04-26-2024 LETTING ITEM 117

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

D-97-014-24

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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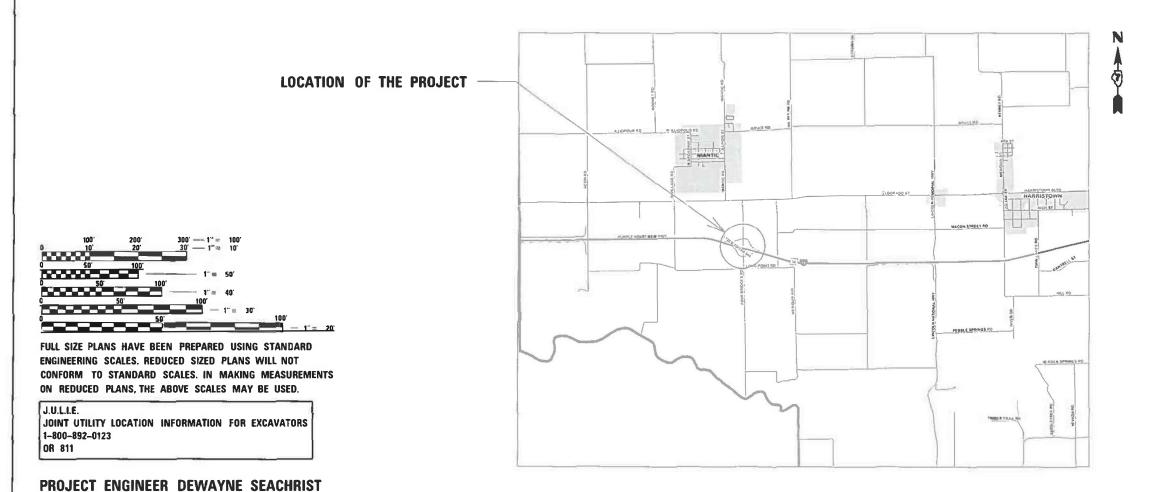
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PROPOSED HIGHWAY PLANS

FAI ROUTE 72 (I-72)
SECTION D7 HIGHWAY LIGHTING 2024-1
PROJECT NHPP-1G6D(146)
REMOVE AND REPLACE LIGHTING WITH LED
MACON COUNTY

C-97-015-24







PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

CONTRACT NO. 74C82

PROJECT MANAGER ROBERT GREUEL

GENERAL NOTES

ELECTRICAL WORK SHALL CONFORM TO NATIONAL, STATE, AND LOCAL CODES.

THE CONTRACTOR SHALL SET LIGHT POLES 15' BEHIND EDGE OF PAVEMENT (WHITE LINE)

A DEPTH OF FORTY-EIGHT INCHES (48") OR GREATER FOR ALL UNDERGROUND UITILITIES SHALL BE MAINTAINED WITHIN ACCESS-CONTROLLED RIGHT OF WAY UNLESS CROSSING A WATERWAY WHERE THE MINIMUM ALLOWED DEPTH SHALL BE SIXTY INCHES (60") BELOW THE FLOW LINE ELEVATION OF THE WATERWAY.

UTITLITIES INSTALLED NEAR BRIDGE STRUCTURES SHALL BE A MINIMUM OF SEVENTY-FIVE FEET (75') BEYOND THE BRIDGE ABUTMENT LOCATION.

SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

THERE ARE NO TREES SCHEDULED TO BE REMOVED ON THIS PROJECT. IF TREES ARE TO BE REMOVED FOR WHATEVER REASON, THEY WILL NOT BE ALLOWED TO BE REMOVED BETWEEN APRIL 1^{ST} AND SEPTEMBER 30^{TH} OF ANY GIVEN YEAR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MOWING, BRUSH AND SHRUB REMOVAL AND SHALL DISPOSE OF ALL REMOVED ITEMS OFF THE JOB SITE. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE REMOVAL OF LIGHTING UNIT, NO SALVAGE.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES (100 MILLIMETERS) IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE BID PRICE FOR THE REMOVAL OF POLE FOUNDATION.

ALL EXCAVATED MATERIAL, WHICH INCLUDES DIGGING OR GRADING OF ANY SOIL OR FILL MATERIAL, WITH THE EXCEPTION OF AGGREGATE FILL MUST BE INCORPORATED WITHIN THE IDOT RIGHT OF WAY DUE TO ENVIRONMENTAL DOCUMENTATION REQUIREMENTS.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT WILL BE INCLUDED IN THE COST OF REMOVE ELECTRIC CABLE FROM CONDUIT.

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

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.

THE CONTACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

SIGNS ATTACHED TO LIGHT POLES SHALL BE REMOVED, PRESERVED AND REINSTALLED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR REMOVAL OF LIGHTING UNIT. NO SALVAGE.

HIGHWAY STANDARDS

000001-08	STANDARD	SYMBOLS,	ABBREVIATIONS	AND	PATTERENS

001006 DECIMAL OF AN INCH AND FOOT

701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY

701006-05 OFF-RD OPERATIONS. 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE

701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE

701106-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY

701201-05 LANE CLOSURE, 2L 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH

701400-12 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY

701401-13 LANE CLOSURE, FREEWAY/EXPRESSWAY

701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS \geq 45 MPH

701456-05 PARTIAL EXIT RAMP CLOSURE, FREEWAY/EXPRESSWAY

701901-09 TRAFFIC CONTROL DEVICES

805001-01 ELECTRICAL SERVICE INSTALLATION DETAILS

821101-02 LUMINAIRE WIRING IN POLE

825011-04 LIGHTING CONTROLLER PEDESTAL MOUNTED, 240V

830021-04 LIGHT POLE STEEL TENON TOP

836001-04 LIGHT POLE FOUNDATION

838001-01 BREAKAWAY DEVICES

LEGEND

- R EXISTING ELECTRIC SERVICE TO BE REMOVED.

PROPOSED ELECTRIC SERVICE, 120/240V.

R EXISTING LIGHTING CONTROLLER TO BE REMOVED.

PROPOSED LIGHTING CONTROLLER, 240V, 60A.

OR EXISTING LIGHTING UNIT TO BE REMOVED.

PROPOSED LIGHTING UNIT, LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H, 45FT GALVANIZED STEEL POLE, TENON MOUNT, 1 FT BRACKET ARM, METAL FOUNDATION, BREAKAWAY COUPLINGS WITH SS SCREEN.

PROPOSED LIGHTING UNIT, LUMINAIRE, LED, ROADWAY,
OUTPUT DESIGNATION H, 45FT GALVANIZED STEEL POLE,
TWIN TENON MOUNT, 1 FT BRACKET ARMS, METAL FOUNDATION,
BREAKAWAY COUPLINGS WITH SS SCREEN.

EXISTING ELECTRIC CABLE IN CONDUIT TO BE REMOVED.

PROPOSED UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.6 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE (UNLESS STATED OTHERWISE)

PROPOSED COILABLE NONMETALLIC CONDUIT 2" DIA. LENGTH AS NOTED

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES,HIGHWAY STANDARDS, INDEX OF SHEETS, AND LEGEND
- 3-4 SUMMARY OF QUANTITIES
- 5-9 LIGHTING REMOVAL PLAN
- 10-14 PROPOSED LIGHTING PLAN
- 15 WIRING DIAGRAM AND LUMINAIRE PERFORMANCE TABLE

REV. - MS

USER NAME = jessica.hille	DESIGNED ==	REVISED =			GENERA	I NOTE	S HIGHW	AV STAN	NARNS	F.A.I. RTE	SECTION	COUNTY	TOTAL S	HEET
	DRAWN	REVISED -	STATE OF ILLINOIS	GENERAL NOTES, HIGHWAY STANDARDS LEGEND, AND INDEX OF SHEETS			72	D7 HIGHWAY LIGHTING 2024-1	MACON	15	2			
PLOT SCALE = 100.0000 / in.	CHECKED	REVISED -	DEPARTMENT OF TRANSPORTATION		LEGI	END, AN	D IMPEY	OL SUEE	:13		'	CONTRACT	Γ NO. 7 4C	82
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90% FED 10% STATE 90% FED 10% STATE

	SUMMADY OF OUMNITITIES CONSTRUCTION TY				RUCTION TYPE CODE		CHANAADY OF CHANTITIC			CONSTRUCTION T	YPE CODE
	SUMMARY OF QUANTITIES		TOTAL	0021			SUMMARY OF QUANTITIES		TOTAL	0021	
CODE NO	ITEM	UNIT	OUANTITIES			CODE NO	ITEM	UNIT	QUANTITIES		
67100100	MOBILIZATION	L SUM	1	1	8	3060830	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H.,	EACH	16	16	
							TENON MOUNT				
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1							
	701411				8	3060835	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H.,	EACH	2	2	
							TENON MOUNT-TWIN				
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1							
	701201				8	3600356	LIGHT POLE FOUNDATION, METAL, 15" BOLT	EACH	18	18	
							CIRCLE, 8 5/8" X 6'				
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1							
	701401				8	3800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS	EACH	72	72	
							STEEL SCREEN				
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1							
	701456				8	4200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH	18	18	
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1	8	4200804	REMOVAL OF POLE FOUNDATION	EACH	18	18	
81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC	FOOT	405	405	8	4500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1	1	
	CONDUIT, 2" DIA.										
					8	4500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1	1	
81603034	UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.6 GROUND,	FOOT	6935	6935							
	(XLP-TYPE USE), 3/4" DIA. POLYETHYLENE				8	4500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1	1	
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	H EACH	20	20	8	9502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	20805	20805	
82500330	LIGHTING CONTROLLER, PEDESTAL MOUNTED,	EACH	1	1		2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25	0.25	
	240VOLT, 60AMP		-					1			+

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	DRAWN -	REVISED -
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STATE	OF ILLINOIS	
DEPARTMENT (OF TRANSPORTATI	ON

SCALE:

SUMMARY OF QUANTITIES					F.A.I. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
					72	D7 HIGHWAY LIGHTING 2024-1	MACON	14	3
							CONTRACT	NO. 74	1C82
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

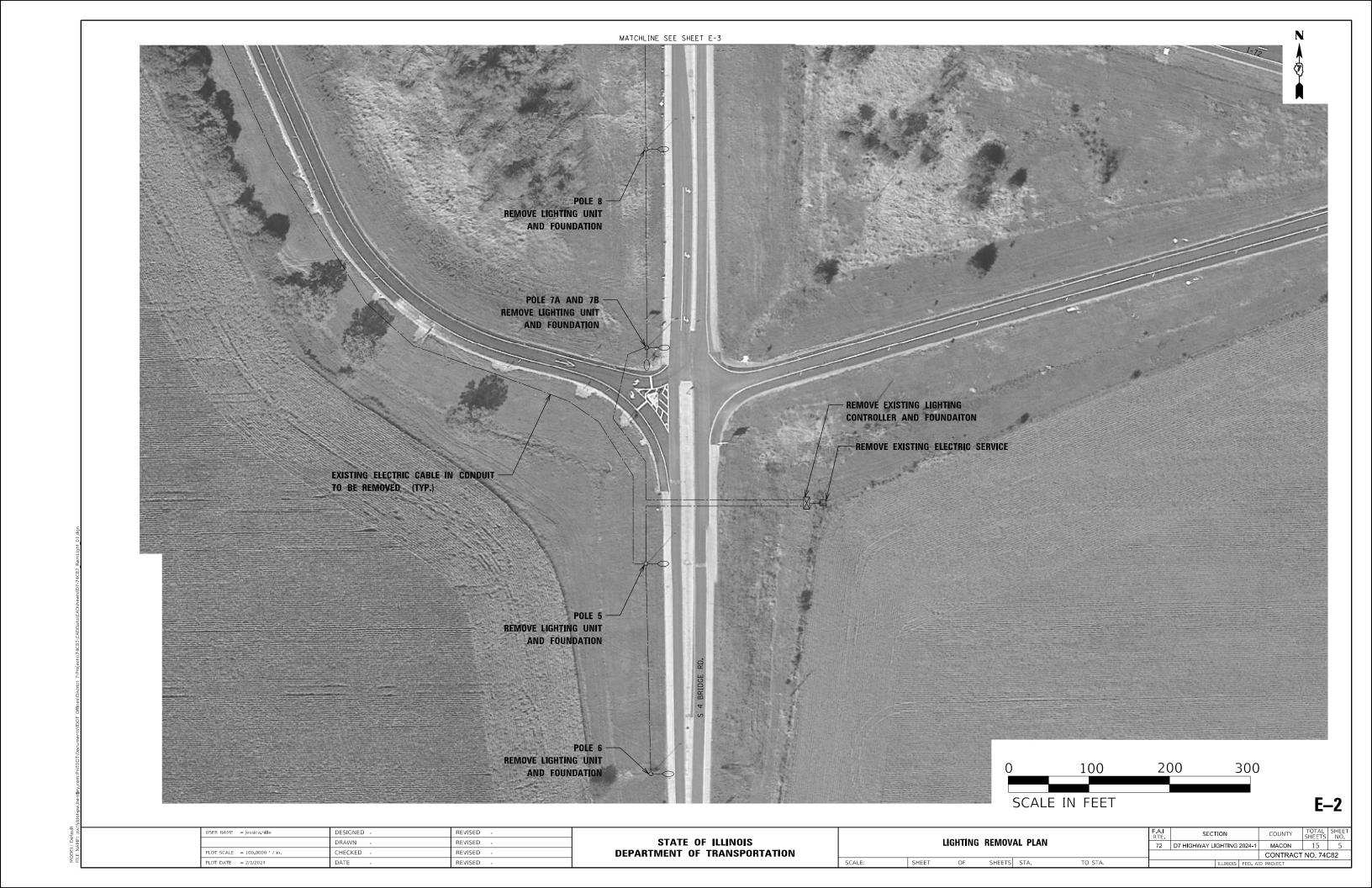
	SUMMARY OF QUANTITIES		-	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0021		
	1. <u>-</u>					
X8110105	REMOVE CONDUIT ATTACHED TO STRUCTURE	FOOT	330	330		
X8210402	LUMINAIRE MOUNTING BRACKET (SPECIAL)	EACH	18	18		
70033024	MAINTAIN EXISTING LIGHTING SYSTEM	L SUM	1	1		
20033024	MAINTAIN EXISTING EIGHTING STSTEM	L 30W	1	1		

USER NAME = jessica hille	DESIGNED -	REVISED -
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PLOT DATE = 2/1/2024	DATE -	REVISED -

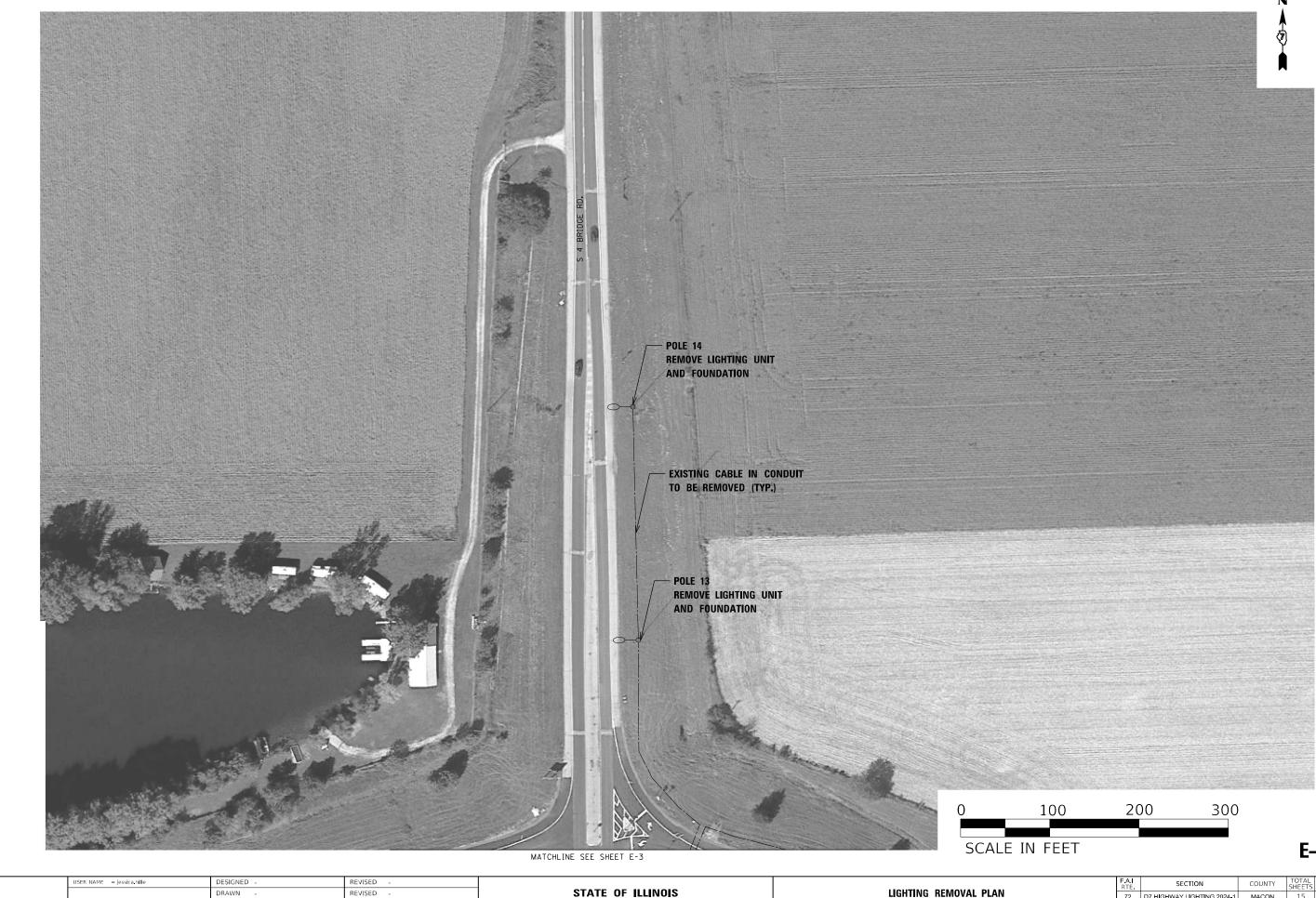
STATE	: OI	F ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

SCALE:

	SUMMARY	OF QUA	ANTITIES		F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					72	D7 HIGHWAY LIGHTING 2024-1	MACON	15	4
							CONTRACT	NO. 74	1C82
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		







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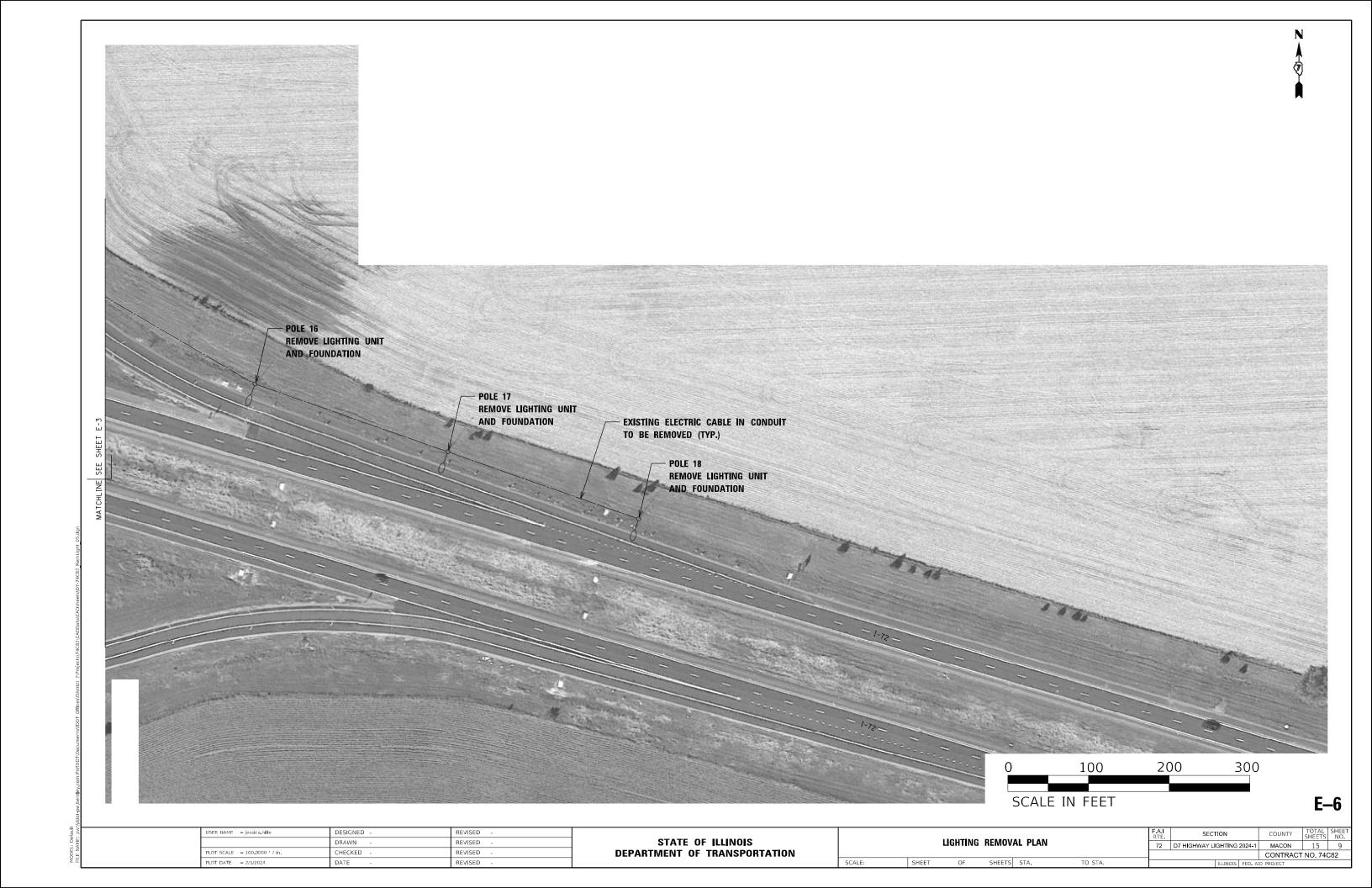
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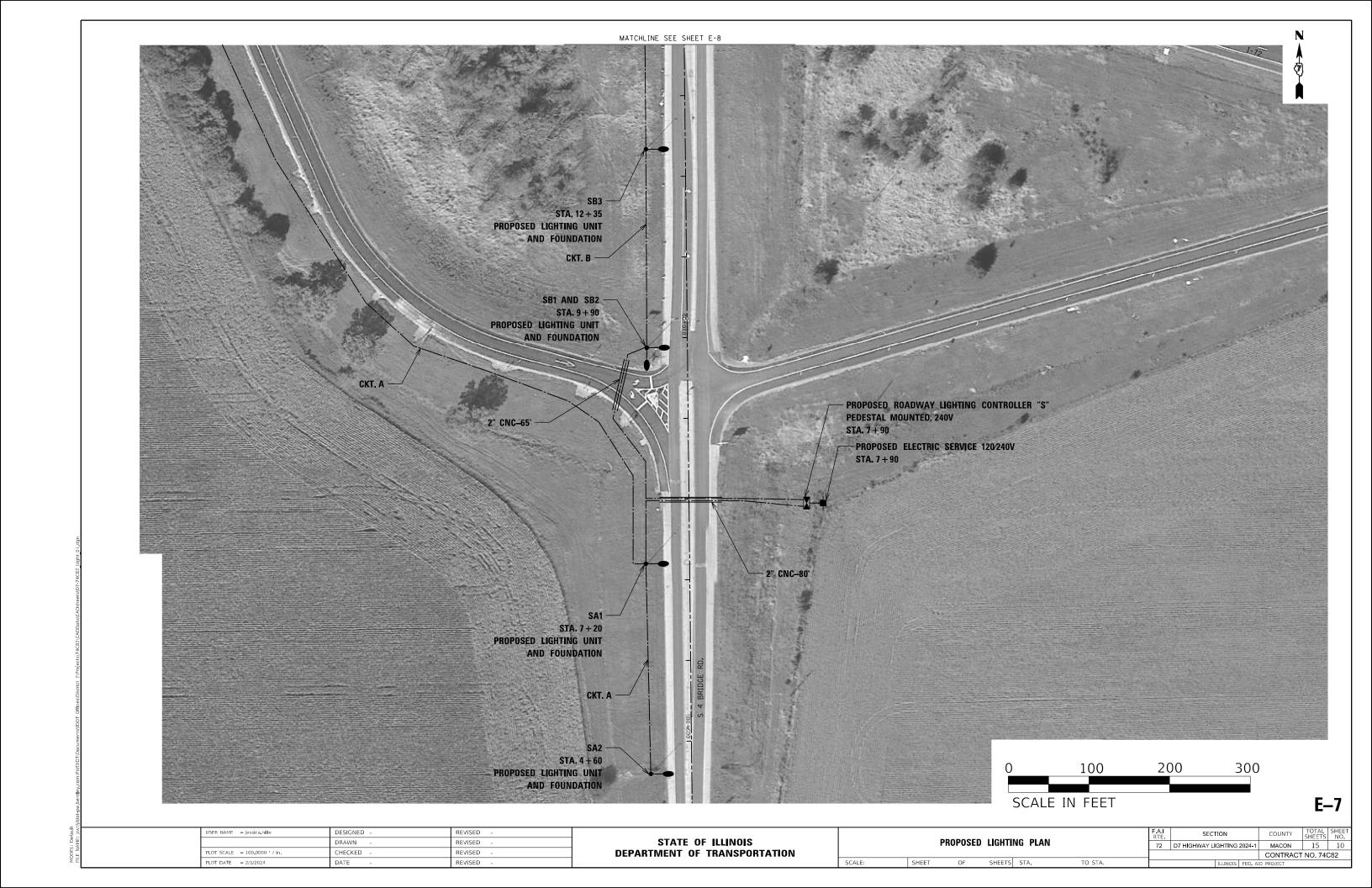
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING REMOVAL PLAN SHEET OF SHEETS STA. TO STA. 72 D7 HIGHWAY LIGHTING 2024-1 MACON 15 7
CONTRACT NO. 74C82

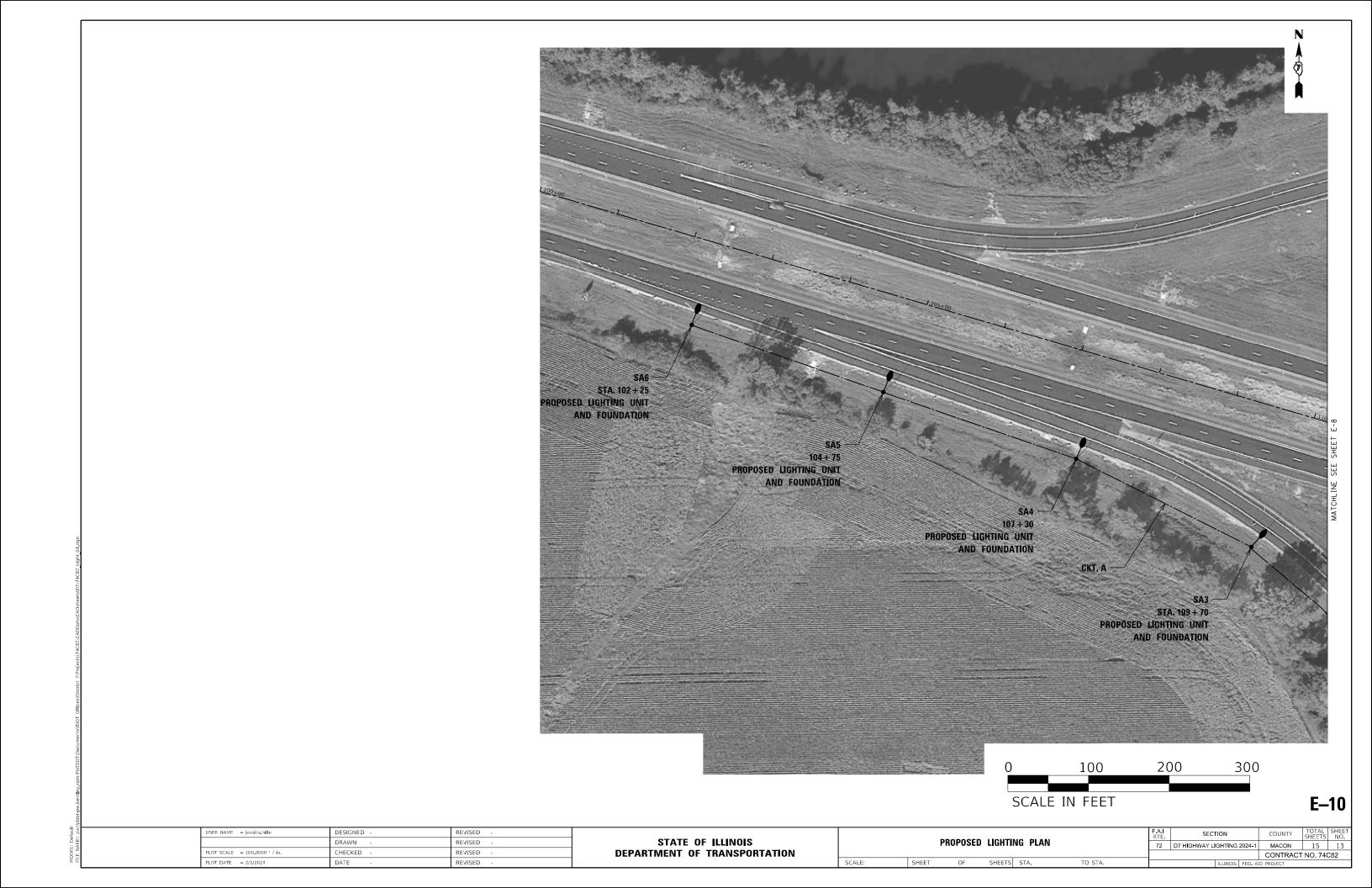


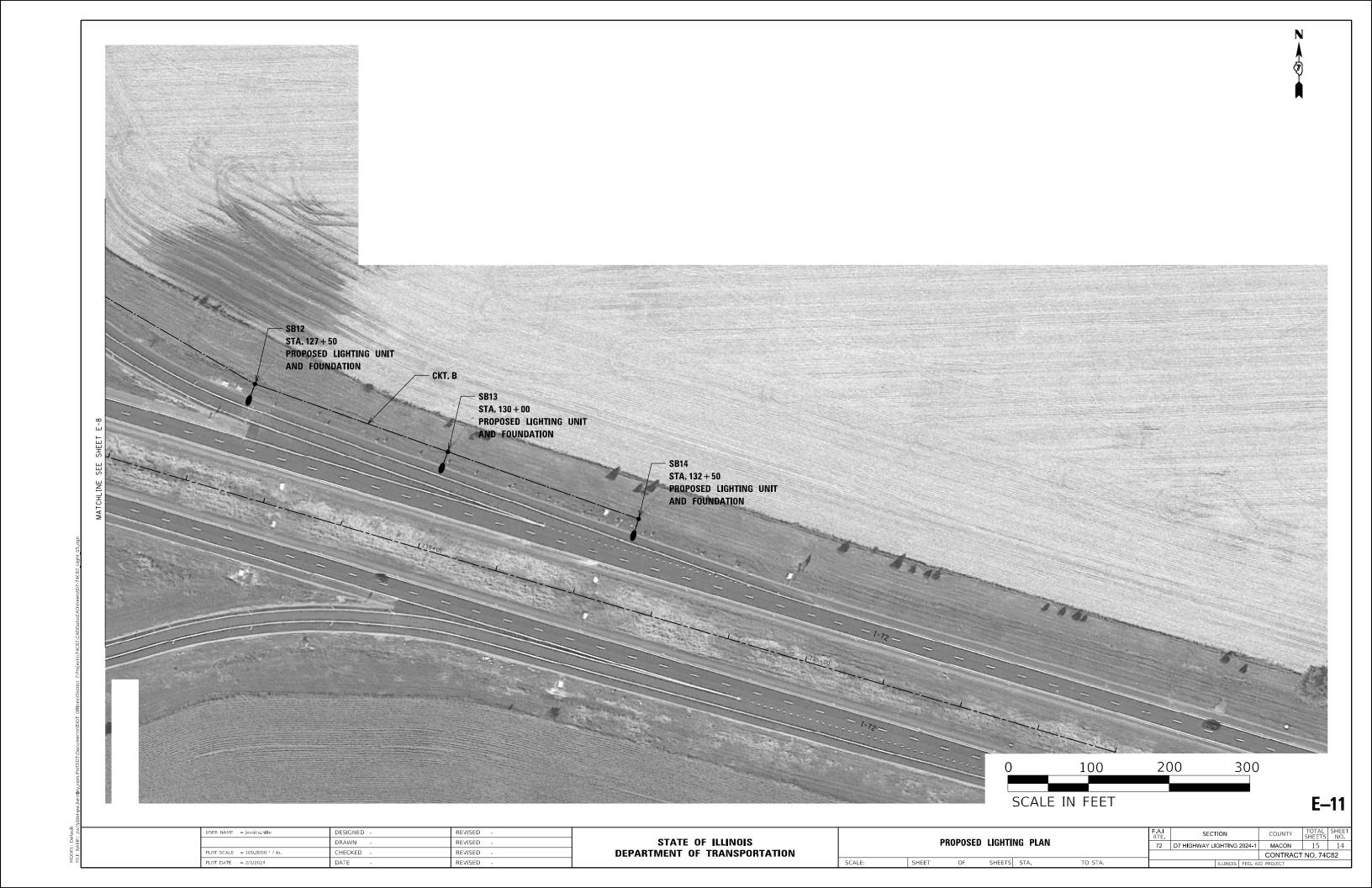












LEGEND:

1 PROPOSED LIGHTING UNIT

GROUND ROD

PROPOSED LIGHTING CONTROLLER "S", PEDESTAL MOUNTED, 240V, 60AMP

REVISED

NOTES

 ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

PLOT DATE = 2/1/2024

I-72 AND S. 4 BRIDGES RD.

Luminaire Performance Table

Project

Date	Contract Number Section		iber	County		
11/14/2023	74C82	D7 HIGHWAY	LIGHTING 2024-1	MACON		
Marked Route Number			Municipality			
1.70			NI / A			

Roadway

Lane Width	*of Lanes	Median Width	I.E.S Surface Classification	Q-Zero Value
12	2	N/A	R3	0.07

Structure

 Mounting Height Arm Length Set Bac		Set Back	Number of Luminaires (Highmast & Sign Lighting Only)
45 FT	2 FT	15 FT	N/A

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S.	Vertical Distribution	
ROADWAY LUMINAIRE, LED, OUTPUT DESIGNATION H	TYPE III	MEDI	MEDIUM	
Total Light Loss Factor (LLF) BUG Rating	Shields		Dimming Protocol	
0.7 U = 0	N/A		10V	

Layout

Spacing (to Nearest 5 Ft	Configuration (Opposite, Staggered, 1 Sided, or Median)
240 FT	SINGLE SIDED

Performance

Average Illuminance, E _{AVE} (fc)	Uniformity Ratio, E AVE/	Uniformity Ratio, E AVE/E MIN	
0.8	3.0		
Average Luminance, L AVE(cd/m²) Uniformity Ratio, L AVE / L MIN Uniformity Ratio, L MAX/LMIN			Veiling Luminance Ratio, L _V /L _{MIN}
N/A	N/A	N/A	0.3:1

Light Tresspass

Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E	Max. Vertical Illuminance at ROW, E
N/A	N/A	N/A
IN/ A	N/ A	N/ A

Notes

- 1. Set Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
- 2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to roadway.
- 3. Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
- 4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions above.

CALCULATIONS ARE TO BE PERFORMED IN ONE DIRECTION ONLY.

COMPLIANCE WITH PERFORMANCE CRITERIA SHALL BE HELD TO ONE SIGNIFICATN DIGIT.

DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIRING DIAGRAM AND LUMINAIRE PERFORMANCE TABLE

FAI SECTION COUNTY SHEETS NO.

72 D7 HIGHWAY LIGHTING 2024-1 MACON 15 15

CONTRACT NO. 740-22

SHEET OF SHEETS STA. TO STA.

SHEET OF SHEETS STA. TO STA.