

08-03-12 LETTING ITEM 006

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

F. A. L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-00-LT	COOK	10	1
STA. 10+00		TD STA. 45+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT M-9003(780)	

CONTRACT #63721

INDEX OF SHEETS

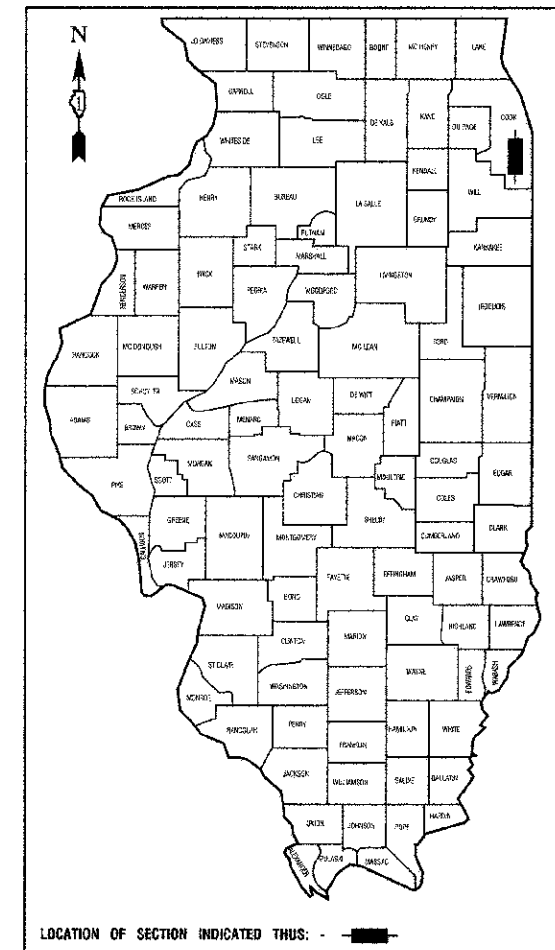
1. COVER SHEET
2. SUMMARY OF QUANTITIES
- 3.-4. STREET LIGHTING PLANS
5. SINGLE LINE DIAGRAM
- 6.-10. STREET LIGHTING DETAILS

HIGHWAY STANDARDS

- | | |
|-----------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 701502-04 | URBAN LANE CLOSURE, 2L 2W, UNDIVIDED |
| 701606-08 | URBAN LANE CLOSURE, MULTILANE, 2W, WITH MOUNTABLE MEDIAN |
| 701701-08 | URBAN LANE CLOSURE, MULTILANE INTERSECTION |
| 701901-02 | TRAFFIC CONTROL DEVICES |

**FAU 2796 (CENTRAL AVENUE)
122ND STREET TO 115TH STREET
STREET LIGHTING
L.A. SECTION NO.: 10-00091-00-LT
PROJECT NO.: M-9003(780)
VILLAGE of ALSIP
COOK COUNTY
C-91-372-11**

RANGE 13 E 3RD PRINCIPAL MERIDIAN



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved: _____
President, Village of Alsip

Prepared: _____
District 1 Engineer of Local Roads & Streets

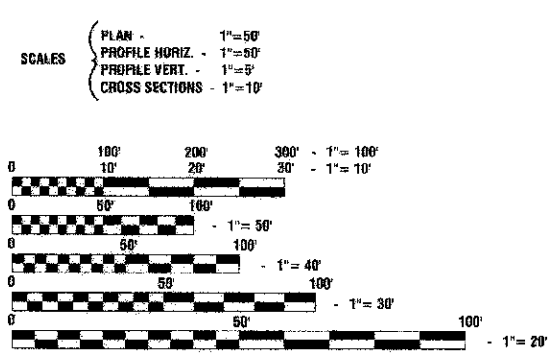
Released for Bid Based on Limited Review: _____
Date: MAY 23, 2012
Deputy Director of Highways, Region 1 Engineer

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PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

3/5/12

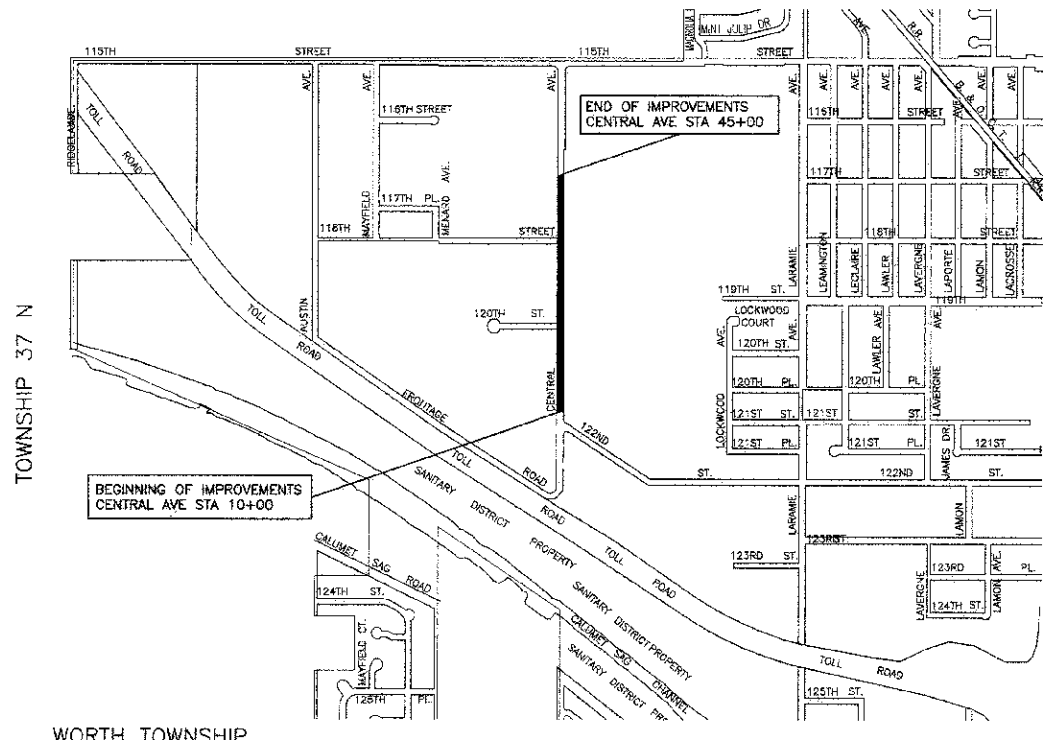
PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE; (847) 705-4406, SCHAUMBURG, IL
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700



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. 63721



LOCATION MAP

GROSS LENGTH=3,500.0 FEET=0.66 MILES
NET LENGTH=3,235.0 FEET=0.61 MILES

SUMMARY OF QUANTITIES					SAFETY
S.I.	CODE NO.	PAY ITEM	UNIT	QUAN	021
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	504	504
	25200110	SODDING, SALT TOLERANT	SQ YD	504	504
	25200200	SUPPLEMENTAL WATERING	UNIT	76	76
	67100100	MOBILIZATION	L SUM	1	1
	70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	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
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1
	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	1
	81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	525	525
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	50	50
	81603090	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	3735	3735
	81702440	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 1/0	FOOT	100	100
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	15	15
	82500360	LIGHTING CONTROLLER, BASE MOUNTED, 480 VOLT, 100 AMP	EACH	1	1
	83002500	LIGHT POLE, ALUMINUM, 40 FT. M.H., 12 FT. DAVIT ARM	EACH	14	14
	83002600	LIGHT POLE, ALUMINUM, 40 FT. M.H., 15 FT. DAVIT ARM	EACH	1	1
	83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	91	91
	83800205	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	15	15
	84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	3	3
	84200804	REMOVAL OF POLE FOUNDATION	EACH	3	3
	X2130010	EXPLORATION TRENCH, SPECIAL	FOOT	200	200
	X8360215	LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET	FOOT	14	14
	Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	4	4

* - 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.
- CONTRACTOR SHALL CALL JULIE FOR UTILITY LOCATES. PRIOR TO CONSTRUCTION, ANY OVERHEAD CLEARANCE ISSUES SHOULD BE COORDINATED WITH COMED FOR APPROVAL.
- ALL CONDUIT TO BE 2 1/2" 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 INCLUDED IN THE COST OF THE CONTRACT.
- 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 INCLUDED IN THE COST OF 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. THE INSTALLATION OF THE TAPE SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER 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 INCLUDED IN THE COST OF 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.
- SHOULD THERE BE A DELAY BETWEEN THE TOPSOIL AND SODDING OPERATIONS, ALL MAJOR DISTURBED AREAS SHALL BE REQUIRED TO HAVE A SOIL EROSION CONTROL BLANKET INSTALLED.

FILE NAME = 1085 QUAN 01 - 1007 Q01

USER NAME =	DESIGNED -- PAP	REVISED --
	CHECKED --	REVISED --
PLOT SCALE =	DRAWN -- MED	REVISED --
PLOT DATE = 4-19-12	CHECKED -- ACAD	REVISED --

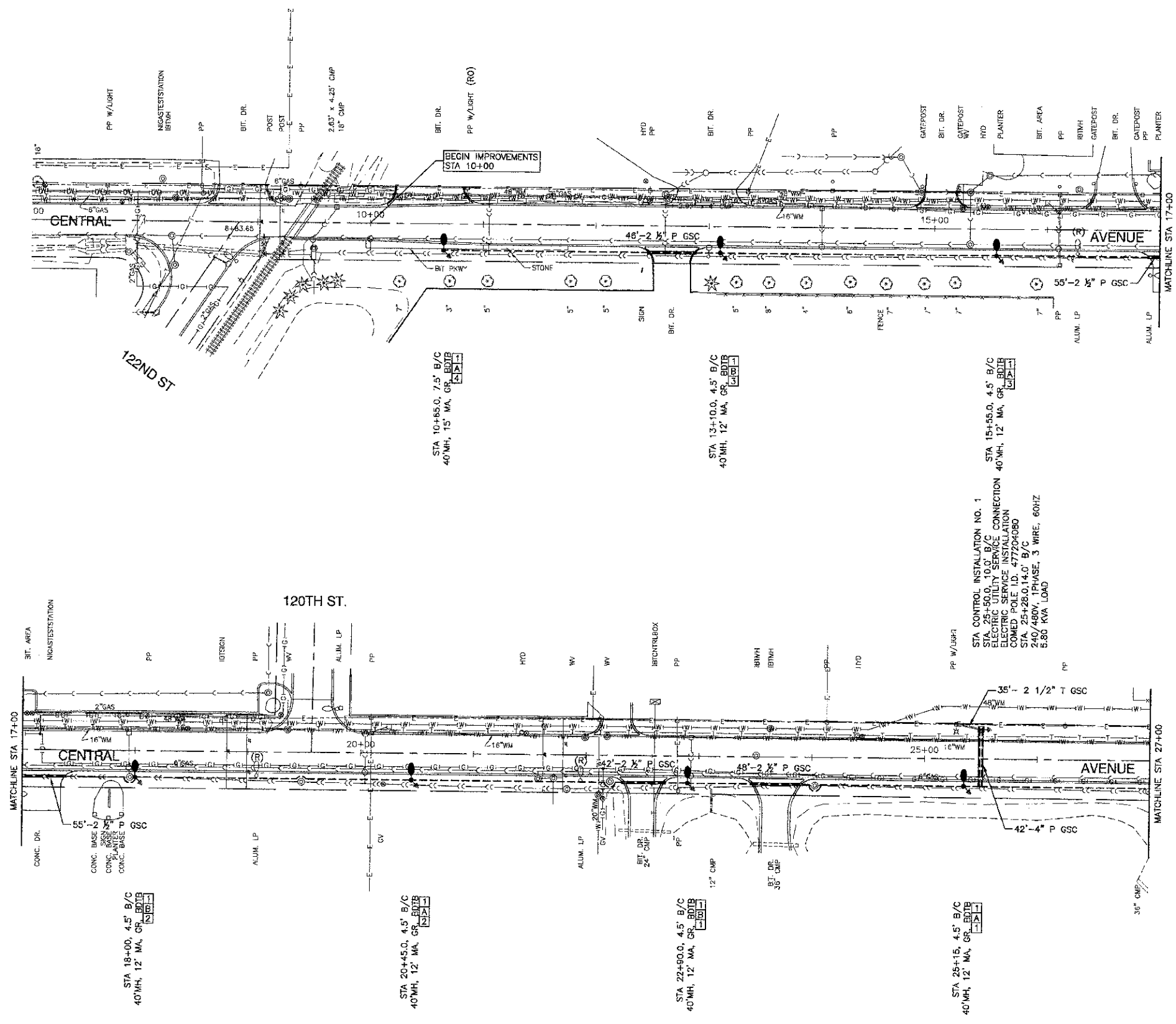
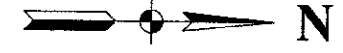
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET
CENTRAL AVENUE STREET LIGHTING
SUMMARY OF QUANTITIES

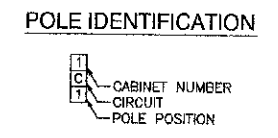
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-00-LT	COOK	10	2
CONTRACT NO. 63721			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJ. REC. M-9003(783)	

SCALE: SHEET NO. 2 OF 10 SHEETS STA. TO STA.

SECTION 20, TOWNSHIP 37, RANGE 13
 SECTION 21, TOWNSHIP 37, RANGE 13
 SECTION 28, TOWNSHIP 37, RANGE 13
 SECTION 29, TOWNSHIP 37, RANGE 13



- LEGEND:**
- EXISTING STREET LIGHT - 250W HPS
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER
 - UNDERGROUND CONDUIT, PUSHED, GALVANIZED STEEL
 - UNDERGROUND CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, 3-1/4" NO.4 AWG AND NO.6 GROUND, 600V IN 1-1/4" DUCT
 - SERVICE WIRE, 3-1/4" NO. 1/0 AWG.
 - * 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
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE



FILE NAME = 10486-PLAN-01 - 100T.P01	USER NAME =	DESIGNED — PAP	REVISED —
		CHECKED —	REVISED —
	PLOT SCALE =	DRAWN — MED	REVISED —
	PLOT DATE = 4-19-12	CHECKED — ACAD	REVISED —

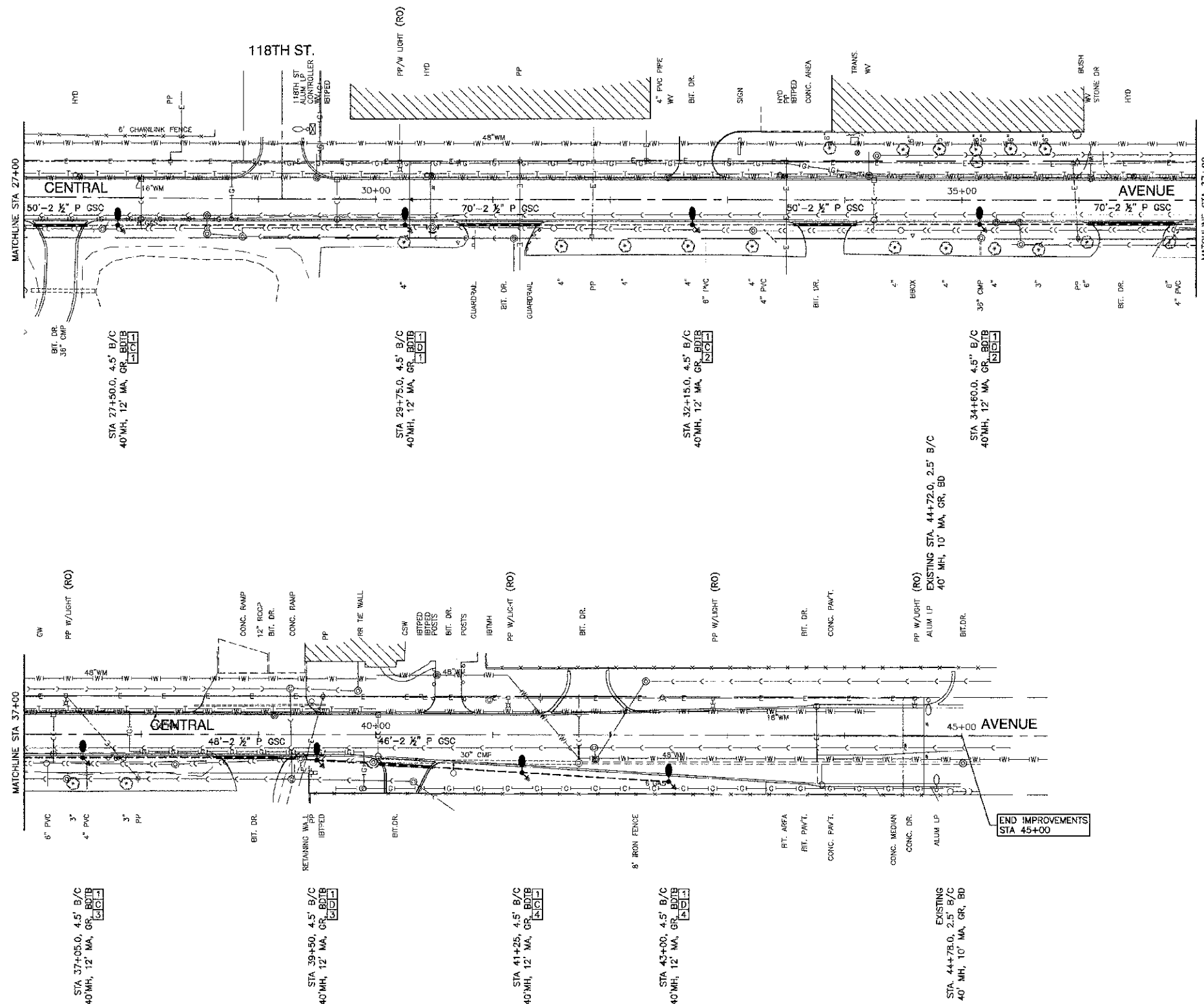
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET
 CENTRAL AVENUE STREET LIGHTING
 IMPROVEMENT PLAN

SCALE: 1"=50' SHEET NO. 3 OF 10 SHEETS STA. TO STA.

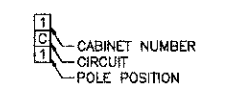
FAU RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-30-LT	COOK	10	3
CONTRACT NO. 63721				
FED. ROAD DIST. NO. 1 ILL. NOS. FED. AID PROJECT. M-9003(780)				

SECTION 20, TOWNSHIP 37, RANGE 13
 SECTION 21, TOWNSHIP 37, RANGE 13
 SECTION 28, TOWNSHIP 37, RANGE 13
 SECTION 29, TOWNSHIP 37, RANGE 13



- LEGEND:**
- EXISTING STREET LIGHT - 250W HPS
 - PROPOSED STREET LIGHT-250W HPS
 - PROPOSED CONTROLLER
 - UNDERGROUND CONDUIT, PUSHED, GALVANIZED STEEL
 - UNDERGROUND CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, 3-1/C, NO.4 AWG AND NO.6 GROUND, EGGV IN 1-1/4\"/>

POLE IDENTIFICATION



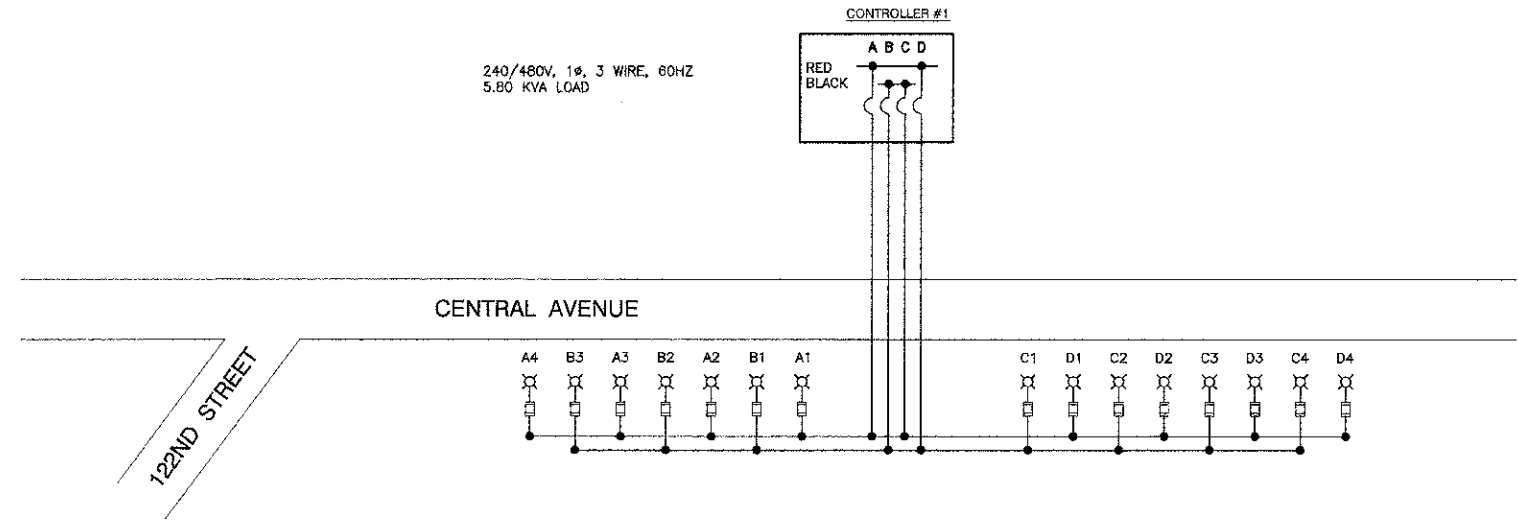
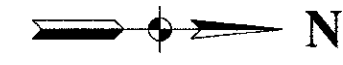
FILE NAME = 1085-PLAN-01 - 1001 P02
 USER NAME =
 PLOT SCALE =
 PLOT DATE = 4-19-12

DESIGNED	PAP	REVISED	
CHECKED		REVISED	
DRAWN	MED	REVISED	
CHECKED	AGAD	REVISED	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

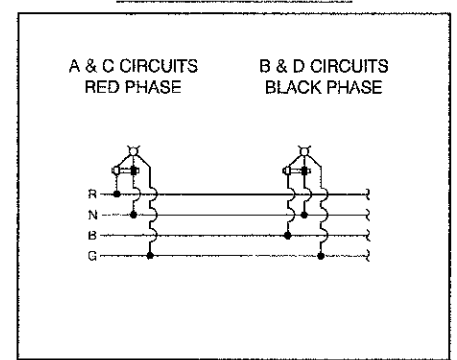
122ND STREET TO 115TH STREET
 CENTRAL AVENUE STREET LIGHTING
 IMPROVEMENT PLAN
 SCALE: 1"=50'
 SHEET NO. 4 OF 10 SHEETS
 STA. TO STA.

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-00-LT	COOK	10	4
CONTRACT NO. 63721				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-0003(780)				



LOAD TABULATIONS CONTROLLER #1			
CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	1,160	5.20	
B	870		3.90
C	1,160	5.20	
D	1,160		5.20
SUBTOTAL	4,350	10.40	9.10
TOTAL AMPS @ 240V = 19.50			

TYPICAL POLE WIRING



LEGEND

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

FILE NAME = 10485-DTL3-01 - 1DOT P01 (6)	USER NAME =	DESIGNED - PAP	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN - MED	REVISED -
	PLOT DATE = 4 19-12	CHECKED - ACAD	REVISED -

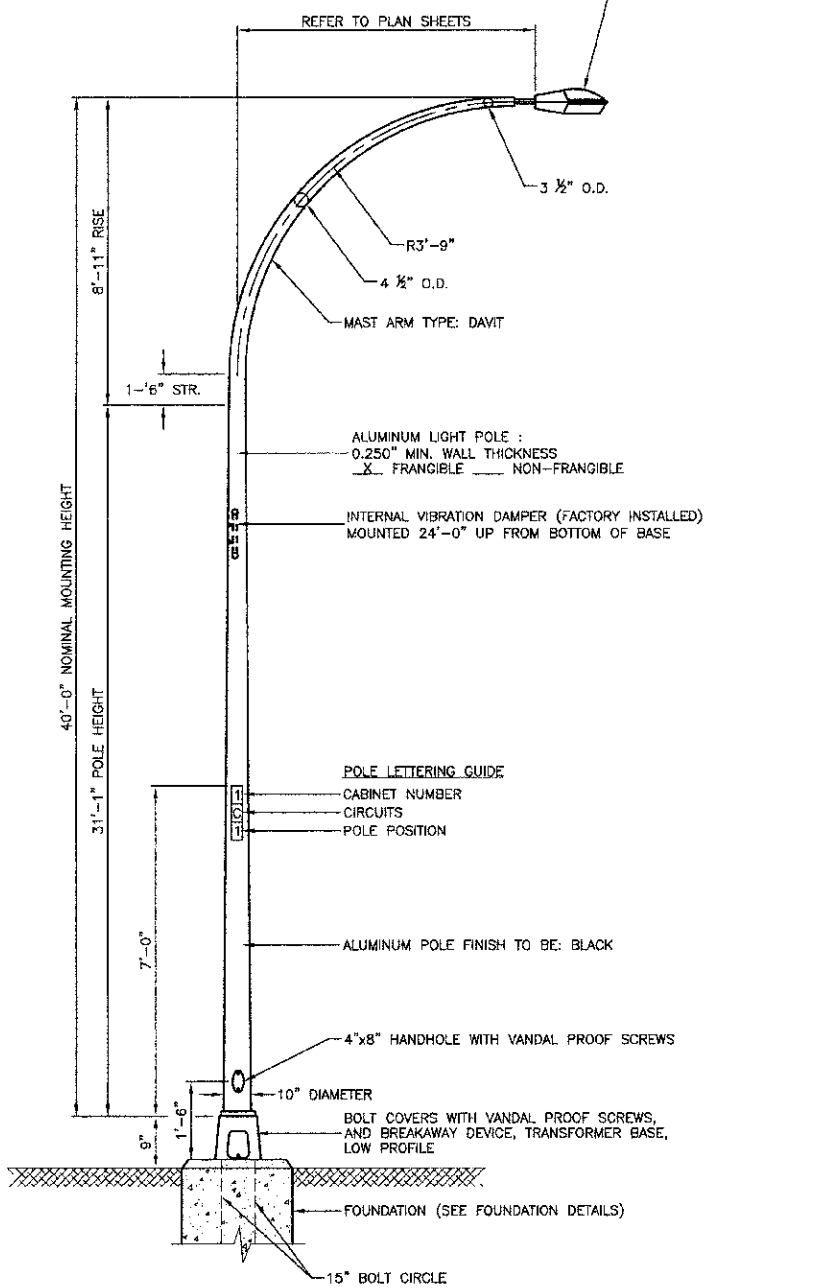
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET CENTRAL AVENUE STREET LIGHTING SINGLE LINE DIAGRAM			
SCALE:	SHEET NO. 5	OF 10 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-03-LT	COOK	10	5
CONTRACT NO. 63721				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-9003(780)				

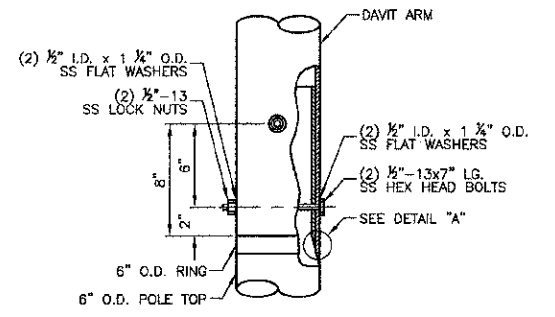
LUMINAIRE: FINISH TO BE BLACK
 250 WATT HIGH PRESSURE SODIUM LAMP
 240 VOLT BALLAST

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

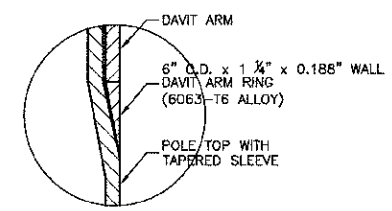


- NOTES:**
1. THE LIGHTING UNITS SHALL MEET AASHTO DESIGN CRITERIA. DESIGN FOR 90 M.P.H. WIND WITH 30% GUST AND 75 POUND LUMINAIRE HAVING AN E.P.A. OF 1.6 SQ. FT. AND PROPER ICE LOADING.
 2. ALUMINUM ALLOY 6063-T6 SHALL BE USED.

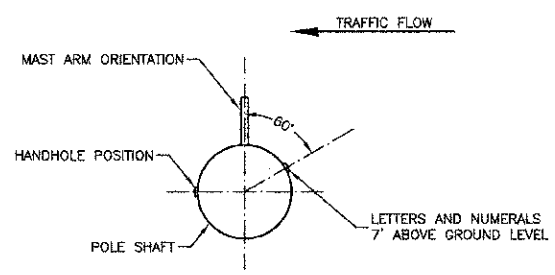
TYPICAL POLE INSTALLATION (40' MH)



CONNECTION DETAIL

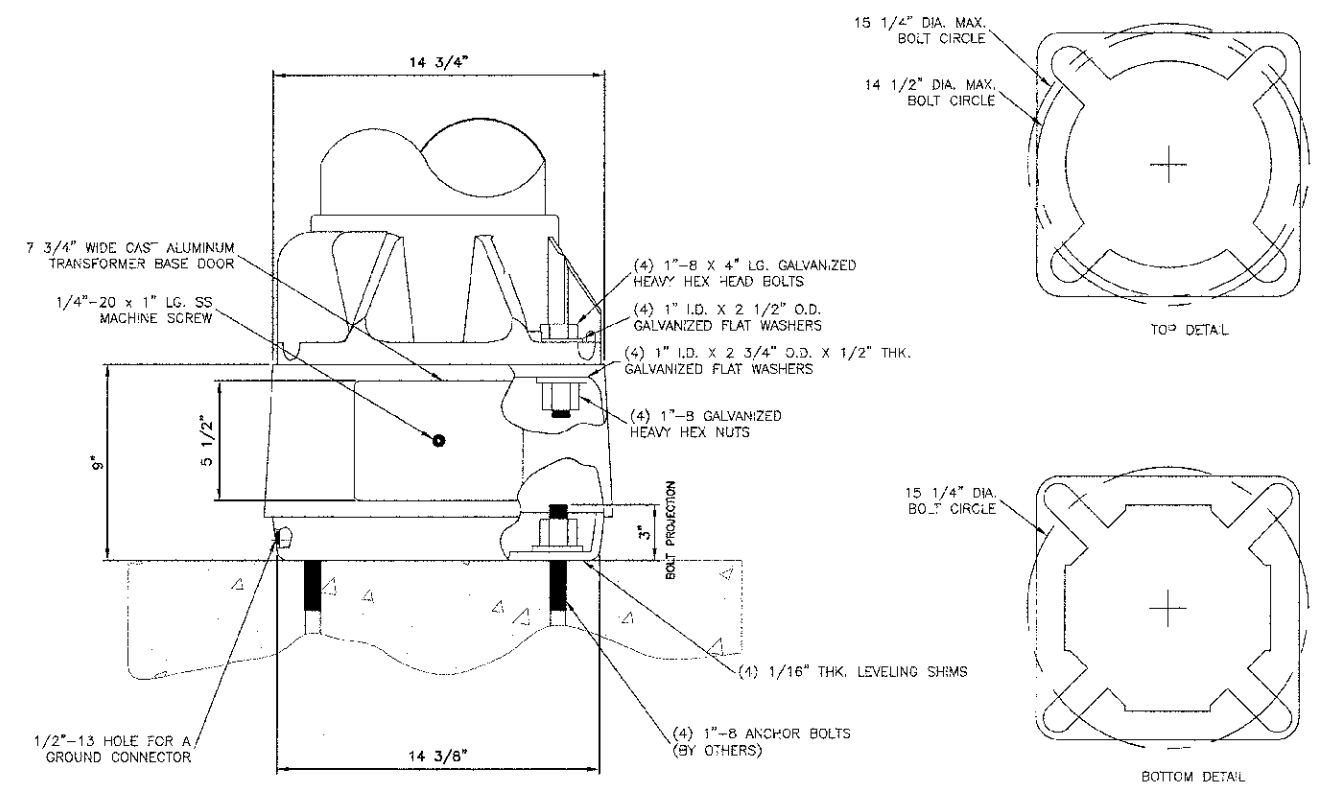


DETAIL "A"



POSITION OF HANDHOLE AND NUMERALS ON POLE

IMPORTANT NOTE:
 TRANSFORMER BASE AND LIGHTPOLE
 TO BE LEVELLED AS ONE UNIT.



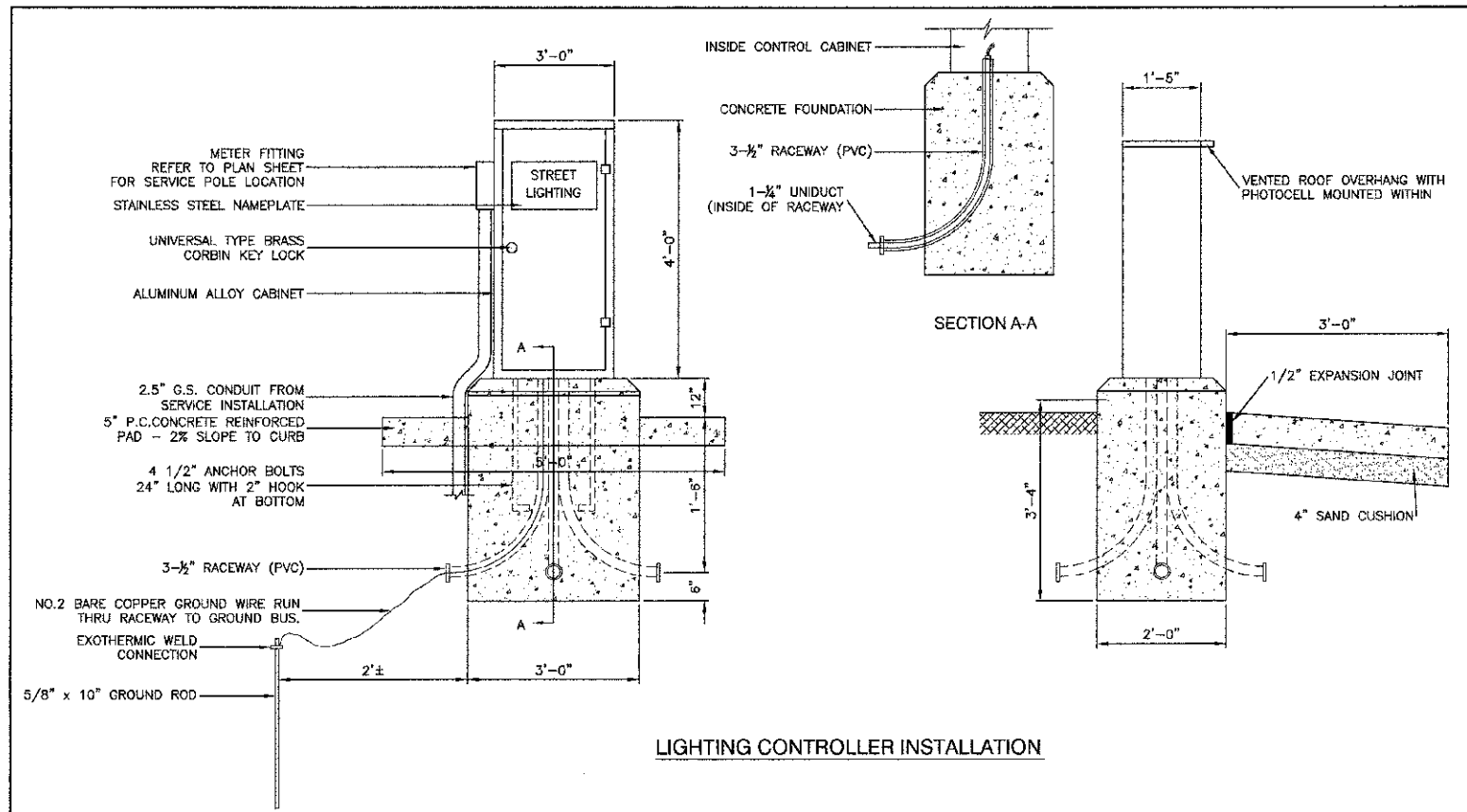
TRANSFORMER BASE DETAIL

TOP DETAIL

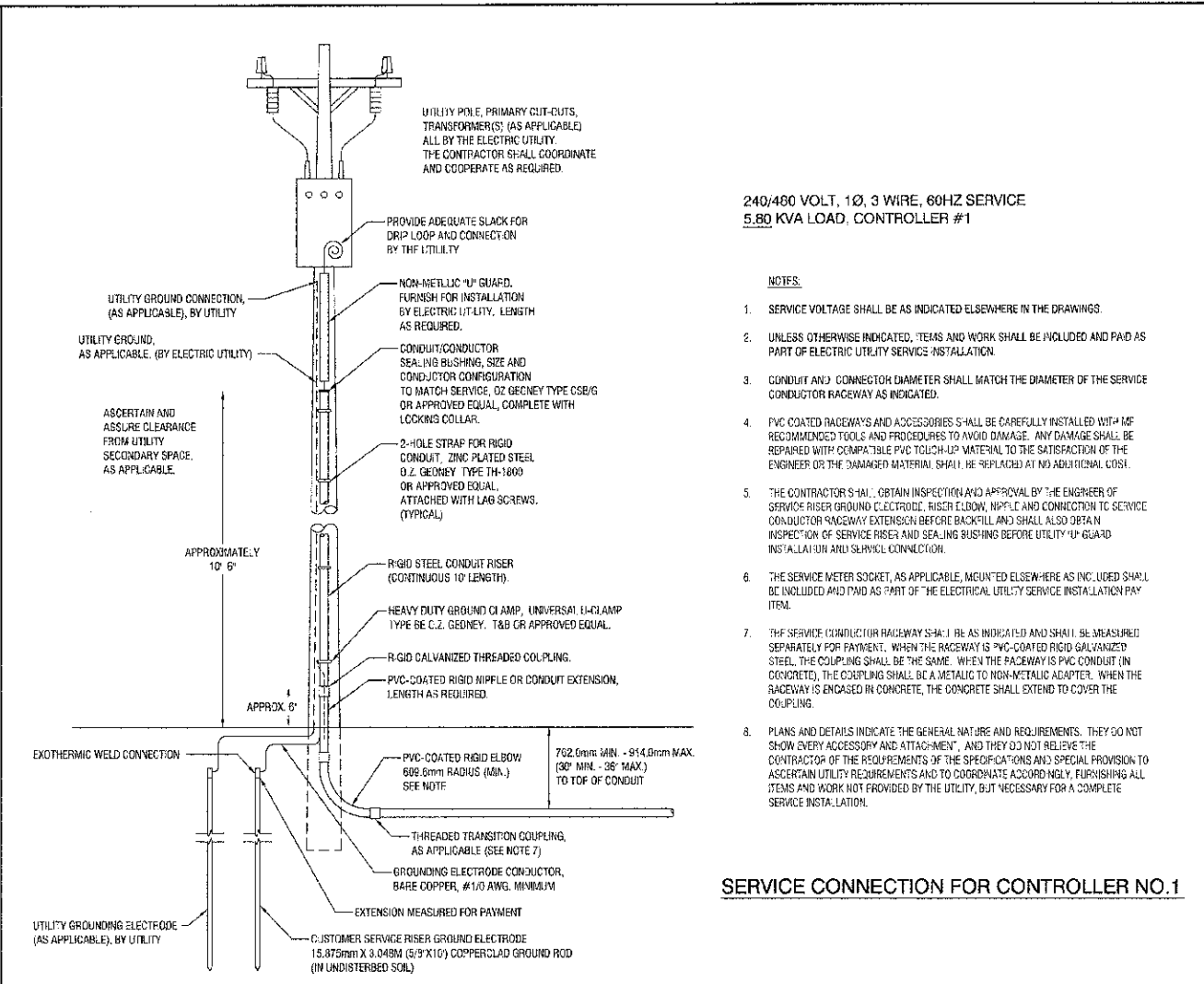
BOTTOM DETAIL

PROJECT NAME = 104R-DT-01 - 10/07/2011 USER NAME = PLOT SCALE = PLOT DATE = 4-19-12	DESIGNED -- PAP CHECKED --	REVISED -- REVISED -- REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	122ND STREET TO 115TH STREET CENTRAL AVENUE STREET LIGHTING STREET LIGHTING DETAILS		F.A.U. RITE 2786	SECTION 10-00091-00-LT	COUNTY COOK	TOTAL SHEETS 10	SHEET NO. 8	
	DRAWN -- MED CHECKED -- ACAD	REVISED -- REVISED --		SCALE: SHEET NO. 6 OF 10 SHEETS STA. TO STA.		CONTRACT NO. 63721		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-9003(780)			

FOR ANY OTHER INFORMATION CONTACT THE DESIGNER AT THE ADDRESS LISTED BELOW.



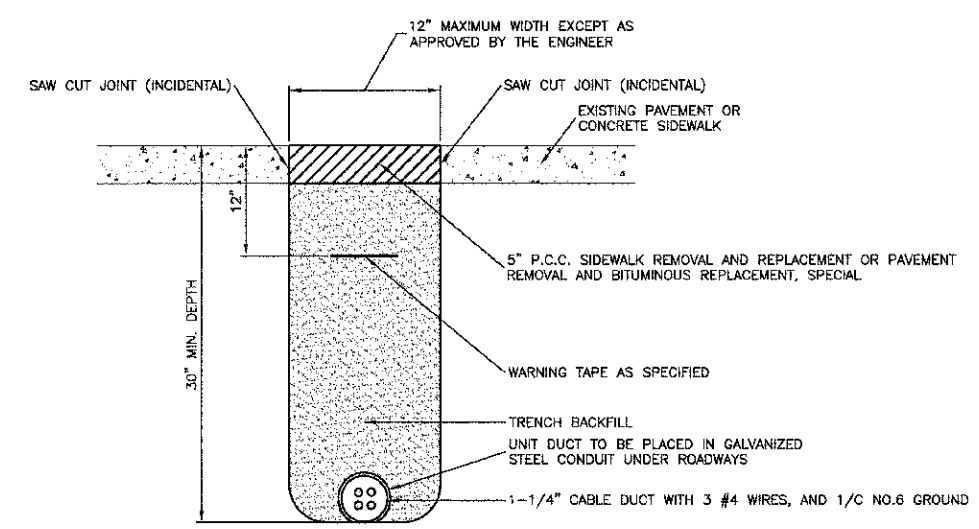
LIGHTING CONTROLLER INSTALLATION



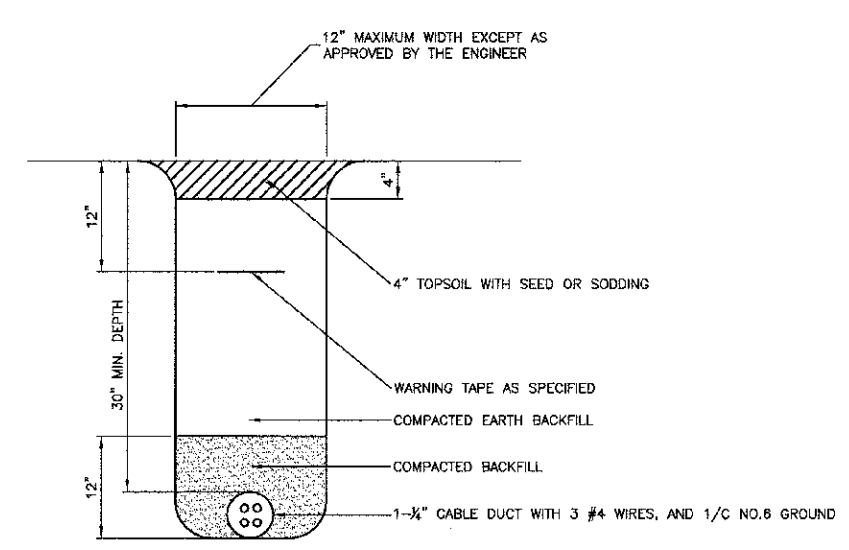
240/480 VOLT, 1Ø, 3 WIRE, 60HZ SERVICE
5.80 KVA LOAD, CONTROLLER #1

- NOTES:
- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
 - UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRIC UTILITY SERVICE INSTALLATION.
 - CONDUIT AND CONDUCTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
 - PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
 - THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY 'U' GUARD INSTALLATION AND PHYSICAL CONNECTION.
 - THE SERVICE METER SOCKET, AS APPLICABLE, MOUNTED ELSEWHERE AS INDICATED SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRICAL UTILITY SERVICE INSTALLATION PAY ITEM.
 - THE SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALLIC TO NON-METALLIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
 - PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISION TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION.

SERVICE CONNECTION FOR CONTROLLER NO.1

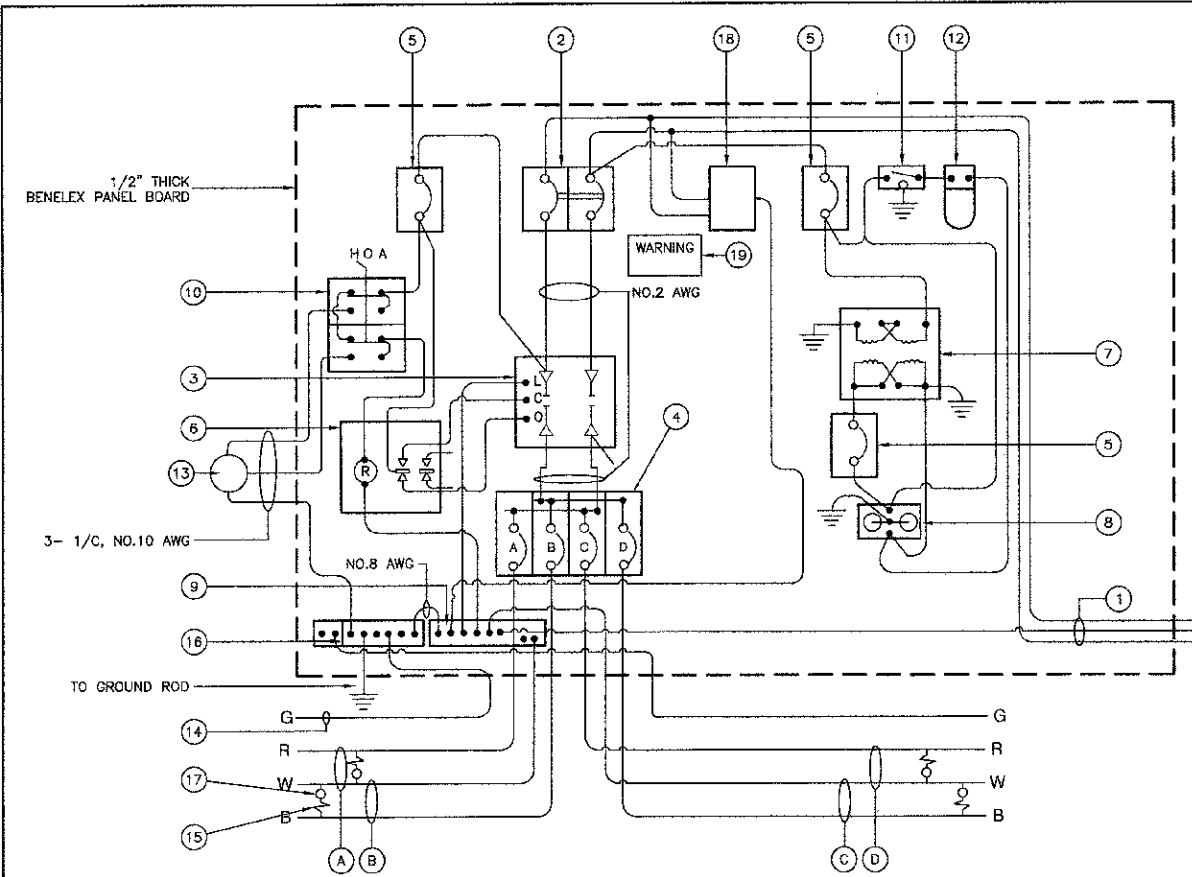


HOT-MIX ASPHALT PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL

FILE NAME = 10485-DLS-01 - 1001 P01 (2)	USER NAME =	DESIGNED -- PAP	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	122ND STREET TO 115TH STREET CENTRAL AVENUE STREET LIGHTING STREET LIGHTING DETAILS	F.A.U. RITE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE =	CHECKED --	REVISOR --	2796			10-0091-00-LT	COOK	10	7	
PLOT DATE = 4-19-12	DRAWN -- MED	REVISOR --	CONTRACT NO. 63721							
	CHECKED -- ACAD	REVISOR --	TED. ROAD DIST NO. 1 ILLINOIS FED. AID PROJECT M-6003(780)							
SCALE:		SHEET NO. 7 OF 10 SHEETS		STA. TO STA.						



CONTROLLER WIRING DIAGRAM

CONTROLLER WIRING DIAGRAM LEGEND

- ① 3-1/2" DIA GALVANIZED STEEL CONDUIT FOR 240/480 VOLT, 1Ø, 3 WIRE, 60HZ. SERVICE.
- ② (1) 100 AMP MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 V.
- ③ (1) 100 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 PHOTOCELL MOUNTED TO CABINET, 120 V.
- ⑭ NO.6 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 SURGE ARRESTOR
- Ⓐ CIRCUIT (RED)
- Ⓑ CIRCUIT (BLACK)
- Ⓒ CIRCUIT (RED)
- Ⓓ CIRCUIT (BLACK)

NOMINAL WATTAGE	FUSE SIZE
250	3.5 AMP

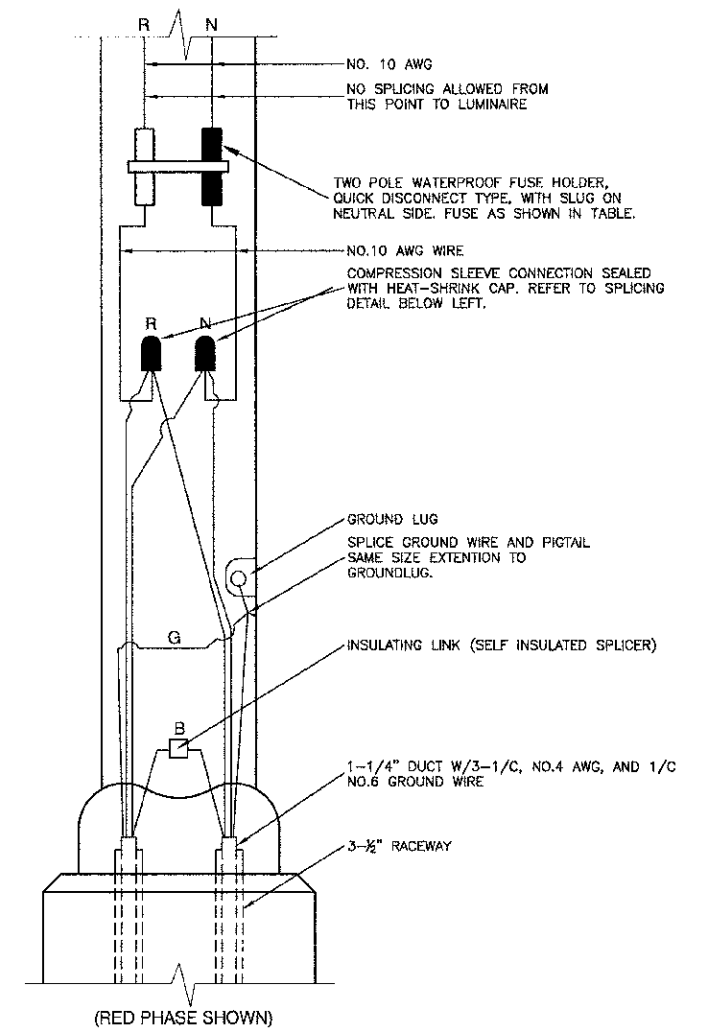
LUMINAIRE FUSE SIZE TABLE

GENERAL NOTES FOR CONTROL CABINET

1. ENTIRE CONTROL CABINET SHALL BE GROUNDED.
2. ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
3. GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
4. ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS OTHERWISE SPECIFIED.
5. CABINET WIRING INSULATION TO BE TYPE XHHW OR APPROVED EQUAL.

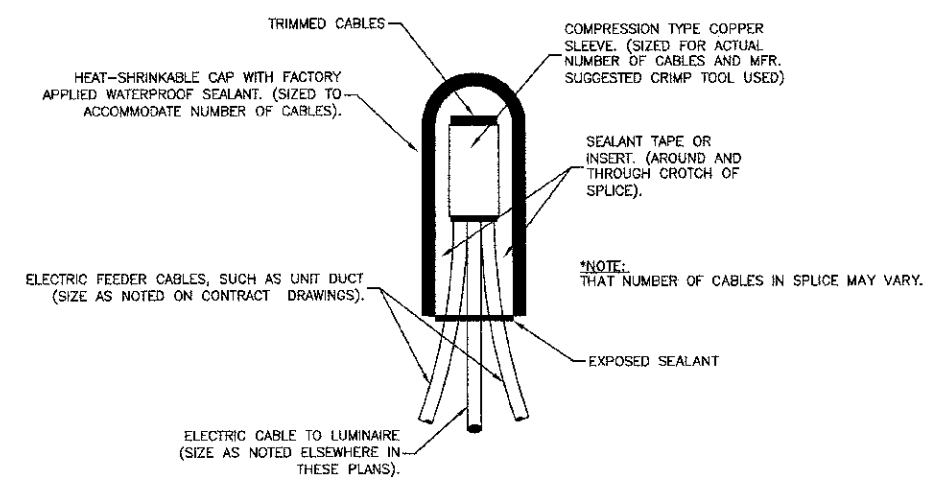
LIGHTING GENERAL NOTES

1. ALL WORK TO CONFORM TO THE MOST RECENT NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE TRENCHING OR AUGERING.
3. CONTRACTOR SHALL CALL JULIE FOR UTILITY LOCATES. PRIOR TO CONSTRUCTION, ANY OVERHEAD CLEARANCE ISSUES SHOULD BE COORDINATED WITH COMED FOR APPROVAL.
4. FOR LOCATION OF EXISTING UNDERGROUND ELECTRICAL CABLE CALL C.E. Co.
5. 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 INCLUDED IN THE COST OF THE CONTRACT.
6. 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.
7. 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 FLOWING OPERATIONS, AS APPLICABLE.
8. 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.
9. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
10. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
11. EQUIPMENT GROUND CONDUCTORS SHALL BE SPliced AND BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
12. UNDERGROUND SPICES OF LIGHTING CONDUCTORS WILL NOT BE ALLOWED EXCEPT AT LIGHT POLE BASE.
13. CONDUITS AND UNIT DUCTS MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREE, BUSHES, DRAINS AND OTHER UTILITIES.
14. THE CONTROLLER SHALL BE UL LISTED, NEMA 3R, AND BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.



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.



SPlicing ELECTRIC CABLES BASIC MATERIALS AND METHODS

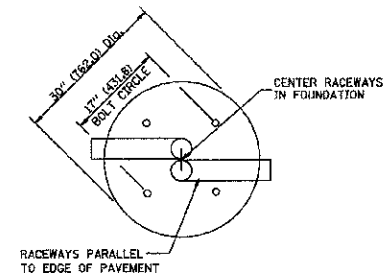
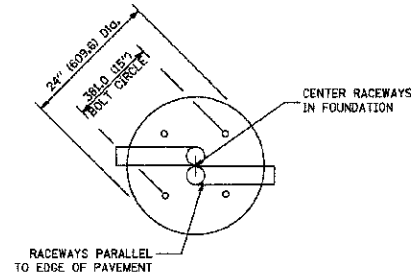
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		CHECKED --	REVISED --
	PLOT SCALE =	DRAWN -- MED	REVISED --
	PLOT DATE = 4-19-12	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET CENTRAL AVENUE STREET LIGHTING STREET LIGHTING DETAILS		FAU R/E 2798	SECTION 10-03091-00-LT	COUNTY COOK	TOTAL SHEETS 10	SHEET NO. 8
SCALE:	SHEET NO. 6 OF 10 SHEETS	STA.	TO STA.	CONTRACT NO. 63721		
				FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-9003(790)

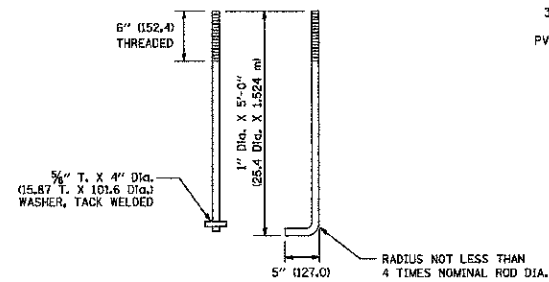
LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

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'-8" (2.99 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)

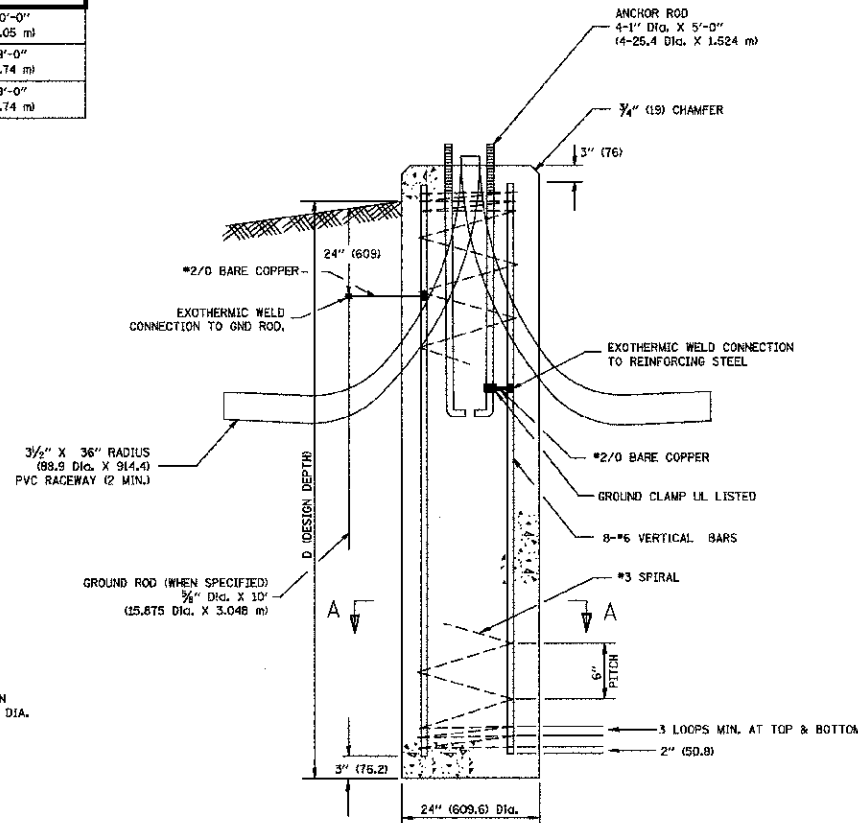


TOP VIEW

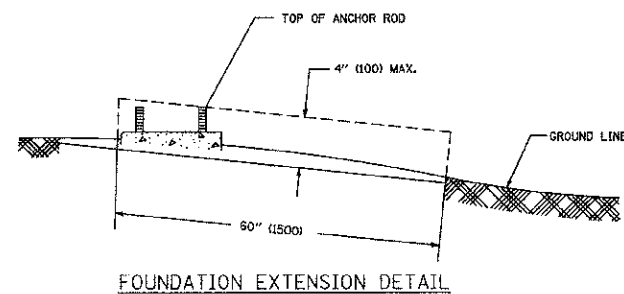
TOP VIEW



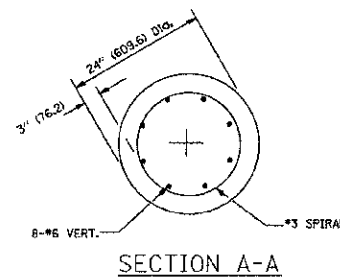
ANCHOR ROD DETAIL



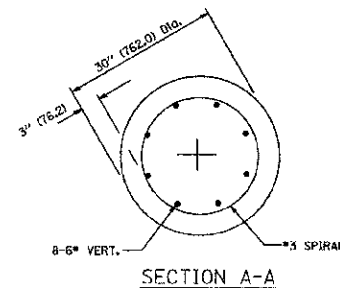
FOUNDATION DETAIL



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 SI. 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 F1954 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 D1, 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 = 10485-DTLR-01 - DOT P01 (4)

USER NAME =	DESIGNED -- PAP	REVISED --
PLOT SCALE =	CHECKED --	REVISED --
PLOT DATE = 4-19-12	DRAWN -- MED	REVISED --
	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET
CENTRAL AVENUE STREET LIGHTING
STREET LIGHTING DETAILS

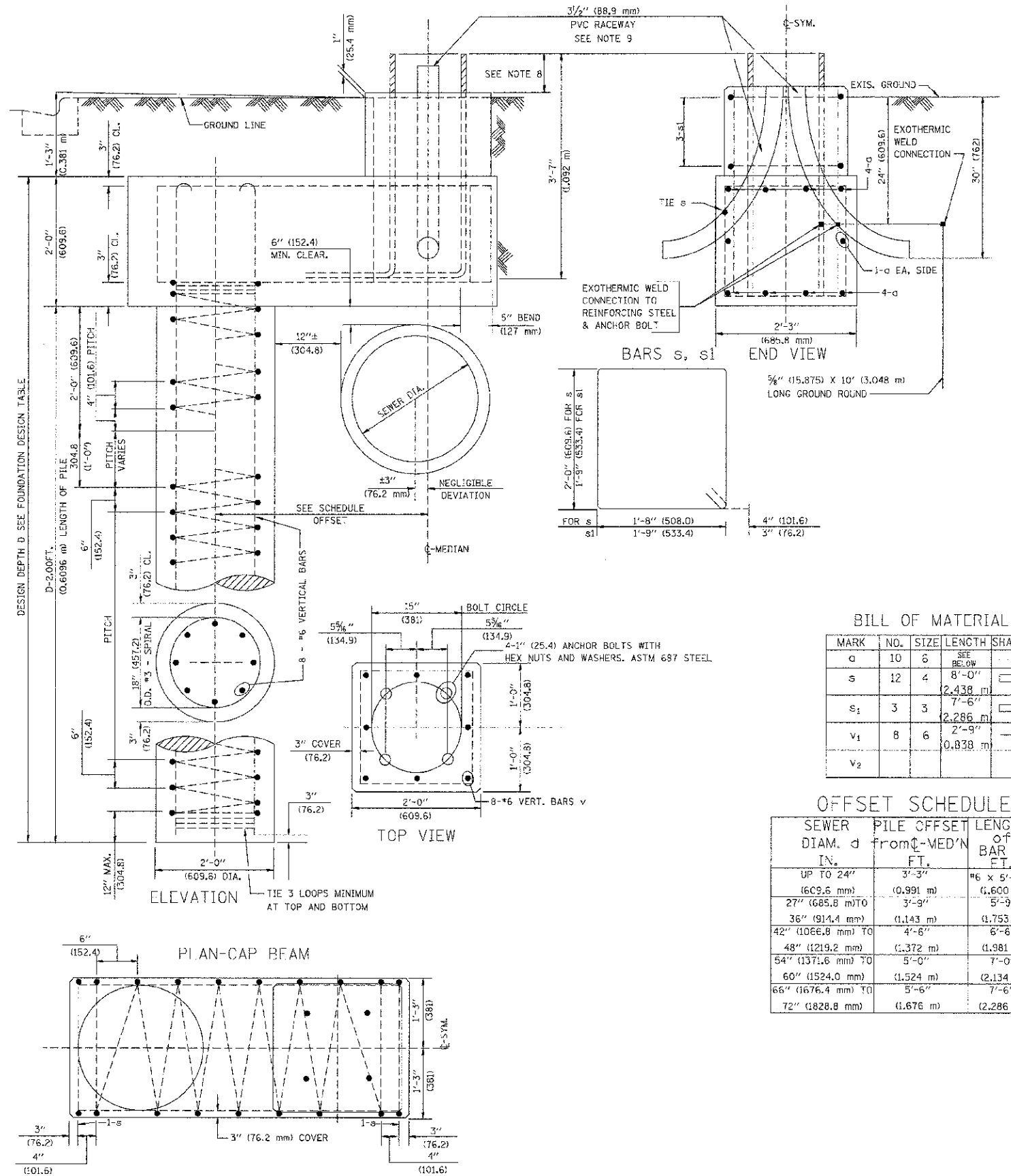
F.A.U. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-09-LT	COOK	10	9
SCALE:			CONTRACT NO. 63721	
SHEET NO. 9 OF 10 SHEETS		STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-9009(760)	

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 EXTENSION 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
g	10	6	SEE BELOW	
s	12	4	8'-0" (2,438 m)	□
s1	3	3	7'-6" (2,286 m)	□
v1	8	6	2'-9" (0,838 m)	
v2				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET FROM CL-MED'N FT.	LENGTH of BAR g FT.
UP TO 24" (609.6 mm)	3'-3" (0.991 m)	#6 x 5'-3" (1,600 m)
27" (685.8 mm) TO 30" (762.0 mm)	3'-9" (1,143 m)	5'-9" (1,753 m)
36" (914.4 mm) TO 42" (1066.8 mm) TO	4'-6" (1,372 m)	6'-6" (1,981 m)
48" (1219.2 mm) TO 54" (1371.6 mm) TO	5'-0" (1,524 m)	7'-0" (2,134 m)
60" (1524.0 mm) TO 66" (1676.4 mm) TO	5'-6" (1,676 m)	7'-6" (2,286 m)
72" (1828.8 mm)	6'-0" (1,828.8 mm)	

FILE NAME = 1043E-DTL-S-01-1001 P01 (5)

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PLOT SCALE =	DRAWN -- MED	REVISION --
PLOT DATE = 4-19-12	CHECKED -- ACAD	REVISION --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

122ND STREET TO 115TH STREET
CENTRAL AVENUE STREET LIGHTING
STREET LIGHTING DETAILS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2796	10-00091-03-LT	COOK	10	10
CONTRACT NO. 63721				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-9003(780)				

SCALE: SHEET NO. 10 OF 10 SHEETS STA. TO STA.