs. 469.6 ft

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
2" topsoil. 480.37				
Brown, CLAY.				
478.57				
Very stiff, damp, gray, SILTY CLAY.		5		
		4	3.09	17
		3	B	
476.07				
Very stiff to stiff, damp, gray, CLAY.	-5	3		
		3	2.06	19
		4	B	
		2		
		2	1.65	22
		4	B	
471.07				
Stiff, damp, brown marbled gray, SILTY CLAY LOAM.	-10	3		
		5	2.27	17
		8	B	
		5		
		10	1.93	20
		18	S	
466.07				
Very stiff, damp, brown, SANDY CLAY LOAM.	-15	12		
		19	2.75	11
		30	PP	
464.57				
Very dense, very moist, brown, SANDY CLAY SHALE.		50/4"		12
		50/1"		
		50/1"		
460.57	-20	50/2"		9

	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very dense, very moist, gray, SANDY CLAY SHALE. Samples pokerchipped and powder.		50/1"		
		50/0"		
458.17				
Extent of exploration.		50/4"		7
		50/1"		
		50/0"		
Benchmark: Brass tablet on NW corner of WB US 50 bridge over the Wabash River (Indiana Dept of Transportation) = 468.60' elevation.	-25			
(Proposed location (Sta 1058+19) is 522' W of WB US 50 bridge West Abutment joint.)				
US 50 WB Mile Marker 21.40				
	-30			
	-35			
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H – Sampler Advanced By Weight of Hammer, W.O.P – Advanced by Weight of Pipe, B.S. – Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\NEW GEOTECHNICAL\GINTDATA\PROJECTS\LAWRENCE CO (051)\051-0000 SOIL 2013 OH SIGN TRUSS.GPJ Data Template DSTEMPLT.GDT Date Printed 11/18/13
Latitude W 87 deg 31 min 22.123 sec Longitude N 38 deg 42 min 26.123 sec Datum Job Number

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		DRAWN -	REVISED -
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Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

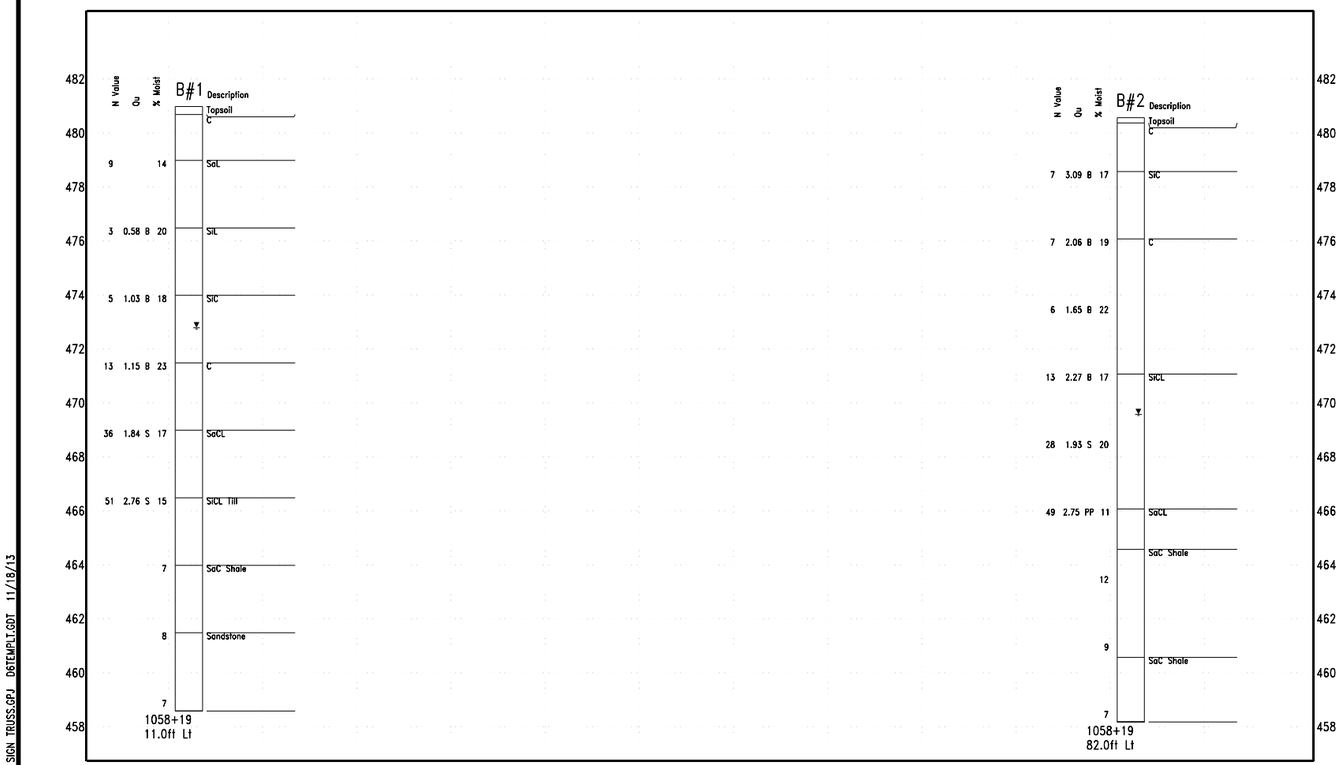
BORING LOG – LOCATION 6
US 50 WB M.P. 21.40 STA. 1058+00

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	71
		CONTRACT NO. 74643		
	ILLINOIS	FED. AID PROJECT		

• VARIOUS

Structure Number 7S051U050L021.4 Overhead Sign Truss – US 50 WB
Located in the SE of Section 9, Township 3 N, Range 10 W of the 3 P.M.



NOT TO HORIZONTAL SCALE

VARIATIONS IN SUBSURFACE CONDITIONS MAY EXIST BETWEEN BORINGS

Illinois Department of Transportation
Division of Highways
IDOT

Groundwater
First Encounter
Completion
after (refer to log) hours

Abbreviations
WOH – Sampler Advanced by Weight of Hammer, WOP – Weight of Pipe
B.S. – Before Seating

SUBSURFACE DATA PROFILE

Route: US 50

Section: D7 ITS 2014

County: Lawrence

TEST FENCE 2 051-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

TEST FENCE 2 051-0000 SOIL 2013 OH SIGN TRUSS.GPJ D6TEMPLT.GDT 11/18/13

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		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 5/22/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG – LOCATION 6
US 50 WB M.P. 21.40 STA. 1058+00

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	D7 ITS 2014	VARIOUS	72	72
		CONTRACT NO. 74643		
	ILLINOIS FED. AID PROJECT			

• VARIOUS