

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
 FEDERAL AID HIGHWAY**

F. A. U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1683	09-00166-01-LT	COOK	12	1
STA. 14+75		TO STA. 86+25		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT 9003(335)	

CONTRACT #63285

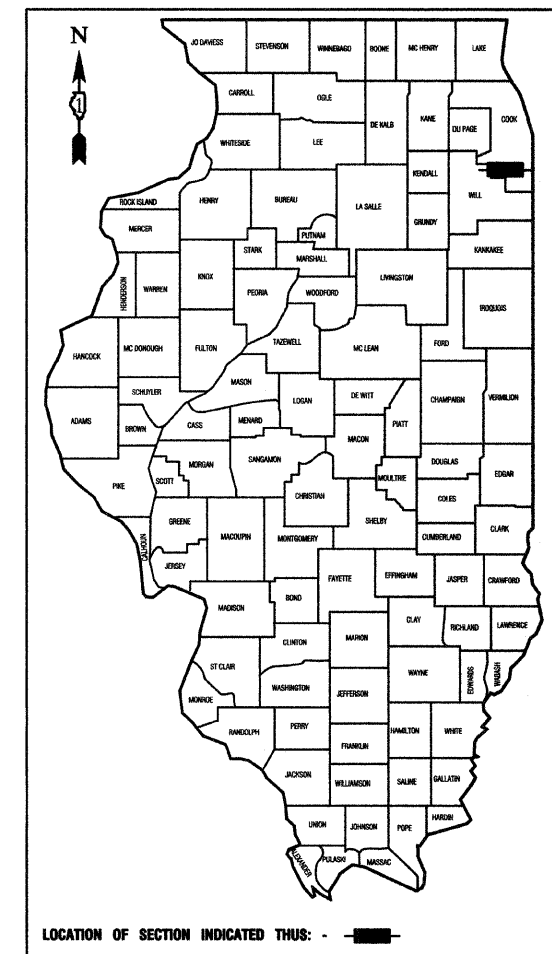
INDEX OF SHEETS

1. COVER SHEET
2. SUMMARY OF QUANTITIES & GENERAL NOTES
- 3.-6. STREET LIGHTING PLANS
7. SINGLE LINE DIAGRAM
- 8.-12. DETAIL DRAWINGS

STATE STANDARDS

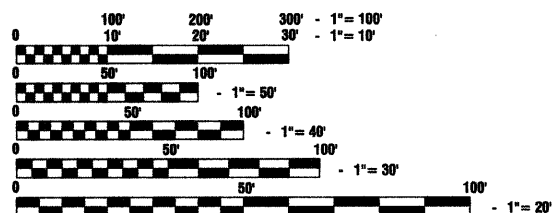
- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701606-06 URBAN LANE CLOSURE, MULTILANE, 2W, WITH MOUNTABLE MEDIAN
- 701701-06 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-01 TRAFFIC CONTROL DEVICES

**FAU 1683 (BERNICE ROAD)
 STREET LIGHTING
 OAK AVENUE TO WENTWORTH AVENUE (FAU 2946)
 SECTION NO.: 09-00166-01-LT
 C-91-650-09
 VILLAGE of LANSING
 COOK COUNTY
 ARA - 9003(335)**



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

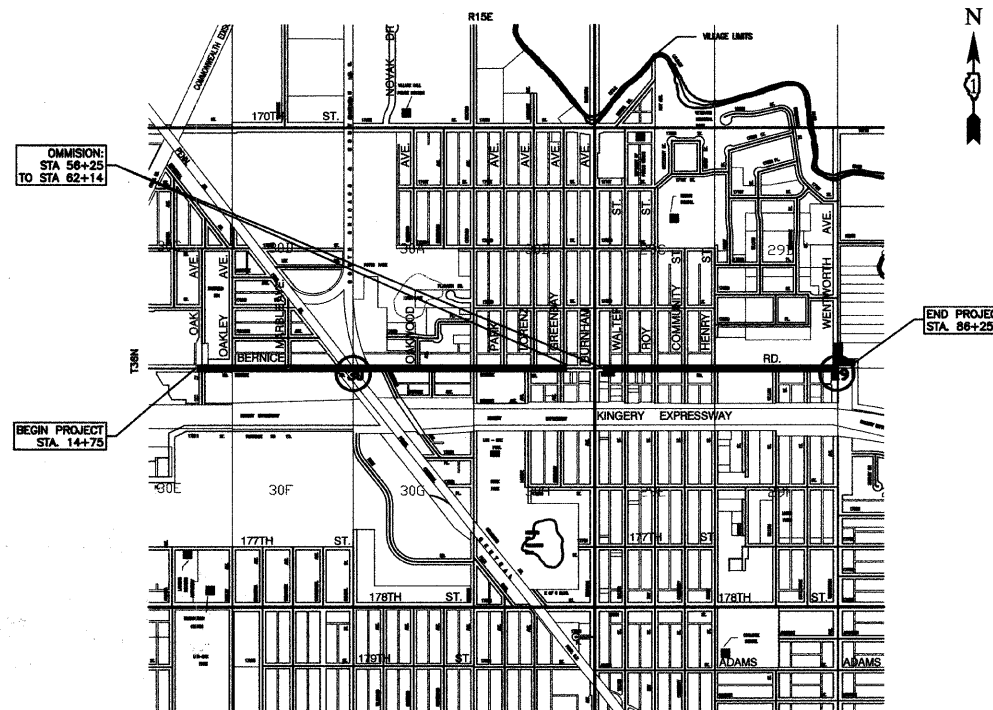
SCALES
 PLAN - 1"=50'
 PROFILE HORIZ. - 1"=50'
 PROFILE VERT. - 1"=5'
 CROSS SECTIONS - 1"=10'



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

CONTRACT NO. 63285



PROJECT LOCATION

GROSS LENGTH= 7,150 FEET = 1.35 MILES
 NET LENGTH= 6,561 FEET = 1.24 MILES

BERNICE ROAD COLLECTOR
 ADT=12,300 (2009)
 =15,000 (2030)
 DESIGN SPEED=35 MPH
 SPEED LIMIT= 30 MPH

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

Approved: 10-19-09
 [Signature]
 Mayor, Village of Lansing

Passed: OCTOBER 26, 2009
 [Signature]
 District 1 Engineer of Local Roads & Streets

Released for Bid
 Based on Limited
 Review: OCTOBER 26, 2009
 [Signature]
 Deputy Director of Highways, Region 1 Engineer

PRINTED BY THE AUTHORITY OF
 THE STATE OF ILLINOIS

PREPARED BY OR UNDER THE
 DIRECT SUPERVISION OF:

[Signature]
 10/20/09



LICENSE EXPIRES: 11/30/11

I.D.O.T. FIELD ENGINEER: MELCHOR MANGOBA: 847-705-4408
 CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

DATE	
BY	
REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
NO.	
PLAN	
NOTE BOOK	
NO.	

DATE	
BY	
REVISIONS	
PLANNED	
GRADES	
CHECKED	
S.M. NOTED	
PROFILE	
NOTE BOOK	
NO.	

SUMMARY OF QUANTITIES					PAVEMENT	LANDSCAPE	LIGHTS
S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	CONSTRUCTION TYPE CODE		
					1000	Y003	Y030-1E
	21300010	EXPLORATION TRENCH, SPECIAL	FOOT	100			100
	25200650	SODDING, SALT TOLERANT, (SPECIAL)	SQ YD	310			310
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	100			100
	44000600	SIDEWALK REMOVAL	SQ FT	100			100
	67100100	MOBILIZATION	L SUM	1			1
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1			1
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1			1
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1			1
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1			1
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	2			2
	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1			1
	81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	965			965
	81603090	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	7730			7730
	81702440	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0	FOOT	63			63
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	600			600
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	34			34
	83008200	LIGHT POLE, ALUMINUM, 40 FT. M.H., 6 FT. MAST ARM	EACH	16			16
	83008300	LIGHT POLE, ALUMINUM, 40 FT. M.H., 8 FT. MAST ARM	EACH	9			9
	83008500	LIGHT POLE, ALUMINUM, 40 FT. M.H., 12 FT. MAST ARM	EACH	7			7
	83008600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. MAST ARM	EACH	2			2
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	350			350
	83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	20			20
	83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	34			34
	XX001399	UNIT DUCT, BORED AND PULLED	FOOT	6615			6615
	XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	36			36
	XX001579	LIGHTING CONTROLLER, CONSOLE TYPE	EACH	2			2
*	XX007577	HMA PARKWAY REMOVAL AND REPLACEMENT	SQ YD	30			30

* - INDICATES SPECIALTY ITEMS

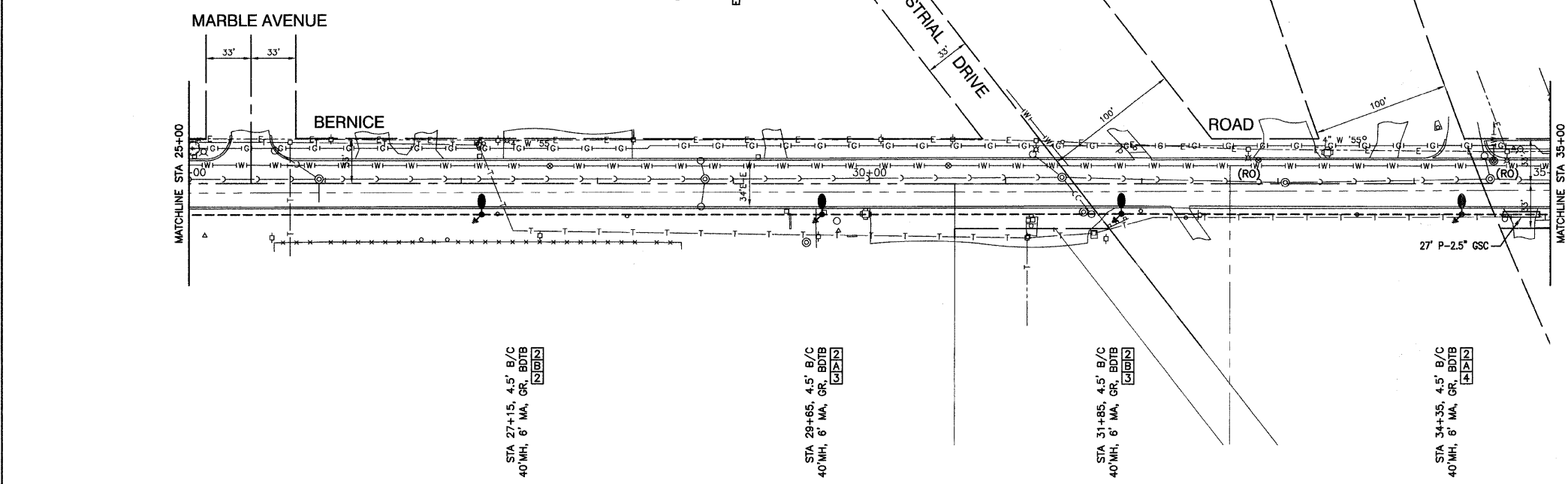
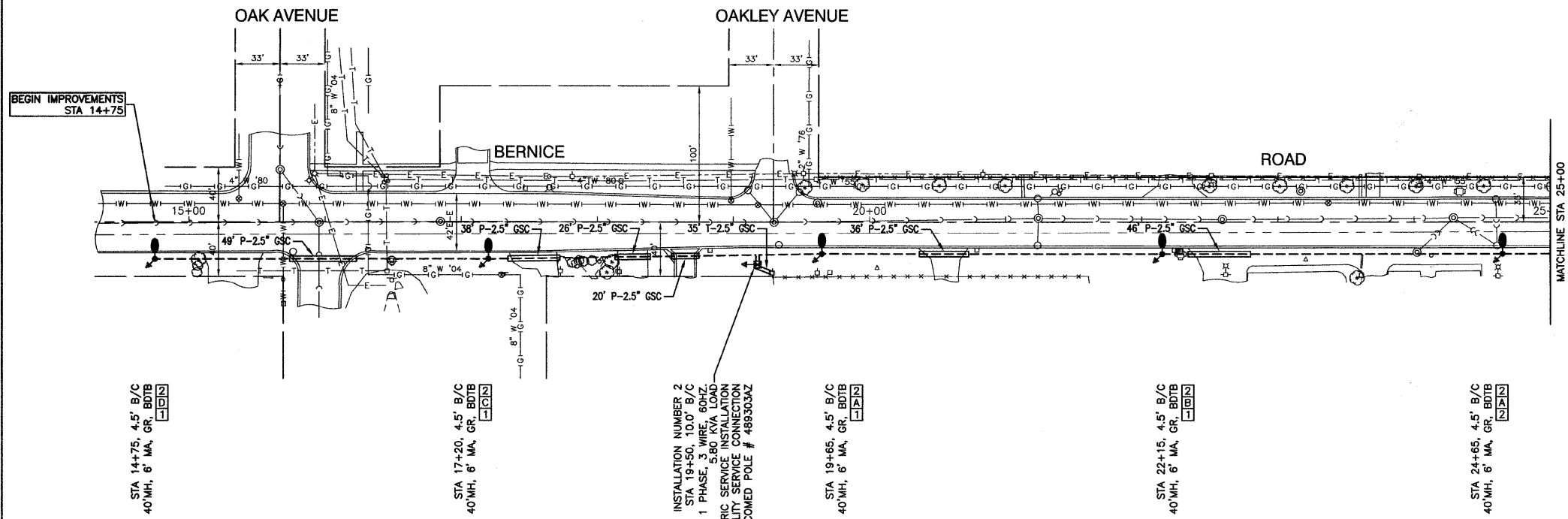
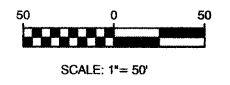
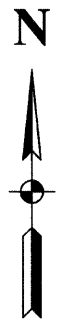
GENERAL NOTES :

- ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
- CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
- BEFORE INSTALLING STANDARDS NEAR OVERHEAD FACILITIES CALL ComEd FOR APPROVAL OF LOCATION.
- FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL ComEd.
- ALL CONDUIT TO BE 2.5" DIAMETER UNLESS OTHERWISE SPECIFIED.
- ANY TREE TRIMMING REQUIRED AS DIRECTED BY THE ENGINEER SHALL BE PERFORMED BY THE CONTRACTOR, AND THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (i.e. DECORATIVE ROCKS, SHRUBS, PLANTS, ETC.) OR SHALL REPLACE IT, THE COST OF WHICH SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CARE IS TO BE TAKEN AS NOT TO DAMAGE ANY OF THE EXISTING TRAFFIC SIGNAL CONDUITS, DETECTORS AND EQUIPMENT. IF ANY OF THE TRAFFIC SIGNAL CONDUIT AND/OR EQUIPMENT IS DAMAGED, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE CONDUIT AND/OR EQUIPMENT AT NO COST TO THE COUNTY, STATE, OR THE VILLAGE.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENT FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "TRENCH AND BACKFILL FOR ELECTRICAL WORK". THE INSTALLATION OF THE TAPE SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO BACKFILLING OR DURING PLOWING OPERATIONS, AS APPLICABLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE RESIDENT ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
- NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
- EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
- CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS AND OTHER UTILITIES AND LANDSCAPING.
- ALL DISTURBED AREAS WHERE RESTORATION IS NOT COVERED BY APPLICABLE SECTIONS OF THE SPECIAL PROVISIONS MUST BE RESTORED TO THE SATISFACTION OF THE ENGINEER. THE WORK MUST BE CONSIDERED INCIDENTAL TO THE CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE.
- THE EXACT LOCATIONS OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE LIGHTING SYSTEM. FOR THE LOCATIONS OF THE UTILITIES, CALL JULIE TOLL FREE AT 1-800-892-0123. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING TRAFFIC SIGNAL CABLES AND CONDUITS.



FILE NAME = 09321-QUAN-01 - P01	USER NAME =	DESIGNED -- PAP	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OAK AVE. TO WENTWORTH AVE. STREET LIGHTING SUMMARY OF QUANTITIES AND GENERAL NOTES			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
	PLOT SCALE = N/A	CHECKED -- EJT	REVISED --		SCALE: N/A	SHEET NO. 2	OF 12 SHEETS	STA. N/A	TO STA. N/A	1683	09-00166-01-LT	COOK	12	2
	PLOT DATE = 10-19-09	DRAWN -- MJD	REVISED --		CONTRACT NO. 63285									
		CHECKED -- DWS	REVISED --		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 9003(335)									

SECTION 30, TOWNSHIP 36, RANGE 15



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - P- CONDUIT, PUSHED, GALVANIZED STEEL, SIZE AS NOTED
 - T- CONDUIT, TRENCHED, GALVANIZED STEEL, SIZE AS NOTED
 - U- UNIT DUCT, 600V, 3-1/2" NO.4, 1/2" NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - S- SERVICE WIRE, 3-1/2" NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
 - GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - MH MOUNTING HEIGHT
 - MA MAST ARM
 - B/C BACK OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE
 - R&R REMOVE AND REPLACE EXISTING STREET LIGHT

- POLE IDENTIFICATION**
- 1 CABINET NUMBER
 - 1 CIRCUIT
 - 1 POLE POSITION

DATE	BY

REVISIONS	CHECKED	DATE

PLAN	NOTE BOOK	NO.

DATE	BY

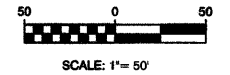
REVISIONS	CHECKED	DATE

PROFILE	NOTE BOOK	NO.

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PLOT SCALE = 1"=50'	DRAWN = MJD	CHECKED = EJT	REVISED =			CONTRACT NO. 63285				
PLOT DATE = 10-19-09	CHECKED = DWS	REVISED =	REVISED =			FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT 9003(335)		
SCALE: 1"=50'	SHEET NO. 3 OF 12 SHEETS	STA. 14+75 TO STA. 35+00								

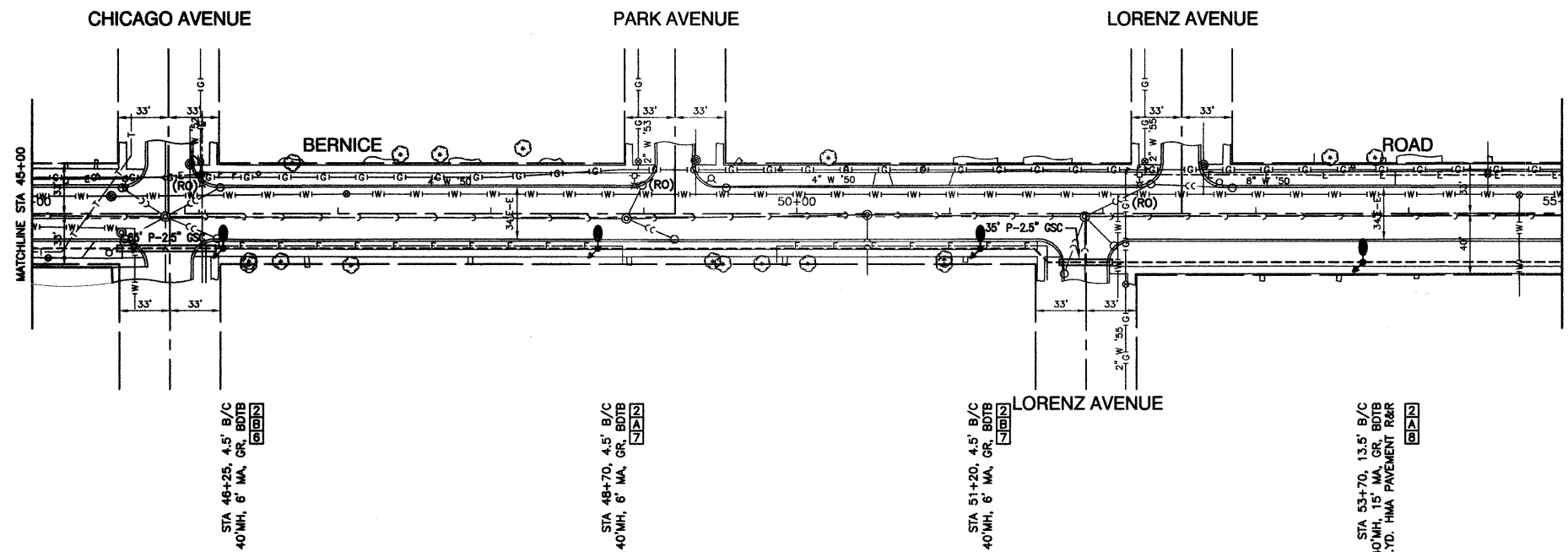
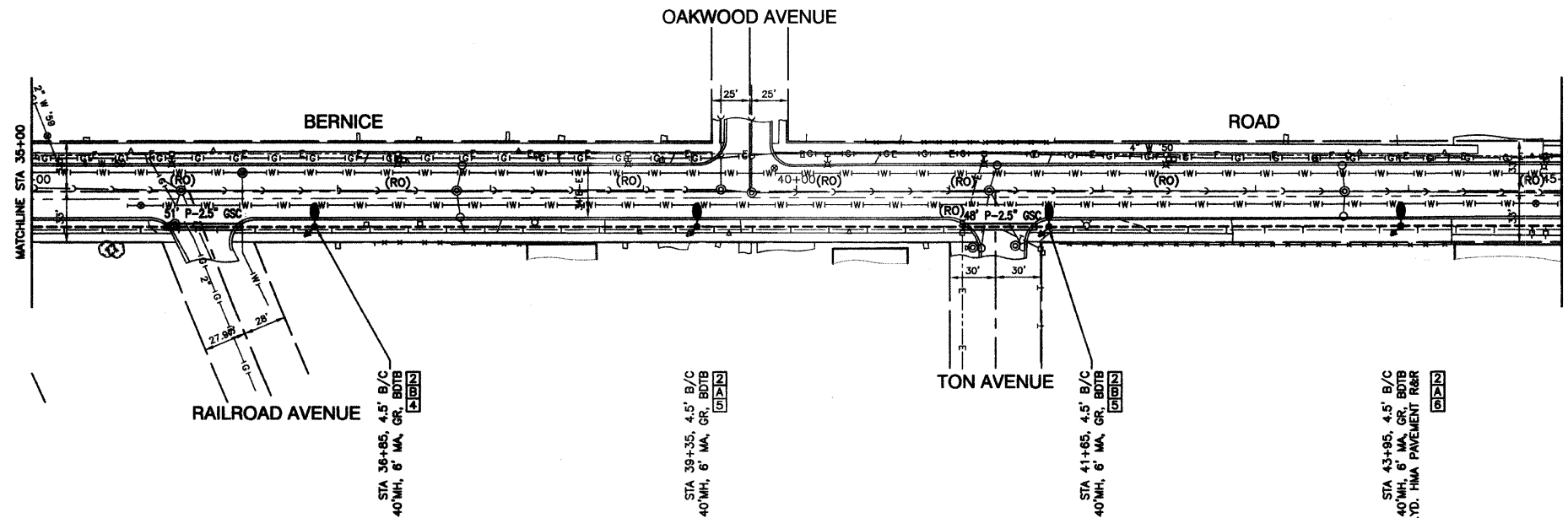


SECTION 30, TOWNSHIP 36, RANGE 15



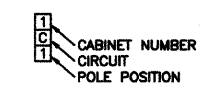
PLAN	DATE
REVISIONS	BY
PLOTTED	
ALIGNMENT CHECKED	
GRADE CHECKED	
GRID FILE NAME	
NO.	

PROFILE	DATE
REVISIONS	BY
PLOTTED	
GRADES CHECKED	
GRID FILE NAME	
NOTE	



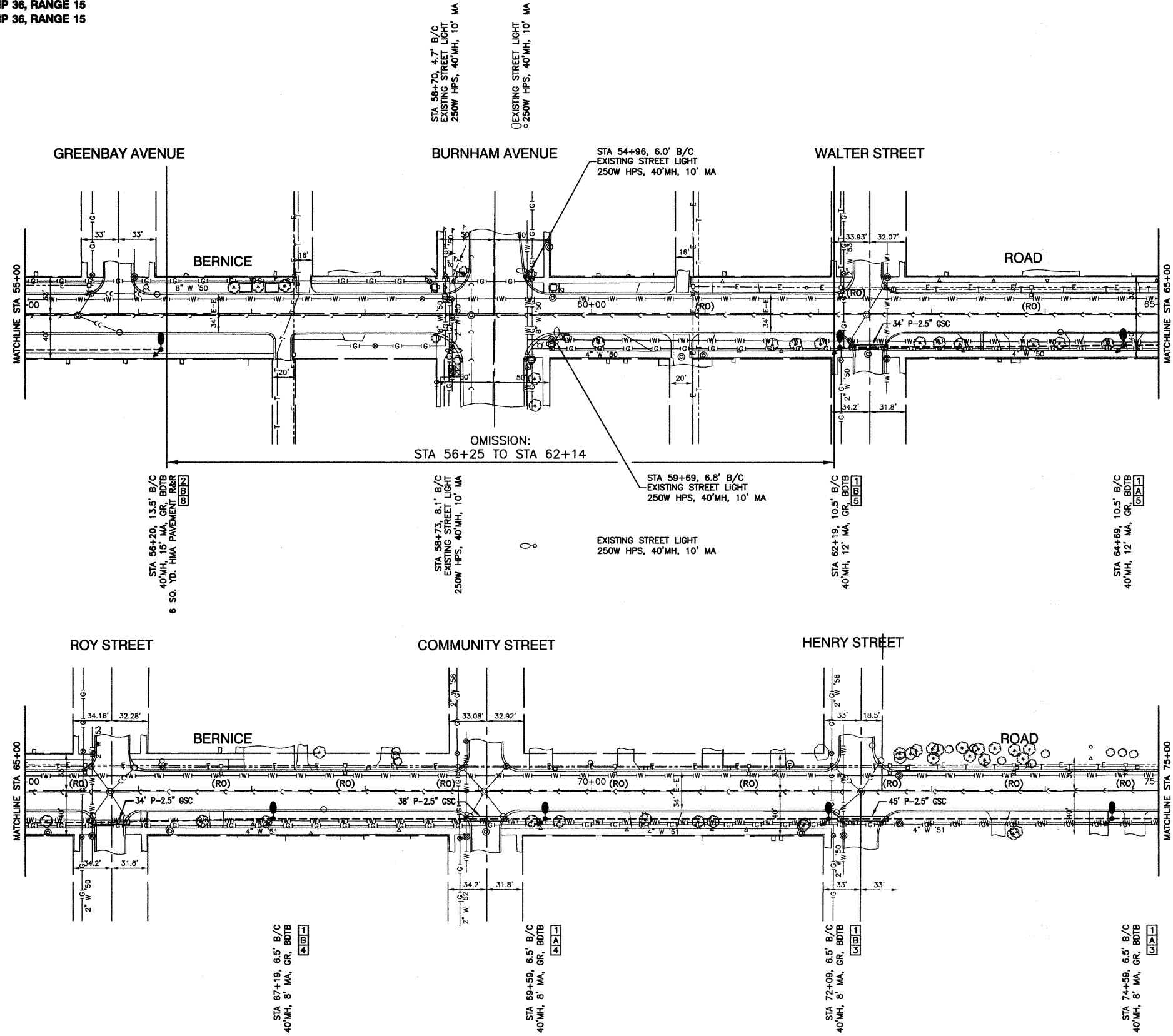
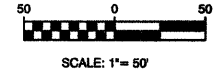
- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - P- CONDUIT, PUSHED, GALVANIZED STEEL, SIZE AS NOTED
 - T- CONDUIT, TRENCHED, GALVANIZED STEEL, SIZE AS NOTED
 - U- UNIT DUCT, 600V, 3-1/C NO.4, 1/C NO.8 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - S- SERVICE WIRE, 3-1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
 - GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - MH MOUNTING HEIGHT
 - MA MAST ARM
 - B/C BACK OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE
 - R&R REMOVE AND REPLACE EXISTING STREET LIGHT

POLE IDENTIFICATION



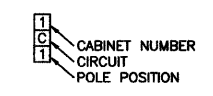
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	PLOT DATE = 10-19-09	DRAWN - MJD	REVISED -		SHEET NO. 4 OF 12 SHEETS	STA. 35+00	TO STA. 55+00	CONTRACT NO. 63285			
		CHECKED - DWS	REVISED -		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT 9003(335)				

SECTION 29, TOWNSHIP 36, RANGE 15
SECTION 30, TOWNSHIP 36, RANGE 15



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - P- CONDUIT, PUSHED, GALVANIZED STEEL, SIZE AS NOTED
 - T- CONDUIT, TRENCHED, GALVANIZED STEEL, SIZE AS NOTED
 - - - UNIT DUCT, 600V, 3-1/C NO.4, 1/C NO.8 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - SERVICE WIRE, 3-1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
 - GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - MH MOUNTING HEIGHT
 - MA MAST ARM
 - B/C BACK OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE
 - R&R REMOVE AND REPLACE EXISTING STREET LIGHT

POLE IDENTIFICATION

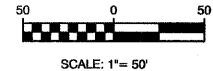


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DATE	BY

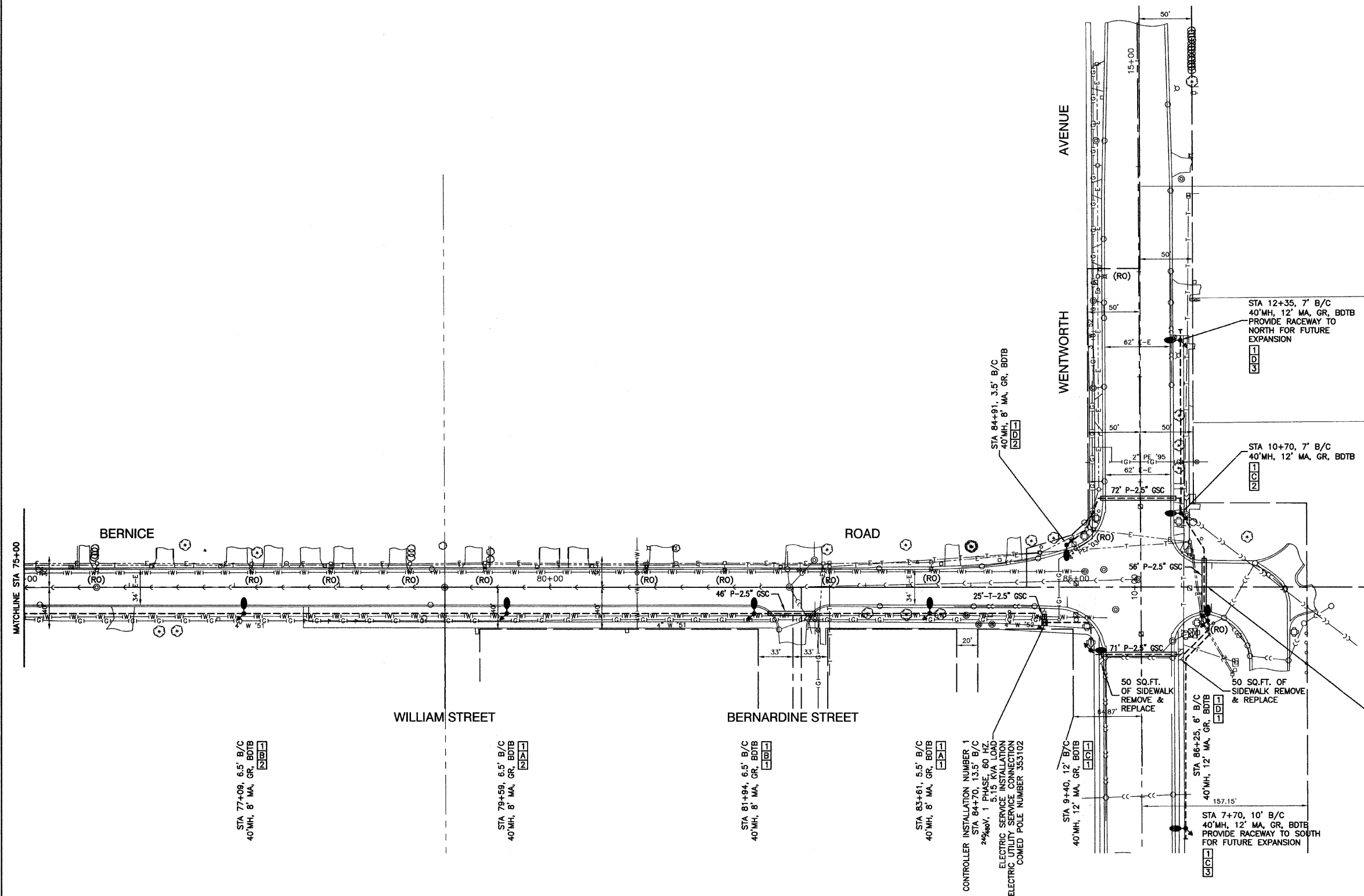
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PLOT SCALE = 1"=50'	CHECKED = EJT	REVISED =	SCALE: 1"=50'			SHEET NO. 5 OF 12 SHEETS	STA. 55+00 TO STA. 75+00	CONTRACT NO. 63285				
DRAWN = MJD	REVISED =		FED. ROAD DIST. NO. 1			ILLINOIS	FED. AID PROJECT 9003(335)					
PLOT DATE = 10-19-09	CHECKED = DWS	REVISED =										





REVISIONS	DATE
PLANNED	
CHECKED	
BY	
NO.	

REVISIONS	DATE
PLANNED	
CHECKED	
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- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER, CONSOLE TYPE
 - P — CONDUIT, PUSHED, GALVANIZED STEEL, SIZE AS NOTED
 - T — CONDUIT, TRENCHED, GALVANIZED STEEL, SIZE AS NOTED
 - U — UNIT DUCT, 600V, 3-1/C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
 - S — SERVICE WIRE, 3-1/C, NO. 1/0 AWG. (SEE LIGHTING CONTROLLER PLAN)
 - ⊗ GR GROUND ROD, 5/8" DIA. x 10'
 - (R) REMOVAL OF EXISTING STREET LIGHT
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - MH MOUNTING HEIGHT
 - MA MAST ARM
 - B/C BACK OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE
 - R&R REMOVE AND REPLACE EXISTING STREET LIGHT

- POLE IDENTIFICATION**
- 1 CABINET NUMBER
 - 2 CIRCUIT
 - 3 POLE POSITION

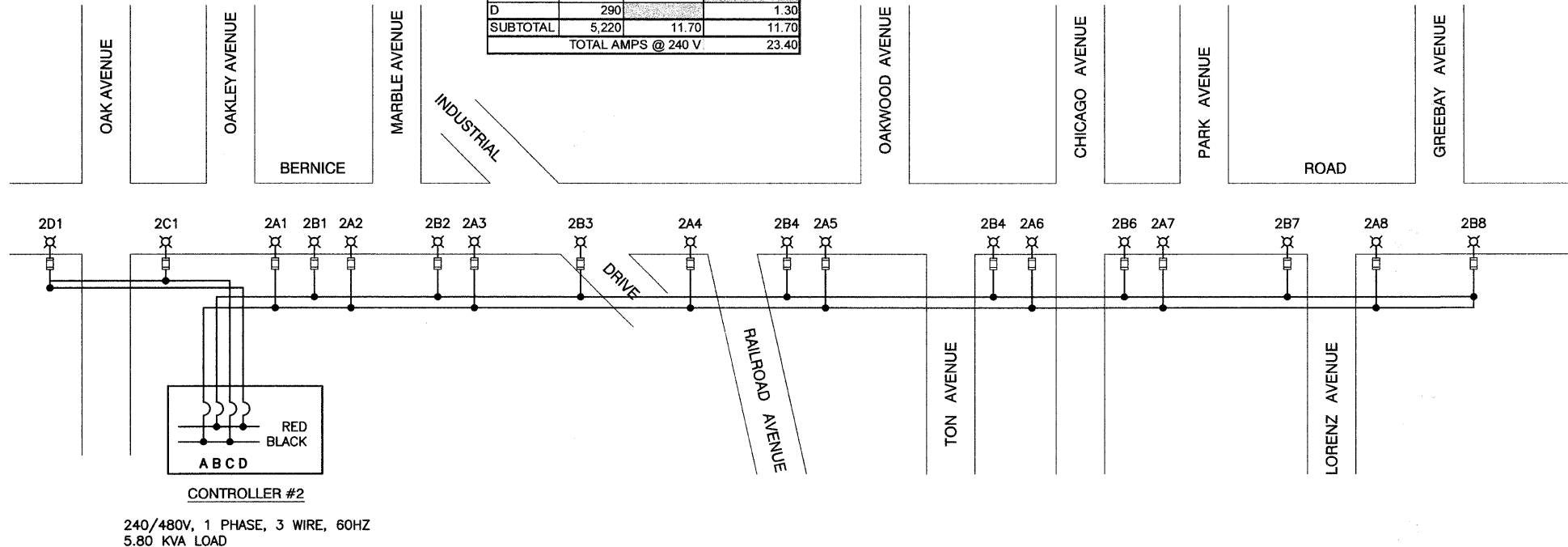
END IMPROVEMENTS
STA 86+25



FILE NAME = 08321-PLAN-01 - IDOT P04	USER NAME =	DESIGNED — PAP	REVISIONS —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OAK AVE. TO WENTWORTH AVE. STREET LIGHTING STREET LIGHTING PLAN SHEETS			F.A.U. RTE. 1683	SECTION 09-00166-01-LT	COUNTY COOK	TOTAL SHEETS 12	SHEET NO. 6
PLOT SCALE = 1"=50'	CHECKED — EJT	REVISIONS —			SCALE: 1"=50'	SHEET NO. 6 OF 12 SHEETS	STA. 75+00 TO STA. 86+25	CONTRACT NO. 63285				
PLOT DATE = 10-19-09	DRAWN — MJD	REVISIONS —			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 9003(335)							
	CHECKED — DWS	REVISIONS —										

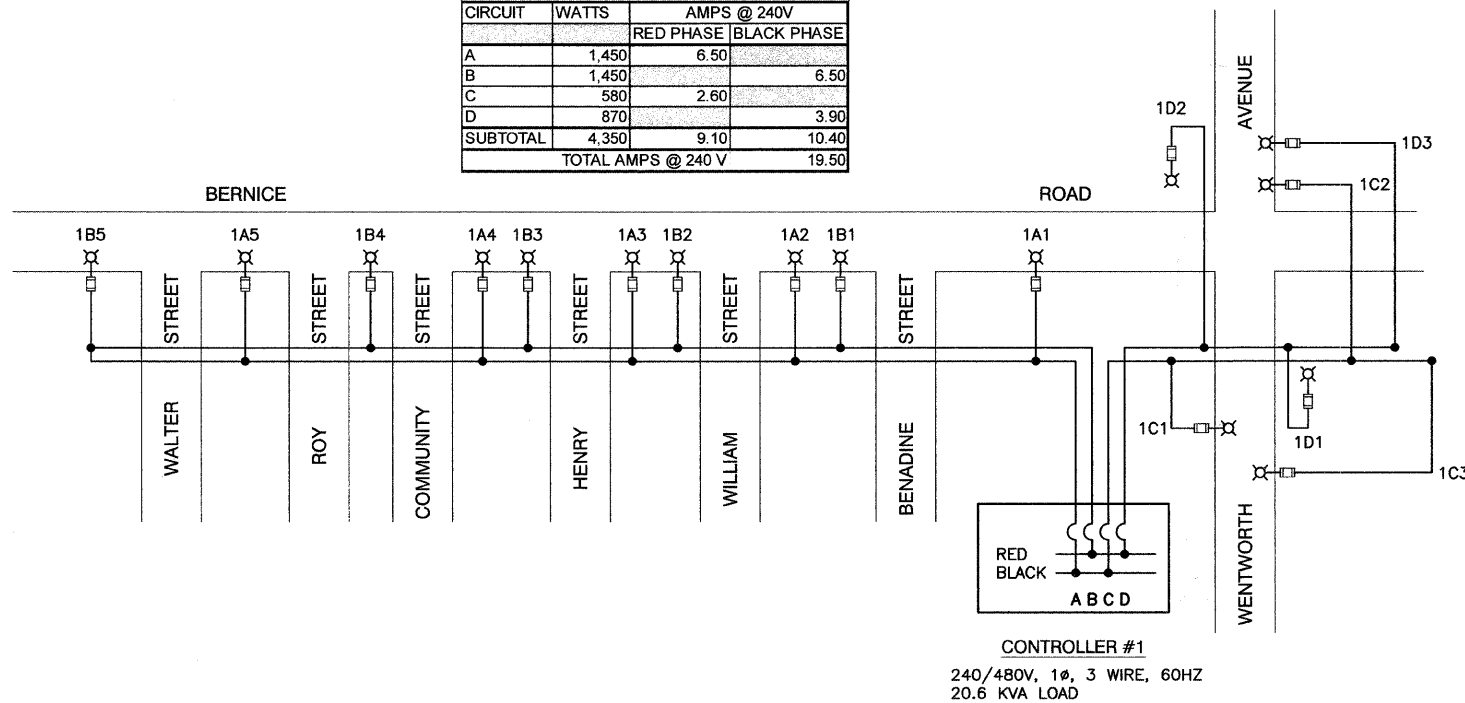


LOAD TABULATIONS CONTROLLER #2			
CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	2,320	10.40	
B	2,320		10.40
C	290	1.30	
D	290		1.30
SUBTOTAL	5,220	11.70	11.70
TOTAL AMPS @ 240 V		23.40	



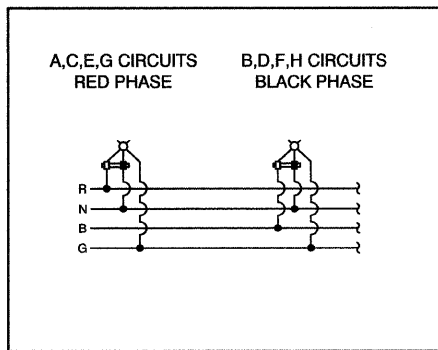
CONTROLLER #2
240/480V, 1 PHASE, 3 WIRE, 60HZ
5.80 KVA LOAD

LOAD TABULATIONS CONTROLLER #1			
CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	1,450	6.50	
B	1,450		6.50
C	580	2.60	
D	870		3.90
SUBTOTAL	4,350	9.10	10.40
TOTAL AMPS @ 240 V		19.50	



CONTROLLER #1
240/480V, 1Ø, 3 WIRE, 60HZ
20.6 KVA LOAD

TYPICAL POLE WIRING



- LEGEND**
- ⊗ LUMINAIRE, 250W HPS, 240V
 - FUSE, 3.5 AMP
 - A1 LUMINAIRE CIRCUIT
 - ⌋ CIRCUIT BREAKER
 - CONNECTION

DATE	BY
REVISIONS	CHECKED
PLANNING	PLANNING
NOTE BOOK	NOTE BOOK
NO.	NO.

DATE	BY
REVISIONS	CHECKED
PROFILE	PROFILE
NOTE BOOK	NOTE BOOK
NO.	NO.

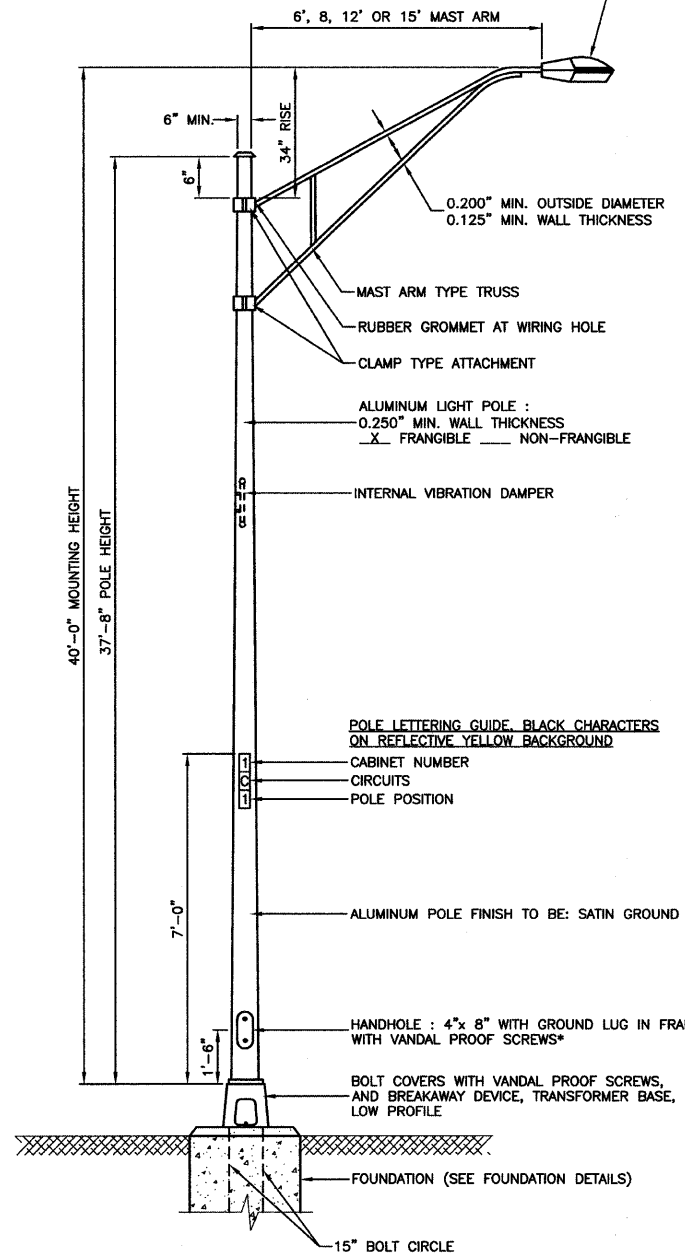
FILE NAME = 08321-DTLS-01 - P01	USER NAME =	DESIGNED -- PAP	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OAK AVE. TO WENTWORTH AVE. STREET LIGHTING SINGLE LINE WIRING DIAGRAM		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -- EJT	REVISED --		1683	09-00166-01-LT	COOK	12	7			
PLOT SCALE = N/A		DRAWN -- MJD	REVISED --		CONTRACT NO. 63285		FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT 9003(335)	
PLOT DATE = 10-19-09		CHECKED -- DWS	REVISED --		SCALE: N/A	SHEET NO. 7	OF 12 SHEETS	STA. N/A	TO STA. N/A			



LUMINAIRE:
 250 WATT HIGH PRESSURE SODIUM LAMP
 240 VOLT BALLAST

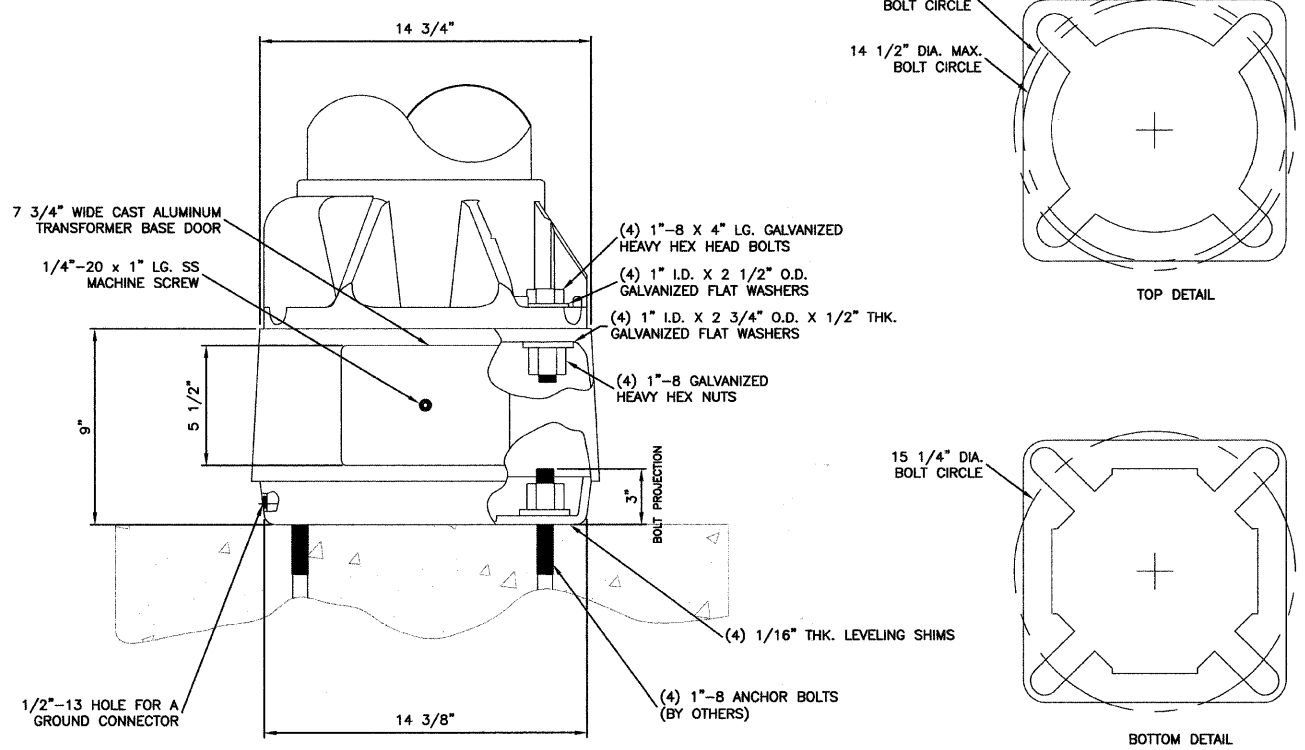
I.E.S. TYPE: MC III LIGHT DISTRIBUTION,
 FULL CUTOFF
 LENS TYPE: FLAT
 INITIAL LAMP LUMENS: 28,000
 LAMP LIFE: 24,000 HOURS

IMPORTANT NOTE:
 TRANSFORMER BASE AND LIGHTPOLE
 TO BE LEVELED AS ONE UNIT. USING
 LEVELING SHIMS IF REQUIRED.

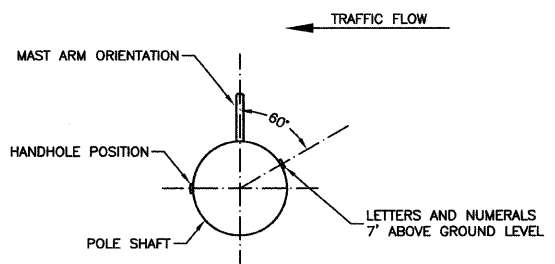


- NOTES:**
1. THE LIGHTING UNITS SHALL MEET AASHTO DESIGN CRITERIA. DESIGN FOR 90 M.P.H. WIND WITH 30% GUST AND 75 POUND LUMINAIRE HAVING AN E.P.A. OF 1.6 SQ. FT. AND PROPER ICE LOADING.
 2. ALUMINUM ALLOY 6063-T6 SHALL BE USED.
 3. LIGHT POLE AND ASSOCIATED EQUIPMENT TO BE U.L. LISTED

TYPICAL POLE INSTALLATION



BREAKAWAY TRANSFORMER BASE DETAIL



POSITION OF HANDHOLE AND NUMERALS ON POLE

DATE	
BY	
REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
NOTED	
FILE NAME	
PLAN	
NOTE BOOK	
NO.	

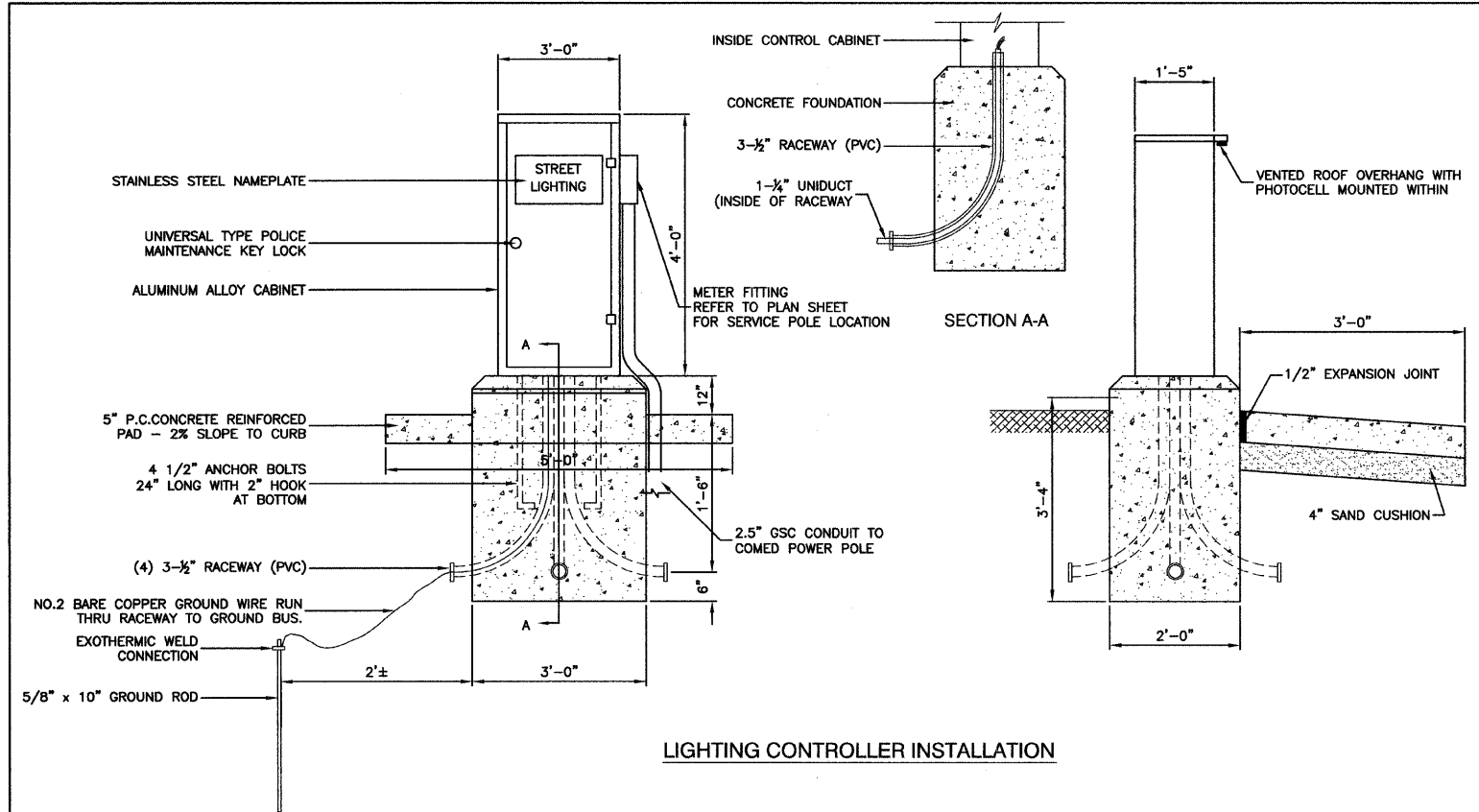
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REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
NOTED	
FILE NAME	
PROFILE	
NOTE BOOK	
NO.	

FILE NAME = 09321-DTLS-01 - P02	USER NAME =	DESIGNED - PAP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OAK AVE. TO WENTWORTH AVE. STREET LIGHTING DETAILS		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = N/A	CHECKED - EJT	REVISED -		SCALE: N/A	SHEET NO. 8 OF 12 SHEETS	STA. N/A TO STA. N/A	1683	09-00166-01-LT	COOK	12	8
	PLOT DATE = 10-19-09	DRAWN - MJD	REVISED -		CONTRACT NO. 63285		FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT 9003(S35)	
		CHECKED - DWS	REVISED -									

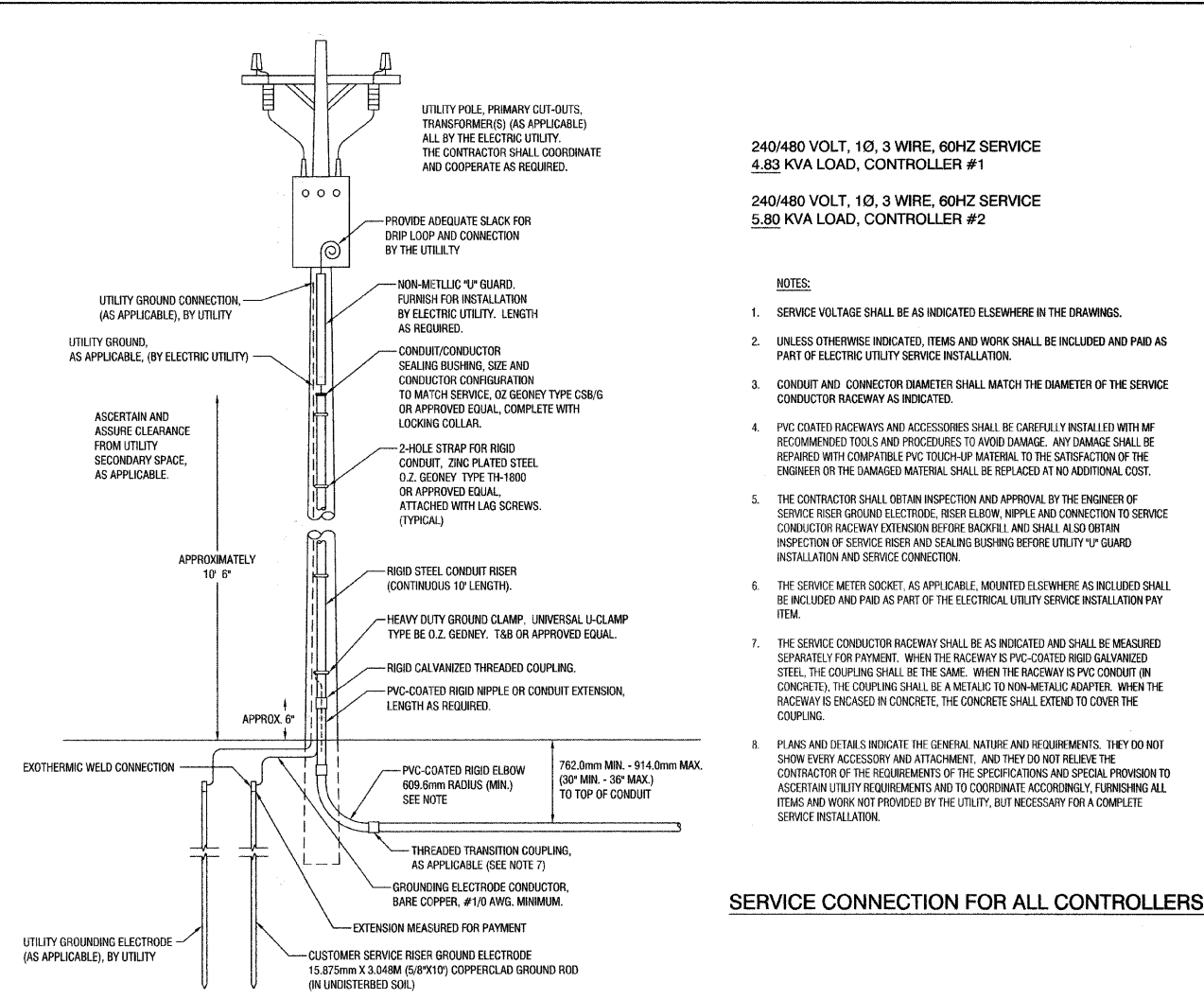


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DESCRIPTION	
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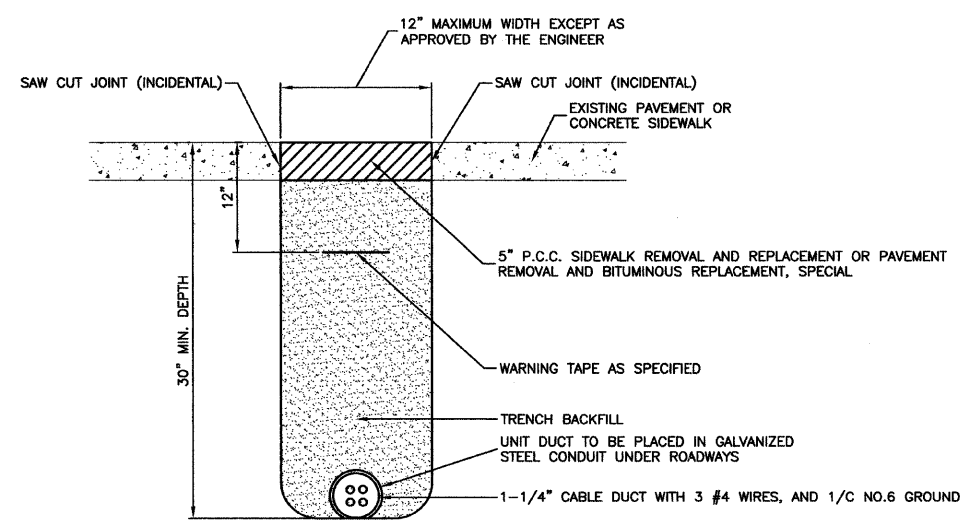
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PROFILE	
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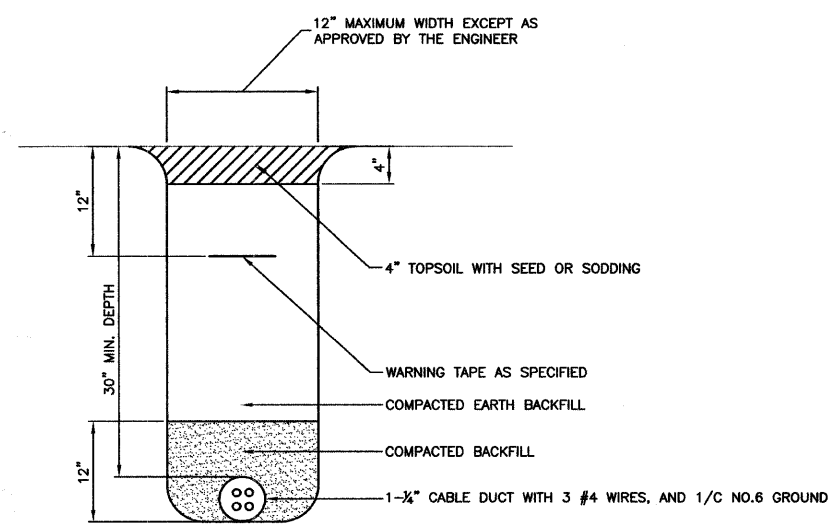
LIGHTING CONTROLLER INSTALLATION



SERVICE CONNECTION FOR ALL CONTROLLERS



HOT-MIX ASPHALT PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL



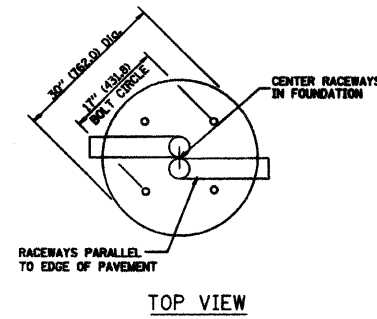
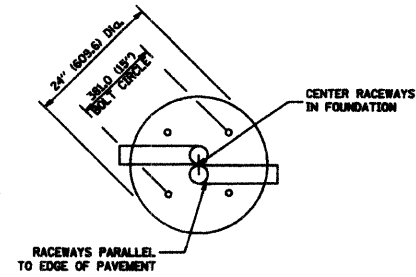
FILE NAME = 09321-DTL5-01 - P04	USER NAME =	DESIGNED -- PAP	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	OAK AVE. TO WENTWORTH AVE. STREET LIGHTING DETAILS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = N/A	CHECKED -- EJT	REVISED --			1683	09-00166-01-LT	COOK	12	10	
	PLOT DATE = 10-19-09	DRAWN -- MJD	REVISED --			CONTRACT NO. 63285					
		CHECKED -- DWS	REVISED --			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 9003(335)					
				SCALE: N/A		SHEET NO. 10 OF 12 SHEETS		STA. N/A TO STA. N/A			

DATE	
BY	
REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
DESIGNED	
FILED	
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NOTE BOOK	
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PROFILE	
NOTE BOOK	
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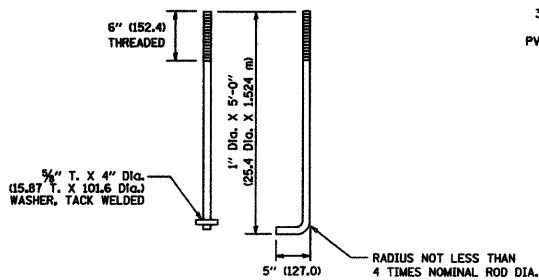
LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)

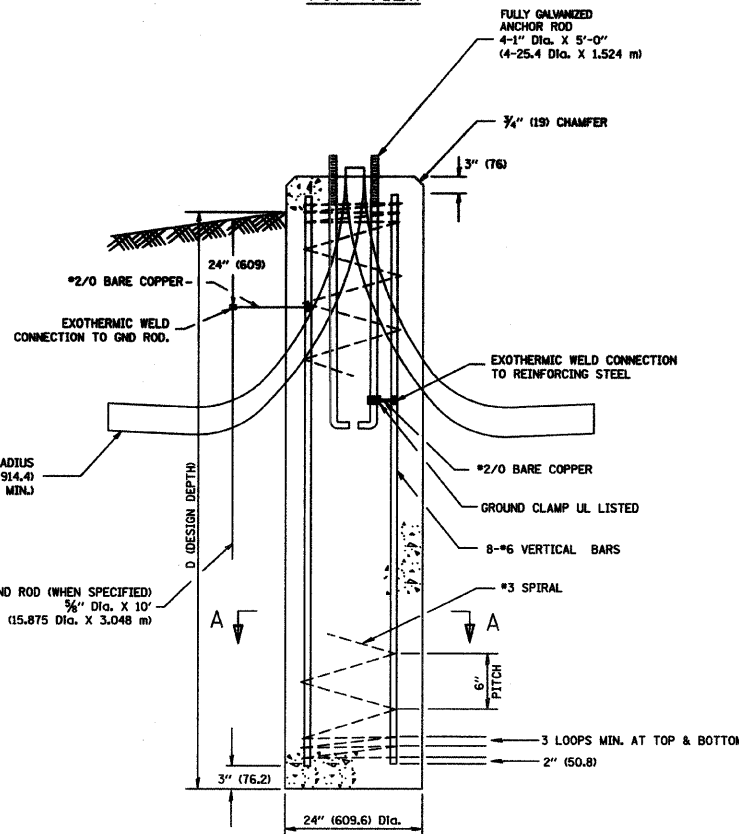


TOP VIEW

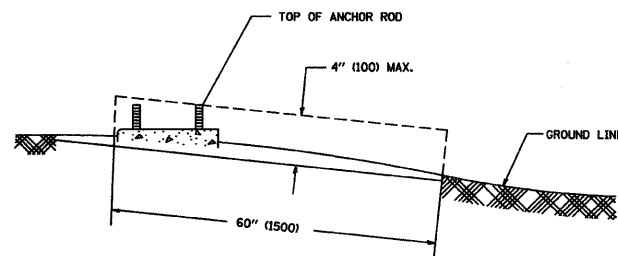
TOP VIEW



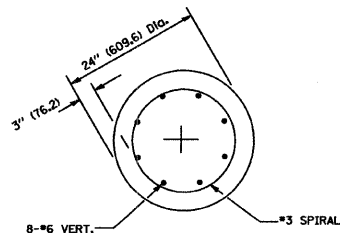
ANCHOR ROD DETAIL



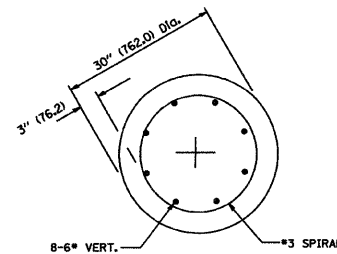
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL, A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS S1. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



FILE NAME = 09321-DTLS-01 - P05

USER NAME =	DESIGNED -- PAP	REVISED --
	CHECKED -- EJT	REVISED --
PLOT SCALE = N/A	DRAWN -- MJD	REVISED --
PLOT DATE = 10-19-09	CHECKED -- DWS	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OAK AVE. TO WENTWORTH AVE. LIGHT POLE FOUNDATION 40' TO 47.5' MOUNTING HEIGHT 15" BOLT CIRCLE DETAILS	
SCALE: N/A	SHEET NO. 11 OF 12 SHEETS STA. N/A TO STA. N/A

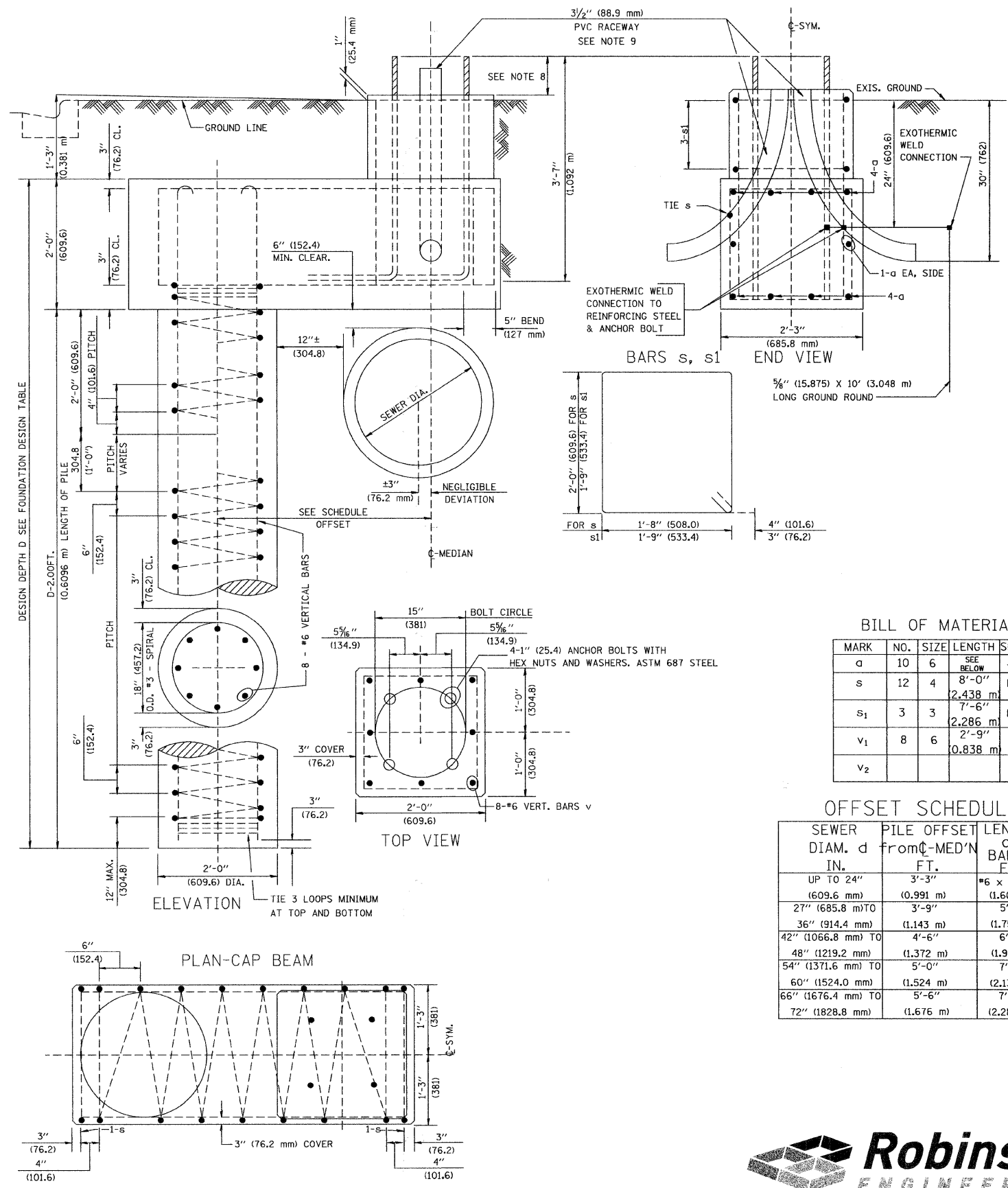
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1683	09-00166-01-LT	COOK	12	11
CONTRACT NO. 63285				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 9003(335)				

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-#6X12'-6" (3.810 m)	#3X122' (37.186 m)	8-#6X14'-3" (4.343 m)	#3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-#6X9'-0" (2.743 m)	#3X90' (27.432 m)	8-#6X10'-0" (3.048 m)	#3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-#6X6'-6" (1.981 m)	#3X66' (20.112 m)	8-#6X7'-6" (2.286 m)	#3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)	8-#6X9'-6" (2.896 m)	#3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-#6X8'-0" (2.438 m)	#3X78' (23.774 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-#6X7'-6" (2.286 m)	#3X73' (22.250 m)	8-#6X8'-6" (2.591 m)	#3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1.524 m)	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERRECTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	2.438 m	□
s ₁	3	3	2.286 m	□
v ₁	8	6	0.838 m	—
v ₂				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from C-MED'N FT.	LENGTH of BAR a FT.
UP TO 24" (609.6 mm)	3'-3" (0.991 m)	#6 x 5'-3" (1.600 m)
27" (685.8 mm) TO	3'-9" (1.137 m)	5'-9" (1.753 m)
36" (914.4 mm) TO	4'-6" (1.372 m)	6'-6" (1.981 m)
42" (1066.8 mm) TO	4'-6" (1.372 m)	7'-0" (2.134 m)
48" (1219.2 mm) TO	5'-0" (1.524 m)	7'-6" (2.286 m)
54" (1371.6 mm) TO	5'-6" (1.676 m)	7'-6" (2.286 m)
60" (1524.0 mm) TO	5'-6" (1.676 m)	7'-6" (2.286 m)
66" (1676.4 mm) TO	5'-6" (1.676 m)	7'-6" (2.286 m)
72" (1828.8 mm)	(1.676 m)	(2.286 m)

DATE	BY	REVISIONS
		PLANNED
		CHECKED
		NOTED
		FILED
		NO.

DATE	BY	REVISIONS
		PLANNED
		CHECKED
		NOTED
		FILED
		NO.

FILE NAME = 0921-DTLS-01 - P06

USER NAME =	DESIGNED — PAP	REVISED —
CHECKED — EJT	REVISED —	
DRAWN — MJD	REVISED —	
CHECKED — DWS	REVISED —	
PLOT SCALE = N/A		
PLOT DATE = 10-19-09		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OAK AVE. TO WENTWORTH AVE.
LIGHT POLE FOUNDATION, OFFSET 40' TO 47.5' MOUNTING HEIGHT
15" BOLT CIRCLE DETAILS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1683	09-00166-01-LT	COOK	12	12
FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO. 63285	
FED. AID PROJECT 9003(335)				

