

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

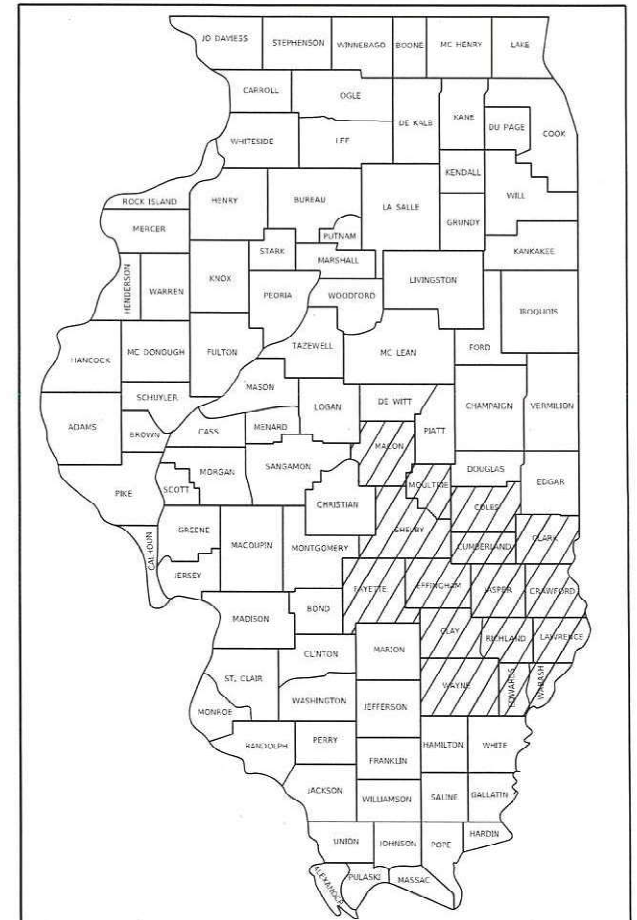
VARIOUS ROUTES
SECTION D7 ELECTRICAL REPAIRS 2024-1
ELECTRICAL MAINTENANCE
VARIOUS COUNTIES

FOR INDEX OF SHEETS, SEE SHEET NO. 2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	*	VARIOUS	6	1
** VARIOUS		ILLINOIS	CONTRACT NO. 74C18	

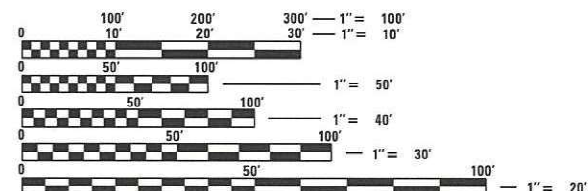
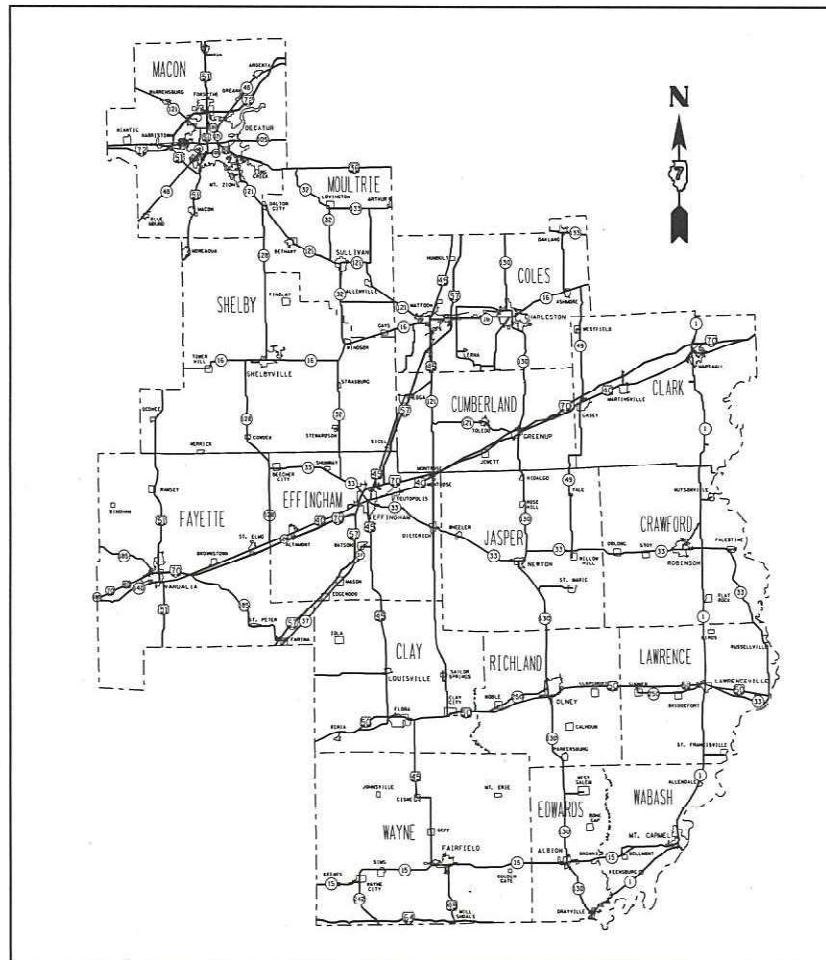
* D7 ELECTRICAL REPAIRS 2024-1

D-97-019-24



LOCATION OF SECTION INDICATED THUS: - [hatched box] OR [solid black box]

C-97-033-24



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

PROJECT ENGINEER – JACQUELYN SEALS
PROJECT MANAGER – KYLE PRICE

CONTRACT NO. 74C88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED FEBRUARY 7 20 24
Jeffrey P. Myerles
REGIONAL ENGINEER

March 22, 2024
Scott A. Etkin
ENGINEER OF DESIGN AND ENVIRONMENT

March 22, 2024
Stephen M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS & GENERAL NOTES
3 - 4	SUMMARY OF QUANTITIES
5 - 6	DETAILS

GENERAL NOTES

THIS PROJECT IS LOCATED ON VARIOUS ROUTES IN MACON, MOULTRIE, SHELBY, FAYETTE, COLES, CUMBERLAND, CLARK, EFFINGHAM, JASPER, CRAWFORD, CLAY, RICHLAND, LAWRENCE, WAYNE, EDWARDS, AND WABASH COUNTIES, ALL LOCATED WITHIN REGION 4-DISTRICT 7. THE WORK INCLUDED IN THIS SECTION CONSISTS OF MAINTAINING AND REPAIRING THE ELECTRICAL HIGHWAY LIGHTING, ELECTRICAL HIGHWAY WARNING SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEM DEVICES, FIBER OPTIC CABLE, AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

ALL WORK IS TO BE REPLACED IN KIND OR, AS INDICATED ON THE CONTRACT PLANS OR PROVISIONS.

THE LOCATIONS OF THE REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER.

REMOVAL OF DAMAGED MATERIALS WILL INCLUDE DISMANTLING, LOADING, HAULING AND DISPOSAL. THE WORK SITE WILL BE LEFT IN A SAFE AND ORDERLY CONDITION.

NO MATERIAL SHOULD BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.

ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE LISTED ON THIS SHEET UNDER THE INDEX OF SHEETS.

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. (PH. 800-892-0123) OR FOR NON-MEMBER, INFORMATION FOR EXCAVATORS (J.U.L.I.E.) SYSTEM AND MUST BE CONTACTED DIRECTLY. DEPARTMENT OF TRANSPORTATION IS NOT A MEMBER OF THE JOINT UTILITY LOCATING THE UTILITY COMPANY DIRECTLY. ILLINOIS

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERCEDE ANY METRIC UNITS IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE FOR THIS PROJECT TO THE CONTRACTOR.

ANY WORK ORDER MAY BE CANCELLED AT THE ENGINEER'S DISCRETION.

NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. XXX

000001 — 08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS	821101 - 02	LUMINAIRE WIRING IN POLE
001001 — 02	AREAS OF REINFORCEMENT BARS	825011 - 04	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240V
001006 —	DECIMAL OF AN INCH AND OF A FOOT	825016 - 04	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480V
701001 — 02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY	825026 - 04	LIGHTING CONTROLLER, BASE MOUNTED, 480V
701006 — 05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE	830001 - 03	LIGHT POLE ALUMINUM MAST ARM
701011 — 04	OFF-ROAD MOVING OPERATION, 2L, 2W, DAY ONLY	830006 - 05	LIGHT POLE ALUMINUM DAVIT ARM
701101 — 05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE	830021 - 04	LIGHT POLE STEEL TENON TOP
701106 — 02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY	836001 - 04	LIGHT POLE FOUNDATION
701201 — 05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH	838001 - 01	BREAKAWAY DEVICES
701206 — 05	LANE CLOSURE, 2L, 2W, NIGHT ONLY FOR SPEEDS > 45 MPH		
701301 — 04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS		
701400 — 12	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY		
701401 — 13	LANE CLOSURE, FREEWAY/EXPRESSWAY		
701406 — 13	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY		
701411 — 09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXT RAMP, FOR SPEEDS > 45 MPH		
701421 — 08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH		
701426 — 09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS > 45 MPH		
701427 — 05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS < 40 MPH		
701428 — 01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY		
701456 — 05	PARTIAL EXT RAMP CLOSURE FREEWAY/EXPRESSWAY		
701501 — 06	URBAN LANE CLOSURE, 2L, 2W UNDIVIDED		
701502 — 09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE		
701601 — 09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN		
701602 — 10	URBAN LANE CLOSURE, MULTILANE, 2W, WITH BIDIRECTIONAL LEFT TURN LANE		
701606 — 10	URBAN LANE CLOSURE MULTILANE, 2W WITH MOUNTABLE MEDIAN		
701611 — 01	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN		
701701 — 10	URBAN LANE CLOSURE, MULTILANE INTERSECTION		
701801 — 06	SIDEWALK, CORNER OR CROSSWALK CLOSURE		
701901 — 09	TRAFFIC CONTROL DEVICES		
878001 — 11	CONCRETE FOUNDATION DETAILS		
886001 — 01	DETECTOR LOOP INSTALLATIONS		
886006 — 01	TYPICAL LAYOUT FOR DETECTION LOOPS		

REV. - MS

* D7 ELECTRICAL REPAIRS 2024-1

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PLOT DATE = 2/7/2024	CHECKED -	REVISED -			** VARIOUS	CONTRACT NO. 74C88				
	DATE -	REVISED -			SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

100%
STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0043	0021	
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	1040		1040	
81028730	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 1 1/4" DIA.	FOOT	20		20	
81028770	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 3" DIA.	FOOT	20		20	
81603000	UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	1000		1000	
82110007	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION G	EACH	10		10	
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	10		10	
82110015	LUMINAIRE, LED, HIGHMAST, OUTPUT DESIGNATION H	EACH	10		10	
82500330	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP	EACH	1		1	
82500335	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 100AMP	EACH	1		1	
82500340	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480VOLT, 60AMP	EACH	1		1	

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0043	0021	
82500360	LIGHTING CONTROLLER, BASE MOUNTED, 480VOLT, 100AMP	EACH	1		1	
83003600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	EACH	3		3	
83009600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. MAST ARM	EACH	3		3	
83060830	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	3		3	
83062730	LIGHT POLE, WEATHERING STEEL, 45 FT. M.H., TENON MOUNT	EACH	3		3	
83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	5		5	
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	10		10	
85800100	FLASHER CONTROLLER	EACH	2		2	
86300300	CONTROLLER CABINET TYPE III	EACH	2		2	

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* D7 ELECTRICAL REPAIRS 2024-1

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USER NAME = Mona.Steffen	DESIGNED -	REVISED - 5/4/2023 KWP
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/7/2024	DATE -	REVISED -

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.
**	*	VARIOUS	6	3
** VARIOUS		CONTRACT NO. 74C88		
ILLINOIS FED. AID PROJECT				

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STATE

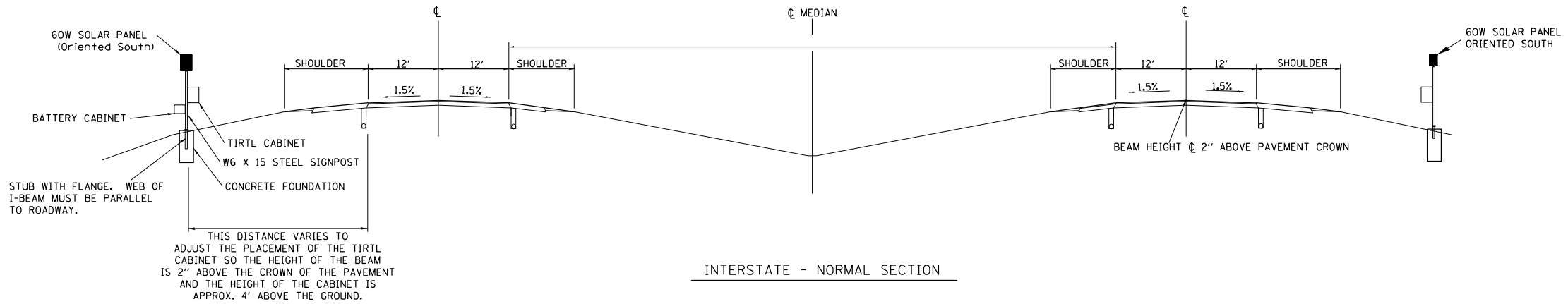
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CODE NO	ITEM	UNIT		0043	0021	
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	7		7	
87900200	DRILL EXISTING HANDHOLE	EACH	2		2	
88600100	DETECTOR LOOP, TYPE I	FOOT	325		325	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	200		200	
X0323388	TRAFFIC COUNTER	EACH	2		2	
X0327116	SOLAR POWER ASSEMBLY	EACH	2		2	
X8730810	ELECTRIC CABLE IN CONDUIT, CONOGA-30003	FOOT	200		200	
X8860105	DETECTOR LOOP REPLACEMENT	FOOT	300		300	
X8860202	PIEZO AXLE SENSOR, CLASS II	FOOT	24		24	
XP000001	JOURNEYMAN ELECTRICIAN	HOUR	200	200		
XP000002	APPRENTICE ELECTRICIAN	HOUR	50	50		
XP000009	PICK-UP TRUCK	HOUR	200	200		
XP000010	BUCKET TRUCK (LENGTH LESS THAN 35 FEET)	HOUR	50	50		
XP000011	BUCKET TRUCK (LENGTH 35 TO 65 FEET)	HOUR	100	100		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0043	0021	
XP000012	ARROWBOARD (TRAILER MOUNTED)	HOUR	20	20		
XP000013	ATTENUATOR, CRASH (TRUCK MOUNTED)	HOUR	20	20		
XP000028	LABOR	HOUR	100	100		

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* D7 ELECTRICAL REPAIRS 2024-1

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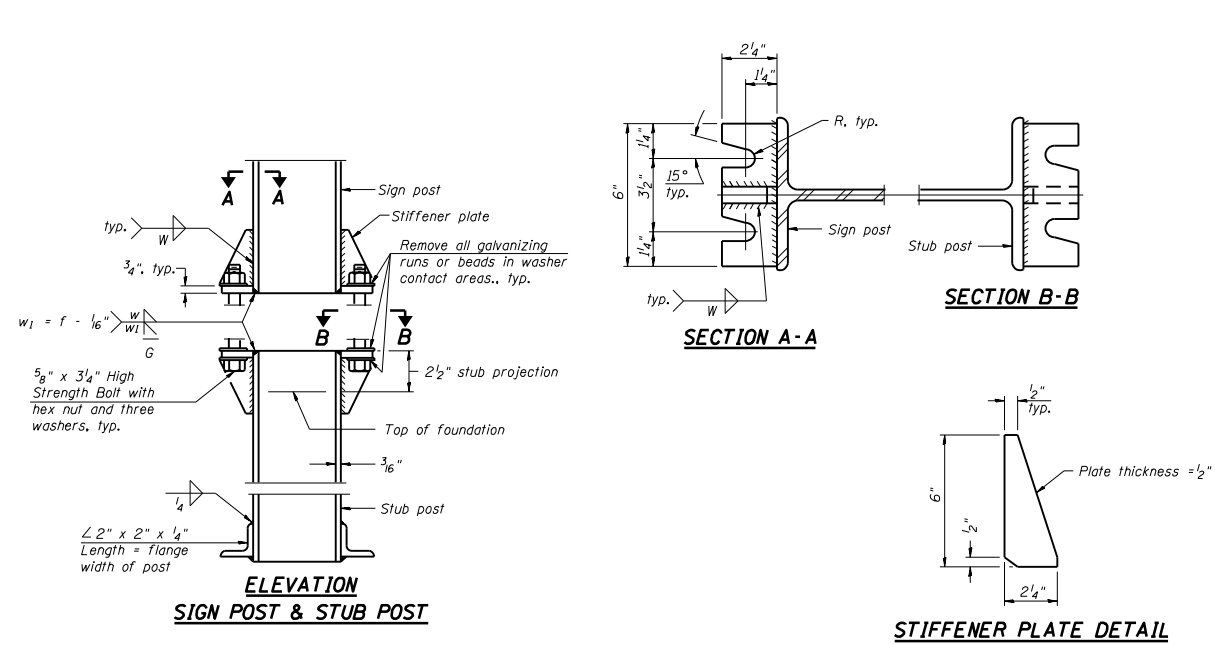
INTERSTATE - NORMAL SECTION

NOTES:

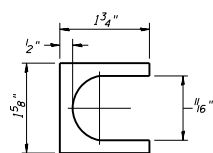
1. SYSTEM CONSISTS OF TWO W6 X 15 I-BEAM SIGNPOSTS WITH CONCRETE FOUNDATION AND A FLANGE WITH BREAKAWAY BOLTS
2. THE I-BEAMS ARE 12' LONG AND DRILLED AS PER THE I-BEAM DETAIL TO ACCOMODATE A PIPE TO ALLOW THE MOUNTING OF THE SOLAR PANEL.
3. THE WEB OF THE I-BEAM IS TO BE PLACED PARALLEL TO THE LANES.
4. THE TWO POSTS MUST BE PLACED DIRECTLY ACROSS FROM EACH OTHER AND PERPENDICULAR TO THE LANES.
5. TWO POSTS ARE REQUIRED LOCATED AS PER THE ENGINEER AND DRAWING.
6. THE CABINETS ARE ATTACHED TO THE I-BEAM USING 8" GALVANIZED J-BOLTS.
7. THE BOTTOM OF THE CABINET HEIGHT MUST BE NO LOWER THAN 4' ABOVE THE GROUND AND BE ABLE TO VIEW ACROSS ALL LANES AT THE CROWN OF THE PAVEMENT.
8. THE IDOT OFFICE OF PLANNING AND PROGRAMMING DATA MANAGEMENT LAB RICH MARX (217-782-2065) MUST BE CONTACTED TWO WEEKS PRIOR TO ANY WORK BEING DONE TO ENSURE PROPER POST PLACEMENT.

TIRTL TRAFFIC COUNTER
SCHEDULE OF QUANTITIES
(FOR INFORMATION ONLY)

CODE NUMBER	ITEM	UNIT	QUANTITY
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	520
X0323388	TRAFFIC COUNTER SYSTEM (INCLUDES BELOW)	EACH	1
TIRTL TRAFFIC DATA COLLECTION SYSTEM INCLUDES:			
	SIERRA WIRELESS MODEM RV-50	EACH	1
	PANORAMA LOW PROFILE LTE MIMO LGAM-BC3G-26-3SP ANTENNA	EACH	1
	TIRTL CABINET 15" X 27" X 16"	EACH	2
	BATTERY CABINET 16.5" X 16" X 11.5" BBAIM W/ #2 POLICE LOCK	EACH	1
	SOLAR PANEL 60 W 12 VDC WITH BRACKET AND JUNCTION BOX	EACH	2
	TIRTL TRAFFIC COUNTER	EACH	1
	SUNSAVER SOLAR CHARGE REGULATOR 10 AMP 12 VDC	EACH	2
	BATTERY - 33 AH ABSORBED ELECTROLYTE 8" X 5.5" X 7" (DEEP CYCLE)	EACH	1
	BATTERY -104AH ABSORBED ELECTROLYTE 10" X 6" X 8" (DEEP CYCLE)	EACH	1



BREAK-AWAY WIDE FLANGE STEEL POST DETAILS



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

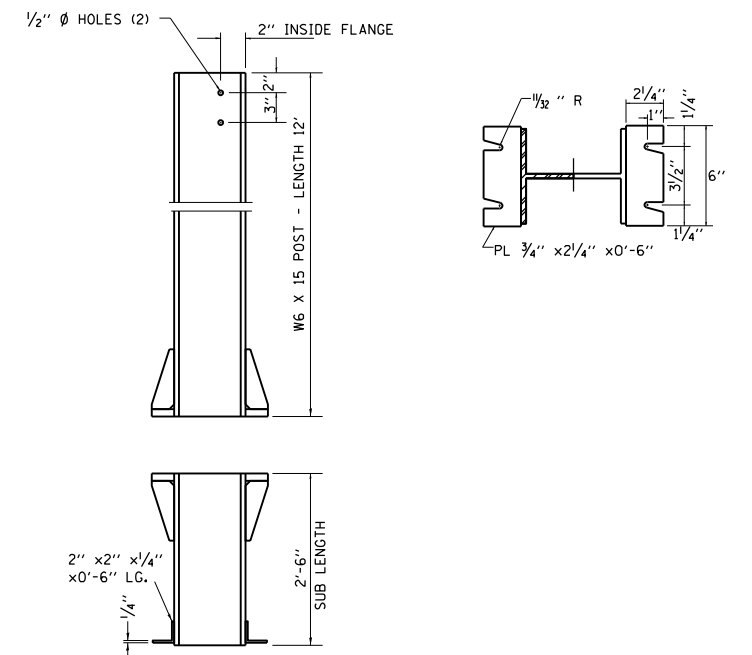
GENERAL NOTES

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

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

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

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



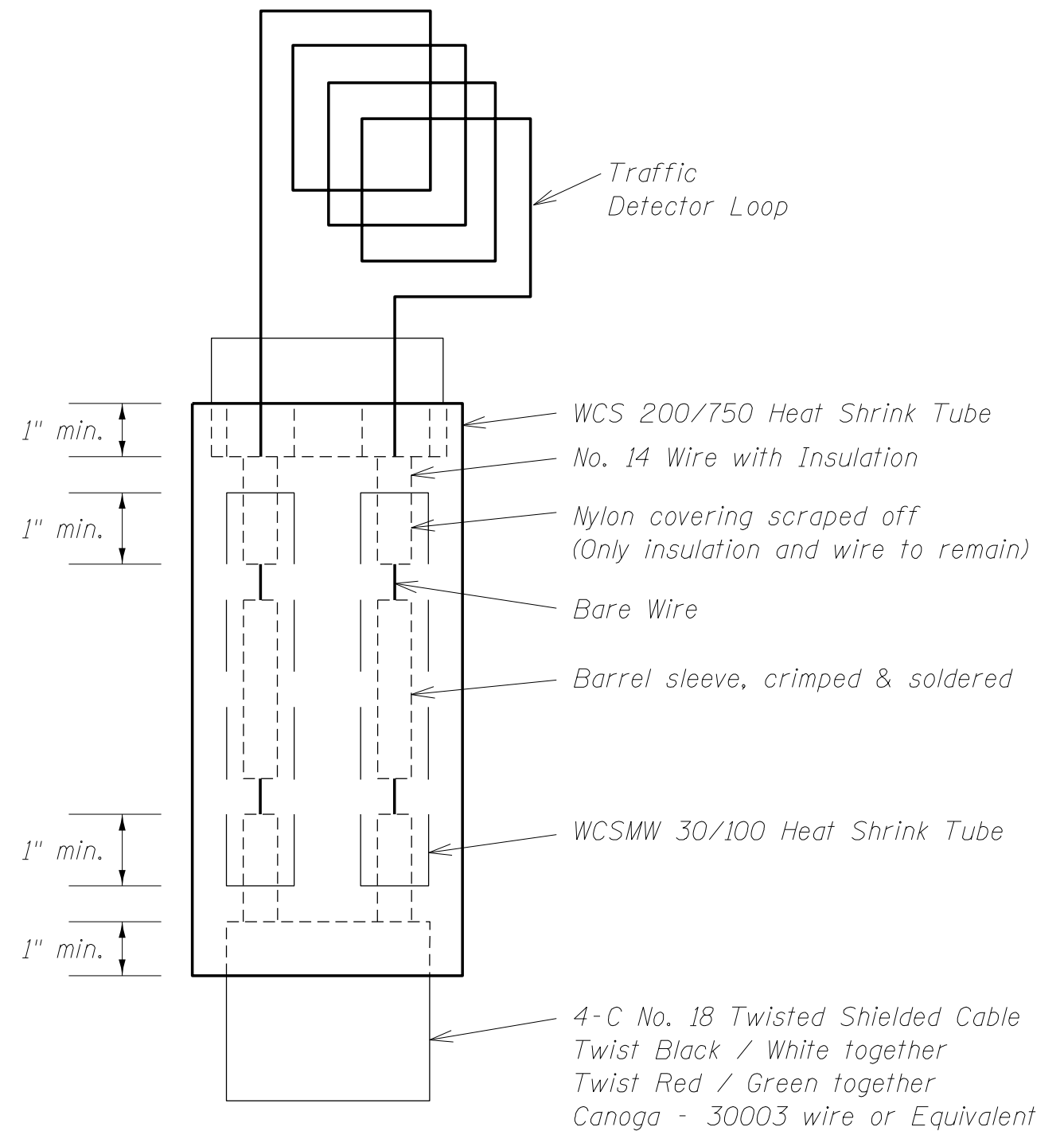
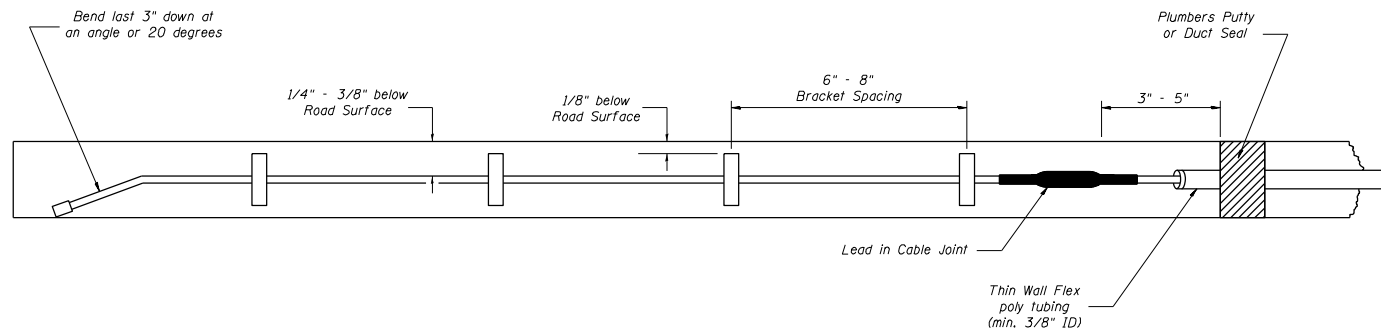
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TIRTL CABINET DETAILS	
SCALE:	SHEET OF SHEETS STA. TO STA.

• D7 ELECTRICAL REPAIRS 2024-1				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**		VARIOUS	6	5
** VARIOUS			CONTRACT NO. 74C88	
ILLINOIS FED. AID PROJECT				

Loop Splicing Requirements



Minimum 1" Heat Shrink Tube overlap on wire.
PVC & Shielded cable to form water tight seal.

Note: Not to Scale

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ADDITIONAL DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

• D7 ELECTRICAL REPAIRS 2024-1

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	.		6	6
** VARIOUS			CONTRACT NO. 74C88	

ILLINOIS FED. AID PROJECT