

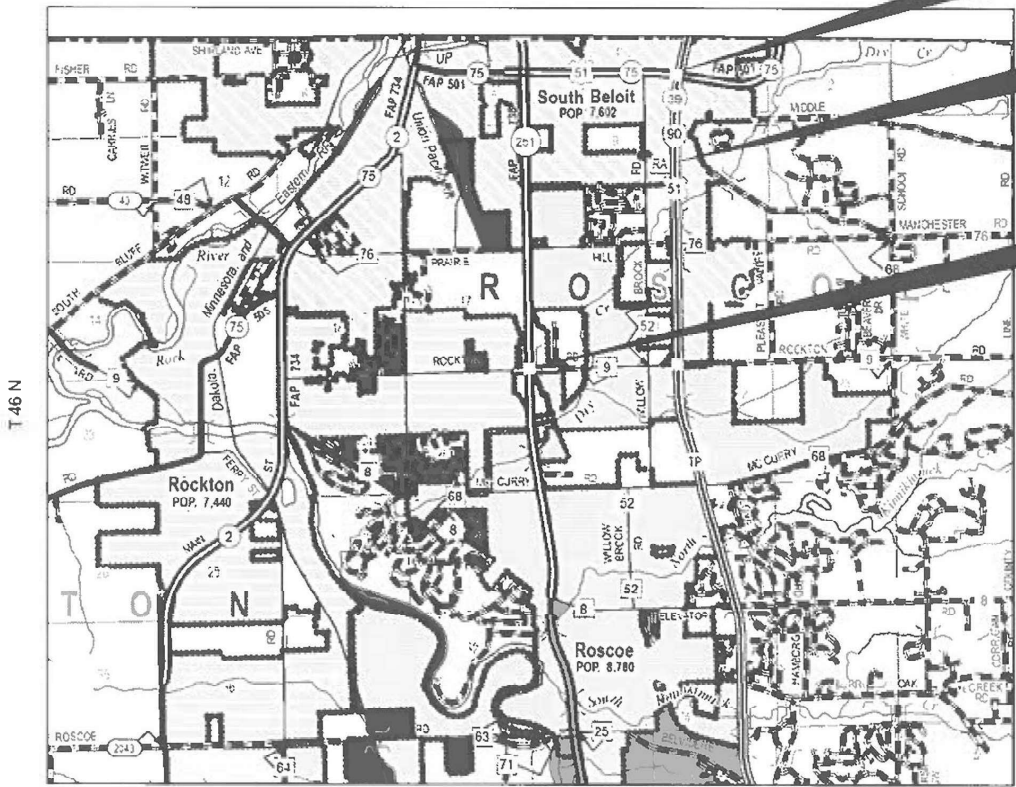
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED  
HIGHWAY PLANS

ROUTE VARIOUS  
SECTION D2 LIGHTING 2025  
LIGHTING  
VARIOUS COUNTY

C-92-011-25

R 2 E



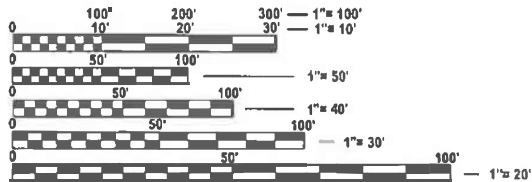
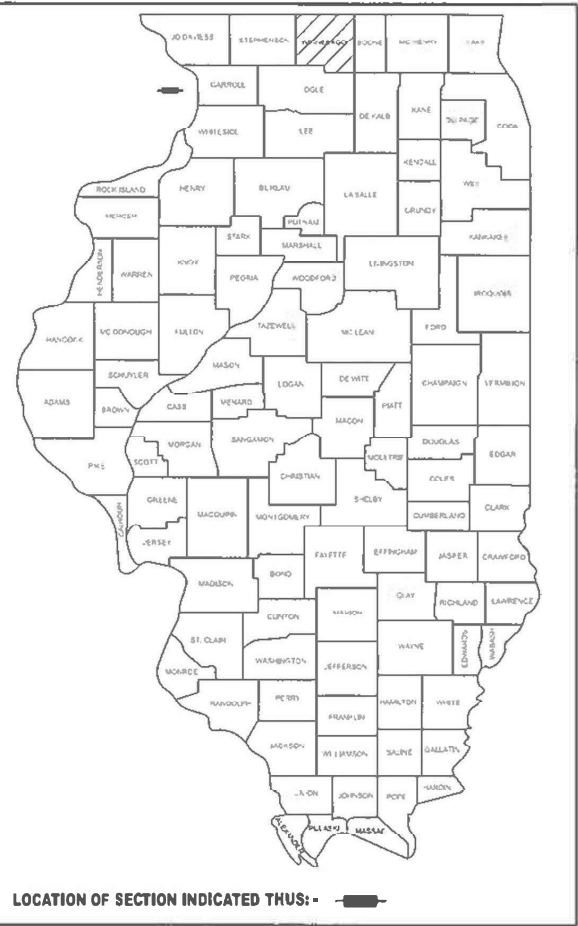
PROJECT LOCATION  
IL 75 & I-90

PROJECT LOCATION  
WILLOW CREEK  
REST AREA

PROJECT LOCATION  
IL 251 AND ROCKTON RD.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D2 LIGHTING 2025	VAR	9	1
ILLINOIS CONTRACT NO. 64U13				

D-92-088-25



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: Scott Kullerstrand  
Designer: Nick Vock (815-284-5407)

CONTRACT NO. 64U13

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan 21 20 25  
John Lyons  
REGIONAL ENGINEER

March 21 20 25  
Scott Kullerstrand  
ENGINEER OF DESIGN AND ENVIRONMENT

March 21 20 25  
John Lyons  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

MODEL D2\_SHT\_INDEX  
FILE NAME: p:\discs\p2\kenilway.com\PM\DOT\Documents\DOT Office\District 2\CRD Project\Operations\Maintenance Section\District 2\Electrical\Operations\FY 2025\64U13 - Various Lighting\CAD\sheet\64U13 - 02 - Index sheet.dgn

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, STANDARDS, GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	LUMINAIRE PERFORMANCE TABLE
5	PLAN SHEET - I-90/ IL 75
6	PLAN SHEET - I-90/ IL 75
7	PLAN SHEET - TURTLE CREEK REST AREA
8	PLAN SHEET - IL 251/ ROCKTON RD.
9	CONTROLLER INSTALLATION DIAGRAM

GENERAL NOTES

TURTLE CREEK CONTROLLER BOX IS AT THE WELCOME CENTER BUILDING  
CONTRACTOR AND ENGINEER TO CONFIRM COUNT OF LUMINAIRE, BRACKETS, AND COUPLINGS PRIOR TO ORDERING MATERIALS

HIGHWAY STANDARDS

701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5M) TO 24" (600MM) FROM PAVEMENT EDGE
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45MPH
701456-05	PARTIAL EXIT RAMP CLOSURE, FREEWAY/ EXPRESSWAY
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NON TRAVERSABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-10	TRAFFIC CONTROL DEVICES
821101-03	LUMINAIRE WIRING IN POLE
825011-04	LIGHTING CONTROLLER PEDESTAL MOUNTED, 240V
830021-04	LIGHTING POLE STEEL TENON TOP
838001-01	BREAKAWAY DEVICES
701400-12	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
838001-01	BREAKAWAY DEVICES

	USER NAME = Nicholas.Vock	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS & HIGHWAY STANDARDS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR	D2 LIGHTING 2025	VAR	9	2
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	PLOT DATE = 2/11/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS   FED. AID PROJECT	

MODEL: D2\_SH1\_SQC  
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SUMMARY OF QUANTITIES				CONSTR. CODE
				100% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	HIGHWAY LIGHTING
				0021
67100100	MOBILIZATION	L SUM	1	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	5	5
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	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
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	92	92
82500330	LIGHTING CONTROLLER, PEDESTAL MOUNTED, 240VOLT, 60AMP	EACH	2	2
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	360	360
X1400267	REMOVAL OF LIGHTING LUMINAIRE, NO SALVAGE	EACH	92	92
X8000001	MAINTAIN EXISTING HIGHWAY LIGHTING	EACH	1	1
X8210402	LUMINAIRE MOUNTING BRACKET (SPECIAL)	EACH	90	90

	USER NAME = Nicholas.Vock	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR	D2 LIGHTING 2025	VARIOUS	9	3
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	PLOT DATE = 2/11/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS   FED. AID PROJECT	



Luminaire Performance Table

Project

Date

Contract Number

Section Number

County

04/04/25

64u13

D2 Lighting 2025

Marked Route Number

Municipality

Various

Various

Roadway

Lane Width (see note 4)

Number and Direction of lanes

Median Width

Surface Classification

Q-Zero Value

12 ft

4 lanes, in 1 direction only

N/A

R3

0.07

Structure

Mounting Height

Arm Length

Set-Back (see note 1)

Number of Luminaires

45 ft

1 ft

30 ft

N/A

Luminaire

Description

Transverse Distribution

Lateral Distribution

roadway, LED, output designation H

Type III

Medium

Total Light Loss Factor (LLF)

B-U-G Rating

Shields

Dimming Protocol

Refer to Notes 6 and 7

U=0

N/A

0-10V

Layout

Spacing

Configuration

160 ft

Single Sided

Performance (see notes 5 and 6)

Average Illuminance,  $E_{AVE}$  (fc)

Uniformity Ratio,  $E_{AVE}/E_{MIN}$

$\geq 0.8$

$\leq 3.5:1$

Average Luminance,  $L_{AVE}$  (cd/m<sup>2</sup>)

Uniformity Ratio,  $L_{AVE}/L_{MIN}$

Uniformity Ratio,  $L_{MAX}/L_{MIN}$

Veiling Luminance Ratio,  $L_v/L_{AVE}$

$\geq 0.6$

$\leq 3.5:1$

$\leq 6:1$

$\leq 0.3:1$

Light Trespass (see notes 5 and 7)

Distance to ROW (behind pole)

Max. Horizontal Illuminance at ROW,  $E_H$

Max. Vertical Illuminance at ROW,  $E_v$

N/A

N/A

N/A

- Notes
1. Set-Back is from Edge of Pavement (white line).

2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to the roadway.

3. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire, based on the given conditions listed above.

4. Lane width is the width of each individual lane, not to be confused with total roadway width.

5. Compliance with performance criteria shall be held to one significant digit.

6. Photometric calculations for roadways shall be performed with a total light loss factor of 0.7

7. Light trespass calculations shall be performed with a total light loss factor of 1.0 and with horizontal calculations performed at grade and vertical calculations performed with calculation points located three feet above grade.

8. Luminaire performance table is intended to define the luminaire and does not necessarily match any specific roadway geometry, mounting height, setback, or arm length.
- 

Printed 04/04/25

BDE 563D (Rev. 06/06/24)

MODEL D2\_SHT SCHEDULE  
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	PLOT DATE = 2/10/2025	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
SCALE:		SHEET	OF	SHEETS	STA.	TO STA.						



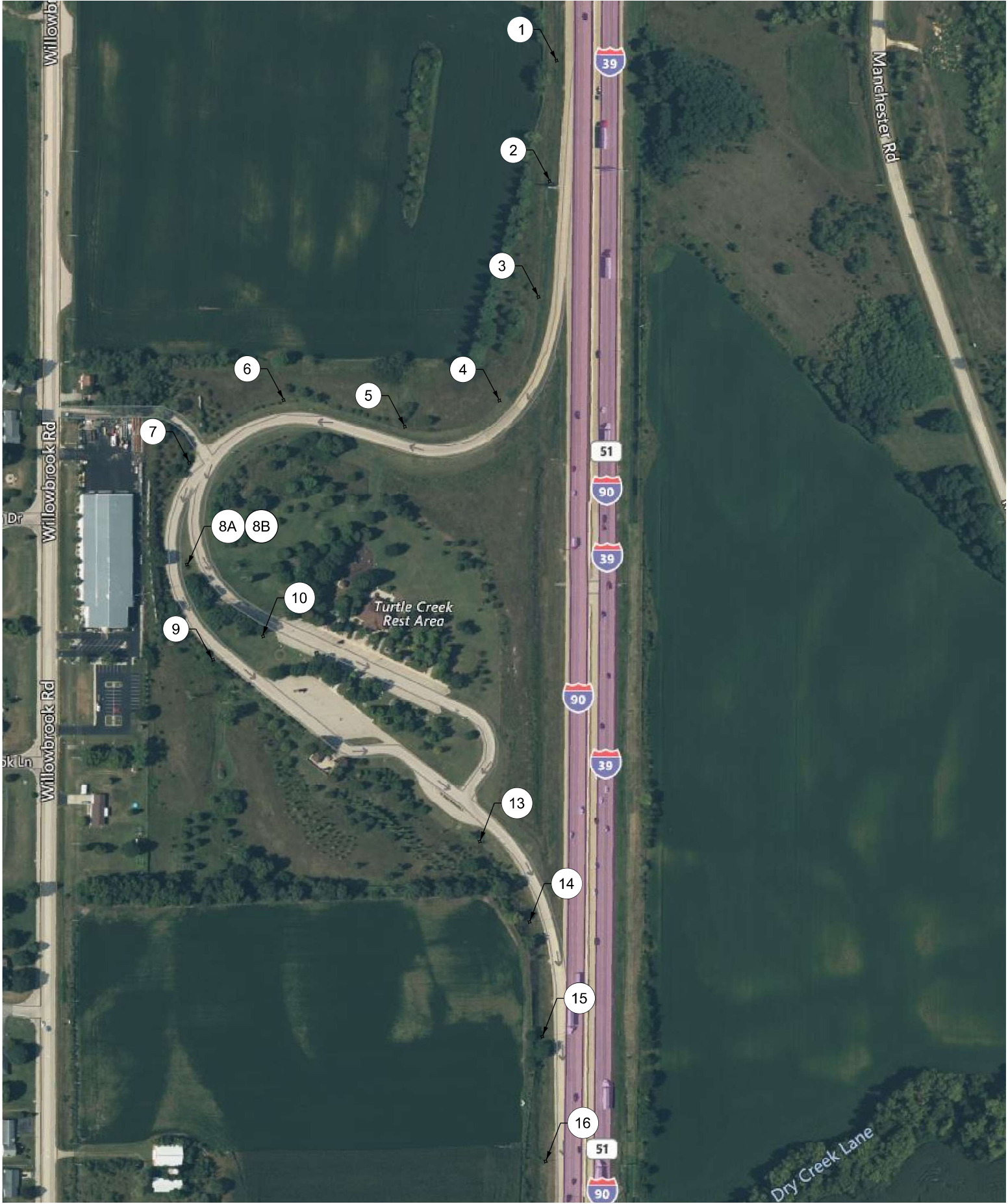








MODEL D2\_SMT PLAN  
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PLOT DATE	= 2/11/2025	CHECKED	-	REVISED	-
		DATE	-	REVISED	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TURTLE CREEK REST AREA  
LIGHTING AND COUPLING REPLACEMENT PLAN SHEET

SCALE: SHEET OF SHEETS STA. TO STA.

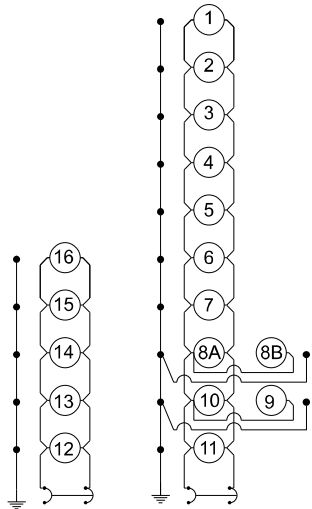
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VAR	D2 LIGHTING 2025	VARIOUS	9	7
CONTRACT NO. 64U13				
ILLINOIS FED. AID PROJECT				





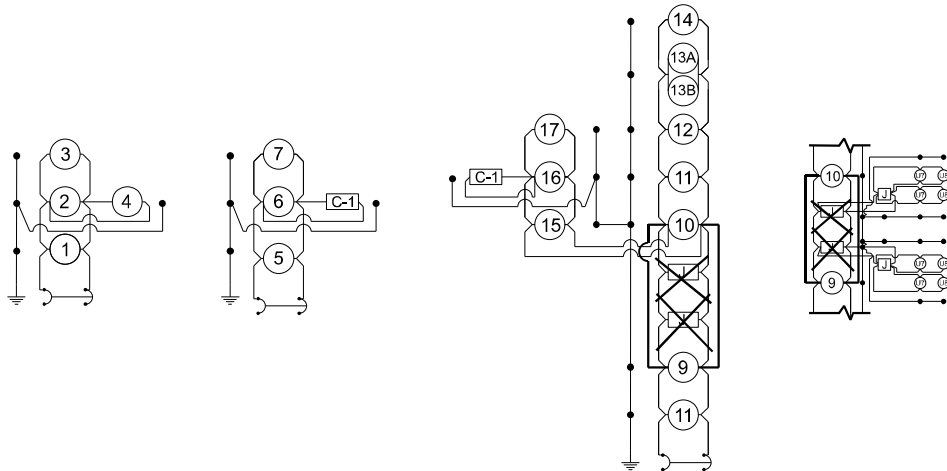


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**I-90 TURTLE CREEK  
REST AREA**

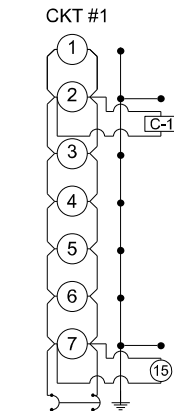
45' TALL,  
(60A 240V)  
FOR REFERENCE ONLY



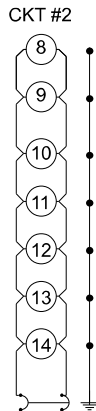
**IL 251 @ ROCKTON RD**

45' TALL,  
(60A 240V)  
FOR REFERENCE ONLY

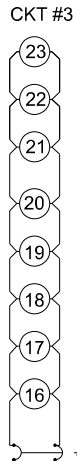
**PROPOSED  
WEST SIDE CONTROLLER #1  
60A 240V**



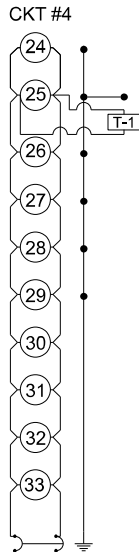
15A, 2 POLE BRK



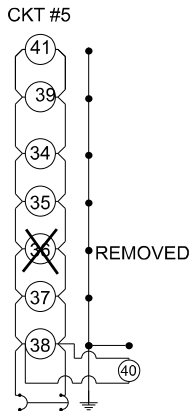
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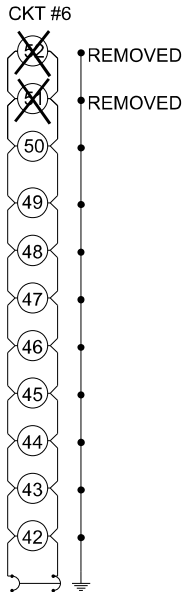
15A, 2 POLE BRK



20A, 2 POLE BRK



15A, 2 POLE BRK



20A, 2 POLE BRK

**I-90 @ IL 75 INTERCHANGE**

45' TALL,  
(60A 240V)

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CONTROLLER INSTALLATION DIAGRAMS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D2 LIGHTING 2025	VAR	9	9
CONTRACT NO. 64U13				
ILLINOIS FED. AID PROJECT				