

SUMMARY OF QUANTITIES				SIDEWALK CONSTRUCTION CODE 0021	SIGNALS CONSTRUCTION CODE 0021
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL	SUBTOTAL	SUBTOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	65.00	65.00	0.00
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18.00	18.00	0.00
20101100	TREE TRUNK PROTECTION	EACH	57.00	57.00	0.00
* 20101200	TREE ROOT PRUNING	EACH	25.00	25.00	0.00
20200100	EARTH EXCAVATION	CU YD	1166.00	1166.00	0.00
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	5005.00	5005.00	0.00
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	66.00	66.00	0.00
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	51.00	51.00	0.00
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	66.00	66.00	0.00
* 25200110	SODDING, SALT TOLERANT	SQ YD	5005.00	5005.00	0.00
28000400	PERIMETER EROSION BARRIER	FOOT	6888.00	6888.00	0.00
28000500	INLET AND PIPE PROTECTION	EACH	13.00	13.00	0.00
28100107	STONE RIPRAP, CLASS A4	SQ YD	4.00	4.00	0.00
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	4656.00	4656.00	0.00
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	62.00	62.00	0.00
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	41876.00	41876.00	0.00
42400800	DETECTABLE WARNINGS	SQ FT	656.00	656.00	0.00
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	62.00	62.00	0.00
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	759.00	759.00	0.00
44000600	SIDEWALK REMOVAL	SQ FT	486.00	486.00	0.00
44003100	MEDIAN REMOVAL	SQ FT	69.00	69.00	0.00
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	4.00	4.00	0.00
550A0090	STORM SEWERS, CLASS A, TYPE 1 18"	FOOT	266.00	266.00	0.00
60200805	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 8 GRATE	EACH	1.00	1.00	0.00
60255500	MANHOLES TO BE ADJUSTED	EACH	4.00	4.00	0.00
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	169.00	169.00	0.00

\* DENOTES SPECIALTY ITEMS

SUMMARY OF QUANTITIES				SIDEWALK CONSTRUCTION CODE 0021	SIGNALS CONSTRUCTION CODE 0021
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL	SUBTOTAL	SUBTOTAL
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	590.00	590.00	0.00
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	69.00	69.00	0.00
* 63200310	GUARDRAIL REMOVAL	FOOT	49.00	49.00	0.00
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	8.00	8.00	0.00
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	1.00	1.00	0.00
* 66400305	CHAIN LINK FENCE, 6'	FOOT	156.00	156.00	0.00
67100100	MOBILIZATION	L SUM	1.00	1.00	0.00
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1.00	1.00	0.00
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.00	1.00	0.00
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.00	1.00	0.00
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2654.00	2654.00	0.00
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	439.00	439.00	0.00
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	527.00	527.00	0.00
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1384.00	1384.00	0.00
* 81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIAMETER	FOOT	118.00	0.00	118.00
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	6.00	0.00	6.00
* 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	5450.00	0.00	5450.00
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	5633.00	0.00	5633.00
* 87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	182.00	0.00	182.00
* 87502640	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4.00	0.00	4.00
* 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16.00	0.00	16.00
* 87900200	DRILL EXISTING HANDHOLE	EACH	4	0.00	4.00
* 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	30.00	0.00	30.00
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	30.00	0.00	30.00
* 89100400	ILLUMINATED SIGN, LED	EACH	24.00	0.00	24.00
* 89502200	MODIFY EXISTING CONTROLLER	EACH	6.00	0.00	6.00

\* DENOTES SPECIALTY ITEMS

PLOT DATE: May 07, 2015  
FILENAME: I:\P\14-00051\PLANS-ENGINEER\14-00051-PH-2009-Sheet 3-4.dwg

USER NAME *	DESIGNED - AS	REVISED - <i>6/5/2015</i>
PLOT SCALE *	DRAWN - DJB	REVISED -
PLOT DATE * May 07, 2015	CHECKED - AS	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

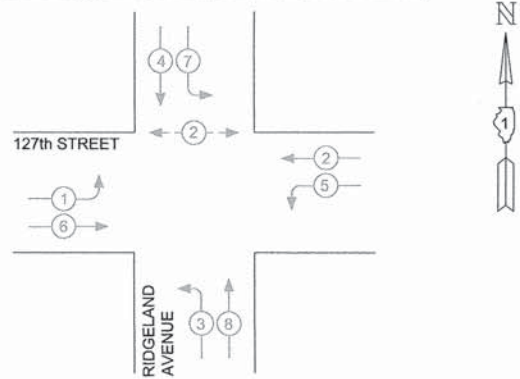
**RTA FUNDED SIDEWALK & SIGNAL IMPROVEMENTS  
SUMMARY OF QUANTITIES**

SCALE: N/A    SHEET NO. 3 OF 64 SHEETS    STA.    TO STA.

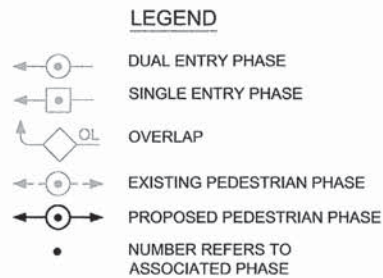
F.A.P. RTE. 348	SECTION 14-00051-00-SW	COUNTY COOK	TOTAL SHEETS 64	SHEET NO. 3
ILLINOIS FED. AID PROJECT		CONTRACT NO. 61B59		



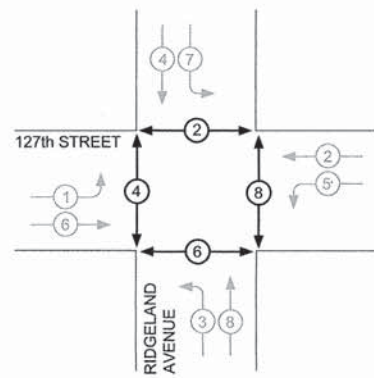
**EXISTING PHASE DESIGNATION DIAGRAM**



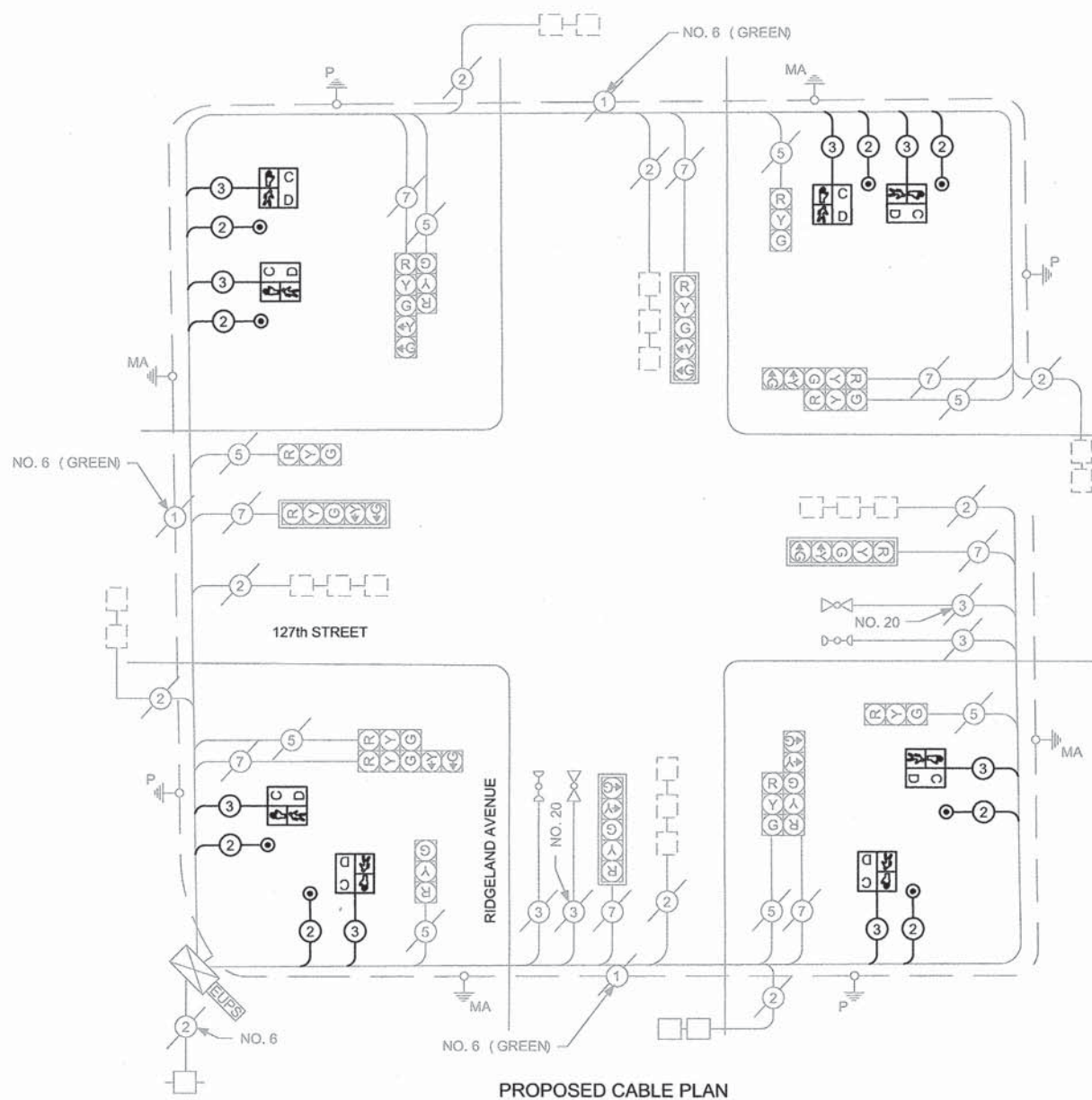
**EXISTING CONTROLLER SEQUENCE**



**PROPOSED PHASE DESIGNATION DIAGRAM**

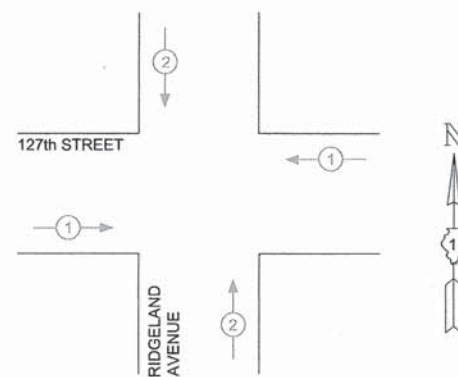


**PROPOSED CONTROLLER SEQUENCE**



**PROPOSED CABLE PLAN**

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM DESCRIPTION
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1295	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1351	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER
1	EACH	MODIFY EXISTING CONTROLLER CABINET
2	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	17	0.50	0.50	136.00
(YELLOW)	16	25	0.25	0.25	100.00
(GREEN)	16	15	0.25	0.25	60.00
ARROW	16	12	0.10	0.10	19.20
PED. SIGNAL	8	25	1.00	1.00	200.00
CONTROLLER	1	100	1.00	1.00	100.00
ILLUM. SIGN				0.05	
VEH. DETECTION		5		1.00	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	615.20
CITY OF PALOS HEIGHTS 7607 W. COLLEGE DRIVE PALOS HEIGHTS, IL. 60463					
ENERGY SUPPLY CONTACT:					
PHONE:					
COMPANY: COMMONWEALTH EDISON					

PLOT DATE: May 07, 2015  
FILE NAME: I:\14-PH-3009\PLANS-ENG\REV-02014-PH-3009-127th - Ridgeland Cable Plan.dwg

USER NAME *	DESIGNED - AS	REVISED - $\Delta$ 6/5/2015
PLOT SCALE *	DRAWN - DJB	REVISED -
PLOT DATE - May 07, 2015	CHECKED - AS	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION  
127th STREET & RIDGELAND AVENUE**

SCALE: N/A SHEET NO. 30 OF 64 SHEETS STA. TO STA.

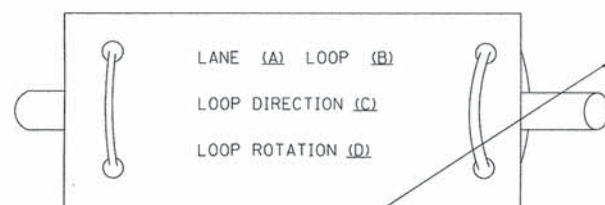
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	14-00051-00-SW	COOK	64	30
CONTRACT NO. 61B59			ILLINOIS FED. AID PROJECT	



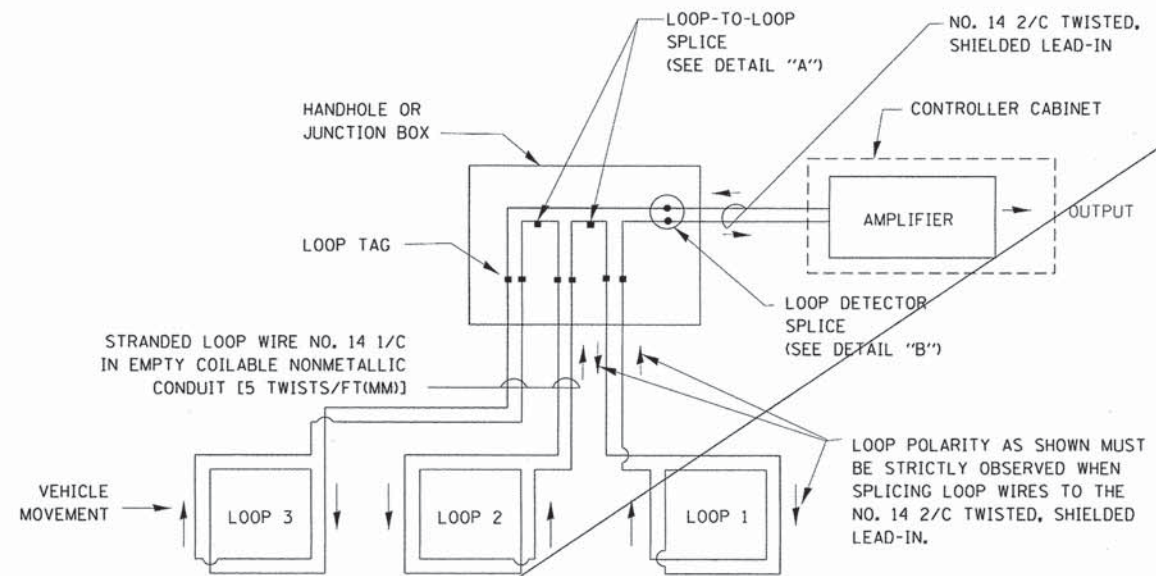
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

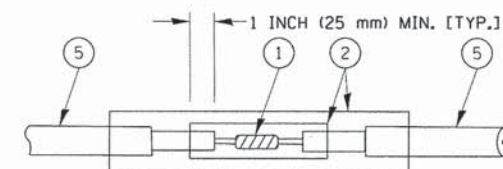


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

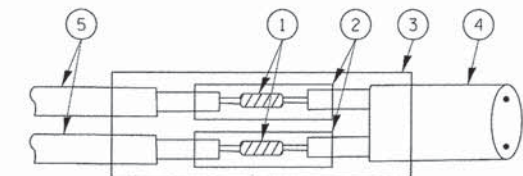


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

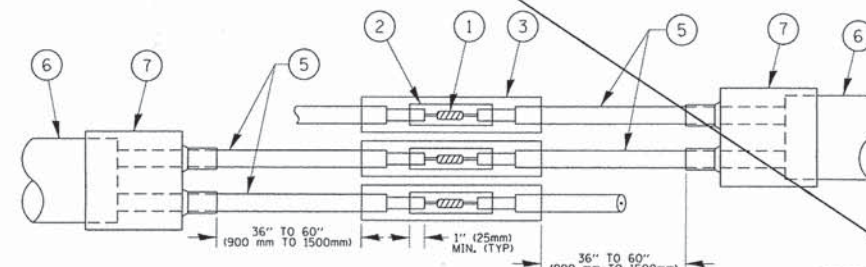


DETAIL "A"  
LOOP-TO-LOOP SPLICE

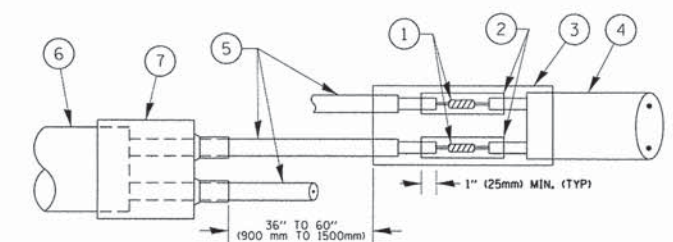


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
es:\pwwork\pwwork\footemj\d0108315\ts05.dgn		DRAWN - BCK	REVISED - <i>6/5/2015</i>
PLOT SCALE = 50.0000 "/in.		CHECKED - DAD	REVISED -
PLOT DATE = 1/13/2014		DATE - 10-28-09	REVISED -

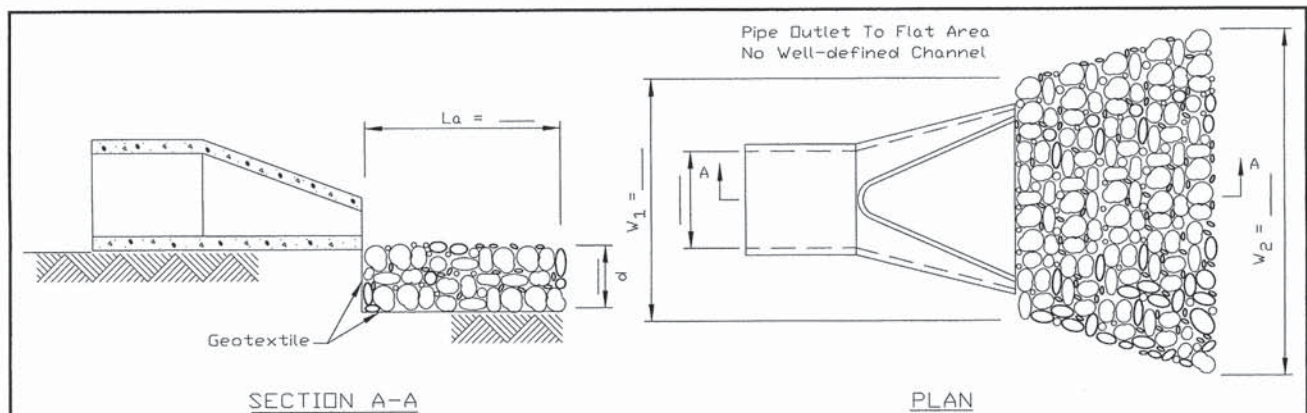
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

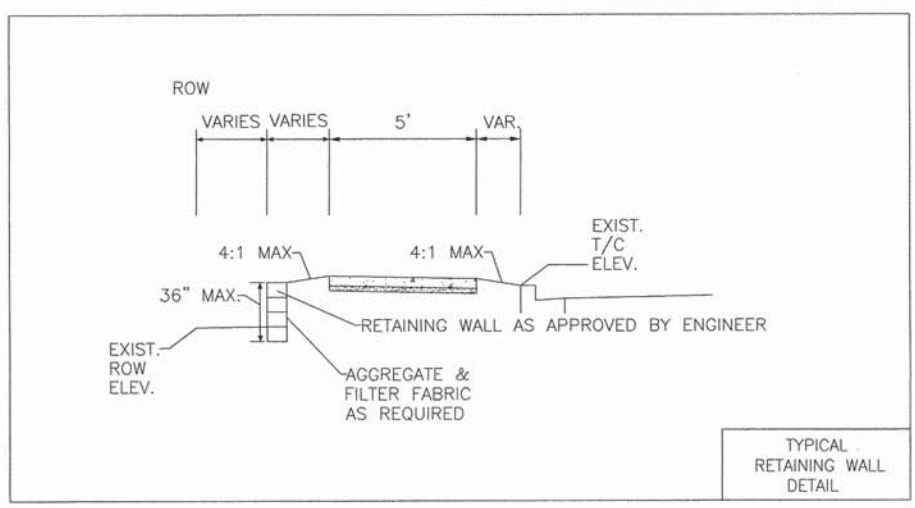
SCALE: NONE SHEET NO. 2 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	14-00051-00-SW	COOK	64	35
TS-05		CONTRACT NO.	81859	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





- NOTES:
1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
  2. The rock riprap shall meet the IDOT requirements for the following gradation: RR \_\_\_\_\_, Quality \_\_\_\_\_.
  3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.



REFERENCE Project _____	 <b>NRCS</b> Natural Resources Conservation Service	STANDARD DWG. NO. IL-610	PIPE OUTLET TO FLAT AREA
Designed _____ Date _____		SHEET 1 OF 1	
Checked _____ Date _____		DATE 9-15-93	
Approved _____ Date _____			

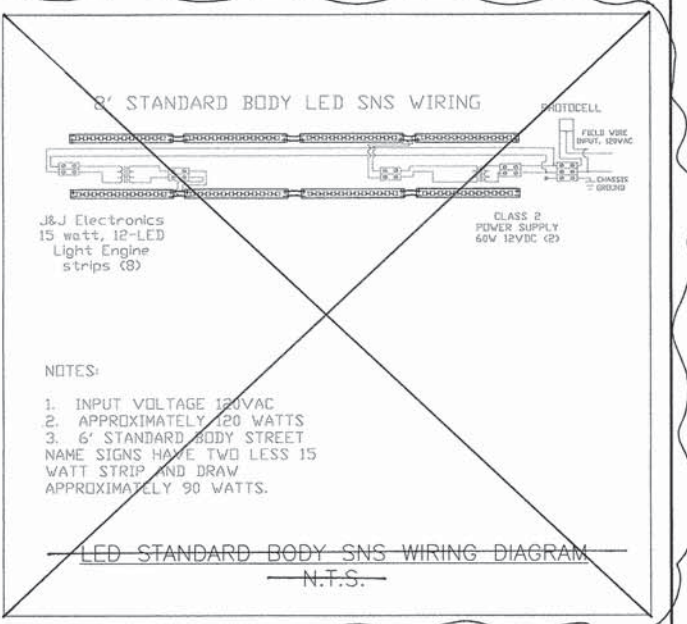
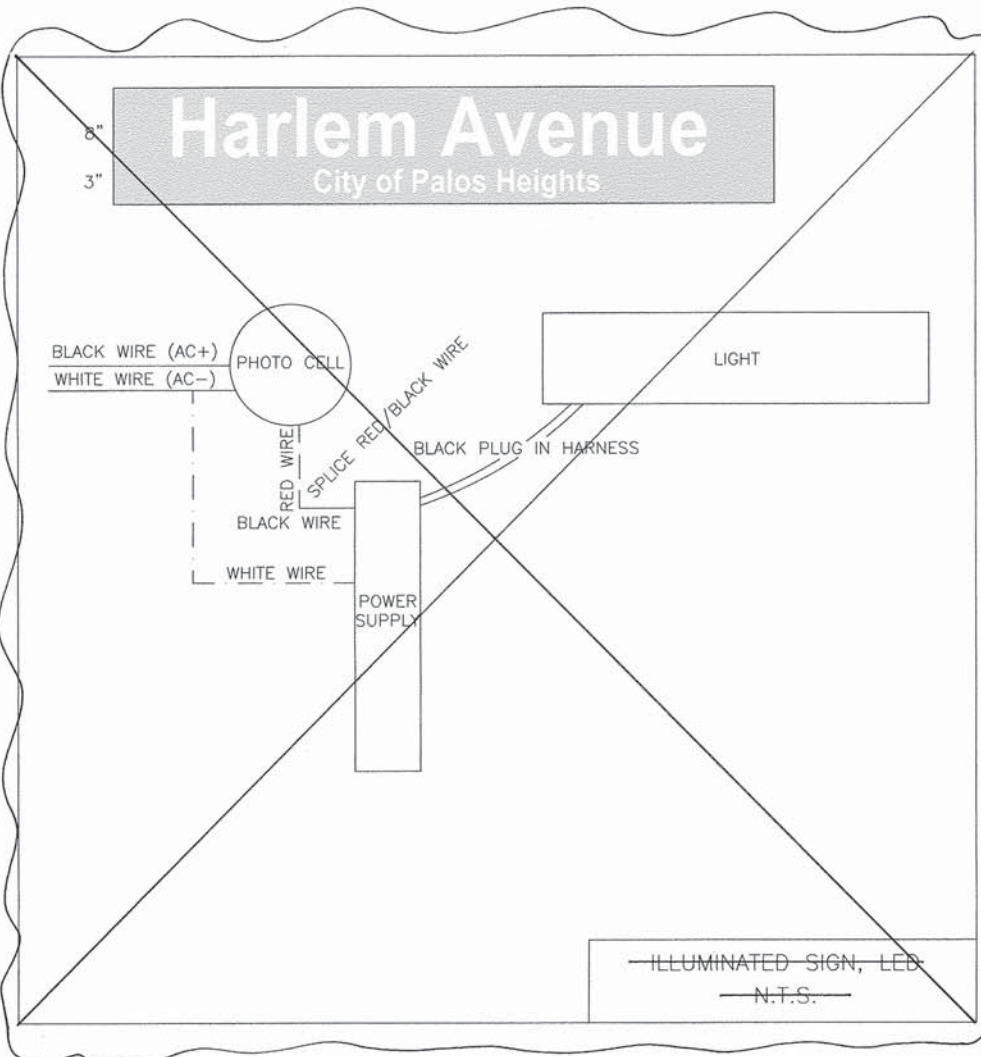
Table 1  
Rock Riprap Sizes and Thickness (Inches)

IDOT Grad. No.	d50	dmax	Min. Blanket Thickness
RR-3 1/	5	10	15
RR-4	9	14	20
RR-5	12	19	28
RR-6	15	22	32
RR-7	18	27	32

Table 2  
Minimum IDOT Rock Sizes and Apron Length (La in feet) for Maximum and Minimum Tailwater Conditions

Culvert Size (Inches)	Min. Tailwater		Max Tailwater		Min. Tailwater		Max Tailwater		
	5 fps 1/	10 fps 1/	5 fps 1/	10 fps 1/	5 fps 1/	10 fps 1/	5 fps 1/	10 fps 1/	
Rock Size	La	Rock Size	La	Rock Size	La	Rock Size	La	Rock Size	La
12	RR-3 10	RR-3 12	RR-3 12	RR-3 15	RR-3 12	RR-3 16	RR-3 16	RR-3 16	RR-3 16
18	RR-3 14	RR-4 16	RR-3 14	RR-3 17	RR-3 14	RR-4 17	RR-3 17	RR-4 17	RR-4 17
24	RR-3 16	RR-4 20	RR-3 16	RR-3 20	RR-3 16	RR-4 20	RR-3 20	RR-4 20	RR-4 20
30	RR-3 18	RR-4 22	RR-3 18	RR-3 22	RR-3 18	RR-4 22	RR-3 22	RR-4 22	RR-4 22
36	RR-4 20	RR-5 24	RR-4 20	RR-4 24	RR-4 20	RR-4 24	RR-4 24	RR-4 24	RR-4 24
48	RR-4 24	RR-6 28	RR-4 24	RR-4 28	RR-4 24	RR-4 28	RR-4 28	RR-4 28	RR-4 28
60	RR-5 32	RR-6 36	RR-5 32	RR-5 36	RR-5 32	RR-5 36	RR-5 36	RR-5 36	RR-5 36
72	RR-6 40	RR-6 44	RR-6 40	RR-6 44	RR-6 40	RR-6 44	RR-6 44	RR-6 44	RR-6 44
96	RR-7 50	RR-7 54	RR-7 50	RR-7 54	RR-7 50	RR-7 54	RR-7 54	RR-7 54	RR-7 54

1/ Concrete block may be used to replace RR-3  
1/ Maximum conduit velocity fps.  
Rock Gradation source: IDOT SCS IL April 1993



- NOTES:
1. INPUT VOLTAGE 120VAC
  2. APPROXIMATELY 120 WATTS
  3. 6' STANDARD BODY STREET NAME SIGNS HAVE TWO LESS 15 WATT STRIP AND DRAW APPROXIMATELY 90 WATTS.

PLOT DATE: Apr 15, 2015  
FILE NAME: H:\14-PRJ\3029\PLANS-EMD\REV-0\2014-PH-3029-Details.dwg

USER NAME = \$USER\$	DESIGNED - AS	REVISED - <i>6/5/2015</i>
DRAWN - DJB	REVISOR -	
CHECKED - AS	REVISOR -	
DATE -	REVISOR -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

RTA FUNDED SIDEWALK & SIGNAL IMPROVEMENTS  
DETAILS

SCALE: NA SHEET NO. 44 OF 64 SHEETS STA. TO STA.

F.A.P. RTE. 348	SECTION 14-00051-00-SW	COUNTY COOK	TOTAL SHEETS 64	SHEET NO. 44
CONTRACT NO. 61B59			ILLINOIS FED. AID PROJECT	