

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	D7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	1
		ILLINOIS	CONTRACT NO. 74A74	

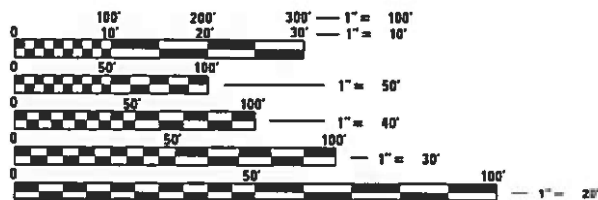
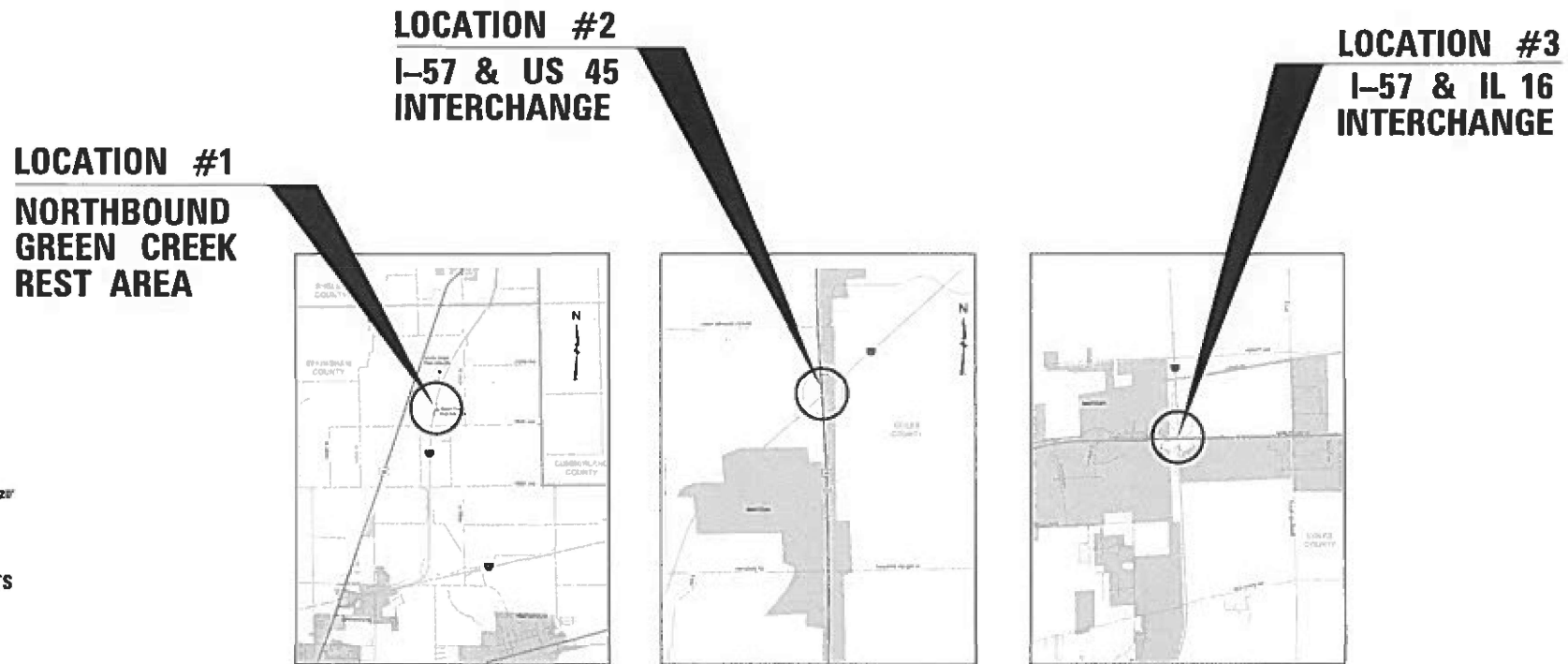
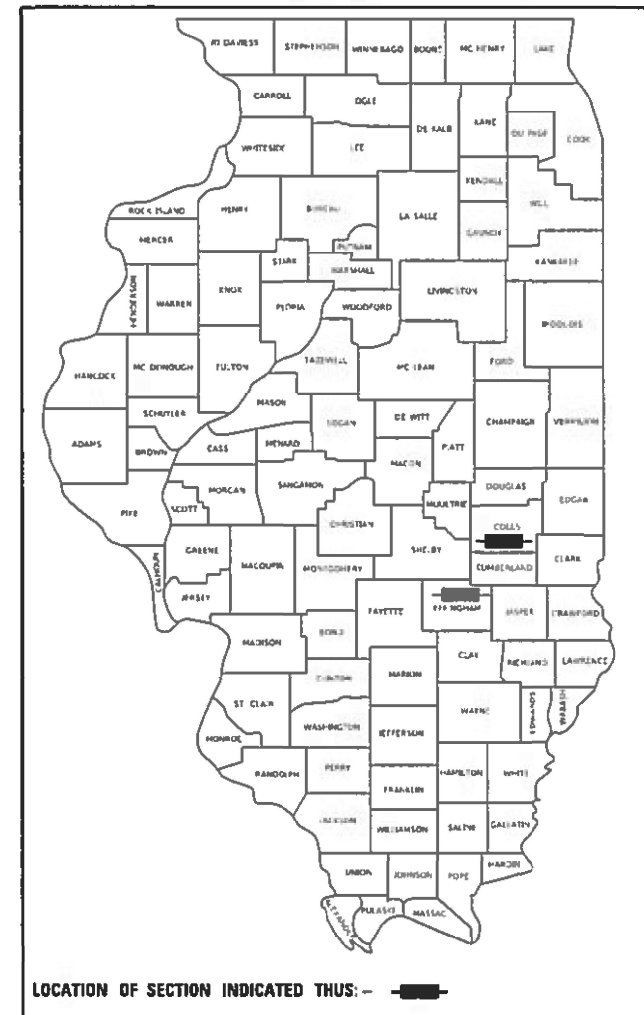
FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 57 (I-57)
D7 HIGHWAY LIGHTING 2022-1
PROJECT NHPP-D4FI(252)
LIGHT TOWER REMOVAL AND REPLACEMENT
EFFINGHAM AND COLES COUNTIES

C-97-174-21

D-97-105-21



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 EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER - DEWAYNE SEACHRIST
PROJECT MANAGER - ROBERT GREUEL

CONTRACT NO. 74A74

GROSS LENGTH = 0 FT. = 0 MILE
NET LENGTH = 0 FT. = 0 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 22, 20 21

John P. Myer REGIONAL ENGINEER
December 10, 20 21

Stephen M. Lewis ENGINEER OF DESIGN AND ENVIRONMENT
December 10, 20 21

Stephen M. Lewis DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>ITEM</u>
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5-8	TYPICAL SECTIONS
9-16	LIGHTING SHEETS
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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

<u>STO. NO.</u>	<u>DESCRIPTION</u>
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
701400-11	APPROACH TO THE 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
701451-05	RAMP CLOSURE FREEWAY/EXPRESSWAY
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701901-08	TRAFFIC CONTROL DEVICES
821101-02	LUMINAIRE WIRING IN POLE
825011-04	LIGHTING CONTROLLER, PEDSTAL MOUNTED, 240V
830006-05	LIGHT POLE ALUMINUM DAVIT ARM
830021-03	LIGHT POLE TENTON TOP
835001-01	LIGHT TOWER
836001-04	LIGHT POLE FOUNDATION
720001-01	SIGN PANEL MOUNTING DETAILS
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
837001-05	LIGHT TOWER FOUNDATION
838001-01	BREAKAWAY DEVICES

GENERAL NOTES

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 1ST AND SEPTEMBER 30TH 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 LIGHT TOWER, 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 COST OF THE LIGHTING PAY ITEMS.

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.

LIGHT TOWERS SHALL BE GALVANIZED STEEL AS SPECIFIED BY ARTICLE 1069.08 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

LIGHT POLES SHALL BE AS SPECIFIED BY ARTICLE 1069.02 AND 1069.03 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

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 REMOVAL OF LIGHT TOWER FOUNDATIONS.

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 SEPARATELY 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 CONTRACTOR 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.

REV. - MS

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PLOT DATE = 10/21/2021	DATE -	REVISED -			SCALE:	SHEET OF SHEETS	STA.	TO STA.		

90% FED
10% STATE
URBAN

90% FED
10% STATE
URBAN

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		0021 COLES CO	0021 EFFINGHAM CO
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1		1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1	
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1		1
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	L SUM	1	1	
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1	
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1	
81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC CONDUIT, 2" DIA.	FOOT	715	640	75
81603000	UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	7240	5530	1710
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	15	12	3

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		0021 COLES CO	0021 EFFINGHAM CO
82110015	LUMINAIRE, LED, HIGHMAST, OUTPUT DESIGNATION H	EACH			16
82500330	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP	EACH	1	1	
83003600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	EACH			3
83060830	LIGHT POLE, GALVANIZED STEEL, 45 FT. M.H., TENON MOUNT	EACH	12	12	
83502500	LIGHT TOWER, 100 FT. MOUNTING HEIGHT, LUMINAIRE MT. - 8	EACH			2
83600356	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8 5/8" X 6'	EACH	15	12	3
83700300	LIGHT TOWER FOUNDATION, 48" DIAMETER	FOOT	45		45
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	60	48	12
84200600	REMOVAL OF LIGHTING UNIT, NO SALVAGE	EACH			3
84200804	REMOVAL OF POLE FOUNDATION	EACH			3

REV. - MS

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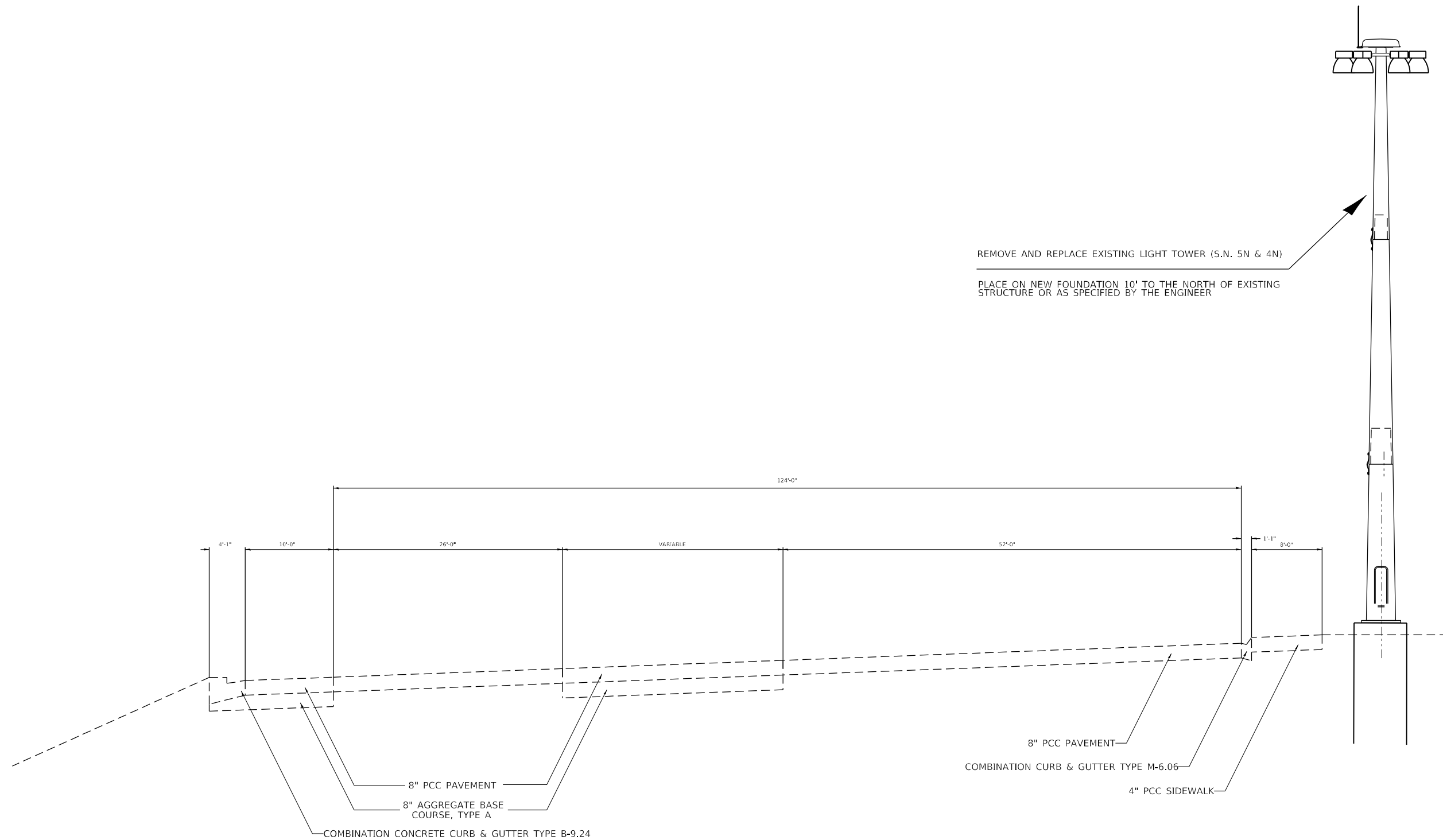
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74A74	



TYPICAL SECTION FOR GREEN CREEK REST AREA
 LOOKING NORTH AT GREEN CREEK REST AREA

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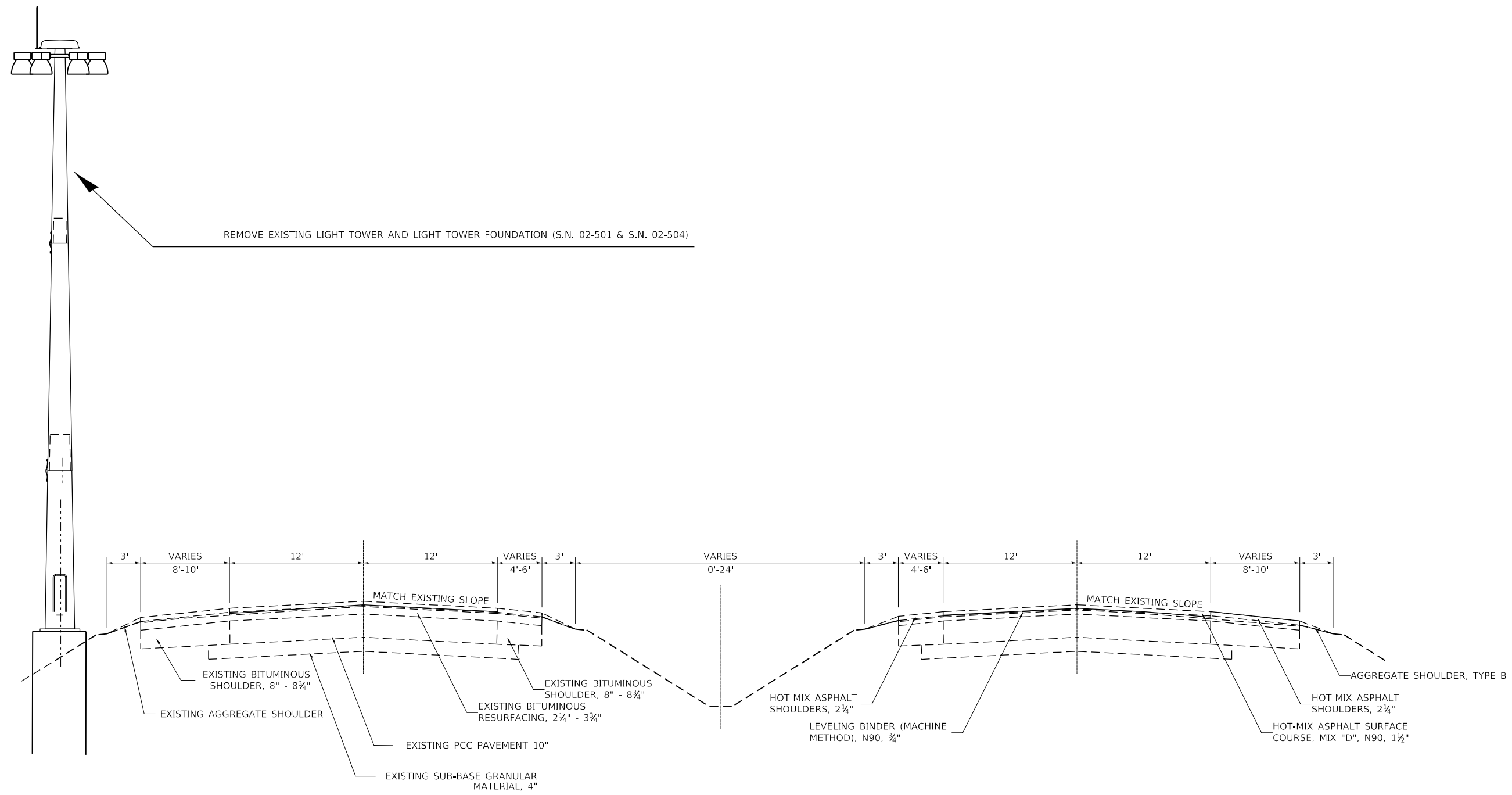
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
 NB GREEN CREEK REST AREA

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74A74	



TYPICAL SECTION FOR US 45
 LOOKING NORTH AND SOUTH FOR US 45

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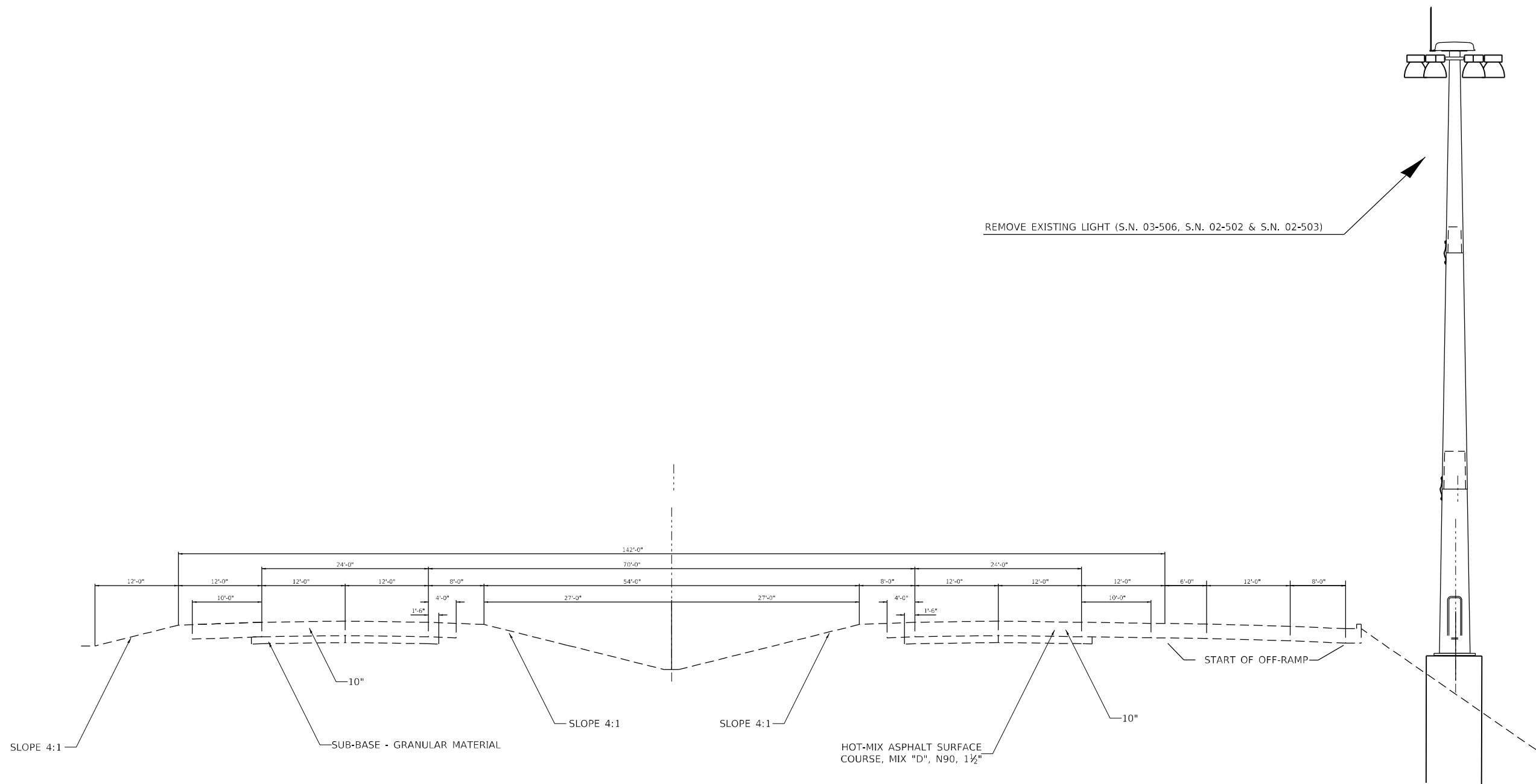
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS
 US 45 / I-57 INTERCHANGE

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74A74	



TYPICAL SECTION FOR I-57
 LOOKING SOUTH FOR I-57

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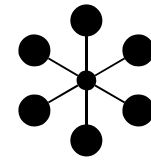
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

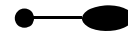
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	STA.		TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 74A74	

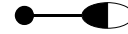
LEGEND



PROPOSED HIGH MAST TOWER, GALVANIZED STEEL, 100' M.H. ON 48" DIAMETER CONCRETE FOUNDATION.



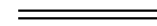
PROPOSED LIGHTING UNIT, ALUMINUM, 45' M.H. WITH 15' DAVIT ARM, LED LUMINAIRE OUTPUT DESIGNATION H, BREAKAWAY TRANSFORMER BASE ON METAL FOUNDATION.



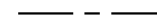
PROPOSED LIGHTING UNIT, GALVANIZED STEEL, 45' M.H. TENON MOUNT, LED LUMINAIRE OUTPUT DESIGNATION H, BREAKAWAY TRANSFORMER BASE ON METAL FOUNDATION.



PROPOSED PEDESTAL MOUNTED LIGHTING CONTROLLER, 240V, SINGLE PHASE.



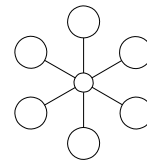
PROPOSED COILABLE NONMETALLIC CONDUIT, SIZE AND LENGTH AS NOTED.



PROPOSED UNIT DUCT, SIZE AS NOTED.



PROPOSED ELECTRIC SERVICE.



REMOVE EXISTING HIGH MAST TOWER, 100' M.H. AND FOUNDATION UNLESS NOTED OTHERWISE.



EXISTING LIGHTING UNIT AND FOUNDATION TO BE REMOVED.



EXISTING SIGN LIGHTING LUMINAIRE TO BE REMOVED.



EXISTING LIGHTING CONTROLLER 480V SINGLE PHASE TO BE REMOVED.



EXISTING CONDUIT TO BE ABANDONED IN PLACE.



EXISTING WIRE IN UNIT DUCT. EXISTING CABLE SHALL BE REMOVED AND CONDUIT ABANDONED IN PLACE.



EXISTING ELECTRIC UTILITY POWER POLE.

NOTES:

1. CONTRACTOR TO EXERCISE CAUTION WHEN INSTALLING FOUNDATIONS AND LIGHT POLES TO AVOID DAMAGE TO EXISTING AERIAL POWER CABLES AND ENSURE ADEQUATE HORIZONTAL CLEARANCE FROM OVERHEAD POWER LINES.
2. 2" AND 3" DIA. COILABLE NONMETALLIC CONDUIT TO BE BORED UNDER PAVEMENT.
3. THE CONTRACTOR SHALL SET CONVENTIONAL POLES 30' BEHIND EDGE OF PAVEMENT. HIGHMAST TOWERS SHALL MAINTAIN EXISTING SETBACKS.
4. NO POLE TO BE INSTALLED IN THE FLOWLINE OF DITCH. POLE SETBACK TO BE ADJUSTED IF NECESSARY AS DIRECTED BY THE ENGINEER.
5. CONTRACTOR SHALL VERIFY TOWER HEIGHTS ARE 100 FOOT MOUNTING HEIGHT. DUE TO FAA RESTRICTIONS PROPOSED TOWER HEIGHTS MUST NOT EXCEED 100 FOOT MOUNTING HEIGHT.

HIGHWAY STANDARDS

821101-02	LUMINAIRE WIRING IN POLE
825011-04	LIGHTING CONTROLLER PEDESTAL MOUNTED, 240V
830006-05	LIGHT POLE ALUMINUM DAVIT ARM
830021-03	LIGHT POLE STEEL TENON TOP
835001-01	LIGHT TOWER
836001-04	LIGHT POLE FOUNDATION
837001-05	LIGHT TOWER FOUNDATION
838001-01	BREAKAWAY DEVICES

INDEX OF SHEETS

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- RL-2 EXISTING LIGHTING REMOVAL PLAN
- RL-3 EXISTING LIGHTING REMOVAL PLAN
- RL-4 EXISTING LIGHTING REMOVAL PLAN
- RL-5 PROPOSED LIGHTING PLAN
- RL-6 PROPOSED LIGHTING PLAN
- RL-7 WIRING DIAGRAMS
- RL-8 LUMINAIRE PERFORMANCE TABLES

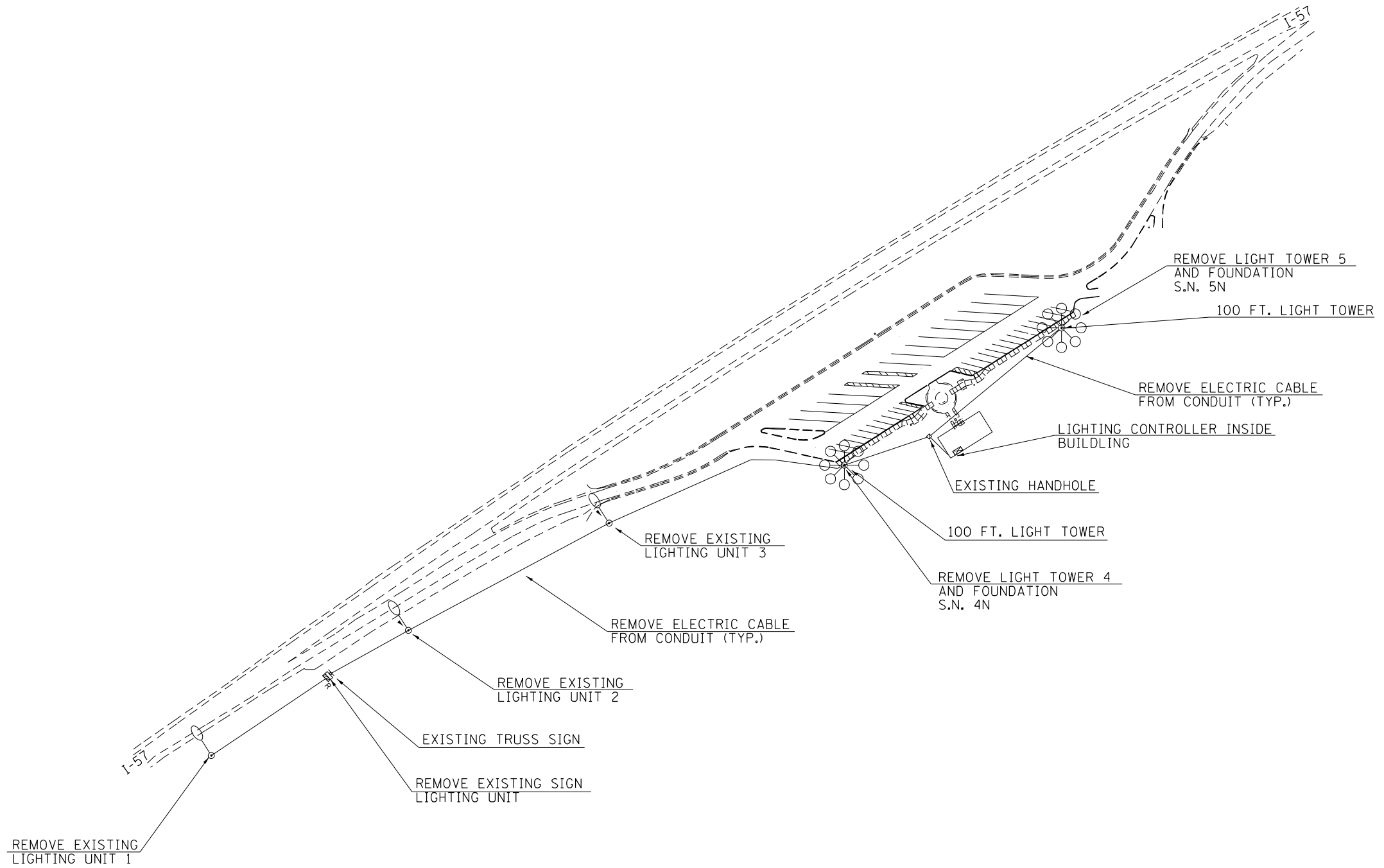
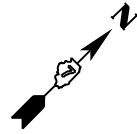
LIGHTING SCHEDULE OF QUANTITIES
(SEE ATTACHED)

RL-1

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	CHECKED - DATE -	REVISED - REVISED -				CONTRACT NO. 74A74		ILLINOIS	FED. AID PROJECT	
			SCALE:	SHEET OF SHEETS	STA. TO STA.					

REV. - MS



RL-2

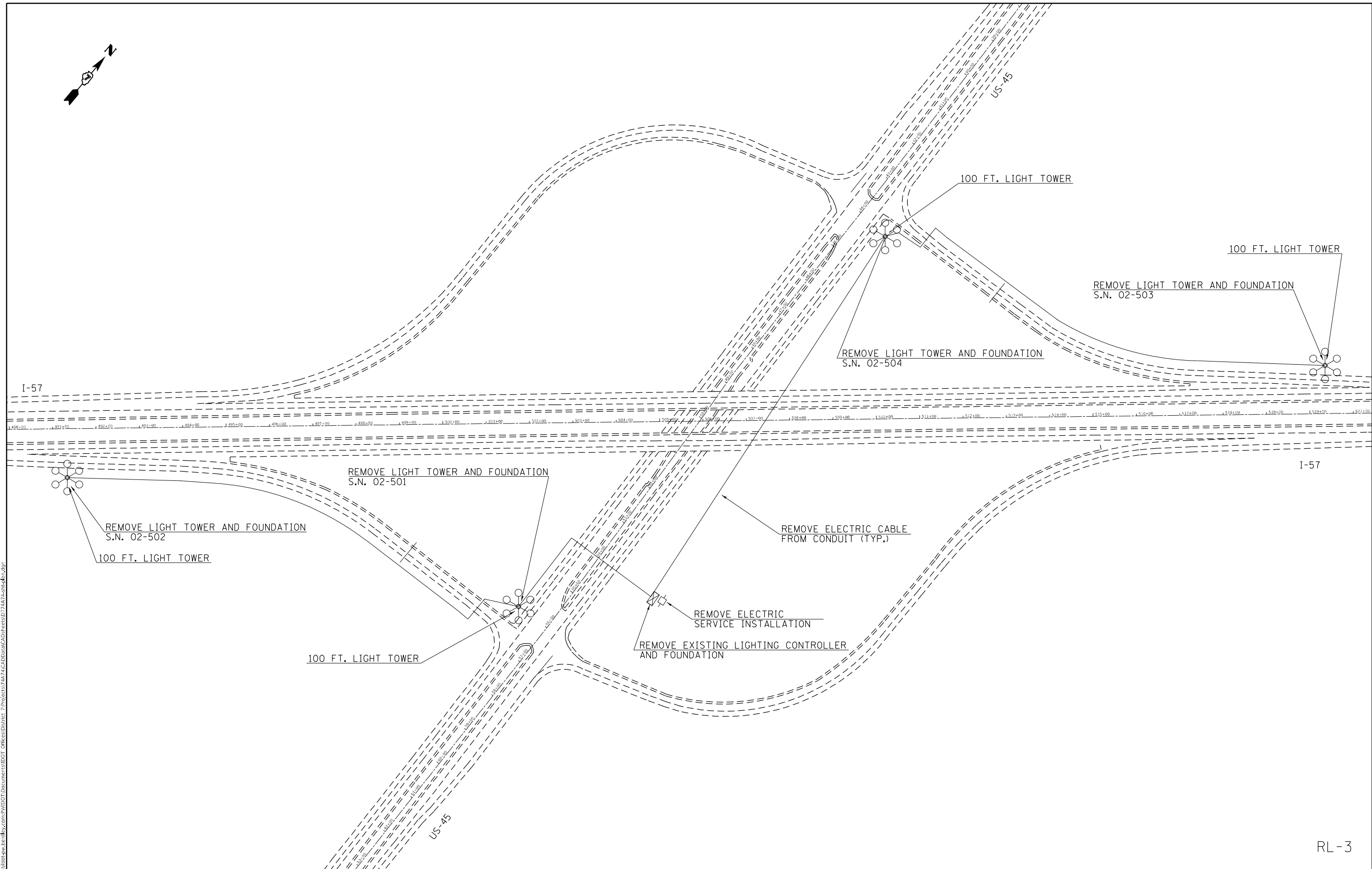
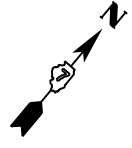
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PLOT DATE = 10/21/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL NB GREEN CREEK REST AREA I-57			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	10
CONTRACT NO. 74A74				
ILLINOIS FED. AID PROJECT				



RL-3

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PLOT SCALE = 200,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/21/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING LIGHTING REMOVAL
EXIT 184 US 45 & I-57

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	11
ILLINOIS			FED. AID PROJECT	

CONTRACT NO. 74A74



REMOVE LIGHT TOWER, KEEP EXISTING FOUNDATION
 S.N. 03-506, REMOVE EXISTING CABLES BACK TO
 SOURCE, SEE NOTE 1.

REMOVE LIGHT TOWER, KEEP EXISTING FOUNDATION
 S.N. 03-502, REMOVE EXISTING CABLES BACK TO
 SOURCE, SEE NOTE 1.

EXISTING FOUNDATION TO REMAIN.
 LIGHT TOWER HAS BEEN REMOVED.

EXISTING ELECTRIC
 SERVICE TO REMAIN
 EXISTING CONTROLLER
 TO REMAIN

EXISTING TOWER
 TO REMAIN

EXISTING TOWER
 TO REMAIN

NOTES:
 1. CONTRACTOR SHALL PROVIDE AND INSTALL A PROTECTIVE BOX OR
 OTHER STRUCTURE TO SECURELY ENCLOSE EXPOSED ANCHOR BOLTS
 ON EXISTING TOWER FOUNDATIONS TO REMAIN TO THE SATISFACTION
 OF THE ENGINEER. STRUCTURE SHALL PREVENT INTRUSION OF WATER,
 RODENTS, AND OTHER DEBRIS. CONTRACTOR SHALL SUBMIT PLAN OF
 ENCLOSURE FOR APPROVAL BY THE ENGINEER. CONDUIT ENDS SHALL
 BE SEALED WITH DUCT SEALING COMPOUND. ANY EXPOSED CABLE ENDS
 SHALL BE SEALED WITH A HEAT-SHRINKABLE CAP WITH FACTORY
 APPLIED WATERPROOF SEALANT SIZED TO ACCOMMODATE NUMBER OF
 CABLES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST
 OF "REMOVAL OF LIGHT, TOWER, NO SALVAGE."

RL-4

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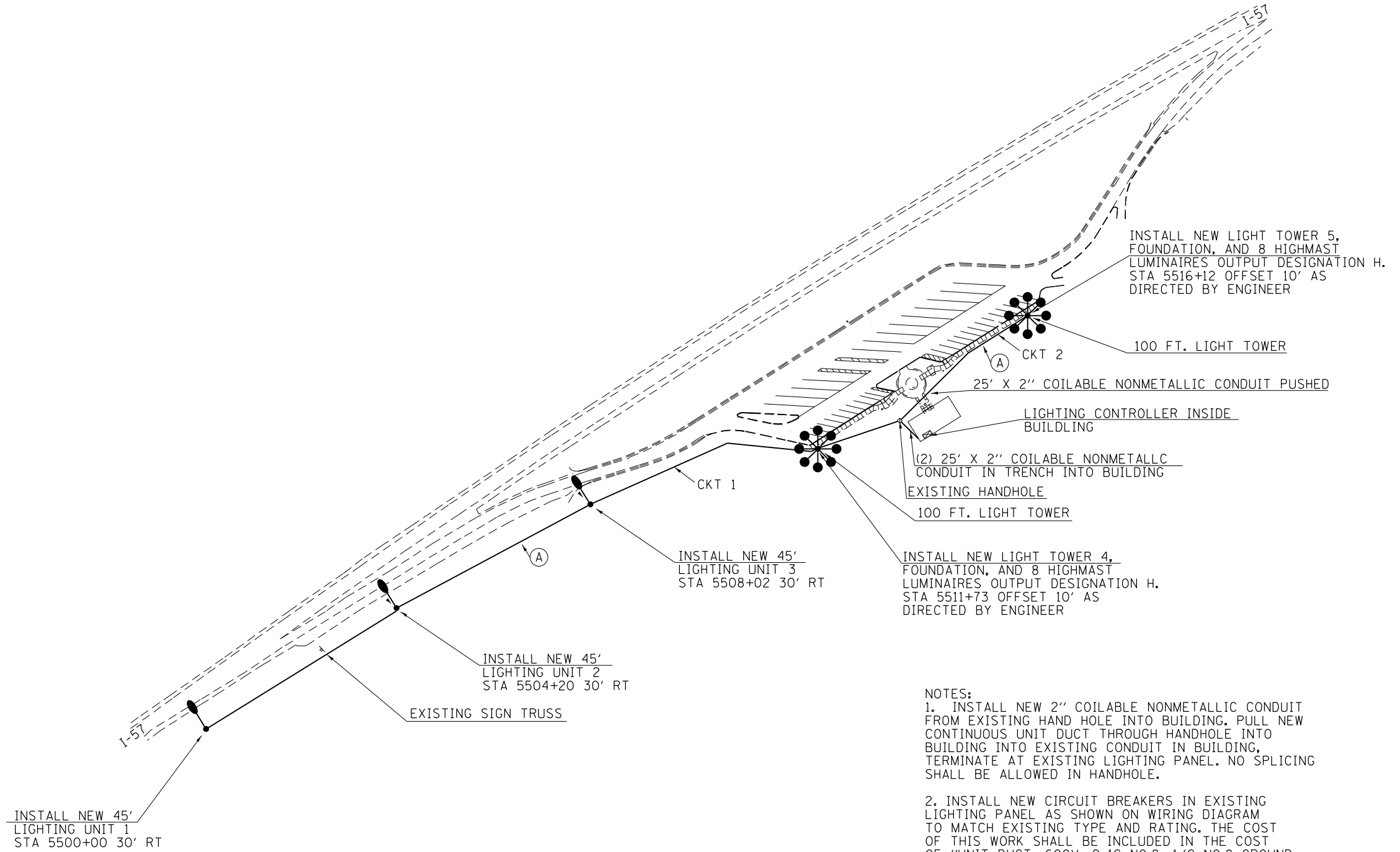
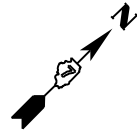
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PLOT DATE = 10/21/2021	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EXISTING LIGHTING REMOVAL
 EXIT 19 IL-16 & I-57**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	12
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74A74	



- NOTES:
1. INSTALL NEW 2" COILABLE NONMETALLIC CONDUIT FROM EXISTING HAND HOLE INTO BUILDING. PULL NEW CONTINUOUS UNIT DUCT THROUGH HANDHOLE INTO BUILDING INTO EXISTING CONDUIT IN BUILDING, TERMINATE AT EXISTING LIGHTING PANEL. NO SPLICING SHALL BE ALLOWED IN HANDHOLE.
 2. INSTALL NEW CIRCUIT BREAKERS IN EXISTING LIGHTING PANEL AS SHOWN ON WIRING DIAGRAM TO MATCH EXISTING TYPE AND RATING. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "UNIT DUCT, 600V, 2-1C NO.8, 1/C NO.8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE."
 3. REFER TO SHEET 16 FOR STRUCTURE SET BACK DISTANCES

CABLE SCHEDULE:

(A) UNIT DUCT, 600V, 2-1C NO.8 1/C NO.8 GROUND.(XLP-TYPE USE), 3/4" DIA. POLYETHYLENE

RL-5

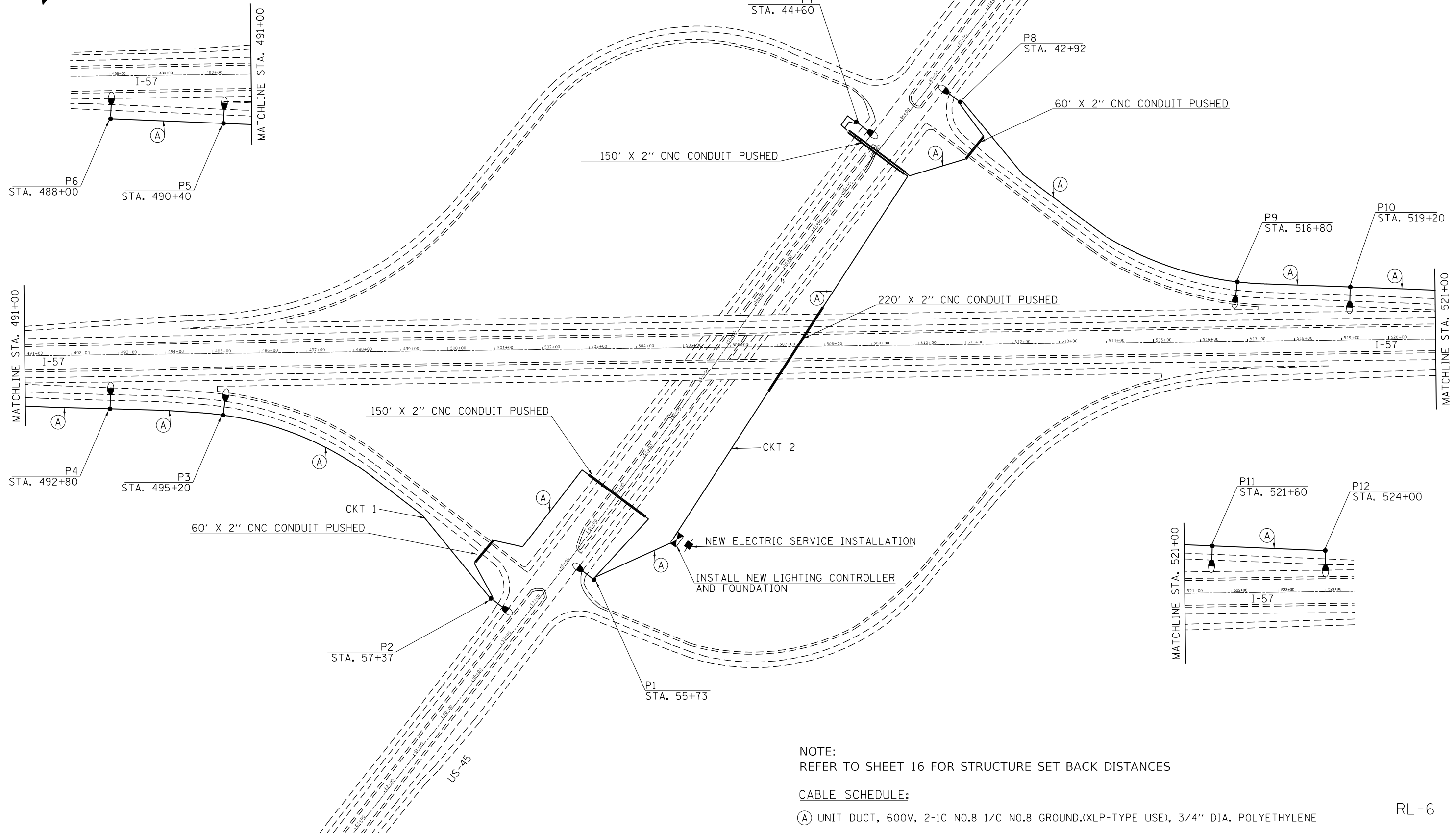
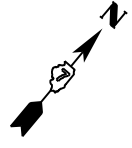
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PLOT DATE = 10/21/2021	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED LIGHTING PLAN NB GREEN CREEK REST AREA I-57			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	13
CONTRACT NO. 74A74				
ILLINOIS FED. AID PROJECT				



NOTE:
REFER TO SHEET 16 FOR STRUCTURE SET BACK DISTANCES

CABLE SCHEDULE:

(A) UNIT DUCT, 600V, 2-1C NO.8 1/C NO.8 GROUND.(XLP-TYPE USE), 3/4" DIA. POLYETHYLENE

RL-6

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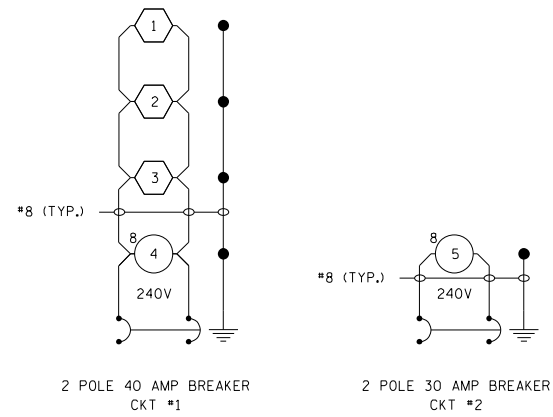
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PLOT DATE = 10/21/2021	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED LIGHTING PLAN
EXIT 184 US 45 & I-57**

SCALE: SHEET OF SHEETS STA. TO STA.

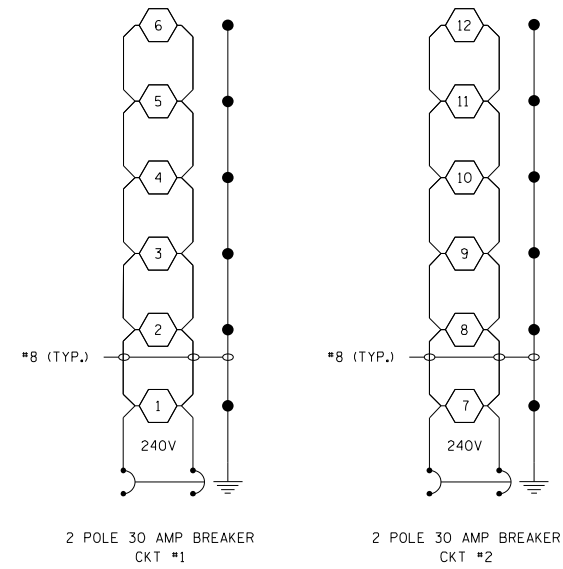
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	14
			CONTRACT NO. 74A74	
ILLINOIS FED. AID PROJECT				



2 POLE 40 AMP BREAKER
CKT #1

2 POLE 30 AMP BREAKER
CKT #2

LIGHTING CONTROLLER
I-57 AT GREEN CREEK REST AREA
IN BUILDING, 240V



2 POLE 30 AMP BREAKER
CKT #1

2 POLE 30 AMP BREAKER
CKT #2

LIGHTING CONTROLLER 02
I-57 AT US-45
PEDESTAL MOUNT, 240V

LEGEND

- EXISTING HIGH MAST LUMINAIRES TO REMAIN.
- PROPOSED ROADWAY LED LUMINAIRE OUTPUT DESIGNATION H. NUMBER INSIDE HEXAGON INDICATES POLE NUMBER.
- PROPOSED HIGH MAST LED LUMINAIRE OUTPUT DESIGNATION H. NUMBER INSIDE HEXAGON INDICATES POLE NUMBER. NUMBER OUTSIDE OF SYMBOL (6) INDICATES NUMBER OF LUMINAIRES ON TOWER.
- GROUND ROD

NOTES:

1. 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.

RL-7

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PLOT DATE = 10/21/2021	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WIRING DIAGRAMS
EXIT 184 US 45 & I-57**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	15
			CONTRACT NO. 74A74	
		ILLINOIS	FED. AID PROJECT	

Luminaire Performance Table Rest Area

Project

Date	Contract Number	Section Number	County
06/21/21	74A74	D7 HIGHWAY LIGHTING 2022-1	COLES & EFFINGHAM

Marked Route Number	Municipality
I-57	VARIOUS

Roadway

Lane Width	*of Lanes	Median Width	I.E.S Surface Classification	0-Zero Value
135 FT	10	N/A	R3	0.07

Structure

Mounting Height	Arm Length	Set Back	Number of Luminaires (Highmast & Sign Lighting Only)
100 FT	1 FT	15 FT	8

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S. Vertical Distribution
HIGHMAST LUMINAIRE, OUTPUT DESIGNATION H	TYPE V	MEDIUM

Total Light Loss Factor (LLF)	BUG Rating	Shields	Dimming Protocol
0.700	U = 0	N/A	0-10V

Layout

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

Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}
1.5	4.0

Average Luminance, L_{AVE} (cd/m ²)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_v/L_{MIN}
N/A	N/A	N/A	0.4:1

Light Trespass

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

PHOTOMETRIC CALCULATIONS TO BE PERFORMED IN ONE DIRECTION ONLY.

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

INITIAL LUMENS OF THE PROPOSED LUMINAIRE MAY VARY FROM THE VALUES SPECIFIED IN THE TABLE GIVEN IN ARTICLE. 1067.06 OF THE BDE SPECIAL PROVISIONS FOR LUMINAIRE, LED.

Luminaire Performance Table Isolated Intersections At I-57 & US-45

Project

Date	Contract Number	Section Number	County
06/21/21	74A74	D7 HIGHWAY LIGHTING 2022-1	COLES & EFFINGHAM

Marked Route Number	Municipality
I-57	VARIOUS

Roadway

Lane Width	*of Lanes	Median Width	I.E.S Surface Classification	0-Zero Value
16 FT	1	N/A	R3	0.07

Structure

Mounting Height	Arm Length	Set Back	Number of Luminaires (Highmast & Sign Lighting Only)
45 FT	1 FT	30 FT	N/A

Luminaire

Description	I.E.S. Lateral Distribution	I.E.S. Vertical Distribution
ROADWAY, OUTPUT DESIGNATION H	TYPE III	MEDIUM

Total Light Loss Factor (LLF)	BUG Rating	Shields	Dimming Protocol
0.700	U = 0	N/A	0-10V

Layout

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

Performance

Average Illuminance, E_{AVE} (fc)	Uniformity Ratio, E_{AVE}/E_{MIN}
0.6	3.0

Average Luminance, L_{AVE} (cd/m ²)	Uniformity Ratio, L_{AVE}/L_{MIN}	Uniformity Ratio, L_{MAX}/L_{MIN}	Veiling Luminance Ratio, L_v/L_{MIN}
N/A	N/A	N/A	0.3:1

Light Trespass

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

PHOTOMETRIC CALCULATIONS TO BE PERFORMED IN ONE DIRECTION ONLY.

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

INITIAL LUMENS OF THE PROPOSED LUMINAIRE MAY VARY FROM THE VALUES SPECIFIED IN THE TABLE GIVEN IN ARTICLE. 1067.06 OF THE BDE SPECIAL PROVISIONS FOR LUMINAIRE, LED.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LUMINAIRE PERFORMANCE TABLES
EXIT 184 US 45 & I-57 AND GREEN CREEK REST AREA

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	16
CONTRACT NO. 74A74				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

ROUTE FAI 57 (I-57) DESCRIPTION High mast tower foundations/I-57 & US 45 Interchange LOGGED BY E. Sandschafer

SECTION N/A LOCATION W 1/2 of sec 1 & E 1/2 of sec 2, SEC. , TWP. 11 N, RNG. 7 E, 3 PM

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

Table with columns: STRUCT. NO., Station, BORING NO., Station, Offset, Ground Surface Elev., D E P T H (ft), B L O W S (/6" (tsf)), U C S Qu, M O I S T (%), Surface Water Elev., Stream Bed Elev., Groundwater Elev., First Encounter, Upon Completion, After 168 Hrs., (ft), /6" (tsf), (%)

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)



SOIL BORING LOG

ROUTE FAI 57 (I-57) DESCRIPTION High mast tower foundations/I-57 & US 45 Interchange LOGGED BY E. Sandschafer

SECTION N/A LOCATION W 1/2 of sec 1 & E 1/2 of sec 2, SEC. , TWP. 11 N, RNG. 7 E, 3 PM

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

Table with columns: STRUCT. NO., Station, BORING NO., Station, Offset, Ground Surface Elev., D E P T H (ft), B L O W S (/6" (tsf)), U C S Qu, M O I S T (%), Surface Water Elev., Stream Bed Elev., Groundwater Elev., First Encounter, Upon Completion, After 168 Hrs., (ft), /6" (tsf), (%)

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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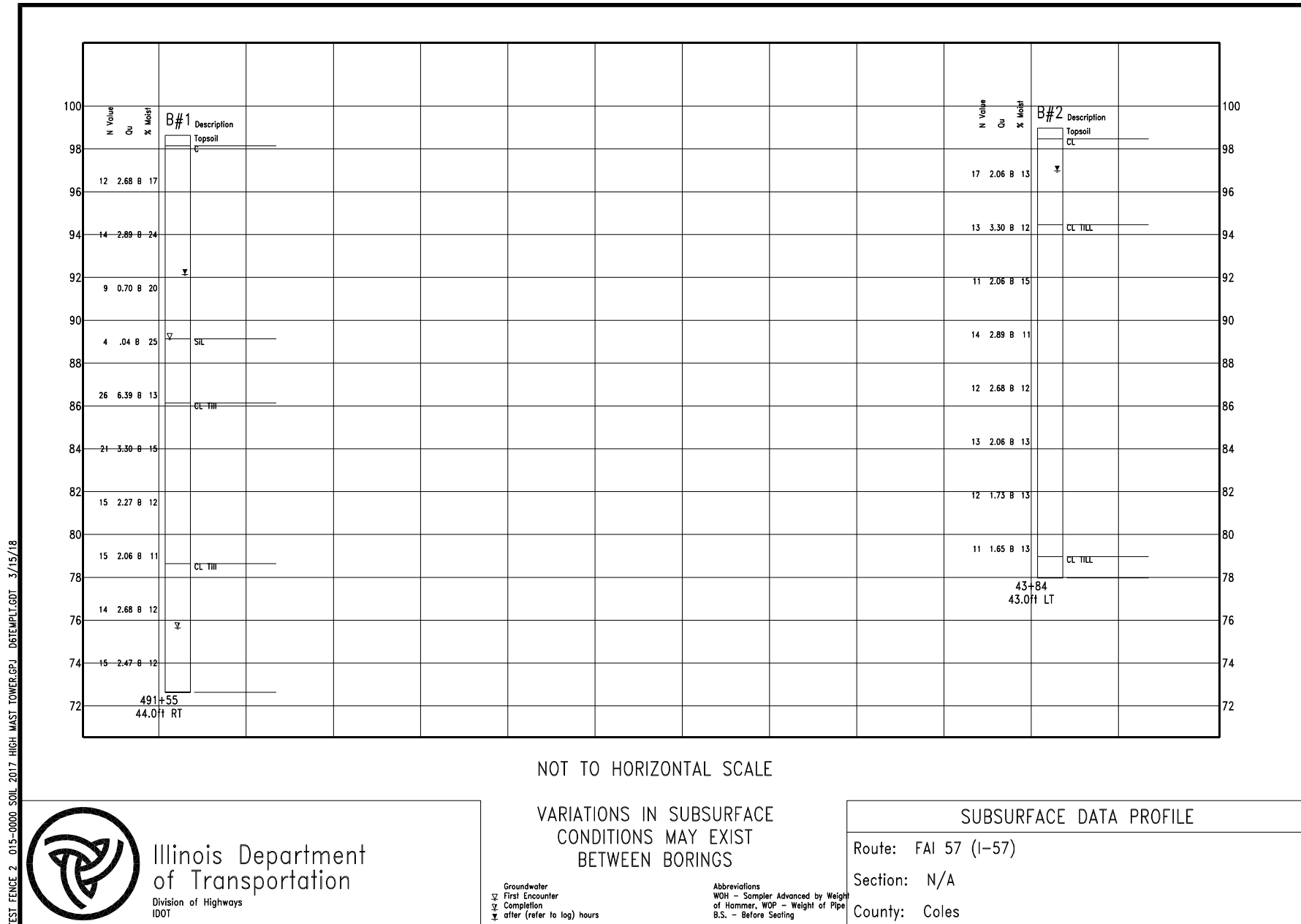
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

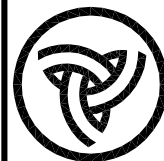
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Structure Number N/A High mast tower foundations/I-57 & US 45 Interchange
 Located in the W 1/2 of sec 1 & E 1/2 of sec 2 of Section , Township 11 N, Range 7 E of the 3 P.M.



TEST FENCE 2 015-0000 SOIL 2017 HIGH MAST TOWER.GPJ DBTEMP1.GDT 3/15/18

TEST FENCE 2 015-0000 SOIL 2017 HIGH MAST TOWER.GPJ DBTEMP1.GDT 3/15/18



Illinois Department of Transportation
 Division of Highways
 IDOT

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS
 US 45 / I-57 INTERCHANGE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D 7 HIGHWAY LIGHTING 2022-1	VARIOUS	19	19
CONTRACT NO. 74A74			ILLINOIS FED. AID PROJECT	

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PLOT DATE = 10/21/2021	DATE -	REVISED -

SCALE: SHEET OF SHEETS STA. TO STA.