

CONTRACT PLANS COMPONENTS

ROADWAY
SIGNING AND PAVEMENT MARKING
LIGHTING
SIGNALIZATION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

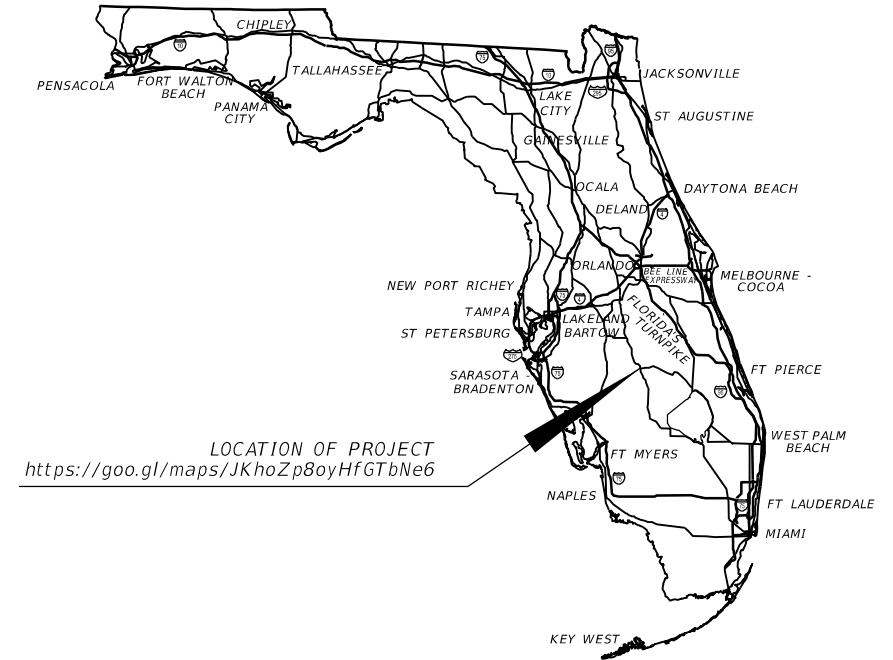
LIGHTING PLANS

FINANCIAL PROJECT ID 439750-2-52-01

HIGHLANDS COUNTY (09010000 & 09030000)

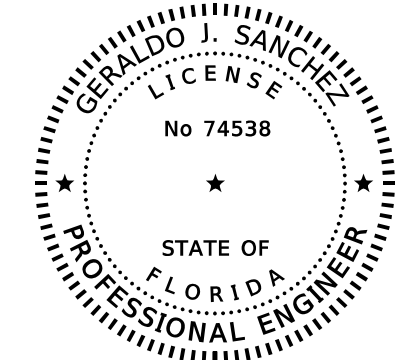
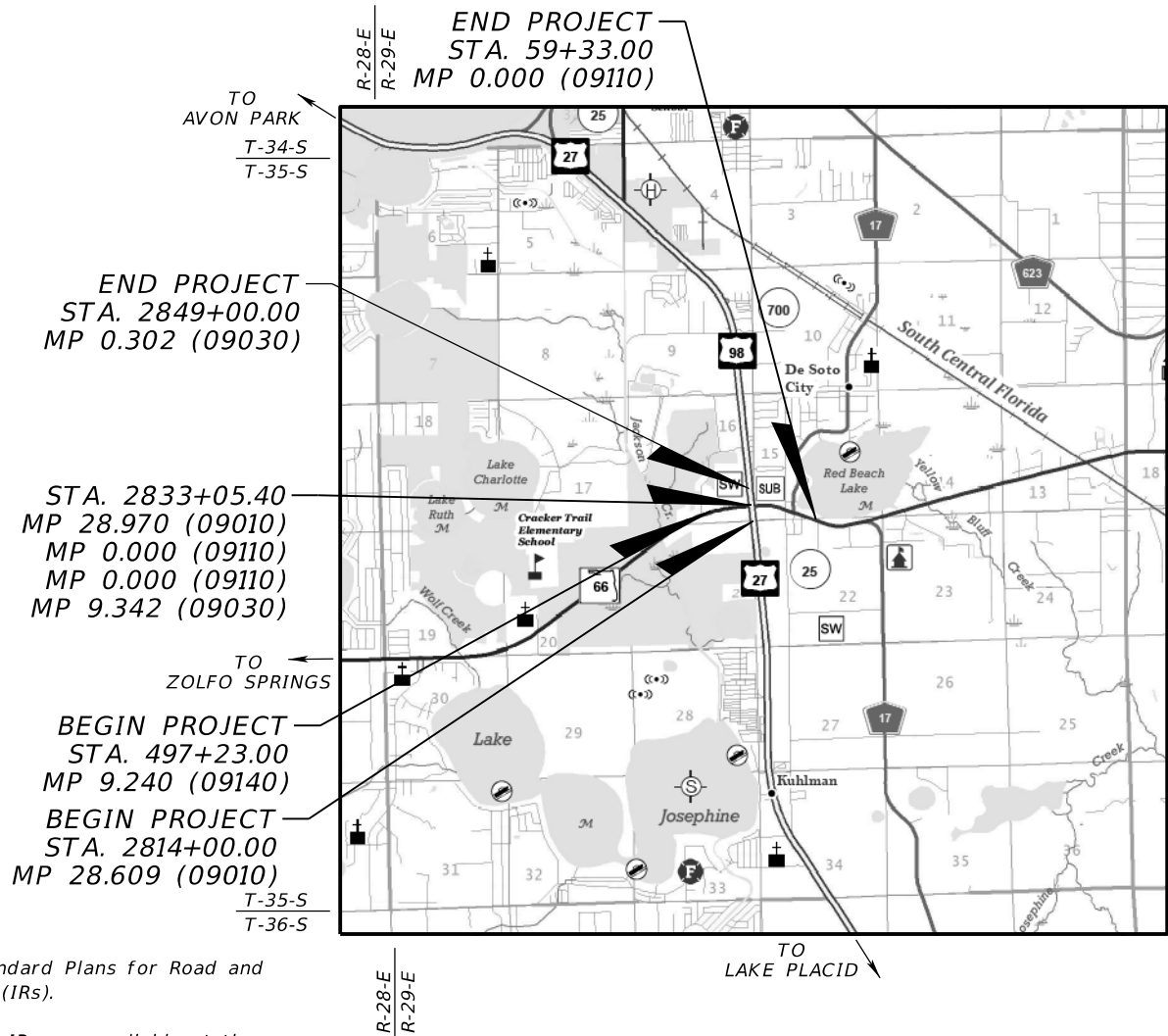
STATE ROAD NO. 25 (US 27)

FROM SOUTH OF SR 66 TO NORTH OF SR 66



INDEX OF LIGHTING PLANS

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L-1	KEY SHEET
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PHASE IIIR
FEBRUARY 2025

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

LIGHTING PLANS ENGINEER OF RECORD:

GERALDO J. SANCHEZ, P.E.
LICENSE NUMBER 74538
PATEL, GREENE & ASSOCIATES, LLC
122 W. PINE STREET, SUITE 201
ORLANDO, FL 32801
PHONE: (407) 720-7420
CONTRACT NO.: C9Y78
VENDOR NO.: F452209743-001

FDOT PROJECT MANAGER:

JENNIFER FREEMAN

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2026-27 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, FY 2026-27 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
TBD	27	L-1

2/2/2026 11:38:34 AM USER: S:\w\k\rama\arachi\c:\pw_workdir\p\p\p\greene-pw-01\pw_user\dms02\48\KEYSLT01.dgn

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL NOTES:

1. PRIOR TO ANY EQUIPMENT ORDER, SUBMIT EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. SUBMIT SEVEN (7) COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.
2. INCLUDE A COMPUTER PRINTOUT FOR SHOP DRAWING SUBMITTAL DATA SHOWING HORIZONTAL FOOT-CANDLE LEVELS OBTAINED USING THE SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION, VERIFY THE HORIZONTAL FOOT-CANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER, AND SUBMIT REPORT FOR APPROVAL.
3. MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C), THE NATIONAL ELECTRICAL SAFETY CODE, AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. PROPERLY GROUND AND BOND ELECTRICAL COMPONENTS PER THE N.E.C. REQUIREMENTS.
4. MAINTAINING AGENCY: HIGHLANDS COUNTY
NOTIFY THE TRAFFIC ENGINEERING DIVISION (MR. EDDIE CARDONA, 863-402-6536) AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO SCHEDULE THE FINAL INSPECTION.
5. UPON COMPLETION OF CONSTRUCTION, SUBMIT A HARD COPY SET OF "AS-BUILT" PLANS AND AN ELECTRONIC COPY (PDF) TO:

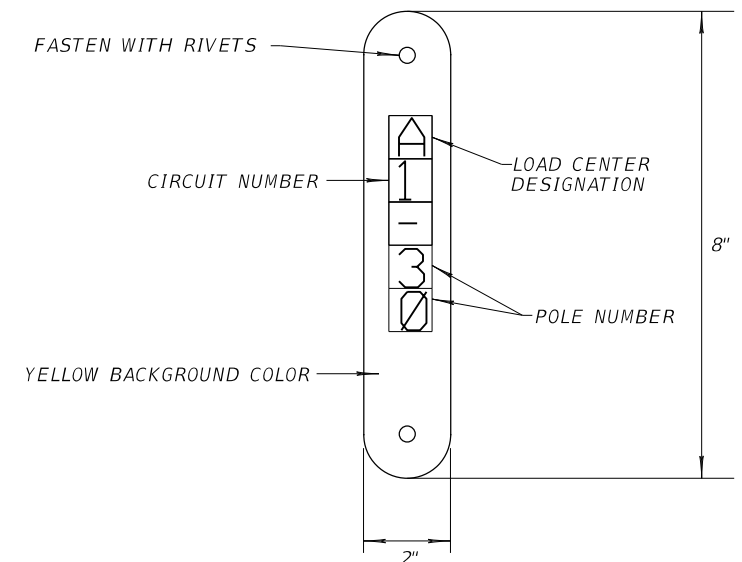
HIGHLANDS COUNTY
ATTN: EDDIE CARDONA
TRAFFIC OPERATIONS MANAGER
4330 GEORGE BLVD.
SEBRING, FL 33875
EMAIL: ECARDONA@HIGHLANDSFL.GOV
6. ENFORCE OSHA RULE 29 CFR PART 1926 AND FDOT DESIGN BULLETIN 11-03 CLEARANCES WHEN WORKING AROUND ANY LIVE ELECTRICAL OVERHEAD LINES AND FOR THE INSTALLATION OF ANY OBJECTS INSTALLED IN THEIR VICINITY.
7. NOTIFY DUKE ENERGY CORPORATION AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN THE DISTANCE PER CURRENT OSHA REQUIREMENTS OF ENERGIZED ELECTRICAL CONDUCTORS. THE LOCAL POWER COMPANY(S), AT ITS OPTION, MAY ASSIST THE FDOT CONTRACTOR TO COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITES OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXERCISE EXTREME CAUTION IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.

DUKE ENERGY CORPORATION
ATTN: MARK R. MANNER
SENIOR ENGINEER (DISTRIBUTION)
2051 OLD SCENIC HIGHWAY
LAKE WALES, FL 33898
PHONE: 863-678-4476
EMAIL: MARK.MANNER@DUKE-ENERGY.COM
8. LUMP SUM NON-BID PAY ITEM 639-8, CONTRIBUTION-IN-AID-OF-CONSTRUCTION (CIAC) IS INCLUDED WITH THIS CONTRACT. CONTACT DUKE ENERGY NEW CONSTRUCTION AT 866-372-4663 MINIMUM OF 8-10 WEEKS BEFORE POWER NEED DATE.
9. RECONNECT THE EXISTING LOAD CENTER TO THE NEW ELECTRICAL SERVICE. FURNISH AND INSTALL ALL NECESSARY CONDUCTORS, CONDUIT, AND ASSOCIATED HARDWARE TO PROPERLY WIRE THE EXISTING LOAD CENTER TO THE NEW SERVICE POINT IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE (NEC), AND LOCAL UTILITY REQUIREMENTS. COORDINATE WITH THE UTILITY COMPANY FOR SERVICE CONNECTION AND ENSURE PROPER GROUNDING AND BONDING.

PAY ITEM NOTES:

0715 11211:
REPLACE THE EXISTING POLE TAG ON EXISTING LIGHT POLE.

POLE IDENTIFICATION TAG DETAIL



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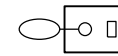
REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	GERALDO J. SANCHEZ, P.E. LICENSE NUMBER 74538 PATEL, GREENE & ASSOCIATES, LLC 122 W. PINE STREET, SUITE 201 ORLANDO, FL 32801		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR 25	HIGHLANDS	439750-2-52-01		L-2

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LEGEND

SYMBOLS

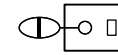
DESCRIPTION



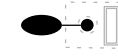
L1 Proposed pole and luminaire designed for an American Electric Lighting Autobahn ATB2 295 watt LED Luminaire with 3000K color temperature, Roadway Type III distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet with a 15-foot arm length (as specified on the Pole Data Table) mounted on a standard light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_P605_R3 with output lumens of 38,668. Symbol includes concrete slab, pull box, pole cable distribution system as well as foundation.



L3 Proposed pole and luminaire designed for an American Electric Lighting Autobahn ATB2 295 watt LED Luminaire with 3000K color temperature, Roadway Type II distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet with a 15-foot arm length (as specified on the Pole Data Table) mounted on a utility conflict light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_P605_R2 with output lumens of 36,958. Symbol includes concrete slab, pole cable distribution system as well as spread footing foundation.



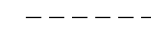
L3 Proposed pole and luminaire designed for an American Electric Lighting Autobahn ATB2 295 watt LED Luminaire with 3000K color temperature, Roadway Type II distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet with a 15-foot arm length (as specified on the Pole Data Table) mounted on a standard light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_P605_R2 with output lumens of 36,958. Symbol includes concrete slab, pull box, pole cable distribution system as well as foundation.



L1 Replace luminaire and arm, designed for an American Electric Lighting Autobahn ATB2 295 watt LED Luminaire with 3000K color temperature, Roadway Type III distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet with a 15-foot arm length (as specified on the Pole Data Table) mounted on a standard light pole. No tilt. Lighting basis of design used AEL Autobahn ATB2 photometric curve number ATB2_P605_R3 with output lumens of 38,670. Symbol includes existing concrete slab, and pull box.



Existing pole and luminaire to remain.



Existing conduit with THW or THWN conductors inside



Proposed pull box



Existing pull box



Existing load center



Existing concrete pole to be removed



Proposed prestressed concrete pole P-II with service disconnect and meter purchased by contractor

POLE NO.	CIRCUIT	STATION	ARM	LUMINAIRE WATTS	LUMINAIRE LUMENS	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
1	A-1	STA. 2832+20.5, BL SURVEY SR 25 (US 27)	15'	295	38,668	40'	44.1' RT	0715 61352
2	A-1	STA. 2829+95.0, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	44.5' RT	0715 61352
3	A-1	STA. 2827+63.8, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	43.8' RT	0715 61352
4	A-1	STA. 2825+26.3, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	47.6' RT	0715 61352
5	A-1	STA. 2825+25.4, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	110.8' LT	0715 61352
6	A-1	STA. 2827+62.7, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	110.8' LT	0715 61352
7	A-1	STA. 2829+94.9, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	110.8' LT	0715 61352
8	A-1	STA. 2832+22.2, BL SURVEY SR 25 (US 27)	15'	295	38,668	40'	118.0' LT	0715 61352
9	**	**	**	**	**	**	**	**
10	**	**	**	**	**	**	**	**
11	**	**	**	**	**	**	**	**
12	**	**	**	**	**	**	**	**
13	**	**	**	**	**	**	**	**
14	A-2	STA. 2834+71.3, BL SURVEY SR 25 (US 27)	15'	295	35,668	40'	121.8' LT	0715 61352
15	A-2	STA. 2837+0.9, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	121.8' LT	0715 61352
16	A-2	STA. 2839+28.1, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	118.2' LT	0715 61352
17	A-2	STA. 2842+03.53, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	123.7' LT	0715 61352
18	A-2	STA. 2841+35.4, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	32.8' RT	0715 61352
19	A-2	STA. 2839+38.6, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	32.8' RT	0715 61352
20	A-2	STA. 2836+97.2, BL SURVEY SR 25 (US 27)	15'	295	36,958	40'	32.8' RT	0715 61352
21	A-2	STA. 2834+60.5, BL SURVEY SR 25 (US 27)	15'	295	38,668	40'	32.8' RT	0715 61352
22	A-2	STA. 54+88.1, BL SURVEY SR 66 (US 98)	15'	295	38,668	40'	43.8' LT	0715 61352
23	A-2	STA. 56+85.3, BL SURVEY SR 66 (US 98)	15'	295	38,668	40'	40.1' LT	0715 11211
24	A-2	STA. 58+53.5, BL SURVEY SR 66 (US 98)	15'	295	38,668	40'	40.7' LT	0715 11211
25	A-2	STA. 59+95.4, BL SURVEY SR 66 (US 98)	15'	295	38,668	40'	45.8' LT	0715 11211
26	A-2	STA. 61+40.0, BL SURVEY SR 66 (US 98)	15'	295	38,668	40'	31.9' LT	0715 11211

NOTE

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** - EXISTING

CONVENTIONAL ROADWAY LIGHTING DESIGN CRITERIA

Average Initial Intensity 1.5 Foot Candles
 Uniformity Ratio Avg./Min. 4:1 Or Less
 Max./Min. 10:1 Or Less
 Veiling Luminance Ratio N/A
 Wind Speed N/A

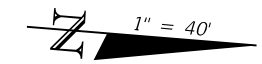
INTERSECTION LIGHTING DESIGN CRITERIA

Average Horizontal Initial Intensity 3.0 Foot Candles
 Average Vertical Initial Intensity 1.5 Foot Candles
 Uniformity Ratio Avg./Min. 4:1 Or Less
 Max./Min. 10:1 Or Less
 Wind Speed N/A

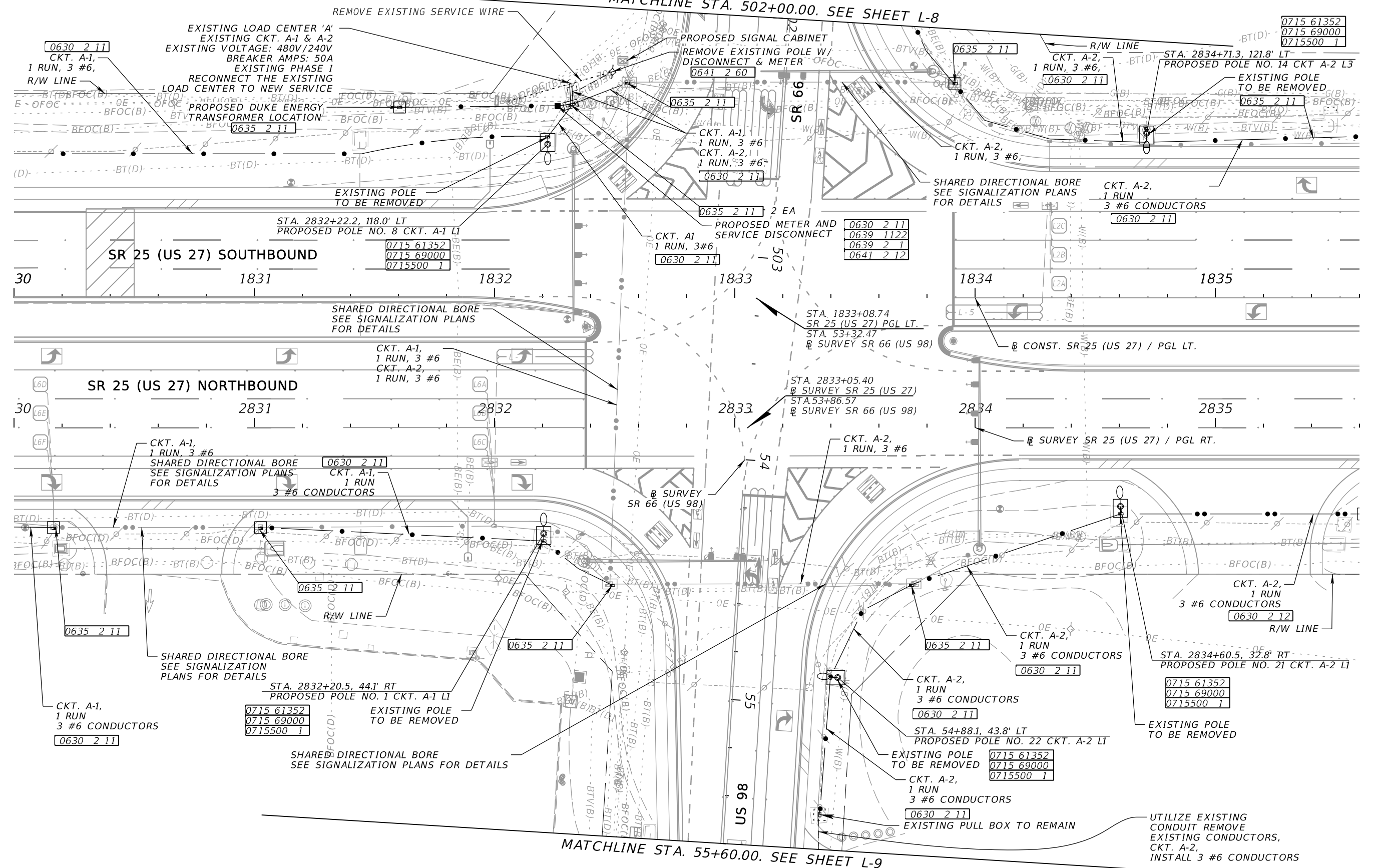
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REVISIONS				ENGINEER OF RECORD			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
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							SR 25	HIGHLANDS	439750-2-52-01	POLE DATA AND LEGEND L-3



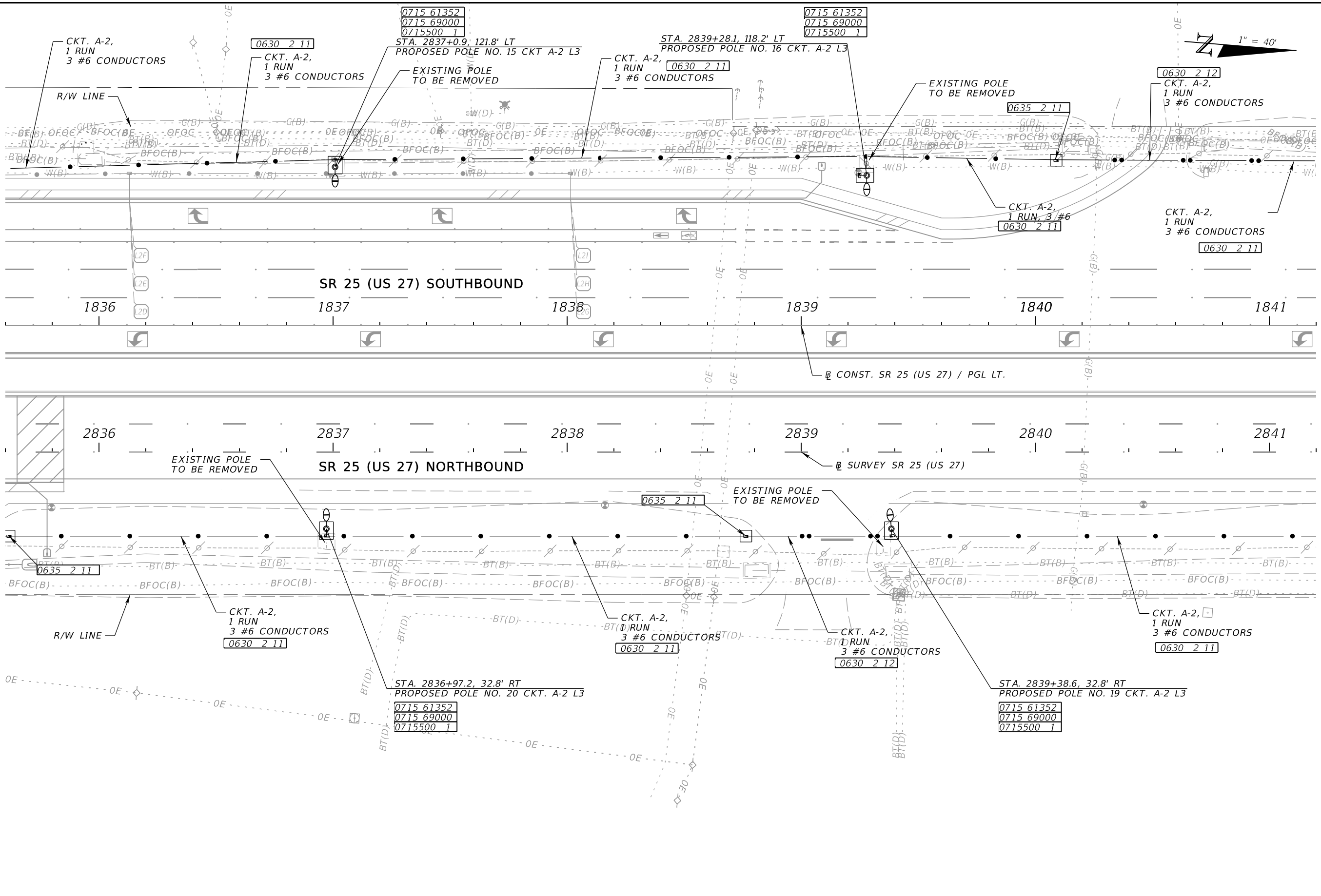
MATCHLINE STA. 502+00.00. SEE SHEET L-8



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						SR 25	HIGHLANDS	439750-2-52-01	LIGHTING PLAN L-5

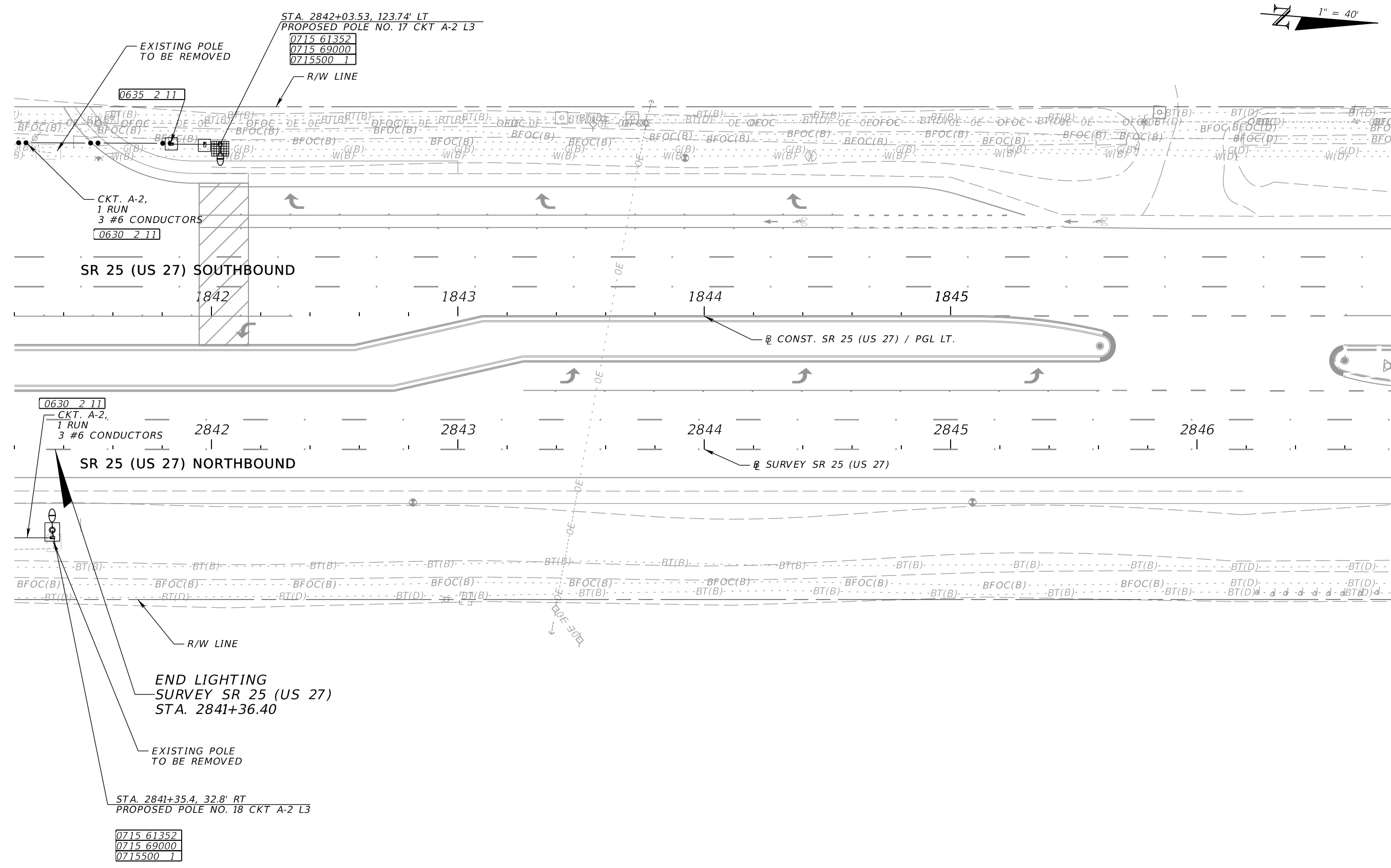
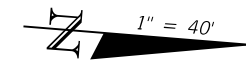


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LIGHTING PLAN



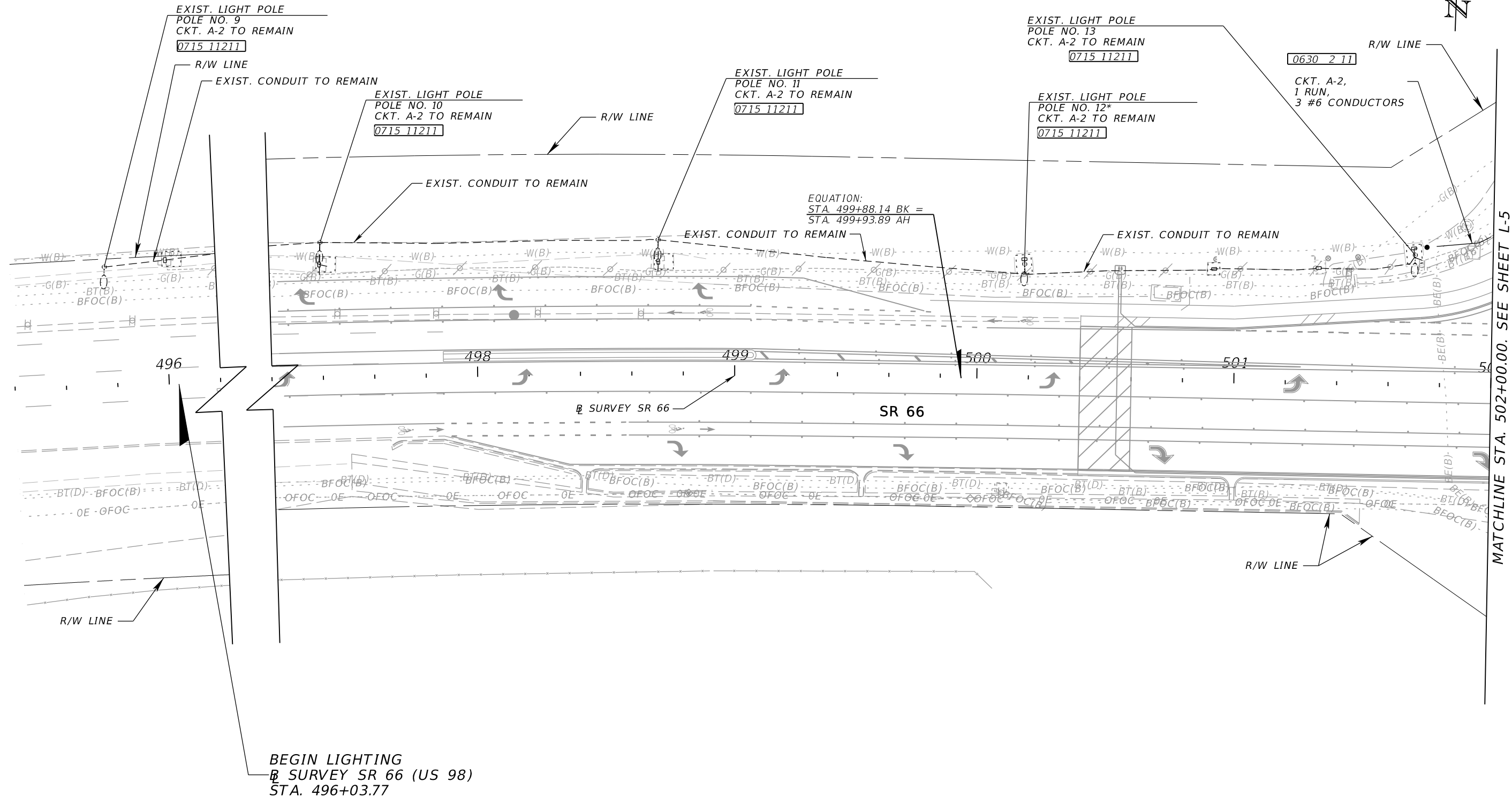
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LIGHTING PLAN

NOTE
 =====
 LIGHT POLES NO. 9, 10, 11, 12 AND 13 TO BE REPLACED WITH PERMIT NUMBER #2022 A 191 00028

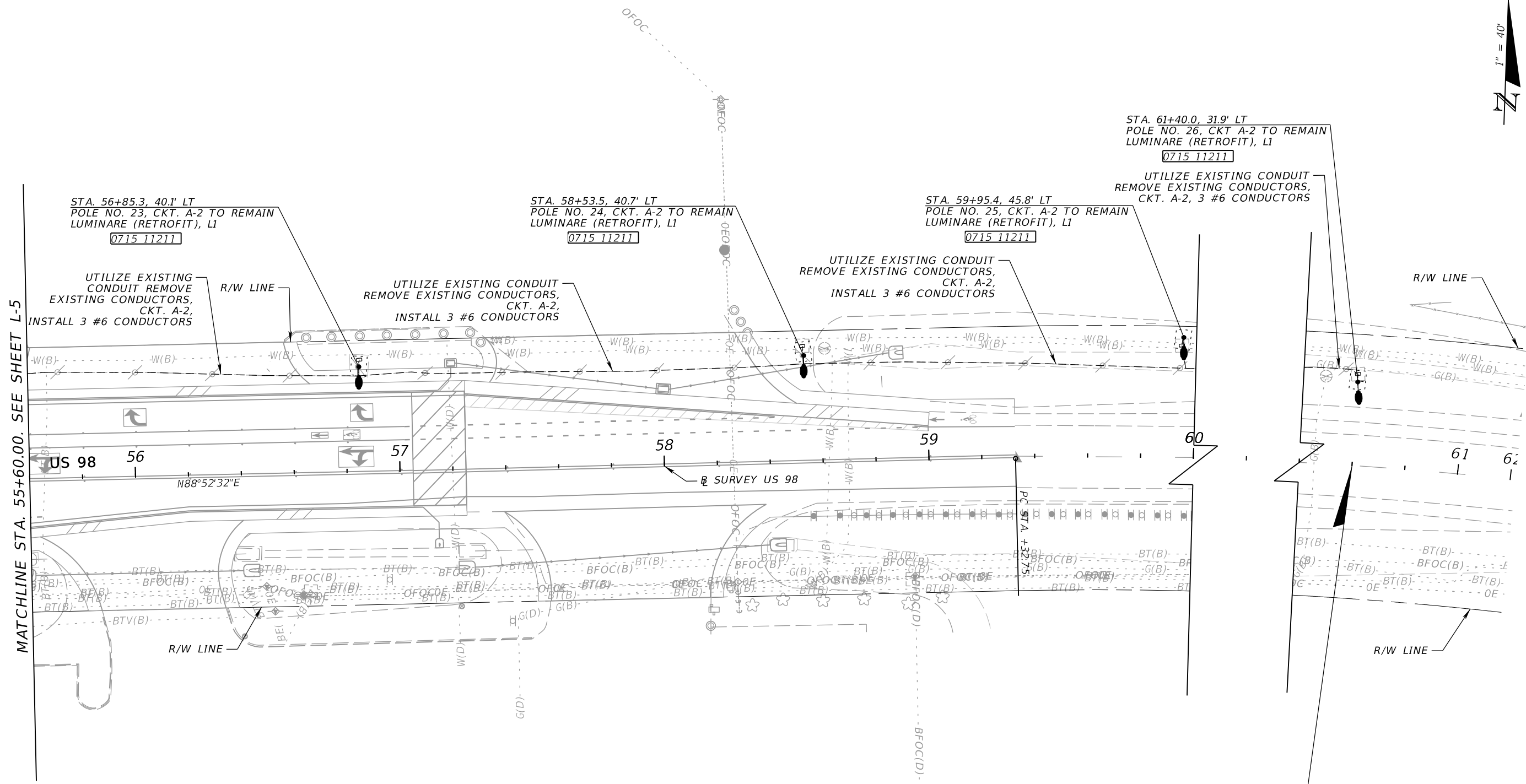


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LIGHTING PLAN



MATCHLINE STA. 55+60.00. SEE SHEET L-5

END LIGHTING
 SURVEY SR 66 (US 98)
 STA. 61+40.00

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LIGHTING PLAN

EXISTING SERVICE POINT "A" (LOAD CENTER SCHEDULE)									
MAINS: 50 AMPS VOLTAGE: 480V/240V PHASE: 1					WIRE: 3 LIGHT POLES: 26 AIC RATING: EXISTING				
CIRCUIT NUMBER	DESCRIPTION	CIRCUIT BREAKER		KVA	KVA	CIRCUIT BREAKER		DESCRIPTION	CIRCUIT NUMBER
		AMPS	POLE			POLE	AMPS		
1	SPACE							SPACE	2
3	CIRCUIT A-1	20	EXIST.			EXIST.	20	CIRCUIT A-2	4
5	SPACE							SPACE	6
7	SPACE							SPACE	8
9	SPACE							SPACE	10
11	SPACE							SPACE	12
13	SPACE							SPACE	14
15	SPACE							SPACE	16
17	SPACE							SPACE	18
TOTAL CONNECTED LOAD: 8.453					TOTAL DEMAND LOAD: 27.52				

ELECTRICAL LOAD CALCULATIONS SERVICE POINT "A"			
DESCRIPTION	CONNECTED (KVA)	DEMAND FACTOR	DEMAND (KVA)
CIRCUIT A-1	2.622	125%	3.2775
CIRCUIT A-2	5.831	125%	7.28875
TOTAL	8.453		10.56625

OVER CURRENT PROTECTION:
 $10.56625 \text{ VA} / 480 \text{ V} = 22.01 \text{ A} * 125\% \text{ (FUTURE LOADS)} = 27.52 \text{ A}$
 THEREFORE A 50 AMP, SINGLE PHASE ELECTRICAL SERVICE IS REQUIRED TO SERVE ALL LOADS.

LOAD CENTER SCHEDULE

SERVICE POINT DETAILS

\$TIMES \$USERS
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