

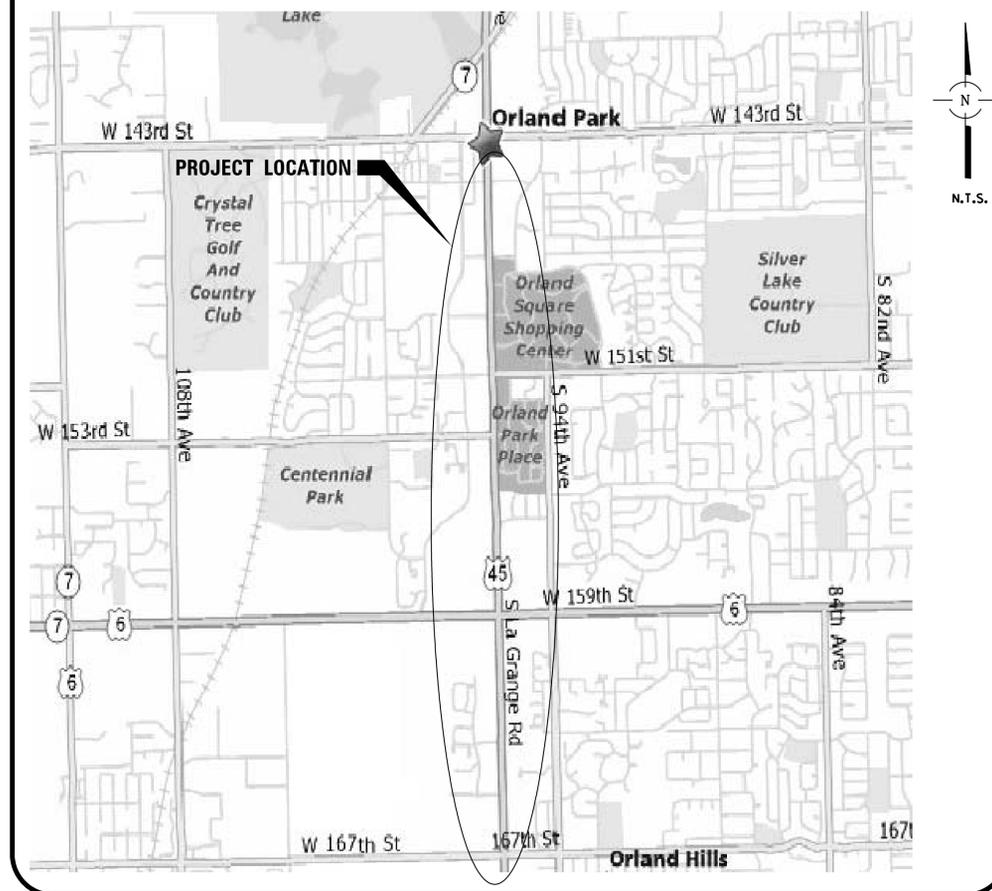
VILLAGE OF ORLAND PARK

LA GRANGE ROAD SEASONAL LIGHTING IMPROVEMENTS

INDEX

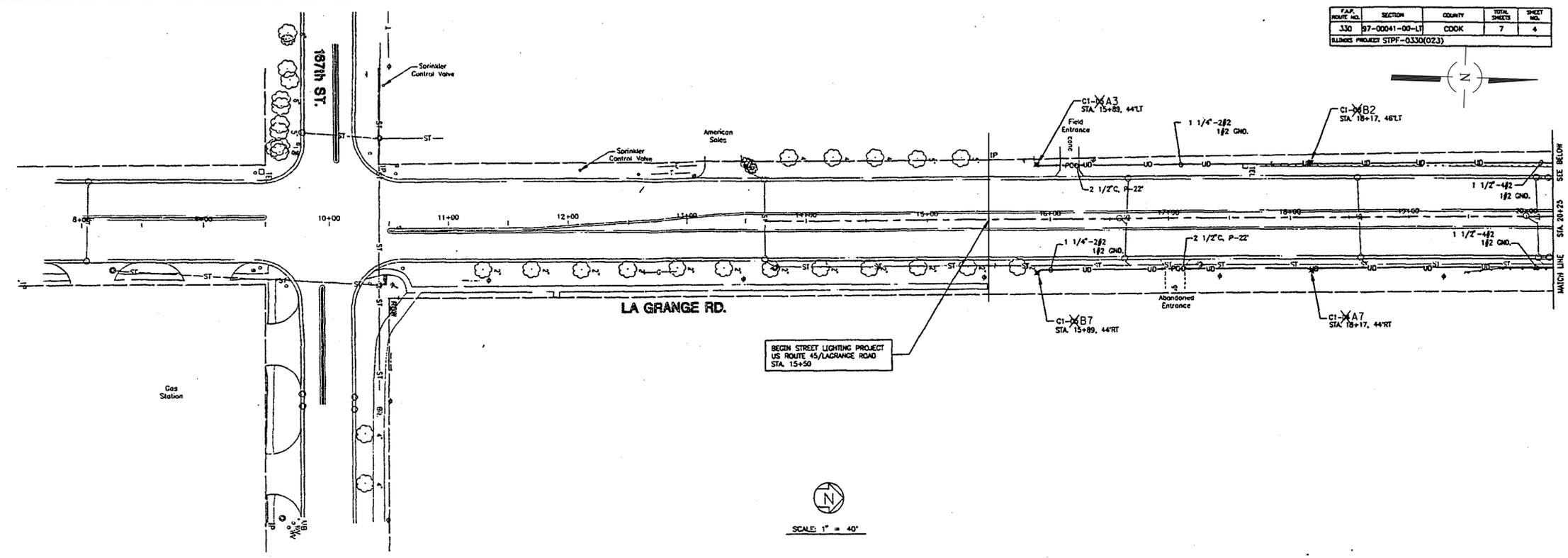
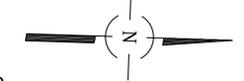
- 1 TITLE SHEET
- 2 GENERAL NOTES, SUMMARY OF QUANTITIES & LEGEND
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- 4 LIGHTING PLAN-2
- 5 LIGHTING PLAN-3
- 6 LIGHTING PLAN-4
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- 8 LIGHTING PLAN-6
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LOCATION / VICINITY MAP

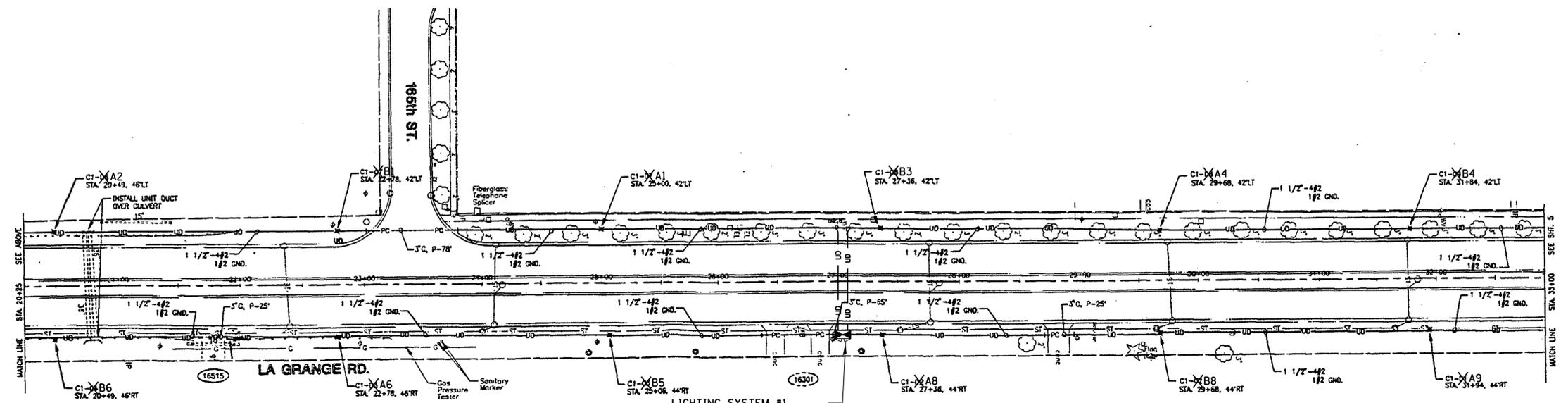


FILE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	97-00041-00-LT	COOK	7	4

ILLINOIS PROJECT STPF-0330(023)



SCALE: 1" = 40'



LIGHTING SYSTEM #1
EXISTING 120/240V, 1Ø
LIGHTING CONTROLLER "CI"
(CONTROLLER ADDRESS: 16301)

16301 S. LAGRANGE RD.
Baxter & Woodman
Crystal Lake, Illinois 815.459.1250
Burlington, Massachusetts 414.782.7824
Oak Forest, Illinois 708.680.7070

VILLAGE OF ORLAND PARK, ILLINOIS
U.S. RT. 45 / LA GRANGE ROAD
STREET LIGHTING PROJECT

LA GRANGE ROAD

DESIGNED BY	JLR	SCALE	1" = 40'
DRAWN BY	PLR	PROJECT NO.	980294
CHECKED BY	RJK	SHEET NO.	4 OF 7
DATE	12-9-99		

REV. NO.	DATE	DESCRIPTION	REV. NO.	DATE	DESCRIPTION

PREPARED BY: JLR
 CHECKED BY: RJK
 DATE: 12-9-99

* REFER TO EQUIPMENT MANUFACTURER'S SHOP DRAWINGS

CB CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT: the village of Orland Park
14700 South Ravinia Avenue
Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL#	#MODELNAME#

FILE NAME: N:\ORLANDPARK\070176\Mech\070176.03.LGT

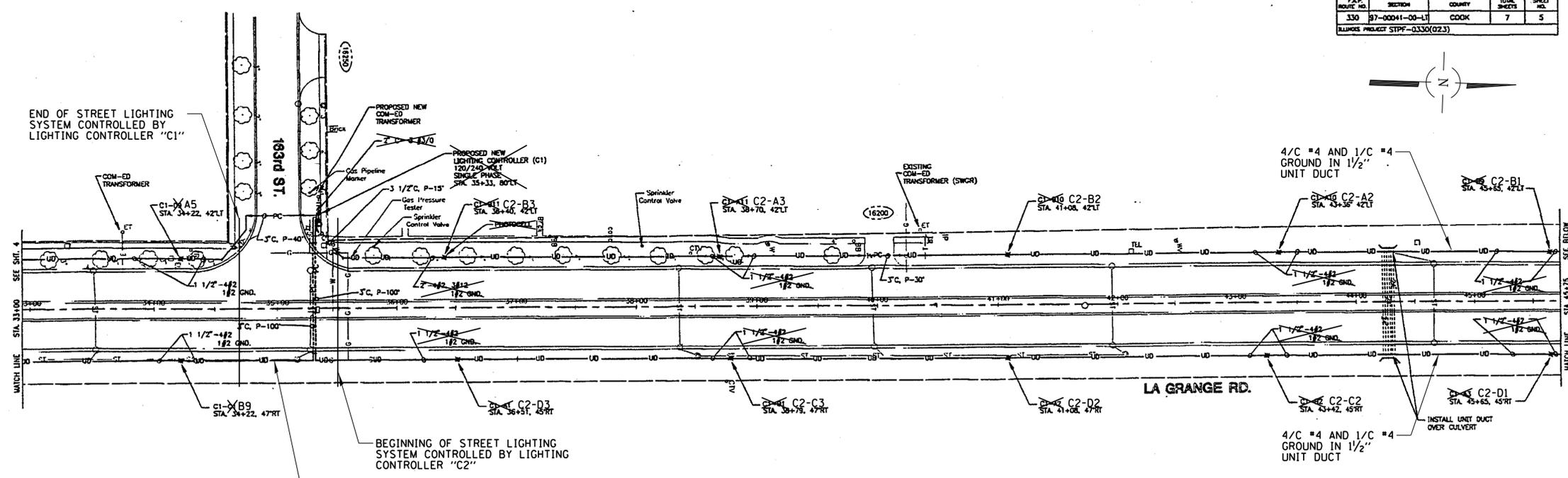
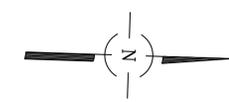
DESIGN: GAH
DWN: KB
CHKD: JPC
SCALE: 1"=50'-0"
PLOT DATE: 2/29/2008
CAD USER: #USER#
DATE: #MODELNAME#

TITLE: LIGHTING PLAN - 1

PROJ. NO. 07-0176
SHEET 3 OF 12
DRAWING NO. 3

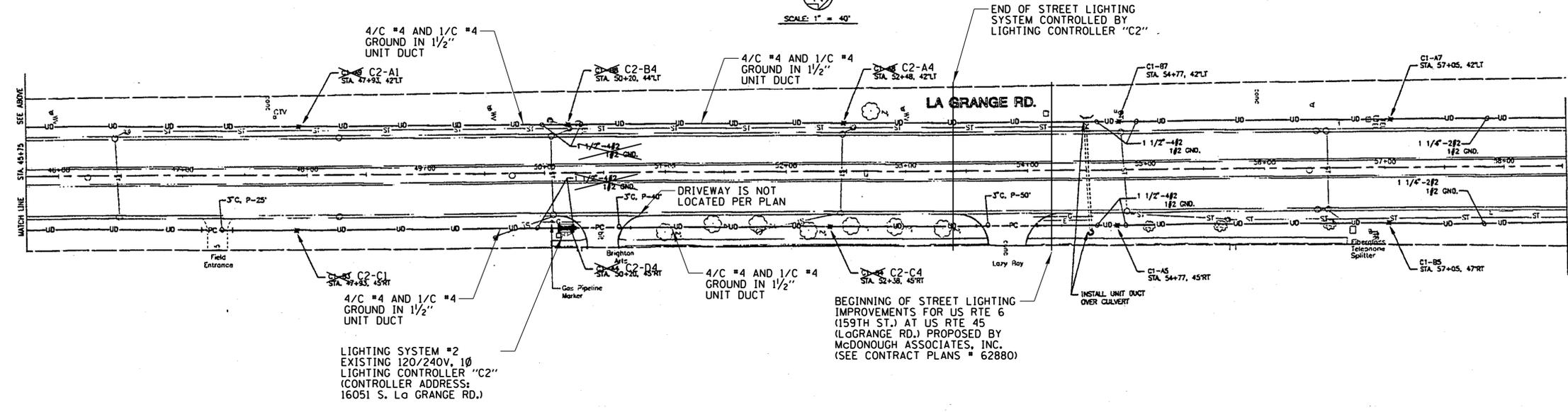
F.A.P. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	97-00041-00-LT	COOK	7	5

ILLINOIS PROJECT STYP-0330(023)



CONTRACTOR TO VERIFY TERMINATING POINT OF LIGHTING CONDUITS FOR CONTROLLER "C1" AND "C2". LIGHTING SYSTEM "C1" & "C2" WERE ORIGINALLY ONE LIGHTING SYSTEM.

SCALE: 1" = 40'



BEGINNING OF STREET LIGHTING IMPROVEMENTS FOR US RTE 6 (159TH ST.) AT US RTE 45 (LA GRANGE RD.) PROPOSED BY McDONOUGH ASSOCIATES, INC. (SEE CONTRACT PLANS # 62880)

EXHIBITING 18/2/00 03.31 BCB
 18/2/00 03.31 BCB
 18/2/00 03.31 BCB

REV. NO.	DATE	DESCRIPTION	REV. NO.	DATE	DESCRIPTION



Baxter & Woodman
 Crystal Lake, Illinois 815.459.1260
 Burlington, Massachusetts 414.783.7834
 Oak Forest, Illinois 708.560.7070

VILLAGE OF ORLAND PARK, ILLINOIS
 U.S. RT. 45 / LA GRANGE ROAD
 STREET LIGHTING PROJECT

LA GRANGE ROAD

DESIGNED BY	JLR	SCALE	1" = 40'
DRAWN BY	JPC	PROJECT NO.	980294
CHECKED BY	JLR	SHEET NO.	5 OF 7
DATE	12-9-99		

CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

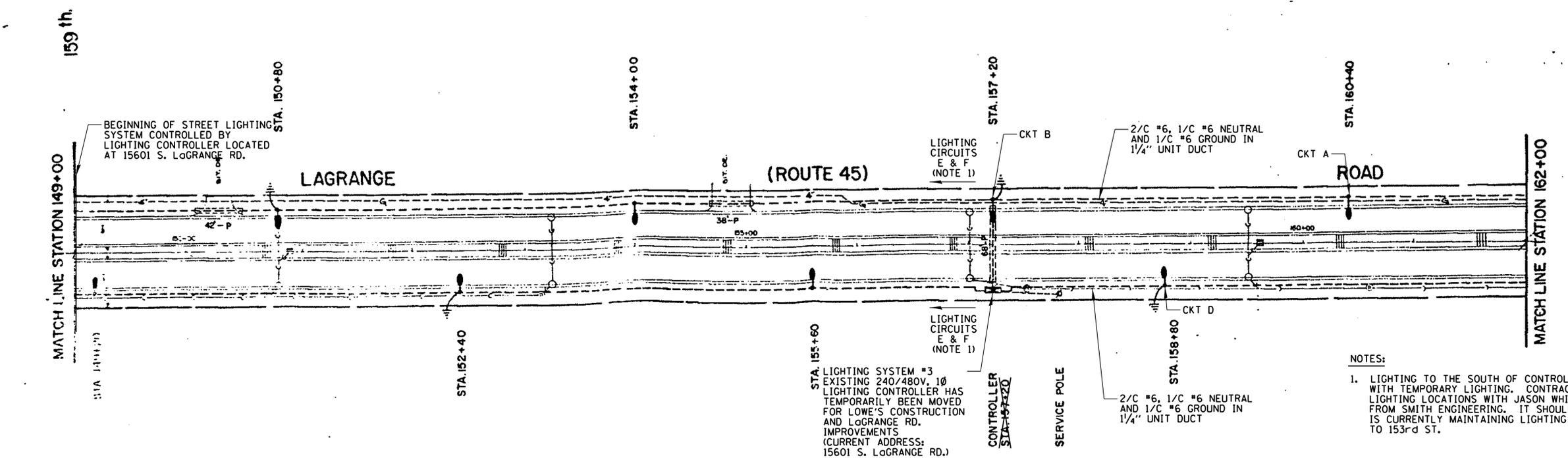
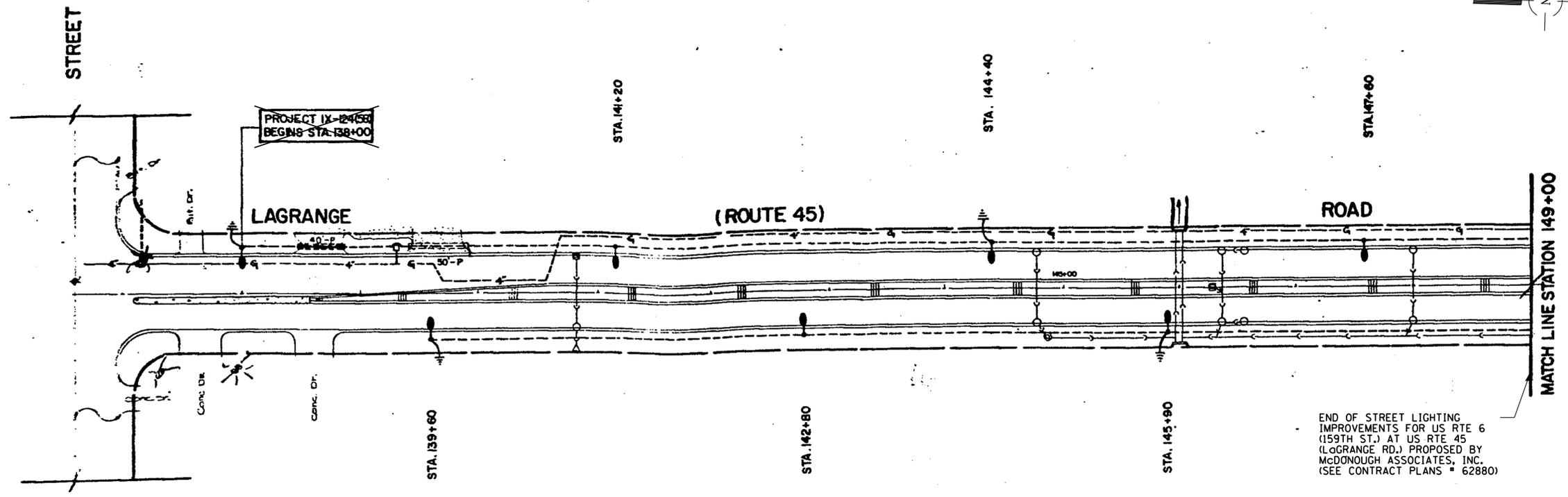
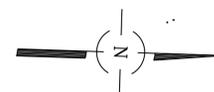
CLIENT:  **the village of Orland Park**
 14700 South Ravinia Avenue
 Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL#	#MODELNAME#

TITLE: **LIGHTING PLAN - 2**

PROJ. NO. 07-0176
 SHEET 4 OF 12
 DRAWING NO. 4

P.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
(F.A.R.-124)	103 L-(80)	COOK	10	6
ILLINOIS PROJ. 124(16) M.F.T. 80-00022-00-L				



NOTES:
 1. LIGHTING TO THE SOUTH OF CONTROLLER HAS BEEN REPLACED WITH TEMPORARY LIGHTING. CONTRACTOR TO COORDINATE FINAL LIGHTING LOCATIONS WITH JASON WHITE, PROJECT MANAGER FROM SMITH ENGINEERING. IT SHOULD BE NOTED THAT LOWE'S IS CURRENTLY MAINTAINING LIGHTING SYSTEM FROM 157th ST. TO 153rd ST.

LIGHTING SYSTEM #3 EXISTING 240/480V, 1Ø LIGHTING CONTROLLER HAS TEMPORARILY BEEN MOVED FOR LOWE'S CONSTRUCTION AND LAGRANGE RD. IMPROVEMENTS (CURRENT ADDRESS: 15601 S. LAGRANGE RD.)

CB **CHRISTOPHER B. BURKE ENGINEERING, LTD.**
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

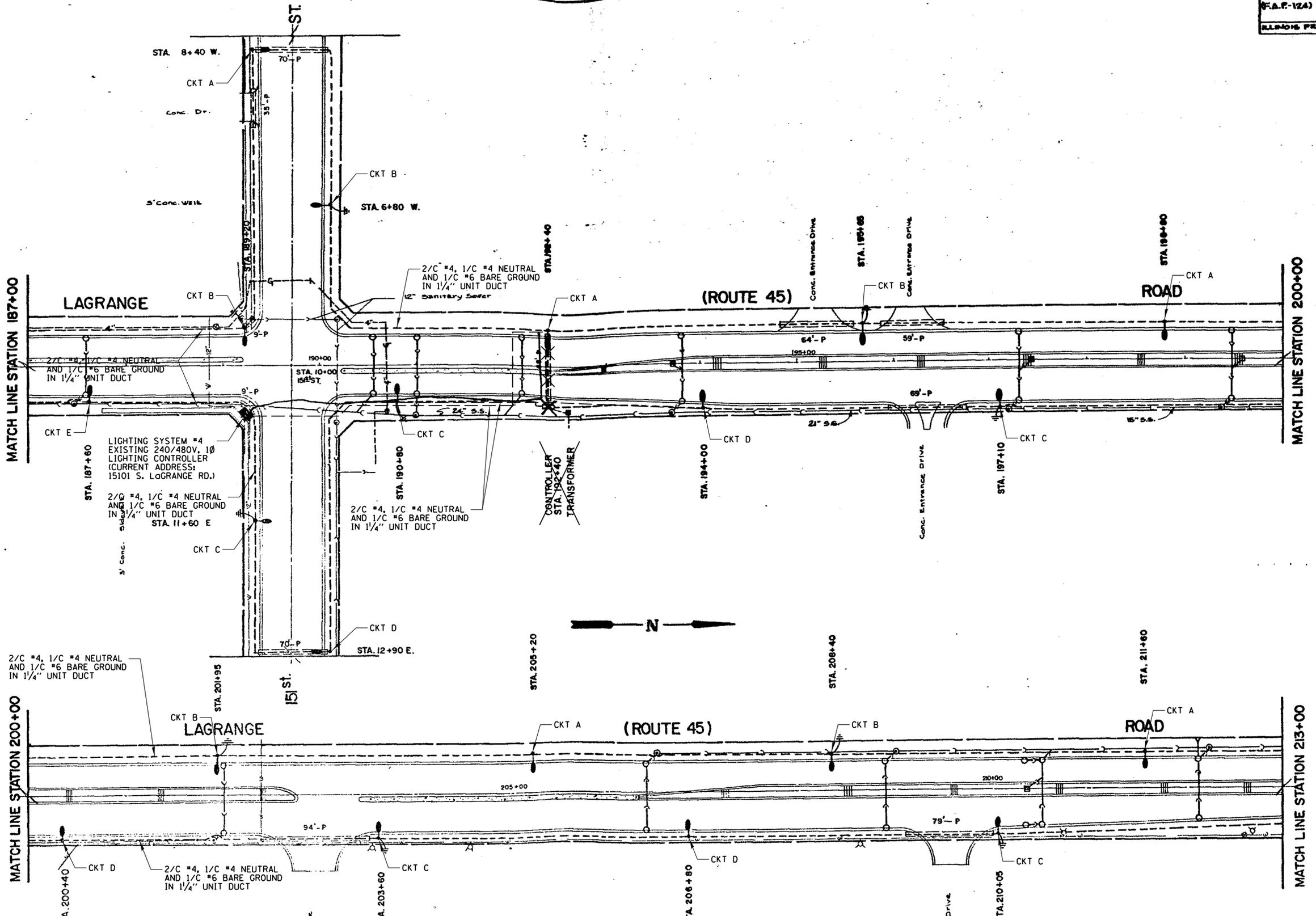
CLIENT:  *the village of*
Orland Park
 14700 South Ravinia Avenue
 Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL	DSGN.	GAH	TITLE
					DWN.	KB	
					CHKD.	JPC	
					SCALE:	1"=50'-0"	
					PLOT DATE:	2/29/2008	
					CAD USER:	#USER#	
					FILE NAME	#MODELNAME#	

LIGHTING PLAN - 3

PROJ. NO.	07-0176
SHEET	5 OF 12
DRAWING NO.	5

FA. ROUTE	SECTION	COUNTY	SHEET	TOTAL SHEETS
F.A.P-124)	103 L-(50)	COOK	10	6
ILLINOIS PROJ. 1X-124 (50)		M.F.T. 80-00022-00-LT.		



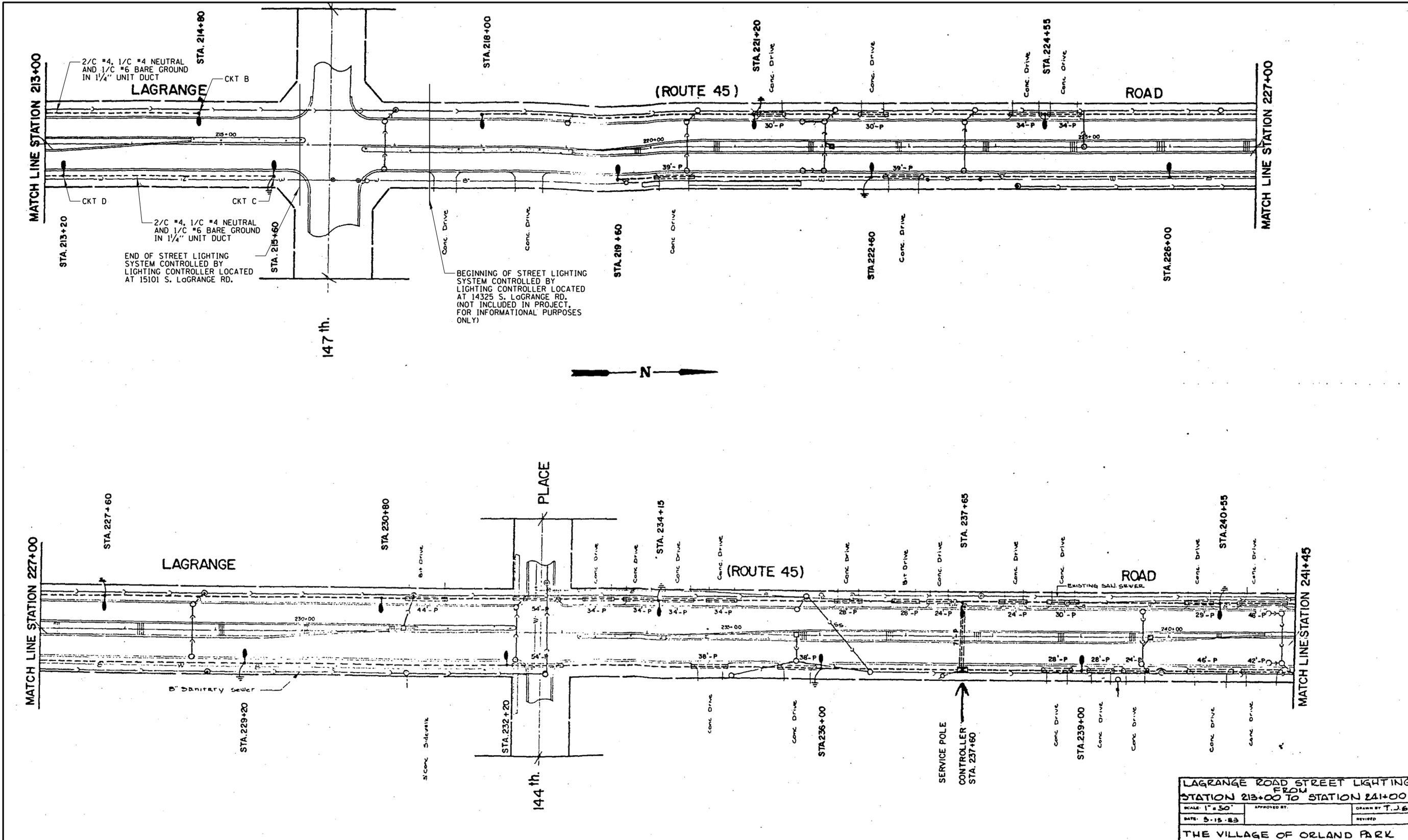
CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CLIENT:  *the village of*
Orland Park
 14700 South Ravinia Avenue
 Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL	DSGN.	GAH	FILE NAME
					DWN.	KB	N:\ORLANDPARK\070176\Mech\070176.07.LGT
					CHKD.	JPC	
					SCALE:	1"=50'-0"	
					PLOT DATE:	2/29/2008	
					CAD USER:	#USER#	
						#MODELNAME#	

TITLE: **LIGHTING PLAN - 5**

PROJ. NO.	07-0176
SHEET	7 OF 12
DRAWING NO.	7



LAGRANGE ROAD STREET LIGHTING
 FROM
 STATION 213+00 TO STATION 241+00
 SCALE: 1" = 50'
 DATE: 5-15-83
 THE VILLAGE OF ORLAND PARK

CB
CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

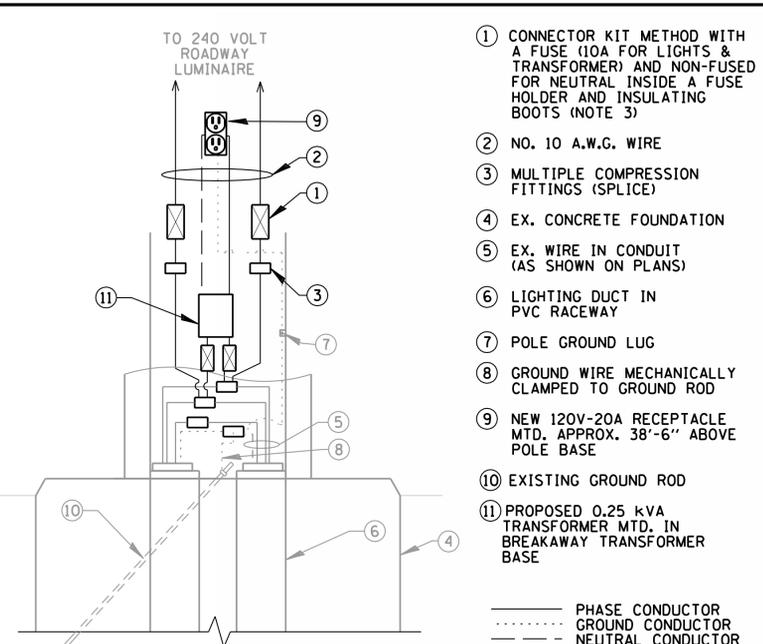
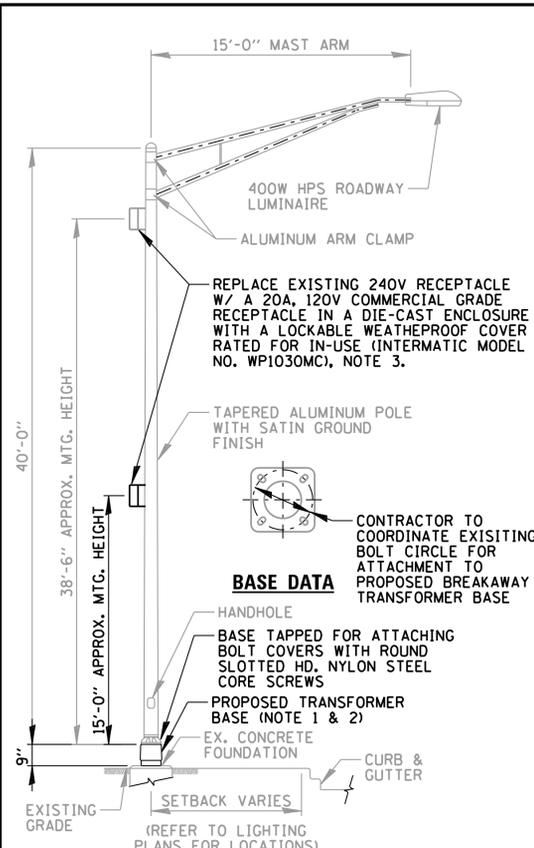
CLIENT:

 the village of
Orland Park
 14700 South Ravinia Avenue
 Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL	#USER#	#MODELNAME#
FILE NAME: N:\ORLANDPARK\070176\Mech\070176_08.LGT						

TITLE:
LIGHTING PLAN - 6

PROJ. NO. 07-0176
SHEET 8 OF 12
DRAWING NO. 8

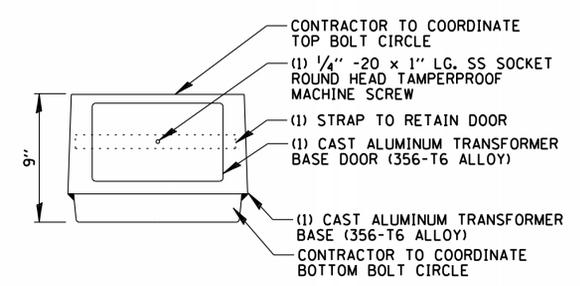


- 1 CONNECTOR KIT METHOD WITH A FUSE (10A FOR LIGHTS & TRANSFORMER) AND NON-FUSED FOR NEUTRAL INSIDE A FUSE HOLDER AND INSULATING BOOTS (NOTE 3)
- 2 NO. 10 A.W.G. WIRE
- 3 MULTIPLE COMPRESSION FITTINGS (SPLICE)
- 4 EX. CONCRETE FOUNDATION
- 5 EX. WIRE IN CONDUIT (AS SHOWN ON PLANS)
- 6 LIGHTING DUCT IN PVC RACEWAY
- 7 POLE GROUND LUG
- 8 GROUND WIRE MECHANICALLY CLAMPED TO GROUND ROD
- 9 NEW 120V-20A RECEPTACLE MTD, APPROX. 38'-6" ABOVE POLE BASE
- 10 EXISTING GROUND ROD
- 11 PROPOSED 0.25 KVA TRANSFORMER MTD. IN BREAKAWAY TRANSFORMER BASE

NOTES:

1. CONTRACTOR TO PROVIDE ALL NEW CONNECTORS, FITTINGS, FUSES, FUSEHOLDERS AND POLE WIRING WHICH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "POLE MOUNTED RECEPTACLE, COMPLETE IN PLACE".
2. CONTRACTOR TO PROVIDE 3' OF ADDITIONAL SLACK CABLE ON THE LINE AND LOAD SIDE OF TRANSFORMER TO ALLOW FOR SERVICING OF THE TRANSFORMER OUTSIDE OF THE POLE BASE.
3. FUSES SHALL BE COOPER BUSSMAN MODEL NO. FMN-10, AND IN-LINE FUSE HOLDERS SHALL BE COOPER BUSSMAN HEB SERIES.

HANDHOLE WIRING DIAGRAM
N.T.S.



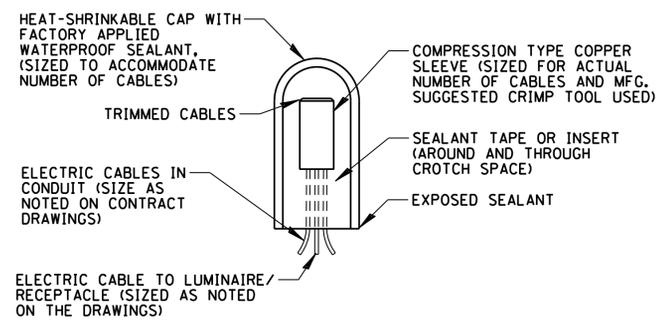
NOTES:

1. BEFORE INSTALLATION OF BREAKAWAY BASE, USER SHOULD CONSULT WITH AUTHORIZED DISTRIBUTOR REGARDING USERS PROPOSED APPLICATION, LOAD REQUIREMENTS AND INSTALLATION METHODS. FAILURES CAN RESULT FROM USERS MISAPPLICATION OR IMPROPER INSTALLATION. TO APPROACH OPTIMUM STATIC LOADS, USE THE LARGEST POSSIBLE BOLT CIRCLES. SHIMS SHALL NOT BE USED.

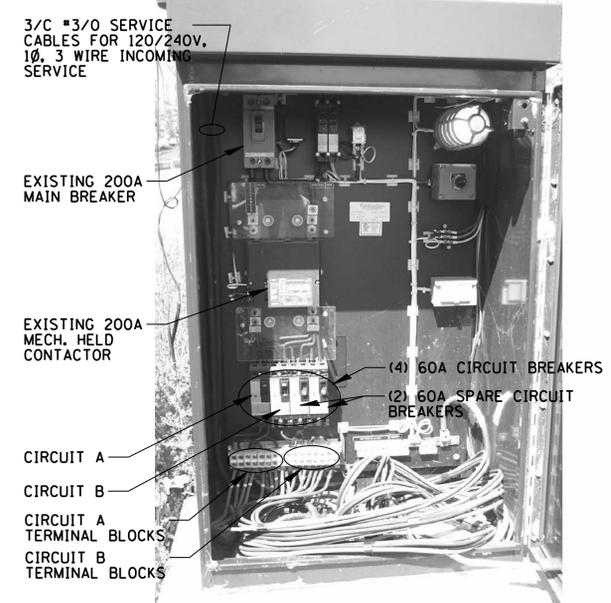
BREAKAWAY TRANSFORMER BASE
N.T.S.

- NOTES:**
1. CONTRACTOR TO REMOVE EXISTING BREAKAWAY COUPLINGS & SKIRT (WHERE APPLIES) AND REPLACE WITH PROPOSED BREAKAWAY TRANSFORMER BASE.
 2. PROPOSED 0.25 KVA, 240V PRIMARY x 120V SECONDARY TRANSFORMER IN A NEMA 3R ENCLOSURE TO BE LOCATED IN PROPOSED BREAKAWAY TRANSFORMER BASE (SEE HANDHOLE WIRING DIAGRAM FOR PROPOSED CONNECTION).
 3. THE NEW RECEPTACLE IS TO BE LOCATED AT 15'-0" ABOVE GRADE. CONTRACTOR SHALL PROVIDE A NON-FERROUS PLUG IN POLE WHERE EXISTING RECEPTACLE IS REMOVED.

EXISTING LIGHT STANDARD DETAIL
N.T.S.



SPlicing ELECTRIC CABLE
N.T.S.



EXISTING LIGHTING CONTROLLER LOCATED AT 16301 S. LaGRANGE RD.
N.T.S.

CIRCUIT ID	400W HPS 240V LIGHT STANDARD	LOAD/UNIT (WATTS)	120W-120V RECEPTACLE	LOAD/UNIT (WATTS)	TOTAL CIRCUIT LOAD (WATTS)
A	9	478 W	9	120 W	5,382 W
B	9	478 W	9	120 W	5,382 W
C	-	478 W	-	120 W	-
D	-	478 W	-	120 W	-
TOTAL					10,764 W

16301 S. LaGRANGE RD. LIGHTING CONTROLLER CIRCUIT WATTAGE LOADS

General Purpose Dry Type Transformers
Standard Ventilated and Resin-Filled

Application
General purpose standard transformers are intended for power, heating, and lighting applications.

Ventilated-Type
All ventilated transformers have core and coil assemblies mounted on rubber isolation pads to minimize the sound level. Vented openings in the enclosure allow air to flow directly over the core-and-coil assembly for cooling. Each is manufactured and tested to meet or exceed IEEE, NEMA and ANSI standards. Their compact size permits installation near the load being supplied. Adding weathershields allows these normally indoor rated units to be used outdoors.

Resin-Filled
Resin-filled general purpose transformers are epoxy encapsulated. The enclosure has no openings, making resin-filled transformers ideal for use indoor or outdoor where airborne particles or contaminants could be detrimental to operation. The core-and-coil assembly is embedded in an epoxy resin compound and wall mounted for maximum protection. These units can be used outdoor without accessories.

Single Phase					
kVA	Catalog Number	Full Capacity Taps #	Dep. C. Temp. Rise	Wt. (Lbs)	Enc. #
240 x 480 Volts Primary, 120/240 Volts Secondary 60 Hz					
0.050	505V1A	None	SS	4.2	1A
0.100	1005V1A	None	SS	4.5	2A
0.150	1505V1A	None	SS	6.2	3A
0.250	2505V1B	None	SS	10.5	4A
0.500	5005V1B	None	SS	13.8	5A
0.750	7505V1F	None	SS	15.5	6A
1	151F	None	SS	21.2	7A
1.5	151F	None	SS	30.1	8A
2	251F	None	SS	38.1	9A
3	351F	None	SS	55.2	10A
5	551F	None	SS	115	13B
7.5	751F	None	SS	115	13B
10	1051F	None	SS	115	13B
15	1551H	None	SS	200	17D
25	255SH	0-2.5%±4-A	SS	250	17D
37.5	375SH	0-2.5%±4-A	SS	325	18D
50	505SH	0-2.5%±4-A	SS	350	18D
75	755SH	0-2.5%±4-A	SS	495	21D
100	1005SH	0-2.5%±4-A	SS	700	25D
167	1675SH	0-2.5%±4-A	SS	1000	24D
600 Volts Primary, 120/240 Volts Secondary 60 Hz					
0.050	605V1A	None	SS	4.2	1A
0.100	1205V1A	None	SS	4.5	2A
0.150	1805V1A	None	SS	6.2	3A
0.250	2405V1B	None	SS	10.5	4A
0.500	4805V1B	None	SS	13.8	5A
0.750	7205V1F	None	SS	15.5	6A
1	1445H	None	SS	21.2	7A
1.5	1445H	None	SS	30.1	8A
2	2885H	None	SS	38.1	9A
3	4325H	0-2.5%FCBN	SS	55.2	10A
5	6485H	0-2.5%FCBN	SS	115	13B
7.5	9725H	0-2.5%FCBN	SS	115	13B
10	12965H	0-2.5%FCBN	SS	165	18B
15	19445H	4-2.5%FCBN	SS	200	17D
25	28845H	4-2.5%FCBN	SS	250	17D
37.5	37545H	4-2.5%FCBN	SS	325	18D
50	50545H	4-2.5%FCBN	SS	350	18D
75	75545H	4-2.5%FCBN	SS	495	21D
100	100545H	4-2.5%FCBN	SS	700	25D
167	167545H	4-2.5%FCBN	SS	1000	24D

SQUARE D

Enclosures and Accessories
Enclosure Dimensions and Accessories

Table 1: Enclosure Dimensions and Accessories

Enclosure Number/Style	Height		Width		Depth	Mounting	Weatherhead	Wall Mounting Bracket	Casting Mounting Bracket
	IN	mm	IN	mm					
1 A	5	127	4.27	114	3.44	87	Wall	---	---
2 A	5.5	140	4.47	114	3.44	87	Wall	---	---
3 A	5.5	140	5.23	133	4.06	103	Wall	---	---
4 A	8.19	157	6.19	157	4.69	119	Wall	---	---
5 A	8.69	176	6.19	157	4.69	119	Wall	---	---
6 A	8.13	270	6.94	176	5.31	135	Wall	---	---
7 A	8.25	210	6.06	220	6.59	167	Wall	---	---
8 A	9.59	243	6.06	220	6.59	167	Wall	---	---
9 A	10.5	267	6.62	219	6.5	165	Wall	---	---
10 A	12.58	318	6.62	219	6.5	165	Wall	---	---
11 A	13.5	343	14.75	375	9	229	Wall	---	---
12 C	14.75	375	16.75	248	11.75	298	Wall	---	---
13 B	14.75	375	16.75	248	11.75	298	Wall	---	---
14 C	14.75	375	16.75	248	11.75	298	Wall	---	---
15 B	20	508	16	381	13.5	343	Wall	---	---
16 C	20	508	25	635	13.5	343	Wall	---	---
17 D	27	686	20	508	16	406	Floor	W5363	WMB301-362
18 E	27	686	20	508	16	406	Floor	N/A	WMB301-362
19 D	30	762	20	508	20	508	Floor	W5363	WMB303-364
19 E	30	762	20	508	20	508	Floor	N/A	WMB303-364
20 D	30	762	20	508	20	508	Floor	W5364	WMB303-364
20 E	30	762	20	508	20	508	Floor	N/A	WMB303-364
21 D	37	940	30	762	24	610	Floor	W5364	N/A
21 E	37	940	30	762	24	610	Floor	N/A	N/A
22 D	43.75	1111	32	813	27	686	Floor	W5380	N/A
22 E	43.75	1111	32	813	27	686	Floor	N/A	N/A
23 D	48	1219	48	1219	29.5	749	Floor	W5384	N/A
23 E	48	1219	48	1219	29.5	749	Floor	N/A	N/A
24 D	49.5	1257	35	787	29.5	749	Floor	W5381	N/A
24 E	49.5	1257	35	787	29.5	749	Floor	N/A	N/A
25 D	49.5	1257	41	1041	32	813	Floor	W5382	N/A
25 E	49.5	1257	41	1041	32	813	Floor	N/A	N/A
26 D	57.5	1461	41	1041	32	813	Floor	N/A	N/A
26 E	57.5	1461	41	1041	32	813	Floor	N/A	N/A
27 D	58	1473	48	1219	29.5	749	Floor	W5388	N/A
27 E	58	1473	48	1219	29.5	749	Floor	N/A	N/A
28 D	60	1524	56	1422	38	914	Floor	N/A	N/A
28 E	60	1524	56	1422	38	914	Floor	W5370A	N/A
29 D	68	1727	56	1422	38	914	Floor	N/A	N/A
29 E	68	1727	56	1422	38	914	Floor	N/A	N/A
30 D	71	1803	48	1219	38	914	Floor	W5383	N/A
30 E	71	1803	48	1219	38	914	Floor	N/A	N/A
31 D	74	1880	56	1422	40.5	1029	Floor	W5384	N/A
31 E	74	1880	56	1422	40.5	1029	Floor	N/A	N/A
32 F	91.5	2324	56	1422	54	1372	Floor	N/A	N/A
33 F	91.5	2324	72	1829	54	1372	Floor	N/A	N/A
34 F	91.5	2324	84	2134	54	1372	Floor	N/A	N/A

SQUARE D

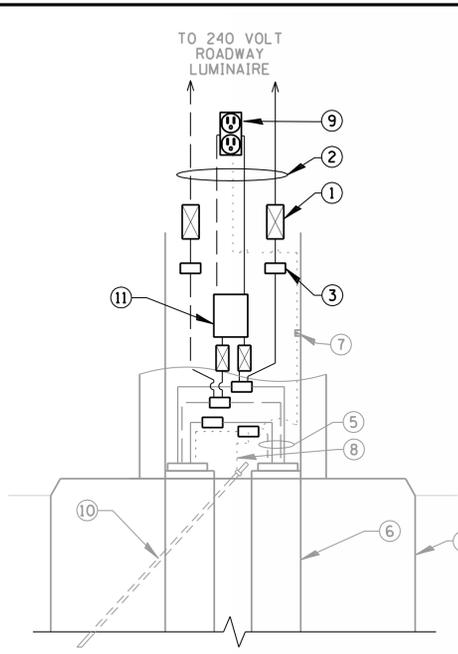
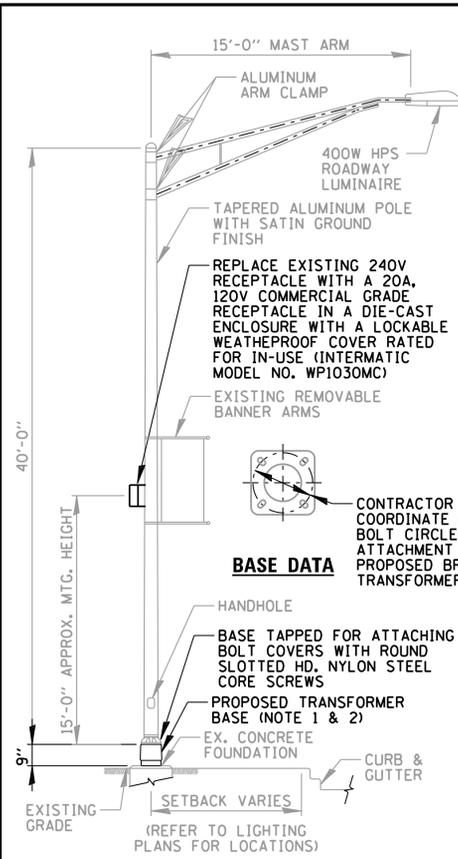
CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT: **the village of Orland Park**
14700 South Ravinia Avenue
Orland Park, IL 60462

DSGN.	GAH	TITLE:
DWN.	KB	
CHKD.	JPC	
SCALE:	N.T.S.	
PLOT DATE:	2/29/2008	
CAD USER:	KBALLADO	
NO.	DATE	NATURE OF REVISION
FILE NAME	N:\ORLANDPARK\070176\Mech\070176_09.LDT	

LIGHTING DETAILS FOR LIGHTING SYSTEM FROM 167th ST. TO 163rd ST.

PROJ. NO. 07-0176
SHEET 9 OF 12
DRAWING NO. 9

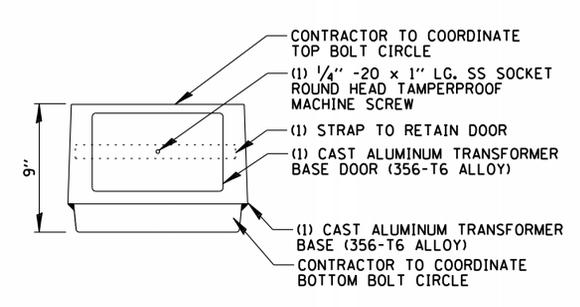


- 1 CONNECTOR KIT METHOD WITH A FUSE (10A FOR LIGHTS & TRANSFORMER) AND NON-FUSED FOR NEUTRAL INSIDE A FUSE HOLDER AND INSULATING BOOTS (NOTE 3)
- 2 NO. 10 A.W.G. WIRE
- 3 MULTIPLE COMPRESSION FITTINGS (SPLICE)
- 4 EX. CONCRETE FOUNDATION
- 5 EX. WIRE IN CONDUIT (AS SHOWN ON PLANS)
- 6 LIGHTING DUCT IN PVC RACEWAY
- 7 POLE GROUND LUG
- 8 GROUND WIRE MECHANICALLY CLAMPED TO GROUND ROD
- 9 NEW 120V-20A RECEPTACLE MTD. APPROX. 15'-0" ABOVE POLE BASE
- 10 EXISTING GROUND ROD
- 11 PROPOSED 0.25 KVA TRANSFORMER MTD. IN BREAKAWAY TRANSFORMER BASE

NOTES:

1. CONTRACTOR TO PROVIDE ALL NEW CONNECTORS, FITTINGS, FUSES, FUSEHOLDERS AND POLE WIRING WHICH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "POLE MOUNTED RECEPTACLE, COMPLETE IN PLACE".
2. CONTRACTOR TO PROVIDE 3' OF ADDITIONAL SLACK CABLE ON THE LINE AND LOAD SIDE OF TRANSFORMER TO ALLOW FOR SERVICING OF THE TRANSFORMER OUTSIDE OF THE POLE BASE.
3. FUSES SHALL BE COOPER BUSSMAN MODEL NO. FMN-10, AND IN-LINE FUSE HOLDERS SHALL BE COOPER BUSSMAN HEB SERIES.

HANDHOLE WIRING DIAGRAM
N.T.S.

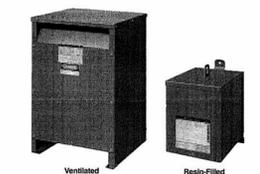


NOTES:

1. BEFORE INSTALLATION OF BREAKAWAY BASE, USER SHOULD CONSULT WITH AUTHORIZED DISTRIBUTOR REGARDING USERS PROPOSED APPLICATION, LOAD REQUIREMENTS AND INSTALLATION METHODS. FAILURES CAN RESULT FROM USERS MISAPPLICATION OR IMPROPER INSTALLATION. TO APPROACH OPTIMUM STATIC LOADS, USE THE LARGEST POSSIBLE BOLT CIRCLES. SHIMS SHALL NOT BE USED.

BREAKAWAY TRANSFORMER BASE
N.T.S.

General Purpose Dry Type Transformers
Standard Ventilated and Resin-Filled



Application
General purpose standard transformers are intended for power, heating, and lighting applications.

Ventilated-Type
All ventilated transformers have core and coil assemblies mounted on rubber isolation pads to minimize the sound level. Vent openings in the enclosure allow air to flow directly over the core-and-coil assembly for cooling. Each is manufactured and tested to meet or exceed IEEE, NEMA and ANSI standards. Their compact size permits installation near the load being supplied. Adding weathersheds allows these normally indoor rated units to be used outdoors.

Resin-Filled
Resin-filled general purpose transformers are epoxy encapsulated. The enclosure has no openings, making resin-filled transformers ideal for use indoor or outdoor where airborne particles or contaminants could be detrimental to operation. The core-and-coil assembly is embedded in an epoxy resin compound and well mounted for maximum protection. These units can be used outdoor without accessories.

Single Phase

kVA	Catalog Number	Full Capacity Taps #	Deg. C Temp. Rise	Wt. (Lbs)	Encl. #	Wiring #
240 x 480 Volts Primary, 120/240 Volts Secondary 60 Hz						
0.050	505V1A	None	55	4.2	1A	1
0.100	1005V1A	None	55	4.5	2A	1
0.150	1505V1A	None	55	6.2	3A	1
0.250	2505V1B	None	80	10.5	4A	1
0.500	5005V1B	None	80	13.8	5A	1
0.750	7505V1F	None	115	15.5	6A	1
1	151F	None	115	21.2	7A	1
1.5	1551F	None	115	30.1	8A	1
2	251F	None	115	39.1	9A	1
3	351F	None	115	55.2	10A	1
5	551F	None	115	115	13B	1
7.5	751F	None	115	150	13B	1
10	1051F	None	115	185	13B	1
15	1551H	None	150	250	17D	1
25	255SH	0-2.5%±4-A	150	350	17D	3
37.5	375SH	0-2.5%±4-A	150	325	18D	3
50	505SH	0-2.5%±4-A	150	350	18D	3
75	755SH	0-2.5%±4-A	150	495	21D	3
100	1005SH	0-2.5%±4-A	150	700	25D	3
167	1675SH	0-2.5%±4-A	150	1000	24D	3
600 Volts Primary, 120/240 Volts Secondary 60 Hz						
0.050	505V1A	None	55	4.2	1A	6
0.100	1005V1A	None	55	4.5	2A	6
0.150	1505V1A	None	55	6.2	3A	6
0.250	2505V1B	None	80	10.5	4A	6
0.500	5005V1B	None	80	13.8	5A	6
0.750	7505V1F	None	115	15.5	6A	6
1	151F	None	115	21.2	7A	6
1.5	1551F	None	115	30.1	8A	6
2	251F	None	115	39.1	9A	6
3	351F	None	115	55.2	10A	6
5	551F	None	115	115	13B	6
7.5	751F	None	115	150	13B	6
10	1051F	None	115	185	13B	6
15	1551H	None	150	250	17D	6
25	255SH	0-2.5%±4-A	150	350	17D	6
37.5	375SH	0-2.5%±4-A	150	325	18D	6
50	505SH	0-2.5%±4-A	150	350	18D	6
75	755SH	0-2.5%±4-A	150	495	21D	6
100	1005SH	0-2.5%±4-A	150	700	25D	6
167	1675SH	0-2.5%±4-A	150	1000	24D	6

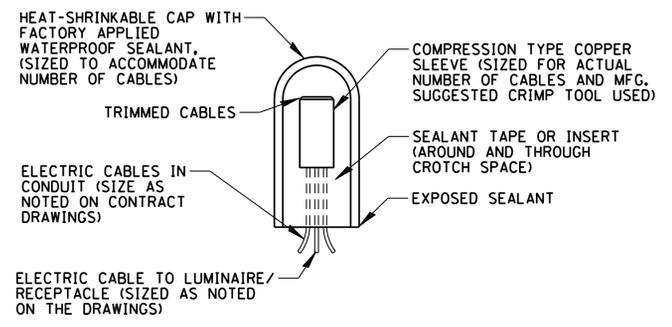
Single Phase

kVA	Catalog Number	Full Capacity Taps #	Deg. C Temp. Rise	Wt. (Lbs)	Encl. #	Wiring #
480 Volts Primary, 120/240 Volts Secondary 60 Hz						
3	3540F	2-5%FCBN	115	55.2	10A	28
5	5540F	2-5%FCBN	115	115	13B	28
7.5	7540F	2-5%FCBN	115	150	13B	28
10	10540F	2-5%FCBN	115	185	13B	28
15	15540F	2-5%FCBN	115	320	15B	28
15	15540H	2-5%FCBN	150	200	17D	19
25	25540F	2-5%FCBN	115	390	15B	28
600 Volts Primary, 120/240 Volts Secondary 60 Hz						
3	3540F	2-5%FCBN	115	55.2	10A	28
5	5540F	2-5%FCBN	115	115	13B	28
7.5	7540F	2-5%FCBN	115	150	13B	28
10	10540F	2-5%FCBN	115	185	13B	28
15	15540H	4-2.5%FCBN	150	200	17D	19
25	255SH	4-2.5%FCBN	150	250	17D	19
37.5	375SH	4-2.5%FCBN	150	325	18D	19
50	505SH	4-2.5%FCBN	150	350	18D	19
75	755SH	4-2.5%FCBN	150	495	21D	19
100	1005SH	4-2.5%FCBN	150	700	25D	19
167	1675SH	4-2.5%FCBN	150	1000	24D	19

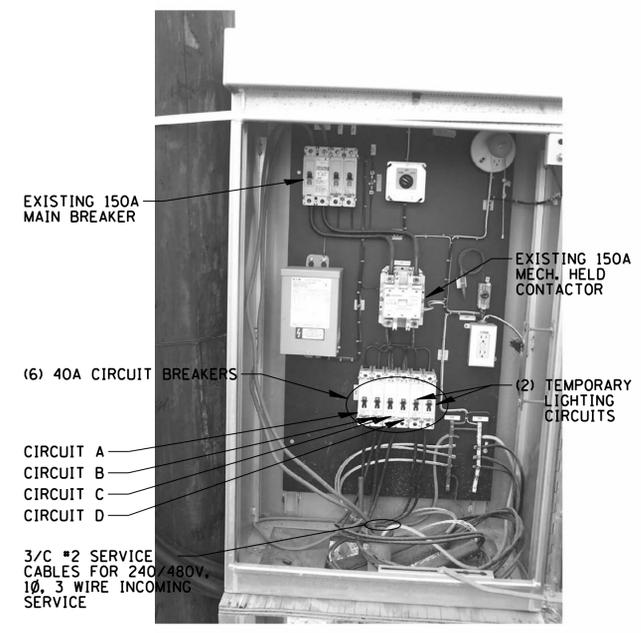
NOTES:

1. CONTRACTOR TO REMOVE EXISTING BREAKAWAY COUPLINGS & SKIRT (WHERE APPLIES) AND REPLACE WITH PROPOSED BREAKAWAY TRANSFORMER BASE.
2. PROPOSED 0.25 KVA, 240V PRIMARYx120V SECONDARY TRANSFORMER IN A NEMA 3R ENCLOSURE TO BE LOCATED IN PROPOSED BREAKAWAY TRANSFORMER BASE (SEE HANDHOLE WIRING DIAGRAM FOR PROPOSED CONNECTION).

EXISTING LIGHT STANDARD DETAIL
N.T.S.



SPLICING ELECTRIC CABLE
N.T.S.



EXISTING LIGHTING CONTROLLER
LOCATED AT 15601 S. LaGRANGE RD.
N.T.S.

CIRCUIT ID	400W HPS 240V LIGHT STANDARD	LOAD/UNIT (WATTS)	120W-120V RECEPTACLE	LOAD/UNIT (WATTS)	TOTAL CIRCUIT LOAD (WATTS)
A	2	478 W	2	120 W	1,196 W
B	4	478 W	4	120 W	2,392 W
C	2	478 W	2	120 W	1,196 W
D	4	478 W	4	120 W	2,392 W
E	-	478 W	-	120 W	-
F	-	478 W	-	120 W	-
TOTAL					7,176 W

• LIGHTING SYSTEM CURRENTLY HAS TEMPORARY LIGHTING FIXTURES ON INDICATED CIRCUITS. CONTRACTOR TO COORDINATE FINAL CIRCUITRY WITH JASON WHITE, PROJECT MANAGER FROM SMITHE ENGINEERING.

15601 S. LaGRANGE RD.
LIGHTING CONTROLLER
CIRCUIT WATTAGE LOADS

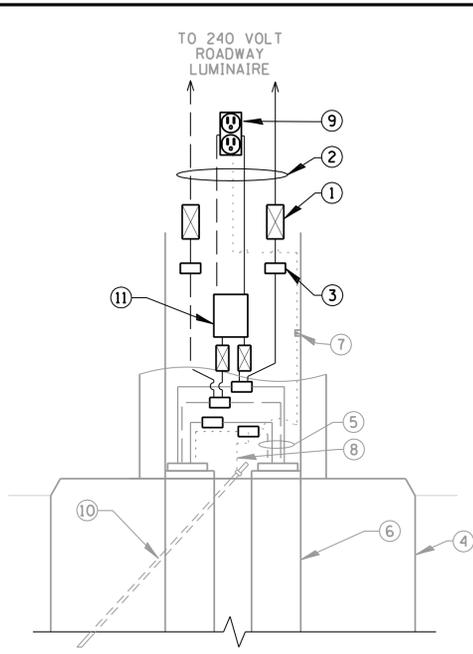
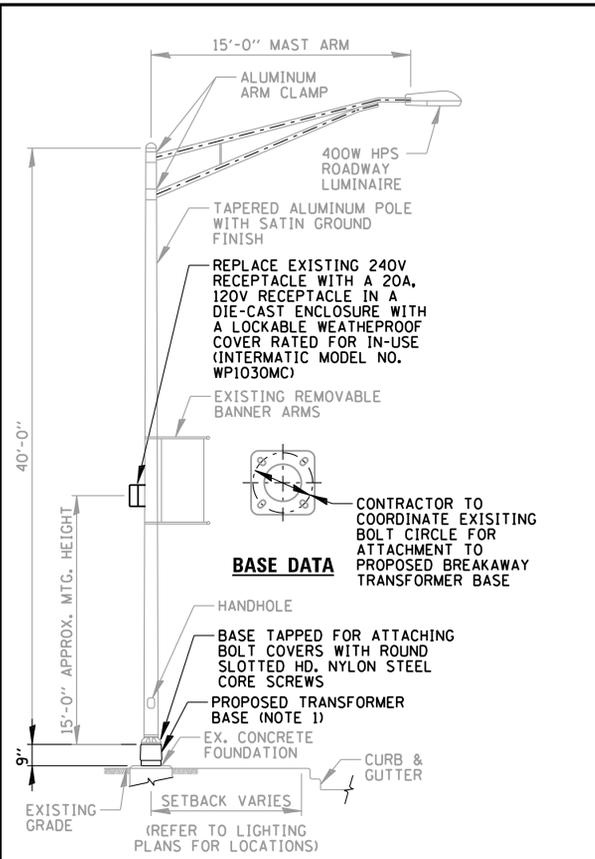
Table 1: Enclosure Dimensions and Accessories

Enclosure Number/Style	Height		Width		Depth	Mounting	Weatherhead	Wall Mounting Bracket	Celling Mounting Bracket
	IN	mm	IN	mm					
1 A	5	127	4.27	114	3.44	87	Wall	---	---
2 A	5.5	140	4.47	114	3.44	87	Wall	---	---
3 A	5	127	4.85	133	3.75	95	Wall	---	---
4 A	5.5	140	5.23	133	4.05	103	Wall	---	---
5 A	6.19	157	6.19	157	4.69	119	Wall	---	---
6 A	6.69	170	6.19	157	4.69	119	Wall	---	---
7 A	8.13	207	6.94	176	5.31	135	Wall	---	---
8 A	8.25	210	6.69	169	5.69	147	Wall	---	---
9 A	9.59	243	6.08	156	6.59	167	Wall	---	---
10 A	10.5	267	6.62	171	6.5	165	Wall	---	---
11 A	12.68	318	6.62	171	6.5	165	Wall	---	---
12 C	13.5	343	14.75	375	9	229	Wall	---	---
13 B	14.75	375	6.75	173	6.69	173	Wall	---	---
14 C	14.75	375	10.1	258	12.25	311	Wall	---	---
15 B	20	508	16	406	13.5	343	Wall	---	---
16 C	22	559	25	635	13.5	343	Wall	---	---
17 D	27	686	20	508	16	406	Floor	W5363	WMB301-302
E	27	686	20	508	16	406	Floor	N/A	WMB301-302
D	30	762	20	508	20	508	Floor	W5363	WMB303-304
E	30	762	20	508	20	508	Floor	N/A	WMB303-304
D	30	762	20	508	20	508	Floor	W5364	WMB305-354
E	30	762	20	508	20	508	Floor	N/A	WMB305-354
D	37	940	30	762	20	508	Floor	W5364	WMB305-354
E	37	940	30	762	20	508	Floor	N/A	WMB305-354
D	37	940	30	762	24	610	Floor	W5364	N/A
E	37	940	30	762	24	610	Floor	N/A	N/A
D	43.75	1111	32	813	27	686	Floor	W5380	N/A
E	43.75	1111	32	813	27	686	Floor	N/A	N/A
D	48	1219	48	1219	29.5	749	Floor	W5384	N/A
E	48	1219	48	1219	29.5	749	Floor	N/A	N/A
D	49.5	1257	38	784	28.5	724	Floor	W5381	N/A
E	49.5	1257	38	784	28.5	724	Floor	N/A	N/A
D	49.5	1257	41	1041	32	813	Floor	W5382	N/A
E	49.5	1257	41	1041	32	813	Floor	N/A	N/A
D	57.5	1461	41	1041	32	813	Floor	W5382	N/A
E	57.5	1461	41	1041	32	813	Floor	N/A	N/A
D	58	1473	48	1219	29.5	749	Floor	W5388	N/A
E	58	1473	48	1219	29.5	749	Floor	N/A	N/A
D	60	1524	56	1422	38	914	Floor	N/A	N/A
E	60	1524	56	1422	38	914	Floor	N/A	N/A
D	68	1727	56	1422	38	914	Floor	W5204	N/A
E	68	1727	56	1422	38	914	Floor	N/A	N/A
D	71	1803	48	1219	38	914	Floor	W5383	N/A
E	71	1803	48	1219	38	914	Floor	N/A	N/A
D	74	1880	56	1422	40.5	1029	Floor	W5384	N/A
E	74	1880	56	1422	40.5	1029	Floor	N/A	N/A
D	74	1880	56	1422	40.5	1029	Floor	N/A	N/A
E	74	1880	56	1422	40.5	1029	Floor	N/A	N/A
D	91.5	2324	72	1829	54	1372	Floor	N/A	N/A
E	91.5	2324	72	1829	54	1372	Floor	N/A	N/A

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT: **the village of**
Orland Park
14700 South Ravinia Avenue
Orland Park, IL 60462

DSGN.	GAH	
DWN.	KB	



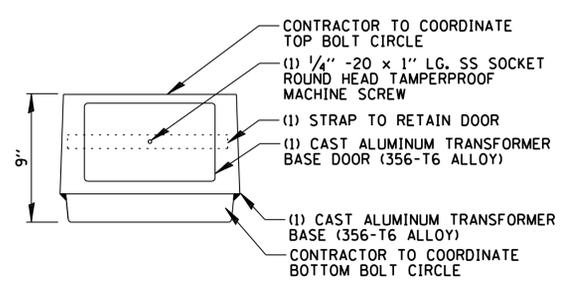
- 1 CONNECTOR KIT METHOD WITH A FUSE (10A FOR LIGHTS & TRANSFORMER) AND NON-FUSED FOR NEUTRAL INSIDE A FUSE HOLDER AND INSULATING BOOTS (NOTE 3)
- 2 NO. 10 A.W.G. WIRE
- 3 MULTIPLE COMPRESSION FITTINGS (SPLICE)
- 4 EX. CONCRETE FOUNDATION
- 5 EX. WIRE IN CONDUIT (AS SHOWN ON PLANS)
- 6 LIGHTING DUCT IN PVC RACEWAY
- 7 POLE GROUND LUG
- 8 GROUND WIRE MECHANICALLY CLAMPED TO GROUND ROD
- 9 NEW 120V-20A RECEPTACLE MTD. APPROX. 15'-0" ABOVE POLE BASE
- 10 EXISTING GROUND ROD
- 11 PROPOSED 0.25 KVA TRANSFORMER MTD. IN BREAKAWAY TRANSFORMER BASE

NOTES:

1. CONTRACTOR TO PROVIDE ALL NEW CONNECTORS, FITTINGS, FUSES, FUSEHOLDERS AND POLE WIRING WHICH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "POLE MOUNTED RECEPTACLE, COMPLETE IN PLACE".
2. CONTRACTOR TO PROVIDE 3' OF ADDITIONAL SLACK CABLE ON THE LINE AND LOAD SIDE OF TRANSFORMER TO ALLOW FOR SERVICING OF THE TRANSFORMER OUTSIDE OF THE POLE BASE.
3. FUSES SHALL BE COOPER BUSSMAN MODEL NO. FMN-10, AND IN-LINE FUSE HOLDERS SHALL BE COOPER BUSSMAN HEB SERIES.

HANDHOLE WIRING DIAGRAM

N.T.S.



NOTES:

1. BEFORE INSTALLATION OF BREAKAWAY BASE, USER SHOULD CONSULT WITH AUTHORIZED DISTRIBUTOR REGARDING USERS PROPOSED APPLICATION, LOAD REQUIREMENTS AND INSTALLATION METHODS. FAILURES CAN RESULT FROM MISAPPLICATION OR IMPROPER INSTALLATION. TO APPROACH OPTIMUM STATIC LOADS, USE THE LARGEST POSSIBLE BOLT CIRCLES. SHIMS SHALL NOT BE USED.

BREAKAWAY TRANSFORMER BASE

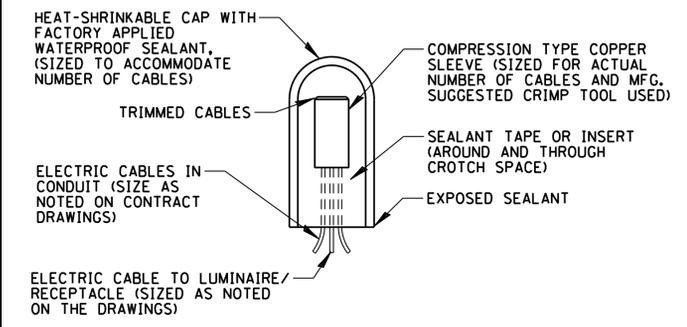
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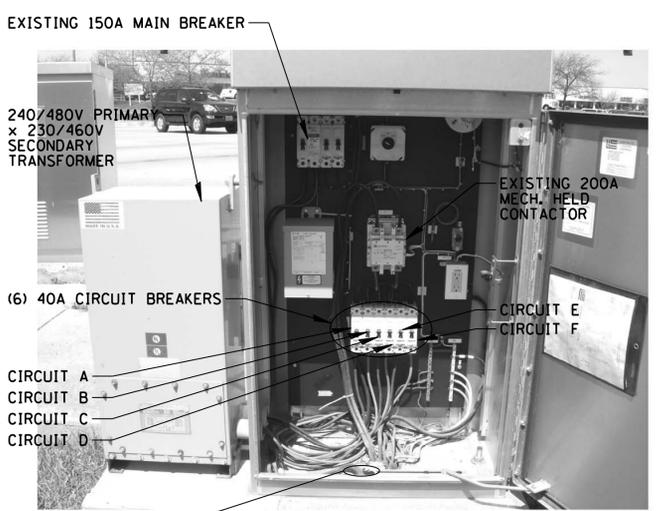
EXISTING LIGHT STANDARD DETAIL

N.T.S.



SPlicing ELECTRIC CABLE

N.T.S.



EXISTING LIGHTING CONTROLLER LOCATED AT 15101 S. LaGRANGE RD.

N.T.S.

CIRCUIT ID	400W HPS 240V LIGHT STANDARD	LOAD/UNIT (WATTS)	120W-120V RECEPTACLE	LOAD/UNIT (WATTS)	TOTAL CIRCUIT LOAD (WATTS)
A	7	478 W	7	120 W	4,186 W
B	8	478 W	8	120 W	4,784 W
C	6	478 W	6	120 W	3,588 W
D	5	478 W	5	120 W	2,990 W
E	2	478 W	2	120 W	1,196 W
F	2	478 W	2	120 W	1,196 W
TOTAL					17,940 W

15101 S. LaGRANGE RD. LIGHTING CONTROLLER CIRCUIT WATTAGE LOADS

General Purpose Dry Type Transformers Standard Ventilated and Resin-Filled

Application
General purpose standard transformers are intended for power, heating, and lighting applications.

Ventilated-Type
All ventilated transformers have core and coil assemblies mounted on rubber isolation pads to minimize the sound level. Vent openings in the enclosure allow air to flow directly over the core-and-coil assembly for cooling. Each is manufactured and tested to meet or exceed IEEE, NEMA and ANSI standards. Their compact size permits installation near the load being supplied. Adding weathershields allows these normally indoor rated units to be used outdoors.

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kVA	Catalog Number	Full Capacity Taps #	Deg. C Temp. Rise	Wt. (Lbs)	Encl. #	Wiring #
240 x 480 Volts Primary 120/240 Volts Secondary 60 Hz						
0.050	505V1A	None	55	4.2	1A	1
0.100	1005V1A	None	55	4.5	2A	1
0.150	1505V1A	None	55	6.2	3A	1
0.250	2505V1B	None	80	10.5	4A	1
0.500	5005V1B	None	80	13.8	5A	1
0.750	7505V1F	None	115	15.5	6A	1
1	151F	None	115	21.2	7A	1
1.5	1.5S1F	None	115	30.1	8A	1
2	2S1F	None	115	39.1	9A	1
3	3S1F	None	115	55.2	10A	1
5	5S1F	None	115	115	13B	1
7.5	7S1F	None	115	150	13B	1
10	10S1F	None	115	165	13B	1
15	15S1H	None	150	200	17D	1
25	25S1H	0-2.5%±4-A	150	230	17D	3
37.5	37S1H	0-2.5%±4-A	150	325	18D	3
50	50S1H	0-2.5%±4-A	150	350	18D	3
75	75S1H	0-2.5%±4-A	150	495	21D	3
100	100S1H	0-2.5%±4-A	150	705	25D	3
167	167S1H	0-2.5%±4-A	150	1000	24D	3
600 Volts Primary, 120/240 Volts Secondary 60 Hz						
0.050	050V1A	None	55	4.2	1A	6
0.100	100V1A	None	55	4.5	2A	6
0.150	150V1A	None	55	6.2	3A	6
0.250	250V1B	None	80	10.5	4A	6
0.500	500V1B	None	80	13.8	5A	6
0.750	750V1F	None	115	15.5	6A	6
1	1S1F	None	115	21.2	7A	6
1.5	1.5S1F	None	115	30.1	8A	6
2	2S1F	None	115	39.1	9A	6
3	3S1F	2-5%FCBN	115	55.2	10A	28
5	5S1F	2-5%FCBN	115	115	13B	28
7.5	7S1F	2-5%FCBN	115	150	13B	28
10	10S1F	2-5%FCBN	115	165	13B	28
15	15S1H	4-2.5%FCBN	150	200	17D	19
25	25S1H	4-2.5%FCBN	150	230	17D	19
37.5	37S1H	4-2.5%FCBN	150	325	18D	19
50	50S1H	4-2.5%FCBN	150	350	18D	19
75	75S1H	4-2.5%FCBN	150	495	21D	19
100	100S1H	4-2.5%FCBN	150	705	25D	19
167	167S1H	4-2.5%FCBN	150	1000	24D	19

SQUARE D

Enclosures and Accessories Enclosure Dimensions and Accessories

Enclosure Number/Size	Height	Width	Depth	Mounting	Weatherhead	Wall Mounting Bracket	Ceiling Mounting Bracket
1 A	5	127	114	3.44	87	Wall	---
2 A	5.5	140	4.47	114	3.44	87	Wall
3 A	5	127	4.85	133	3.35	95	Wall
4 A	5.5	140	5.23	133	4.06	103	Wall
5 A	6.19	157	6.19	157	4.69	119	Wall
6 A	6.69	170	6.19	157	4.69	119	Wall
7 A	8.13	270	6.94	176	5.31	135	Wall
8 A	8.28	270	8.08	200	6.60	167	Wall
9 A	9.56	243	8.08	200	6.90	167	Wall
10 A	10.5	287	8.08	219	6.5	185	Wall
11 A	12.68	318	8.08	219	8.5	195	Wall
12 C	13.5	343	14.76	375	9	239	Wall
13 B	14.76	375	15.75	248	11.75	298	Wall
14 C	14.76	375	16.1	488	12.25	311	Wall
15 B	20	508	16	381	13.5	343	Wall
16 C	22	569	25	635	13.5	343	Wall
17 D	27	686	20	508	16	406	Floor
18 E	27	686	20	508	16	406	Floor
19 D	30	762	20	508	20	508	Floor
20 E	30	762	20	508	20	508	Floor
21 D	37	840	30	762	20	508	Floor
22 E	37	840	30	762	20	508	Floor
23 D	43.75	1111	32	813	27	686	Floor
24 E	43.75	1111	32	813	27	686	Floor
25 D	48	1219	48	1219	29.5	749	Floor
26 E	48	1219	48	1219	29.5	749	Floor
27 D	49.5	1227	30	889	28.5	724	Floor
28 E	49.5	1227	30	889	28.5	724	Floor
29 D	49.5	1227	41	1041	32	813	Floor
30 E	49.5	1227	41	1041	32	813	Floor
31 D	57.5	1461	41	1041	32	813	Floor
32 E	57.5	1461	41	1041	32	813	Floor
33 D	58	1473	48	1219	28.5	749	Floor
34 E	58	1473	48	1219	28.5	749	Floor
35 D	60	1524	56	1422	38	914	Floor
36 E	60	1524	56	1422	38	914	Floor
37 D	68	1727	56	1422	38	914	Floor
38 E	68	1727	56	1422	38	914	Floor
39 D	71	1803	48	1219	38	914	Floor
40 E	71	1803	48	1219	38	914	Floor
41 D	74	1880	56	1422	40.5	1029	Floor
42 E	74	1880	56	1422	40.5	1029	Floor
43 F	91.5	2324	56	1422	54	1372	Floor
44 F	91.5	2324	72	1629	54	1372	Floor
45 F	91.5	2324	64	2154	54	1372	Floor

SQUARE D

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT: **the village of Orland Park**
14700 South Ravinia Avenue
Orland Park, IL 60462

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL	DeFault
DSGN.	GAH				
DWN.	KB				
CHKD.	JPC				
SCALE:	N.T.S.				
PLOT DATE:	2/29/2008				
CAD USER:	KBALLADO				

LIGHTING DETAILS FOR LIGHTING SYSTEM FROM 153rd ST. TO 147th ST.
PROJ. NO. 07-0176
SHEET 12 OF 12
DRAWING NO. 12