

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

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2. SUMMARY OF QUANTITIES AND GENERAL NOTES
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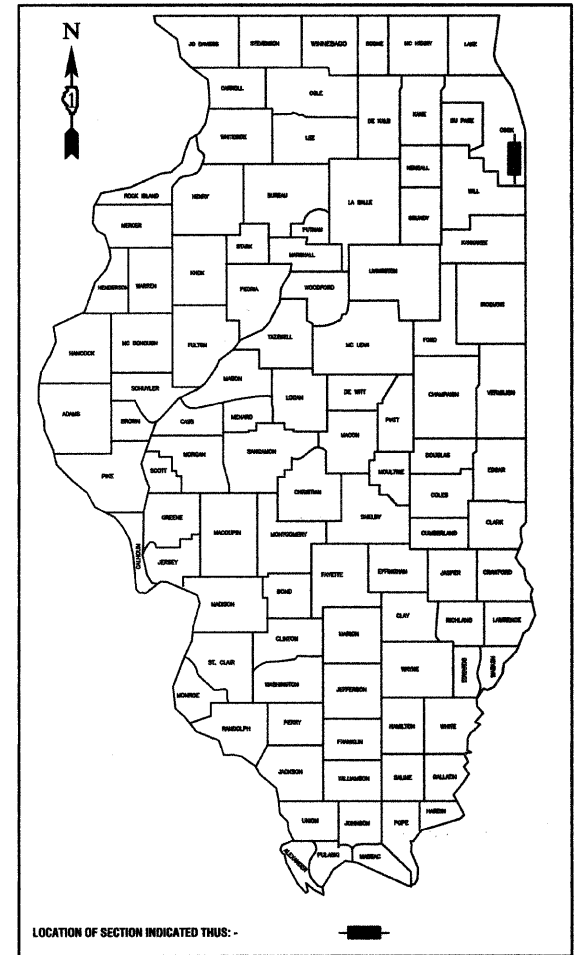
STATE STANDARDS

- 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
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- 701901-01 TRAFFIC CONTROL DEVICES

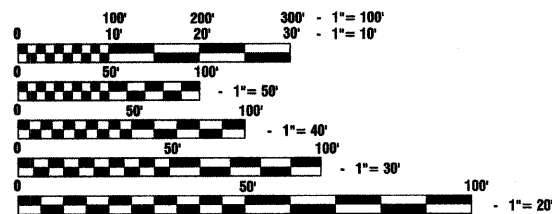
FAU 1025 (BROADWAY AVENUE)  
STREET LIGHTING  
PARK AVENUE (FAU 3597) TO 151ST STREET  
SECTION NO.: 09-00182-00-LT  
C-91-649-09  
CITY OF HARVEY  
COOK COUNTY  
ARA-9003 (333)

F. A. I. D. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1025	09-00182-00-LT	COOK	10	1
STA.	11+00	TO STA.	39+00	
FED. ROAD DIST. NO. 1	LANES	FED. AID PROJECT	ARA-9003 (333)	

CONTRACT #63286



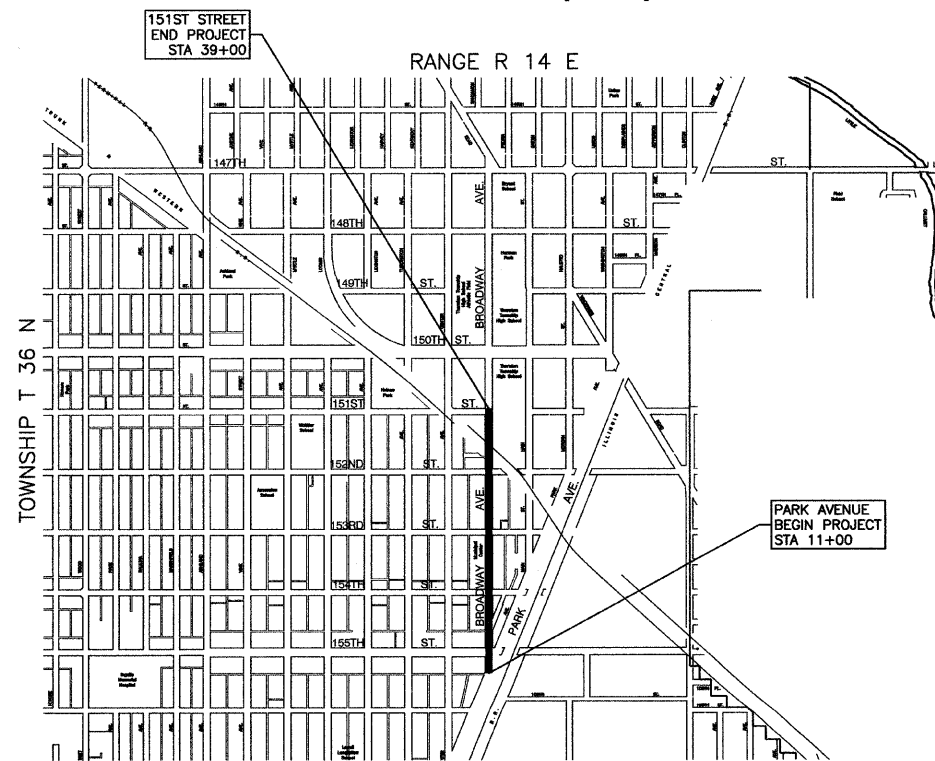
SCALES  
 PLAN - 1"=50'  
 PROFILE HORIZ. - 1"=50'  
 PROFILE VERT. - 1"=5'  
 CROSS SECTIONS - 1"=10'



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. 63286



LOCATION MAP

- INDICATES PROPOSED IMPROVEMENT  
 GROSS LENGTH=2,800 FEET=0.53 MILES  
 NET LENGTH=2,800 FEET=0.53 MILES

BROADWAY AVENUE COLLECTOR  
 ADT=12,000 (2009)  
 =12,000 (2030)  
 DESIGN SPEED=35 MPH  
 SPEED LIMIT= 35 MPH

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Approved: Oct 19, 2009  
*Eric J. Kelly*  
 Mayor, City of Harvey

Passed: October 26, 2009  
*Christopher Holt*  
 District 1 Engineer of Local Roads & Streets

Released for Bid Based on Limited Review: OCTOBER 26, 2009  
*Diana M. O'Keefe*  
 Deputy Director of Highways, Region 1 Engineer *AK*

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THE STATE OF ILLINOIS

PREPARED BY OR UNDER THE  
DIRECT SUPERVISION OF:

*Edward J. Tinsley*  
 10/20/09



LICENSE EXPIRES: 11/30/11

SUMMARY OF QUANTITIES

S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	CONSTRUCTION TYPE CODE		LIGHTS
							Y030-1E
	21300010	EXPLORATION TRENCH, SPECIAL	FOOT	50			50
	25200650	SODDING, SALT TOLERANT (SPECIAL)	SQ YD	250			250
*	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1800			1800
*	44000600	SIDEWALK REMOVAL	SQ FT	1800			1800
	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	695			695
	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	60			60
	81603030	UNIT DUCT, 600V, 2-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	330			330
	81603090	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	6050			6050
	81702440	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0	FOOT	80			80
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	650			650
	82102150	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 150 WATT	EACH	32			32
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	4			4
	83001400	LIGHT POLE, ALUMINUM, 35 FT. M.H. 10 FT. DAVIT ARM	EACH	36			36
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	300			300
	83600215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	10			10
	83800105	BREAKAWAY DEVICE, TRANSFORMER BASE, 11.5 INCH BOLT CIRCLE	EACH	16			16
	84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	15			15
	84200705	LIGHTING FOUNDATION REMOVAL, PARTIAL	EACH	15			15
	XX001399	UNIT DUCT, BORED AND PULLED	FOOT	4600			4600
	XX001579	LIGHTING CONTROLLER, CONSOLE TYPE	EACH	2			2
	XX006937	GROUND ROD, 5/8" DIA. X 10 FT.	EACH	38			38
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1			1
	XX008228	LUMINAIRE, SODIUM VAPOR, 70 WATT, COACH LIGHT	EACH	32			32
	XX008229	DECORATIVE LIGHT POLE BASE	EACH	20			20

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 Com Ed.
- 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 CITY.
- 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.

\* - INDICATES SPECIALTY ITEMS

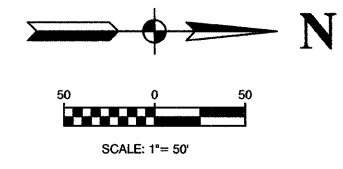
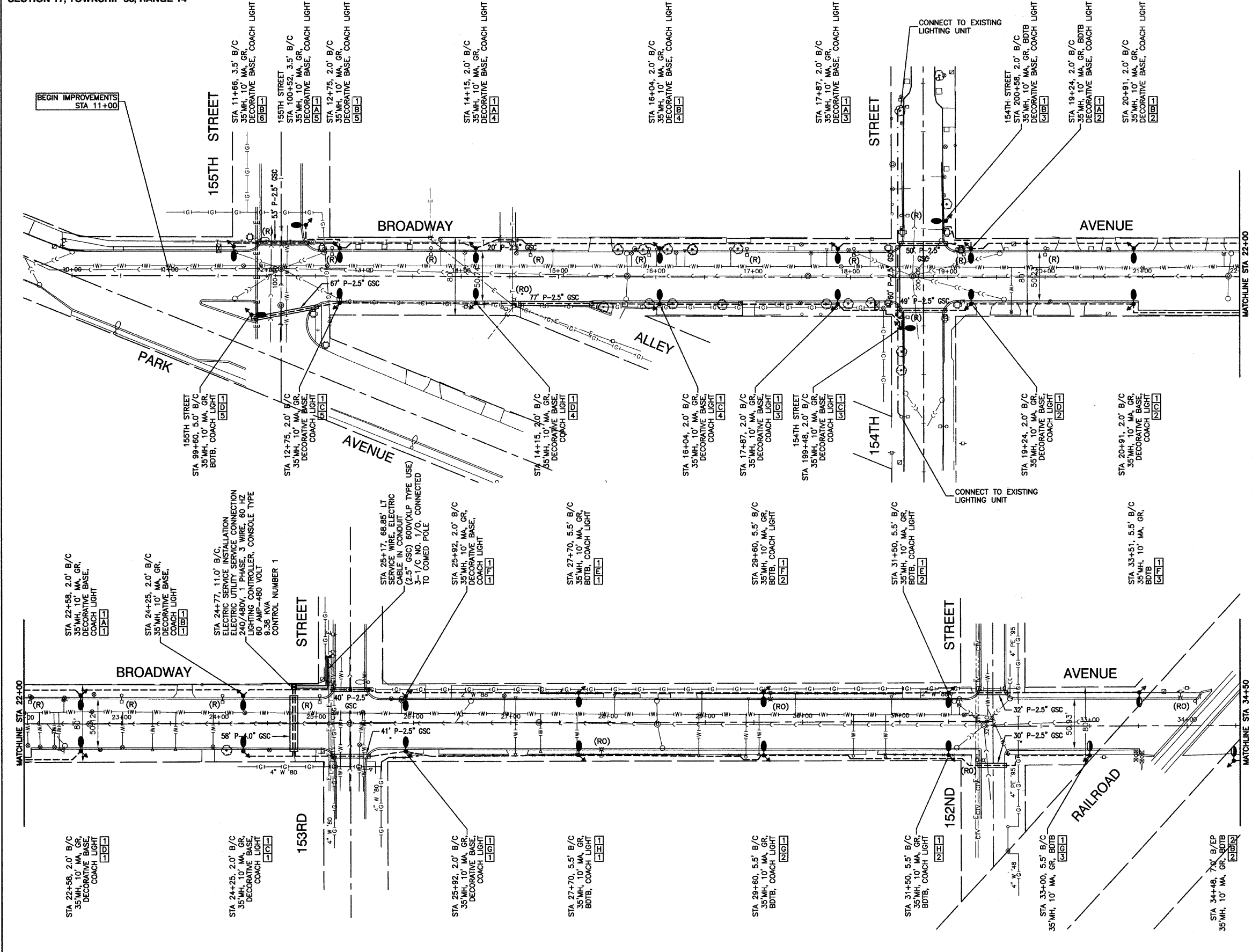


PLAN	DATE
REVISIONS	BY
PLOTTED	
ALIGNMENT CHECKED	
GRADE CHECKED	
GRID FILE NAME	
NO.	

PROFILE	DATE
REVISIONS	BY
PLOTTED	
GRADES CHECKED	
BLM. NOTED	

FILE NAME = 09307-QUAN-01	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BROADWAY AVENUE STREET LIGHTING PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD) SUMMARY OF QUANTITIES	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = N/A	CHECKED -- EJT	REVISED --	1025			09-00192-00-LT	COOK	10	2	
PLOT DATE = 10-19-09	DRAWN -- MJD	REVISED --	CONTRACT NO. 63286							
CHECKED -- PAP	REVISED --	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (333)								

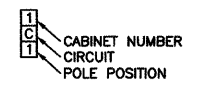
SECTION 17, TOWNSHIP 36, RANGE 14



LEGEND:

- ○ EXISTING STREET LIGHT
- ● PROPOSED STREET LIGHT-250W HPS
- ● PROPOSED STREET LIGHT-150W HPS
- □ EXISTING CONTROLLER
- □ PROPOSED CONTROLLER, CONSOLE TYPE
- ⊥ COMED POWER POLE FOR SERVICE CONNECTION
- CONDUIT, PUSHED, GALVANIZED STEEL
- CONDUIT, TRENCHED, GALVANIZED STEEL
- UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
- UNIT DUCT, 600V, 2-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1" DIA., POLYETHYLENE
- ⊥ GR GROUND ROD, 5/8" DIA. x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT (SALVAGE)
- (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- B/EP BEHIND EDGE OF PAVEMENT
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 11.5" BOLT CIRCLE

POLE IDENTIFICATION



PLAN	REVISIONS	DATE
NO.	BY	
NO.	BY	
NO.	BY	
NO.	BY	

PROFILE	REVISIONS	DATE
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FILE NAME = 08307-PLAN-01

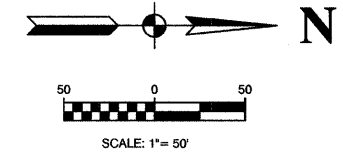
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	CHECKED - EJT	REVISED -
PLOT SCALE = 1"=50'	DRAWN - MJD	REVISED -
PLOT DATE = 10-19-09	CHECKED - PAP	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BROADWAY AVENUE STREET LIGHTING PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD) PLAN SHEET	
SCALE: 1"=50'	SHEET NO. 3 OF 10 SHEETS
STA. 11+00	TO STA. 34+50

F.A.U. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1025	09-00182-00-LT	COOK	10	3
CONTRACT NO. 63286				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (333)				

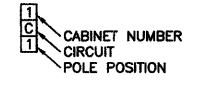




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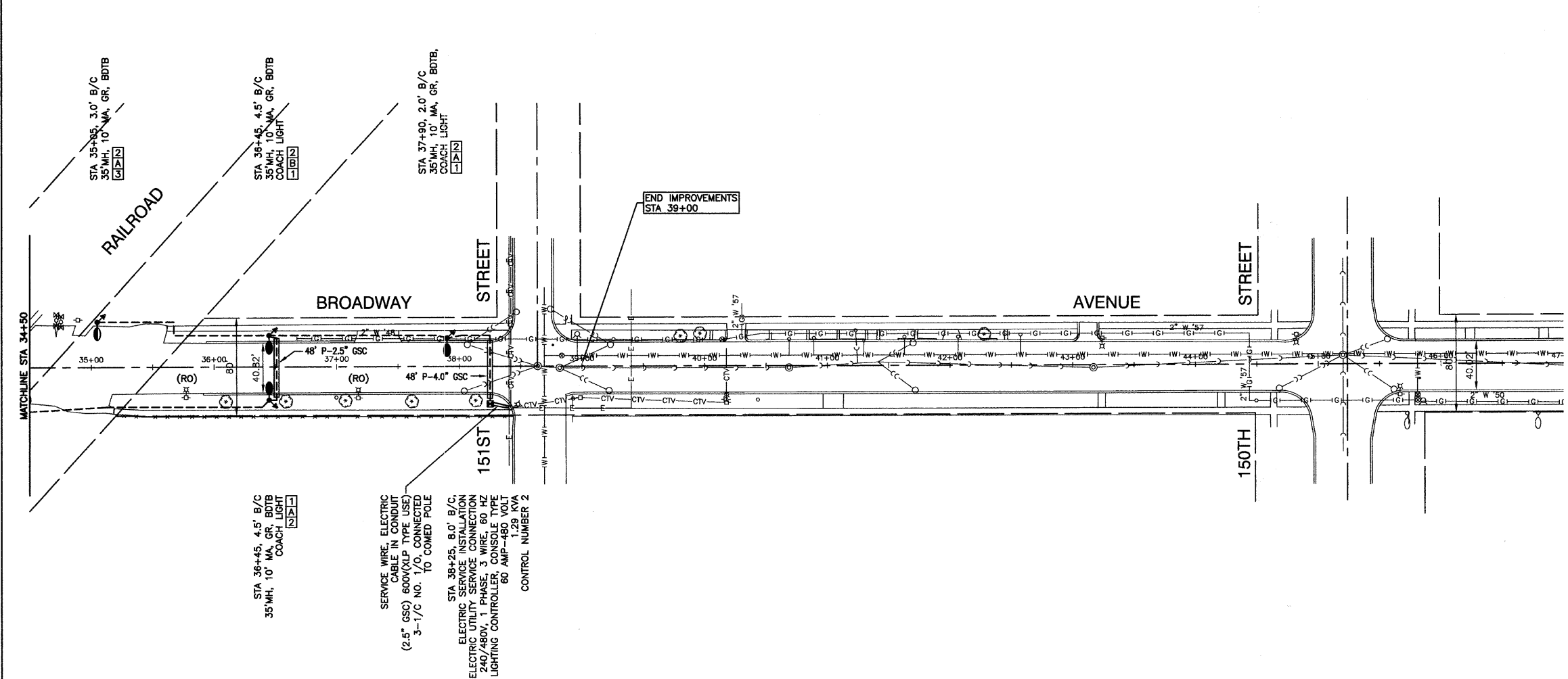
- ○ EXISTING STREET LIGHT
- ○ PROPOSED STREET LIGHT-250W HPS
- ○ PROPOSED STREET LIGHT-150W HPS
- EXISTING CONTROLLER
- PROPOSED CONTROLLER, CONSOLE TYPE
- ⊥ COMED POWER POLE FOR SERVICE CONNECTION
- P — CONDUIT, PUSHED, GALVANIZED STEEL
- T — CONDUIT, TRENCHED, GALVANIZED STEEL
- UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1-1/4" DIA., POLYETHYLENE
- UNIT DUCT, 600V, 2-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1" DIA., POLYETHYLENE
- ⚡ GR GROUND ROD, 5/8" DIA. x 10'
- (R) REMOVAL OF EXISTING STREET LIGHT (SALVAGE)
- (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
- MH MOUNTING HEIGHT
- MA MAST ARM
- B/C BACK OF CURB
- B/EP BEHIND EDGE OF PAVEMENT
- BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 11.5" BOLT CIRCLE

**POLE IDENTIFICATION**



PLAN	REVISERS	DATE
NO.	PLOTTED	
	ALIGNMENT CHECKED	
	GRADE CHECKED	
	ADD FILE NAME	

PROFILE	REVISERS	DATE
NO.	PLOTTED	
	GRADES CHECKED	
	BY	



FILE NAME = 08307-PLAN-01

USER NAME =	DESIGNED -- DWS	REVISION --
	CHECKED -- EJT	REVISION --
PLOT SCALE = 1"=50'	DRAWN -- MJD	REVISION --
PLOT DATE = 10-19-09	CHECKED -- PAP	REVISION --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BROADWAY AVENUE STREET LIGHTING  
PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD)  
PLAN SHEET

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1025	09-00182-00-LT	COOK	10	4
FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO. 63286	
FED. AID PROJECT ARA-9003 (333)				

SCALE: 1"=50' SHEET NO. 4 OF 10 SHEETS STA. 34+50 TO STA. 39+00

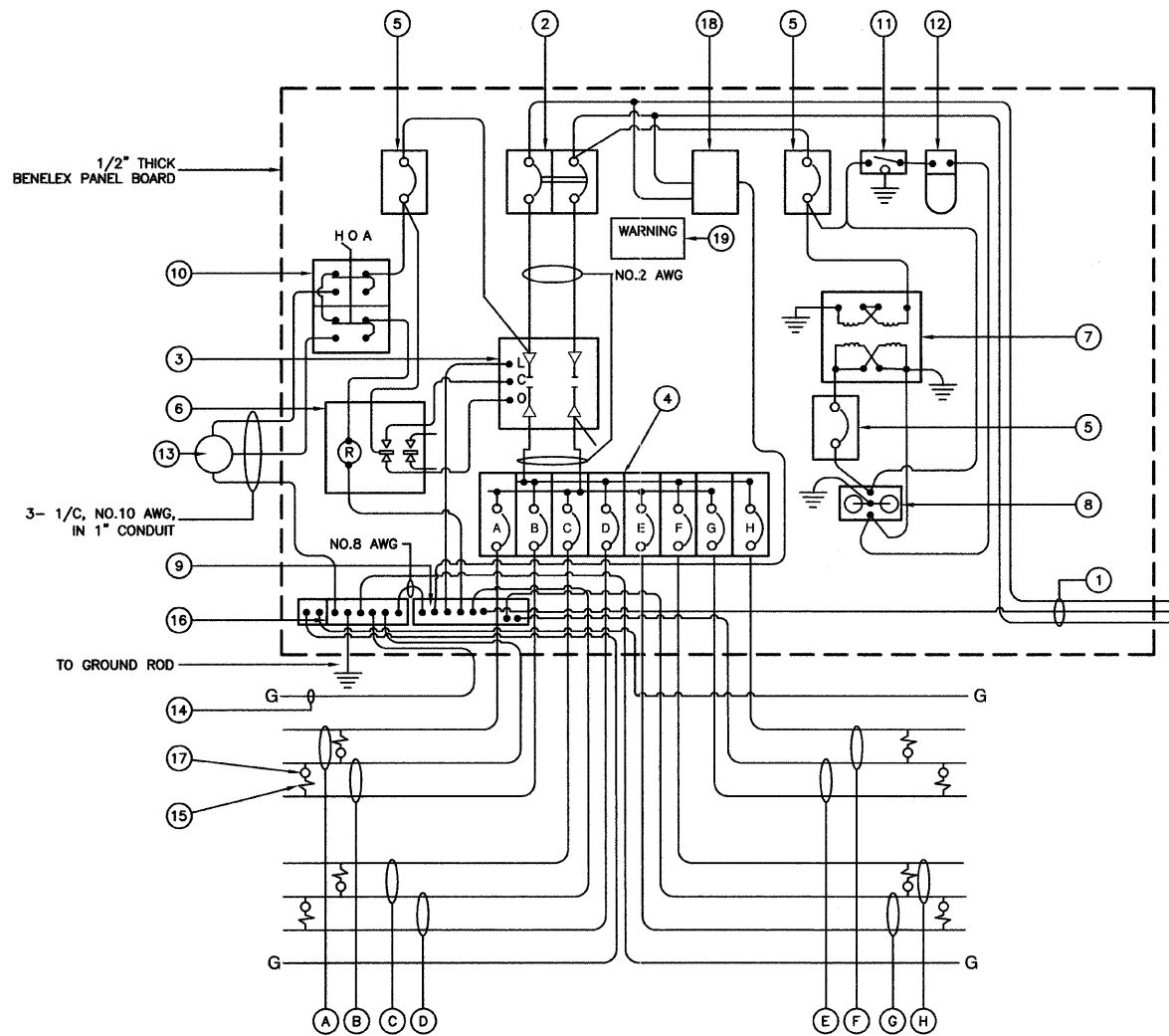




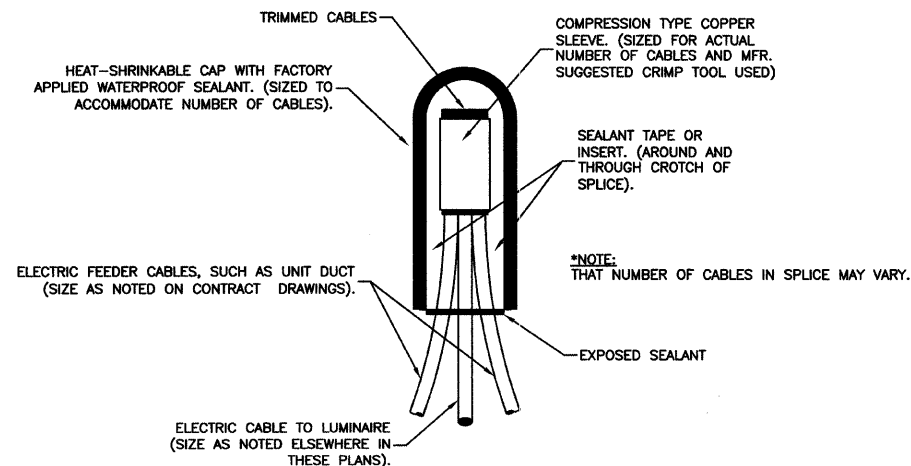


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FILE NAME	



CONTROLLER WIRING DIAGRAM



SPLICING ELECTRIC CABLES  
BASIC MATERIALS AND METHODS

CONTROLLER WIRING DIAGRAM LEGEND

- ① 3-1/C, NO. 1/0 600V SERVICE WIRE IN 2" DIA GALVANIZED STEEL CONDUIT FOR 240/480 VOLT, 1Ø, 3 WIRE, 60HZ. SERVICE.
  - ② (1) 60 AMP MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 V.
  - ③ (1) 60 AMP CONTACTOR SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, 600 VOLT
  - ④ (4) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 240 VOLTS.
  - ⑤ (3) 20 AMP CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA 14000 AMP AT 240 V.
  - ⑥ (1) 20 AMP, 1 POLE DOUBLE THROW, 240 VOLT RELAY
  - ⑦ (1) 1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480/120 X 240 VOLT, 60HZ.
  - ⑧ (1) 20 AMP, 120 VOLT DUPLEX GFCI RECEPTACLE.
  - ⑨ NEUTRAL BUS BAR, 1/4"x1"x12" LONG MOUNTED ON PANEL WITH TAPS.
  - ⑩ 3 POSITION SELECTOR SWITCH
  - ⑪ SWITCH FOR LIGHTING FIXTURE MOUNTED IN BOX.
  - ⑫ WEATHER-PROOF INCANDESCENT LIGHTING FIXTURE WITH 60 WATT, 120 V LAMP.
  - ⑬ PHOTOCCELL MOUNTED TOP OF NEAREST LIGHT POLE, 240 V.
  - ⑭ NO.2 AWG INSULATED GROUND WIRE
  - ⑮ IN-LINE FUSEHOLDER WITH FUSE AS NOTED IN FUSE TABLE
  - ⑯ GROUND BUS BAR 1/4"x1"x12" MINIMUM LENGTH MOUNTED ON PANEL WITH TAPS.
  - ⑰ LUMINAIRE
  - ⑱ WARNING PLATE TO READ: WARNING, MAINTENANCE CIRCUIT IS LIVE WHEN MAIN BREAKER IS SWITCHED OFF.
- (A) CIRCUIT (RED)                      (E) CIRCUIT (RED) - CONTROLLER NO. 1 ONLY  
 (B) CIRCUIT (BLACK)                (F) CIRCUIT (BLACK) - CONTROLLER NO. 1 ONLY  
 (C) CIRCUIT (BLACK)                (G) CIRCUIT (RED) - CONTROLLER NO. 1 ONLY  
 (D) CIRCUIT (BLACK)                (H) CIRCUIT (BLACK) - CONTROLLER NO. 1 ONLY

GENERAL NOTES FOR CONTROL CABINET

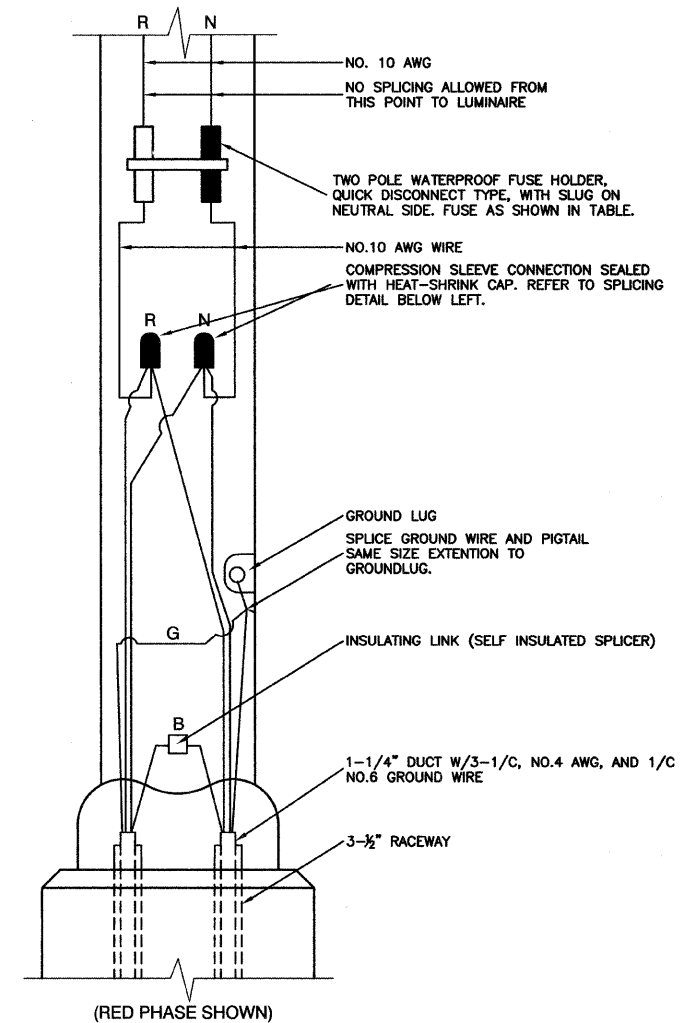
- ENTIRE CONTROL CABINET SHALL BE GROUNDED.
- ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
- GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
- ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS OTHERWISE SPECIFIED.
- CABINET WIRING INSULATION TO BE TYPE XHHW OR APPROVED EQUAL.
- THE CONTROLLER SHALL BE UL LISTED, NEMA 3R, AND BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.

LIGHTING GENERAL NOTES

- ALL WORK TO CONFORM TO THE MOST RECENT 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 C.E. Co. FOR APPROVAL OF LOCATION.
- FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL C.E. Co.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (I.E. DECORATIVE ROCKS, SHRUBS, PLANTS, ECT.) 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 CONDUIT, MAGNETIC 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 CITY OR STATE.
- THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENT FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "TRENCH AND BACK FILL 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 WILL 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 ACCORDINGLY.
- EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
- UNDERGROUND SPLICES OF LIGHTING CONDUCTORS WILL NOT BE ALLOWED EXCEPT AT LIGHT POLE BASE.
- CONDUITS AND UNIT DUCTS MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREE, BUSHES, DRAINS AND OTHER UTILITIES.

NOMINAL WATTAGE	FUSE SIZE
250	3.5 AMP
150 COBRA HEAD PLUS 70 COACH	3.0 AMP

LUMINAIRE FUSE SIZE TABLE



POLE HANDHOLE WIRING DIAGRAM  
(TYPICAL FOR SINGLE LUMINAIRE INSTALLATION)

NOTE:  
ALLOW 36" LOOP OF CABLES TO INSURE SUFFICIENT SLACK FOR WITHDRAWAL OF THE CONNECTORS OUTSIDE OF THE POLE HANDHOLE.



FILE NAME = 08907-DTLS-01	USER NAME =	DESIGNED -- DWS	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BROADWAY AVENUE STREET LIGHTING PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD) STREET LIGHTING DETAILS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED -- EJT	REVISED --	1025			09-00182-00-LT	COOK	10	7	
PLOT SCALE = N/A	DRAWN -- MJD	REVISED --	CONTRACT NO. 63286							
PLOT DATE = 10-19-09	CHECKED -- PAP	REVISED --	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (333)							
				SCALE: N/A	SHEET NO. 7 OF 10 SHEETS	STA. N/A	TO STA. N/A			



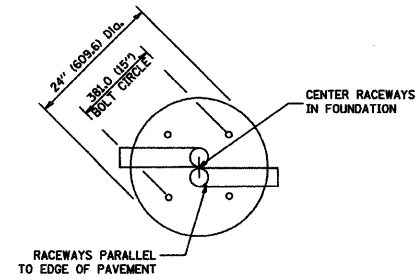


DATE	
BY	
REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
NOTE BOOK	
NO.	

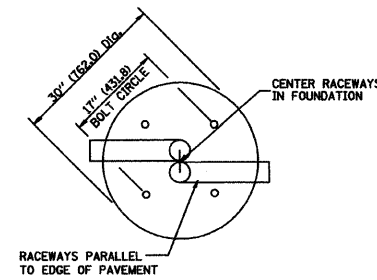
DATE	
BY	
REVISIONS	
PLANNED	
GRADES	
CHECKED	
NOTE BOOK	
NO.	

LIGHT POLE FOUNDATION DEPTH TABLE  
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

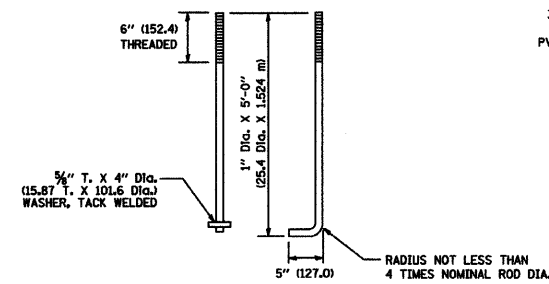
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT.	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74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



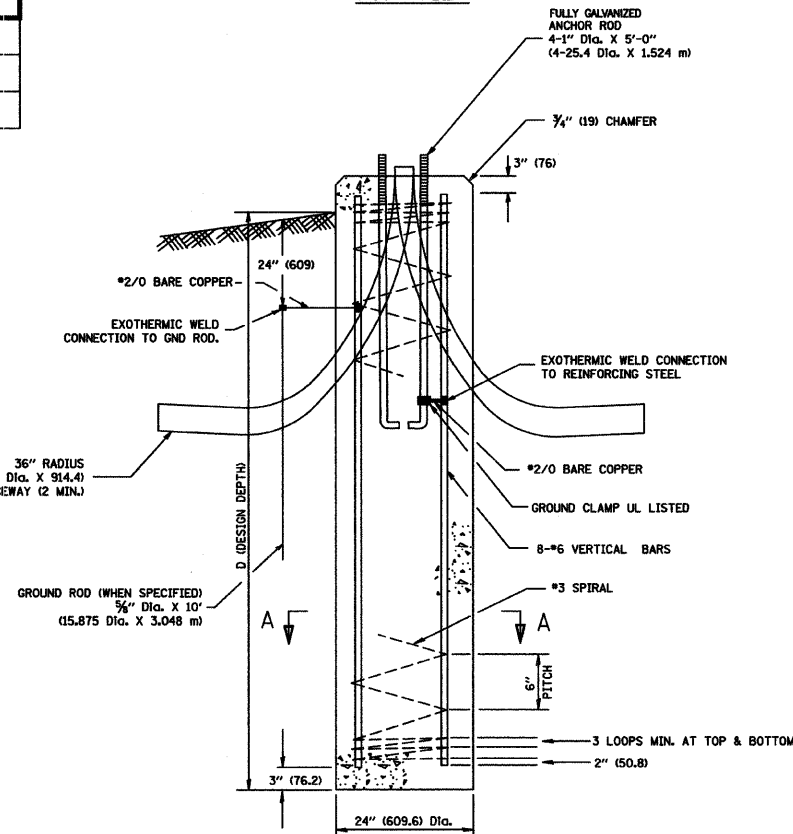
TOP VIEW



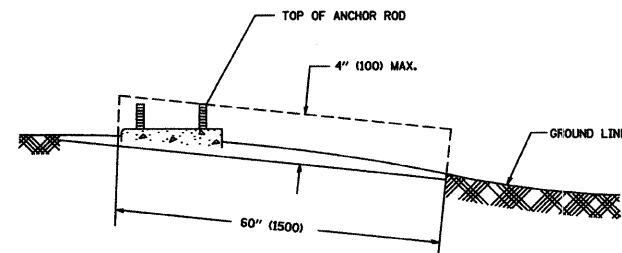
TOP VIEW



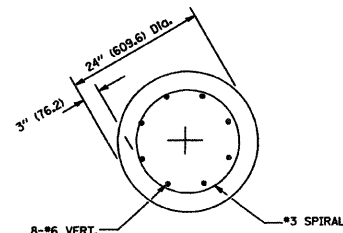
ANCHOR ROD DETAIL



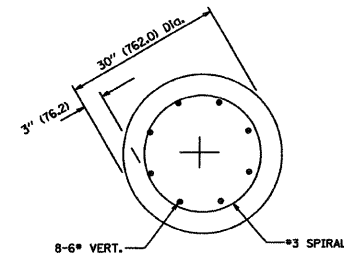
FOUNDATION DETAIL



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 SL 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 UM6 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 = 06307-DTLS-01

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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BROADWAY AVENUE STREET LIGHTING  
PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD)  
STREET LIGHTING DETAILS

SCALE: N/A SHEET NO. 9 OF 10 SHEETS STA. N/A TO STA. N/A

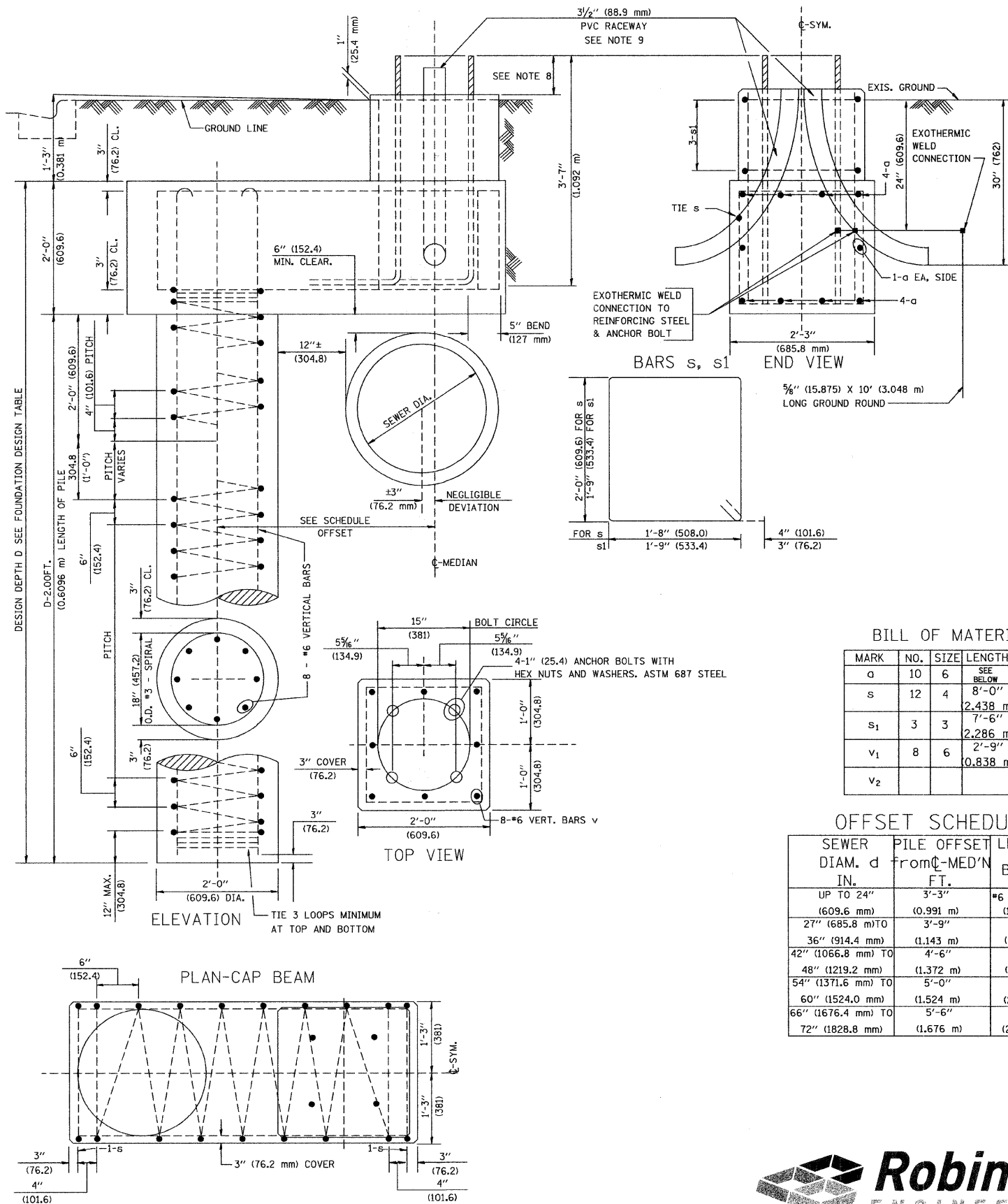
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1025	09-00182-00-LT	COOK	10	9
CONTRACT NO. 63286				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (333)				

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)
<b>STIFF CLAY</b>	<b>7'-0" (2.134 m)</b>	<b>8'-0" (2.438 m)</b>	<b>8-#6X6'-6" (1.981 m)</b>	<b>#3X66' (20.112 m)</b>	<b>8-#6X7'-6" (2.286 m)</b>	<b>#3X76' (23.165 m)</b>
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 ERECTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2.438 m)	□
s <sub>1</sub>	3	3	7'-6" (2.286 m)	□
v <sub>1</sub>	8	6	2'-9" (0.838 m)	—
v <sub>2</sub>				

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"	5'-9"
36" (914.4 mm) TO	(1.143 m)	(1.753 m)
42" (1066.8 mm) TO	4'-6"	6'-6"
48" (1219.2 mm) TO	(1.372 m)	(1.981 m)
54" (1371.6 mm) TO	5'-0"	7'-0"
60" (1524.0 mm) TO	(1.524 m)	(2.134 m)
66" (1676.4 mm) TO	5'-6"	7'-6"
72" (1828.8 mm) TO	(1.676 m)	(2.286 m)

DATE	BY
PLANNING	
DESIGN	
CHECKING	
DATE	BY
REVISIONS	
NO.	

DATE	BY
PLANNING	
DESIGN	
CHECKING	
DATE	BY
REVISIONS	
NO.	

FILE NAME = 06307-DTLS-01

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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BROADWAY AVENUE STREET LIGHTING  
PARK AVENUE TO 151ST STREET (SIBLEY BOULEVARD)  
STREET LIGHTING DETAILS

SCALE: N/A SHEET NO. 10 OF 10 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1025	09-00182-00-LT	COOK	10	10
CONTRACT NO. 63286				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (333)				

