

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
--	2014-090TS	VARIOUS	76	1
		ILLINOIS	CONTRACT NO. 62A42	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED  
HIGHWAY PLANS**

VARIOUS LOCATIONS IN DISTRICT 1/CONTRACT #1  
LIGHT EMITTING DIODE (LED) INSTALLATION

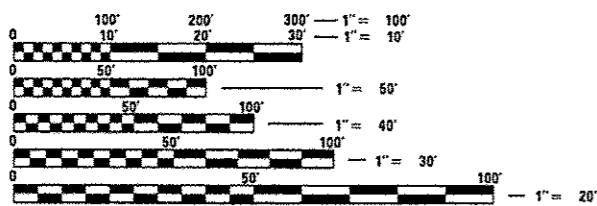
2014-090TS

VARIOUS COUNTIES

C-91-179-15

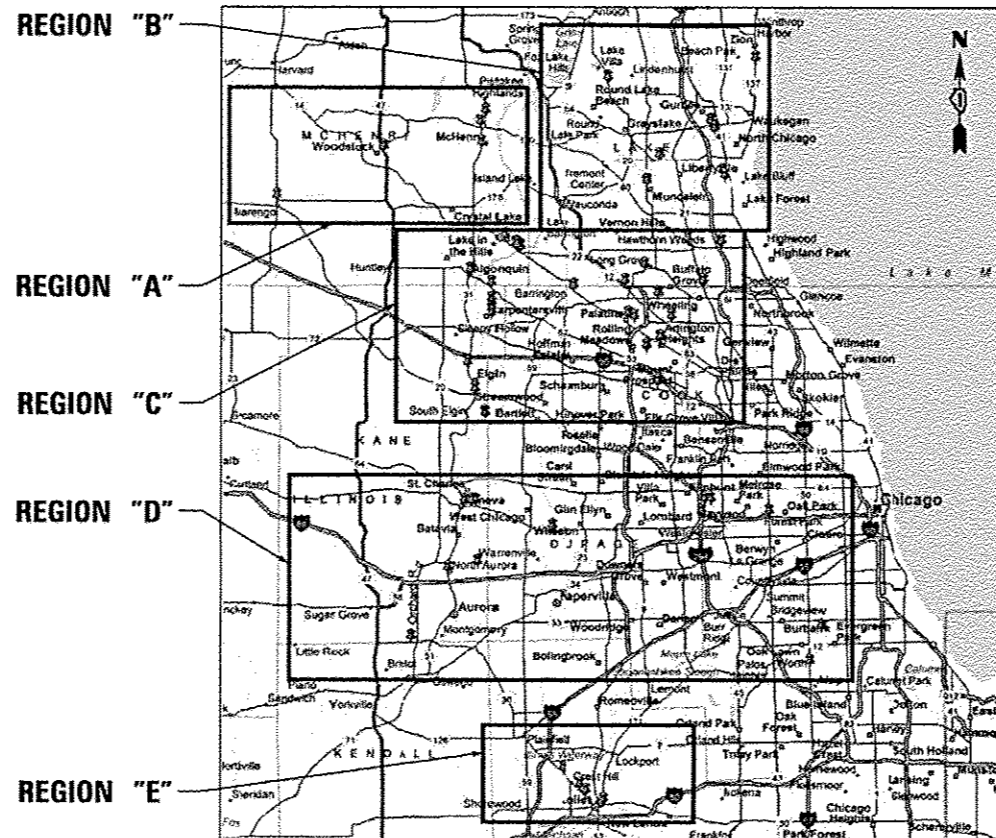
**HIGHWAY STANDARDS**

- 701006-05 OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701101-04 OFF-ROAD OPERATIONS MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701701-09 URBAN LANE CLOSURE MULTILANE INTERSECTION
- 701901-04 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAIL
- 720006-04 SIGN PANEL ERECTION DETAILS
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 862001-01 UNINTERRUPTABLE POWER SUPPLY (UPS)
- 880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS



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



LOCATION MAP  
SEE SHEET NO. 3 & 4



Signed Daniel Wirtorzak  
DANIEL WIRTORZAK, P.E., IL. Lic. No. 062-060950  
Expires 11-30-2015  
Date 2/3/15

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Feb 4 20 15

John Fortmann  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

John D. Baranelli, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Mar 20 20 15  
Omer Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: LUKASZ POCIECHA  
PROJECT MANAGER: SUDUD MAHMOUD

CONTRACT NO. 62A42



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OF THE STATE OF ILLINOIS



INDEX OF SHEETS

- 1 COVER SHEET
2 INDEX OF SHEETS & GENERAL NOTES
3-4 LOCATION MAP
5-9 SUMMARY OF QUANTITIES
10-16 DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

TRAFFIC SIGNAL PLANS:

Table with columns: PAGE#, TS#, INTERSECTION NAME. Lists various intersections such as IL RTE 62 (ALGONQUIN RD) AT IL RTE 31 (MAIN ST), IL RTE 62 (ALGONQUIN RD) AT HARRISON ST, etc.

GENERAL NOTES:

- 1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
2. CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470, 72 HOURS IN ADVANCE OF BEGINNING WORK.
3. CONTRACTOR SHALL REPLACE ALL METAL MOUNTING BRACKETS AT ALL RETROFIT SIGNAL HEAD INTERSECTIONS WITH NEW POLYCARBONATE BRACKETS OR AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CORRESPONDING SIGNAL HEAD, LED, RETROFIT PAY ITEM OF THE TYPE AND NUMBER OF SIGNAL HEADS, FACES, AND SECTIONS AS SPECIFIED IN THE PLANS.
4. CONTRACTOR SHALL RELOCATE ANY EXISTING SIGN PANELS, INCLUDING BLANK OUT SIGNS, FROM PAINTED POSTS THAT ARE INDICATED FOR REPLACEMENT TO A NEW POST AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE COST OF REMOVAL, RELOCATION AND ANY NEW MOUNTING HARDWARE NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE TRAFFIC SIGNAL POST, GALVANIZED STEEL PAY ITEM OF THE LENGTH AS SPECIFIED IN THE PLANS.
5. DUE TO THE PRESENCE OF A RED LIGHT RUNNING (RLR) CAMERA FOR THE BELOW LISTED LOCATIONS, CONTRACTOR SHALL NOTIFY THE VILLAGE AND RLR CAMERA COMPANY PRIOR TO THE START OF CONSTRUCTION. THE VILLAGE OR THE RLR CAMERA COMPANY SHALL MAKE THE CAMERA INOPERATIVE FOR THE TIME OF CONSTRUCTION. ANY RLR CAMERA EQUIPMENT THAT IS IN CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED BY ITS RESPECTIVE OWNERS PRIOR TO THE START OF CONSTRUCTION.

RLR CAMERA LOCATION: 7095 - IL RTE 137 AVE AT BUTTERFIELD RD. Includes contact info for GATSO USA, INC. and REDSPEED ILLINOIS.

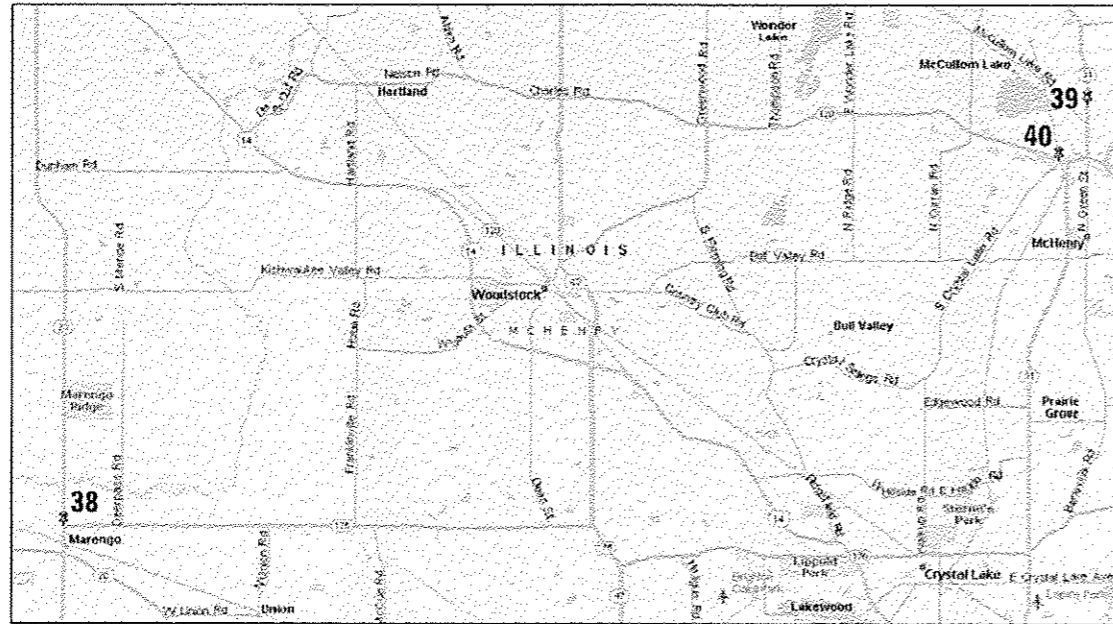
- 6. AT LOCATIONS ON THE PLANS WHERE TRAFFIC SIGNAL POST REMOVAL AND NEW TRAFFIC SIGNAL POST INSTALLATIONS ARE SPECIFIED, THE CONTRACTOR SHALL INSPECT THE EXISTING POST FOUNDATIONS. PRIOR TO REMOVING THE EXISTING TRAFFIC SIGNAL POST TO BE REPLACED THE CONTRACTOR SHALL VERIFY THAT THE PATTERN, SPACING, AND CONDITION OF THE EXISTING ANCHOR BOLT IS ACCEPTABLE FOR REUSE WITH A NEW POST. IF THE EXISTING ANCHOR BOLT IS NOT ACCEPTABLE, THE CONTRACTOR SHALL REPLACE ANCHOR BOLT AS DIRECTED BY THE ENGINEER. ANCHOR BOLT REPLACEMENT WILL BE PAID FOR AS "REMOVE AND REPLACE ANCHOR BOLTS". "REMOVE AND REPLACE ANCHOR BOLTS" PAY ITEM QUANTITIES SHOWN ARE NOMINAL AND ONLY TO BE UTILIZED AS APPROVED BY THE ENGINEER.

- 7. ANY ADDITIONAL CABLE LENGTHS NECESSARY FOR THE PROPER INSTALLATION OF AN UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED DUE TO THE LARGER DISTANCE AWAY FROM THE CONTROLLER CABINET SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED PAY ITEM.

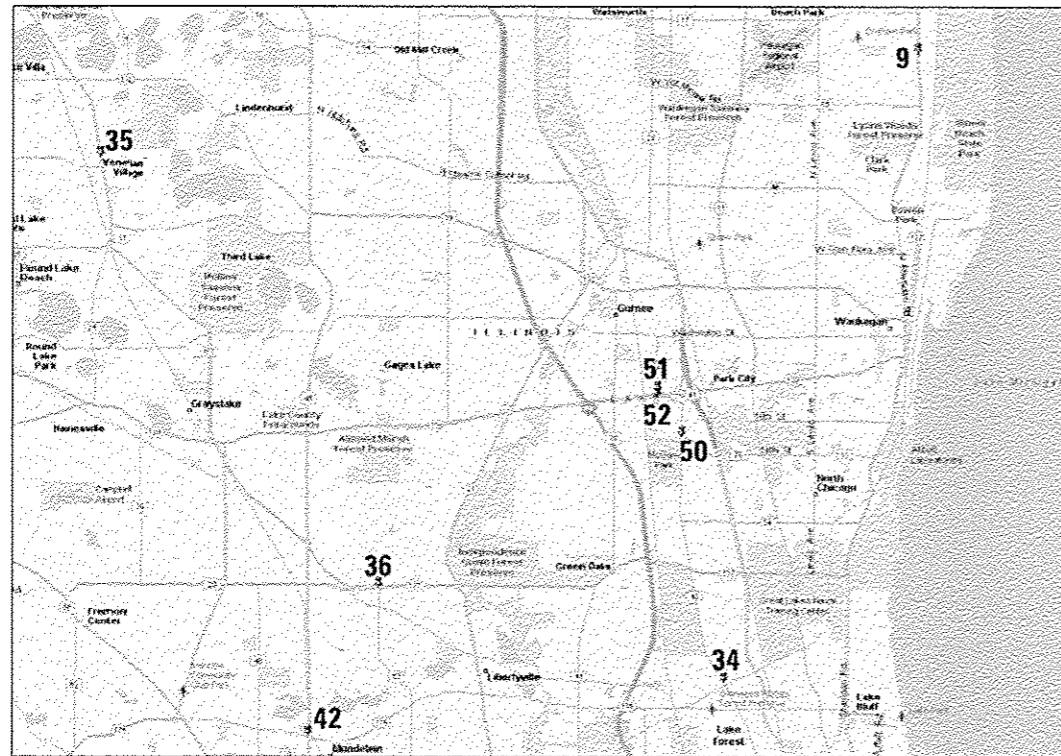
- 8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTHS.
9. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).
10. IF THIS CONTRACT REQUIRES THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK. IF THIS CONTRACT DOES NOT REQUIRE THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR MAY REQUEST ONE FREE LOCATE FOR EXISTING IDOT ELECTRICAL FACILITIES FROM THE DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK. ADDITIONAL REQUESTS MAY BE AT THE EXPENSE OF THE CONTRACTOR. THE LOCATION OF UNDERGROUND TRAFFIC FACILITIES DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO REPAIR ANY FACILITIES DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.
11. CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
12. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.
13. PARTIAL PAYMENT AS DESCRIBED IN ARTICLE 109.07(b) OF THE STANDARD SPECIFICATIONS WILL NOT BE ALLOWED FOR ITEMS INCLUDED IN THIS CONTRACT.
14. A CONCRETE APRON SHALL NOT BE REQUIRED FOR NEW UPS INSTALLATIONS ADJACENT TO EXISTING IMPERVIOUS SURFACES THAT SATISFY THE NEED OF THE CONCRETE APRON, AS DIRECTED BY THE ENGINEER.
15. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.
16. THIS PROJECT HAS RECEIVED AN IN-HOUSE ENVIRONMENTAL SIGN-OFF. DUE TO THE RURAL SETTING ANY SOIL EXCAVATED SHALL REMAIN ON SITE. CONTRACTOR SHALL SPREAD THE SOIL AT THE SAME QUADRANT FROM WHICH IT WAS EXCAVATED. THE GRADING SHALL BE DONE SO THAT THE EXISTING DITCH PROFILES AND WATER FLOW PATTERNS ARE MAINTAINED. THIS WORK SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, HANDHOLE, GRADING AND SHAPING DITCHES, ETC. AND NO EXTRA COMPENSATION SHALL BE ALLOWED. FINAL GROUND SURFACE SHALL BE COVERED WITH TOPSOIL, SEED AND EROSION CONTROL BLANKET FOR WHICH NOMINAL QUANTITIES HAS BEEN PROVIDED.

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Bottom section containing user information, state of Illinois department of transportation logo, index of sheets & general notes, and project details like F.A. RTE, SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 62A42.



**REGION "A"**



**REGION "B"**

LOCATION NO.	REGION	PAGE NO.	TS NO.	LOCATION	MUNICIPALITY	COUNTY
1.	C	17	7280	IL RTE 62 (ALGONQUIN RD) AT IL RTE 31 (MAIN ST)	ALGONQUIN	MCHENRY
2.	C	18	11580	IL RTE 62 (ALGONQUIN RD) AT HARRISON ST	ALGONQUIN	MCHENRY
3.	C	19	3100	IL RTE 68 (DUNDEE RD) AT ARLINGTON HEIGHTS RD	ARLINGTON HTS	COOK
4.	D	20	11485	IL RTE 56 (BUTTERFIELD RD) AT KIRK RD/ FARNSWORTH AVE	AURORA	KANE
5.	C	21	12380	IL RTE 22 AT I-94 EAST RAMP	BANNOCKBURN	LAKE
6.	C	22	20350	IL RTE 22 AT LAKESIDE DR	BANNOCKBURN	LAKE
7.	C	23	4695	US RTE 14 (NORTHWEST HWY) AT EASTERN AVE	BARRINGTON	COOK
8.	C	25	4457	IL RTE 25 AT WEST BARTLETT RD/MIDDLE ST	BARTLETT	KANE
9.	B	26	7190	IL RTE 137 (SHERIDAN RD) AT BEACH RD	BEACH PARK	LAKE
10.	D	27	2693	IL RTE 56 (BUTTERFIELD RD) AT DARMSTADT RD / ATWOOD AVE	BERKELEY	COOK
11.	D	28	5795	ST. CHARLES RD AT TAFT AVE	BERKELEY	COOK
12.	D	29	5800	ST. CHARLES RD AT WOLF RD	BERKELEY	COOK
13.	C	30	760	IL RTE 25 /HAEGERS BEND RD AT IL RTE 62 (ALGONQUIN RD)	CARPENTERSVILLE	KANE
14.	C	31	4310	IL RTE 25 AT KING RD	CARPENTERSVILLE	KANE
15.	C	32	4315	IL RTE 25 AT BESINGER DR	CARPENTERSVILLE	KANE
16.	C	33	4320	IL RTE 25 AT HELM RD	CARPENTERSVILLE	KANE
17.	C	34	4325	IL RTE 25 AT ROBIN RD	CARPENTERSVILLE	KANE
18.	C	35	4390	IL RTE 25 AT LAKE MARIAN RD /HAZARD RD	CARPENTERSVILLE	KANE
19.	C	36	7275	US RTE 14 AT FIRST ST	CARY	MCHENRY
20.	E	37	7430	US RTE 30 AT CATON FARM RD / GAYLORD RD	CREST HILL	WILL
21.	C	38	675	IL RTE 31 (STATE ST) AT US RTE 20	ELGIN	KANE
22.	C	40	4330	IL RTE 31 (STATE ST) AT CHICAGO RAWHIDE ENTR	ELGIN	KANE
23.	C	41	22235	ARLINGTON HEIGHTS RD AT BENNETT RD	ELK GROVE	COOK
24.	D	42	85	IL RTE 43 (HARLEM AVE) AT I-290 RAMP	FOREST PARK	COOK
25.	C	43	1236	US RTE 14 AT ALGONQUIN RD	FOX RIVER GROVE	MCHENRY
26.	C	45	1237	US RTE 14 AT LINCOLN AVE	FOX RIVER GROVE	MCHENRY
27.	C	47	1238	US RTE 14 (NORTHWEST HWY) AT FOXMOOR RD	FOX RIVER GROVE	MCHENRY
28.	D	49	755	IL RTE 38 (STATE ST) AT IL RTE 25 (BENNETT ST)	GENEVA	KANE
29.	D	50	845	IL RTE 38 (EAST STATE ST) AT EAST SIDE DR	GENEVA	KANE
30.	D	51	10945	IL RTE 38 (STATE ST) AT GLENGARY DR	GENEVA	KANE
31.	E	52	7507	US RTE 30 (PLAINFIELD RD) AT RAYNOR AVE /BLACK RD	JOLIET	WILL
32.	E	53	22500	US RTE 6 / US RTE 30 (COLLINS AVE) AT JOLIET HIGH SCHOOL	JOLIET	WILL
33.	E	54	22565	US RTE 30 (PLAINFIELD RD) AT INGALLS AVE	JOLIET	WILL
34.	B	55	6830	IL RTE 43 AT FOSTER AVE	LAKE BLUFF	LAKE
35.	B	56	6949	IL RTE 83 AT ENGLE DR	LAKE VILLA	LAKE
36.	B	57	7095	IL RTE 137 (BUCKLEY RD) AT BUTTERFIELD RD	LIBERTYVILLE	LAKE
37.	C	58	FL 701	IL RTE 53 AT ROBERT PARKER COFFIN RD	LONG GROVE	LAKE
38.	A	59	21971	IL RTE 23 (STATE ST) AT IL RTE 176 (TELEGRAPH ST)	MARENGO	MCHENRY
39.	A	60	11897	IL RTE 31 (RICHMOND RD) AT BLAKE RD	MCHENRY	MCHENRY
40.	A	61	11915	IL RTE 120 AT CRYSTAL LAKE RD	MCHENRY	MCHENRY
41.	D	63	727	US RTE 30 AT GRIFFIN DR	MONTGOMERY	KANE
42.	B	64	6625	US RTE 45 AT IL RTE 176	MUNDELEIN	LAKE
43.	D	66	11483	IL RTE 31 AT IL RTE 56 (STATE ST)	NORTH AURORA	KANE
44.	D	67	2505	IL RTE 50 (CICERO AVE) AT 110TH ST	OAK LAWN	COOK
45.	C	68	410	US RTE 12 (RAND RD) AT LAKE COOK RD	PALATINE	COOK
46.	C	69	1225	US RTE 14 (NORTHWEST HWY) AT HICKS RD (SOUTH JCT)	PALATINE	COOK
47.	C	70	5615	PALATINE RD AT ROHLWING RD	PALATINE	COOK
48.	C	71	5395	KIRCHOFF RD AT WILKE RD	ROLLING MEADOWS	COOK
49.	C	72	6598	US RTE 45 AT PORT CLINTON RD	VERNON HILLS	LAKE
50.	B	73	14904	IL RTE 43 (WAUKEGAN RD) AT PULASKI DR	WAUKEGAN	LAKE
51.	B	74	14925	IL RTE 120 (BELVEDERE RD) AT GREENLEAF AVE NORTH RAMP	WAUKEGAN	LAKE
52.	B	75	14930	IL RTE 120 (BELVEDERE RD) AT GREENLEAF AVE SOUTH RAMP	WAUKEGAN	LAKE
53.	D	76	6200	IL RTE 38 (ROOSEVELT RD) AT WINFIELD RD	WINFIELD	DUPAGE

FILE NAME: M:\p\14181\2189 P18 175-18 1001 v01 - Signal\14-022 Various LED\14sig\1401\Sheet 1 File\LocationMapLdgn

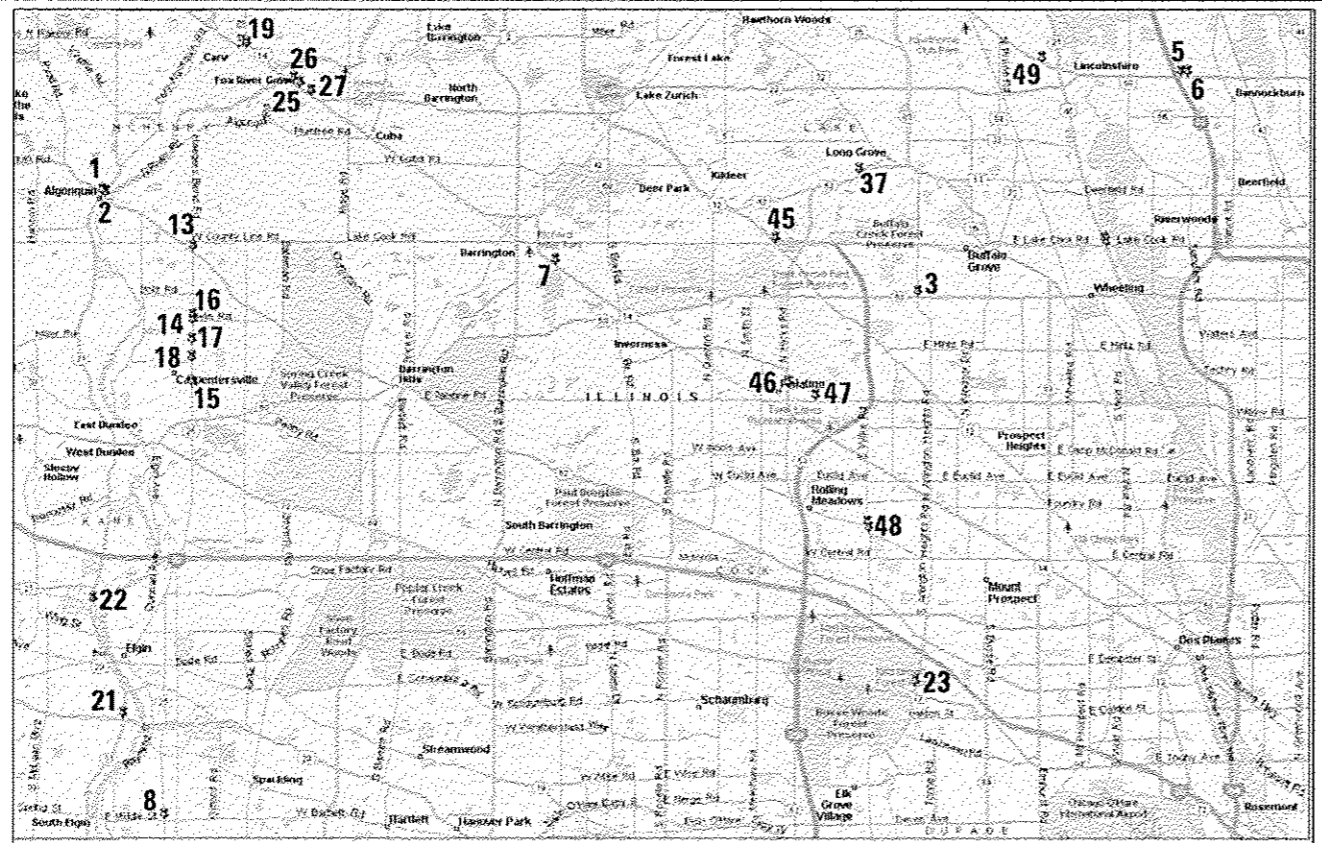
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PLOT DATE = 2/27/2015		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

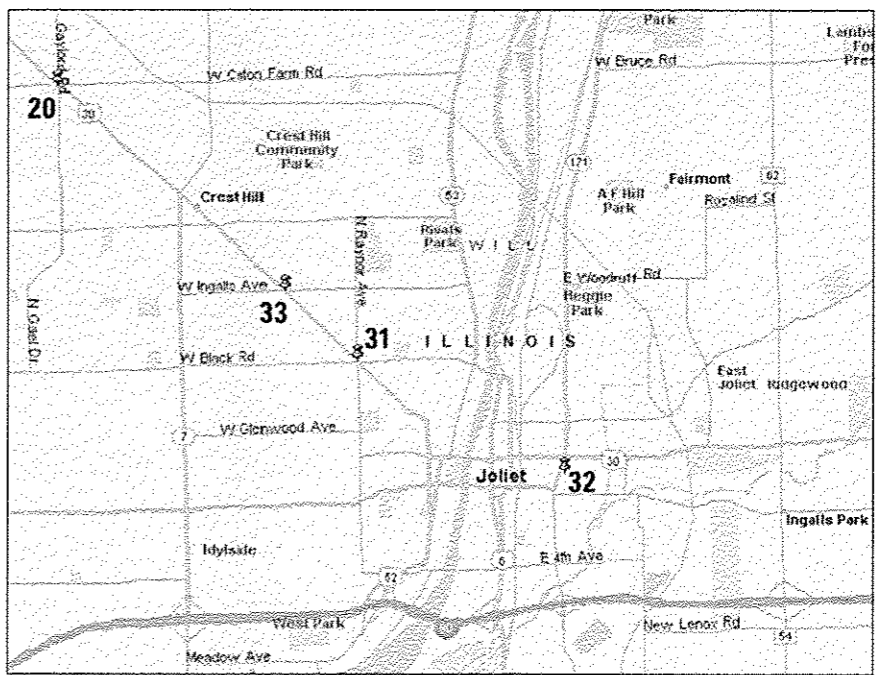
LOCATION MAP  
(SHEET 1 OF 2)

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

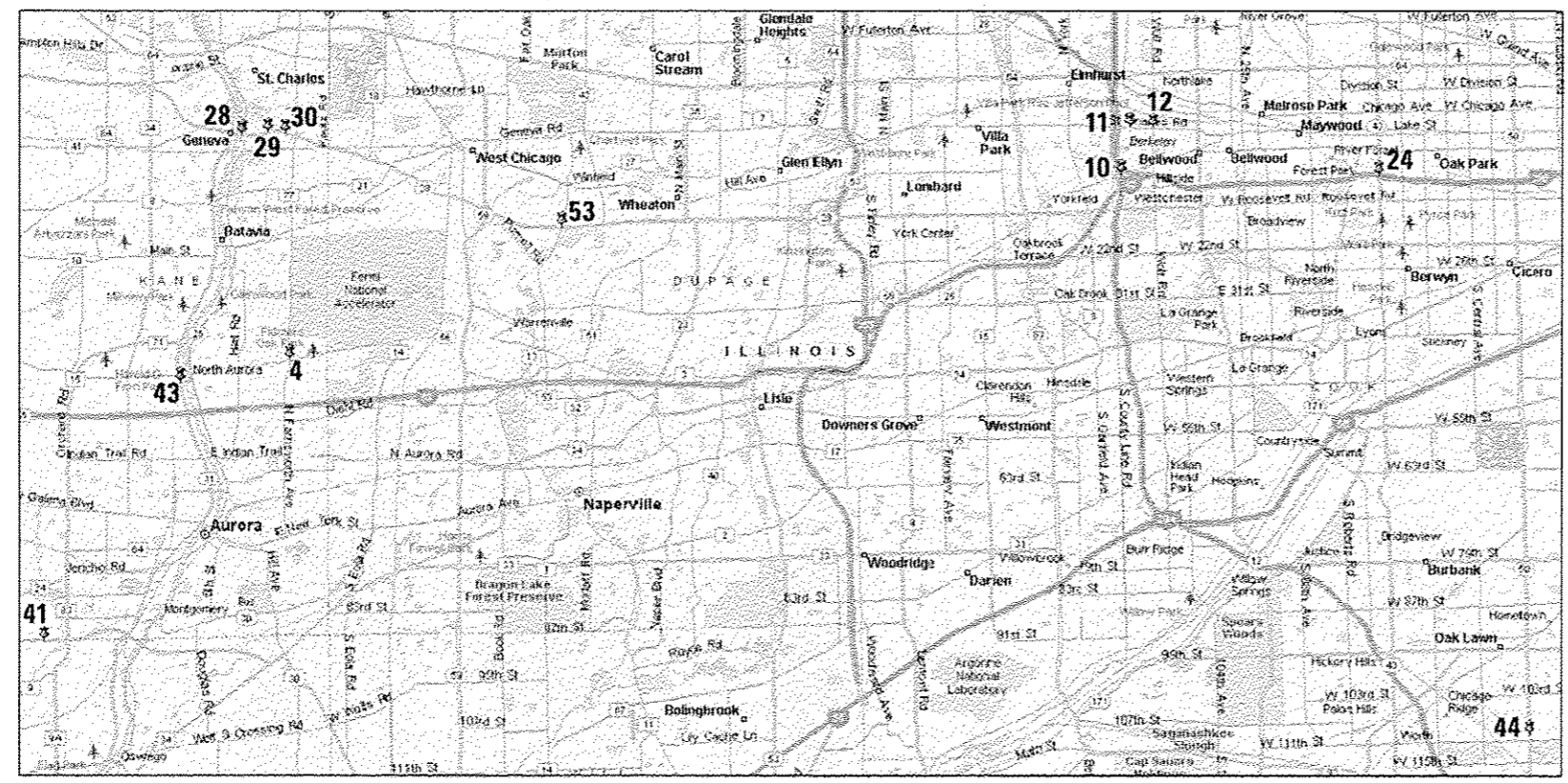
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	3
CONTRACT NO. 62A42			ILLINOIS	



**REGION "C"**



**REGION "E"**



**REGION "D"**

FILE NAME: C:\p\proj\141\2181 P19 172-6 1001 Ver Sigmas\141-022 Various LED\Design\CON\SHEET Files\Locationmap2.dwg

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PLOT SCALE = 20,000 / in.	DRAWN - CC	REVISED -				2014-090TS		76	4	
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -		SCALE: NTS	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 62A42 ILLINOIS	
	DATE -	REVISED -								





FILE NAME: C:\Programs\Bentley\Bentley\Plot\Plot14-202\Various LED\Items\gr201\Sheet Files\5022.dgn

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE																																	
				TRAFFIC SIGNAL																																	
				0021																																	
				URBAN																																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6																																	
67100100	MOBILIZATION	L SUM	1	1																																	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1																																	
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	52	12	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	3	2	2	1	1	1	1	1	2	1	1	1	1	1	1			
85000500	MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION	EACH	1																																1		
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	3																																1		
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	1																																	
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	5	1																															2		
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	7																																1		
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	21																																4		
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	2																																1		
88030012	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED	EACH	1																																1		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	23	6																															1		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	14	6																															3		

USER NAME = _USERNAME_	DESIGNED - DW	REVISED -
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PLOT SCALE = 1/8" = 1' (1/8")	DATE -	REVISED -
PLOT DATE = 2/6/2015		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES (SHEET 2 OF 5)			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	6
ILLINOIS			CONTRACT NO. 62A42	









FILE NAME: M:\proj\1481\2189\_P1B\_P2-6\_ID01\_Ver\_Signals\14-822\_Verious LED\1\Design\CAD\Sheet Files\500.dwg

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE																																		
				TRAFFIC SIGNAL																																		
				0021																																		
				URBAN																																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34					
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	22	7				1	1		1	1			1	1	1			1							1						1	1		1	1	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	48	11	1	1	1	1		1	1	1	4	1		1	1		3	2	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	
Z0050400	REMOVE AND REPLACE ANCHOR BOLTS	EACH	21	1	1				1		4			3				1										2		4			2		2			
X8570231	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	2	1										1																								
X8600105	MASTER CONTROLLER (SPECIAL)	EACH	1	1																																		
X8620050	UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED	EACH	2	1															1																			
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	21	6				1	1	1	1			1	1	1	1										1			1	1		1		1	1	1	
X8803084	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	14					4											10																			
X8803088	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	4					4																														
X8803090	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	4																4																			
X8803210	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT	EACH	4					4																														
X8880015	PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	77	23	4	4	3	3		4	6							11	3							3		3				7		3				
X8950100	RELOCATE EXISTING MASTER CONTROLLER	EACH	1											1																								
88060450	COMBINATION SIGNAL HEAD, LED, 3- FACE, 1-4 SECTION OPTICALLY PROGRAMMED, 2-4 SECTION, BRACKET MOUNTED	EACH	2	2																																		

USER NAME = USERNAME	DESIGNED - DW	REVISED -
DRAWN - CC	REVISOR -	
PLOT SCALE = 1/8" = 1'-0"	CHECKED - JDH	REVISIONS -
PLOT DATE = 2/2/2015	DATE -	

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
(SHEET 5 OF 5)			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	9
			CONTRACT NO. 62A42	
ILLINOIS				



# TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT							
DETECTOR LOOP, TYPE I				RADIO REPEATER							
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

## RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.T.S.      SHEET NO. 1 OF 7 SHEETS      STA.      TO STA.

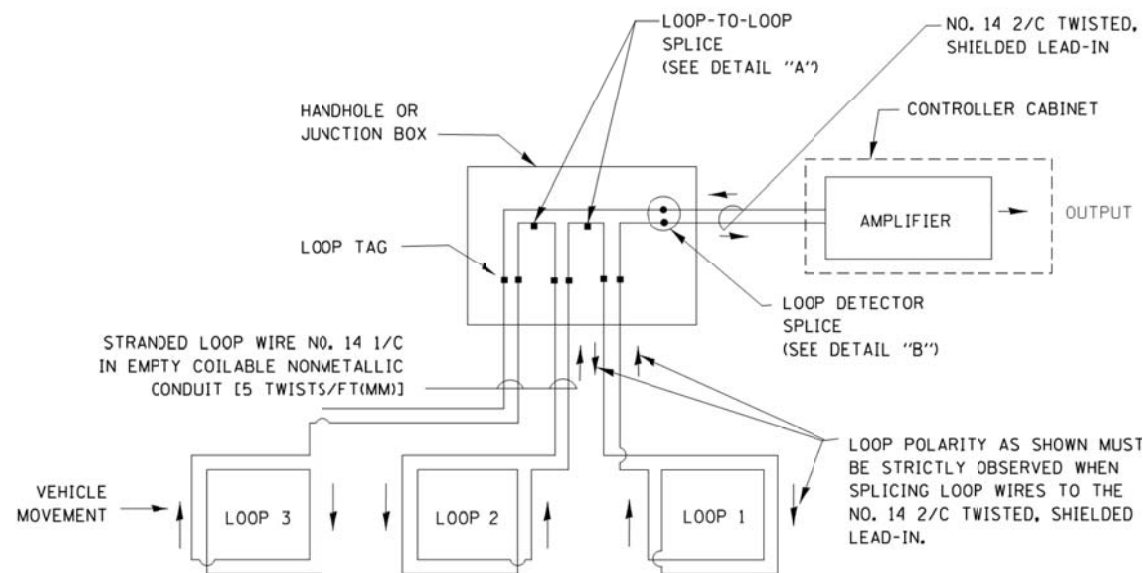
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ILLINOIS			CONTRACT NO. 62A42	

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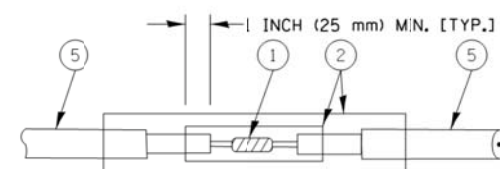
**LOOP DETECTOR NOTES**

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.

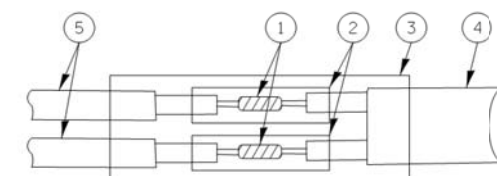


**DETECTOR LOOP WIRING SCHEMATIC**

- 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.



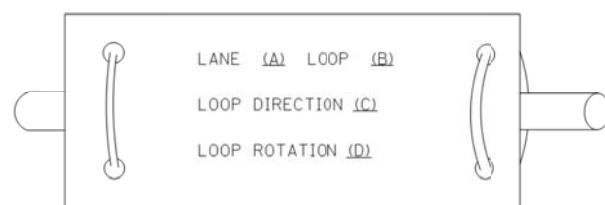
DETAIL "A"  
LOOP-TO-LOOP SPLICE



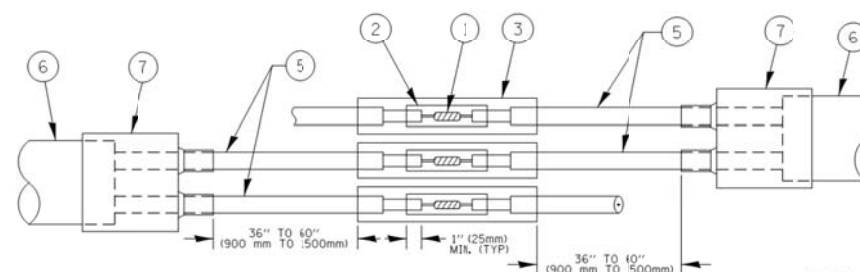
DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**

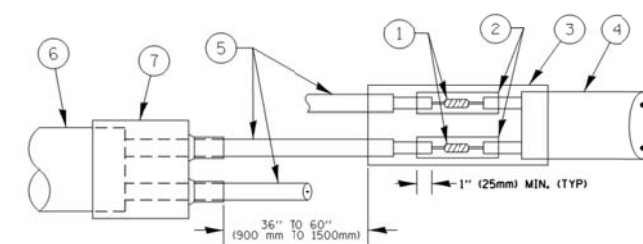
**LOOP LEAD-IN CABLE TAG**



- 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.



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**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 PRE-FORMED LOOP
- ⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

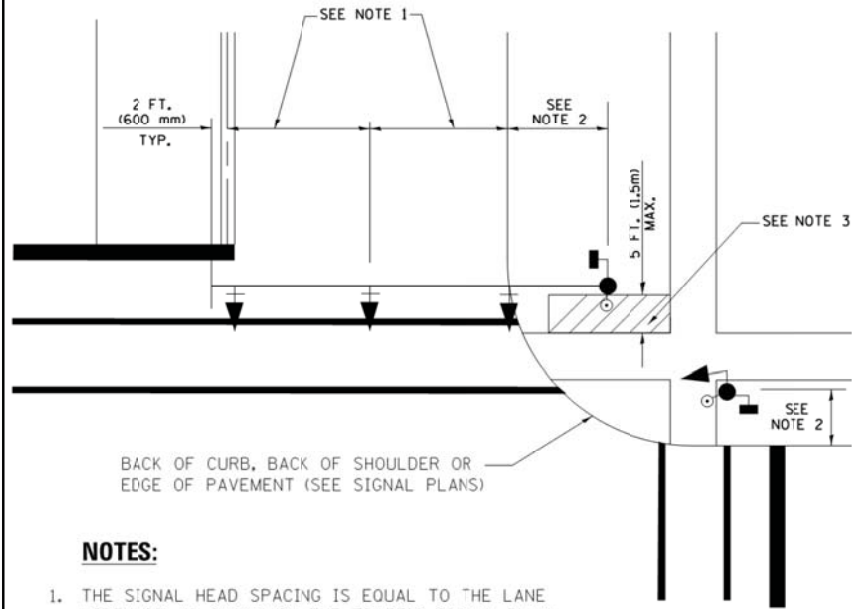
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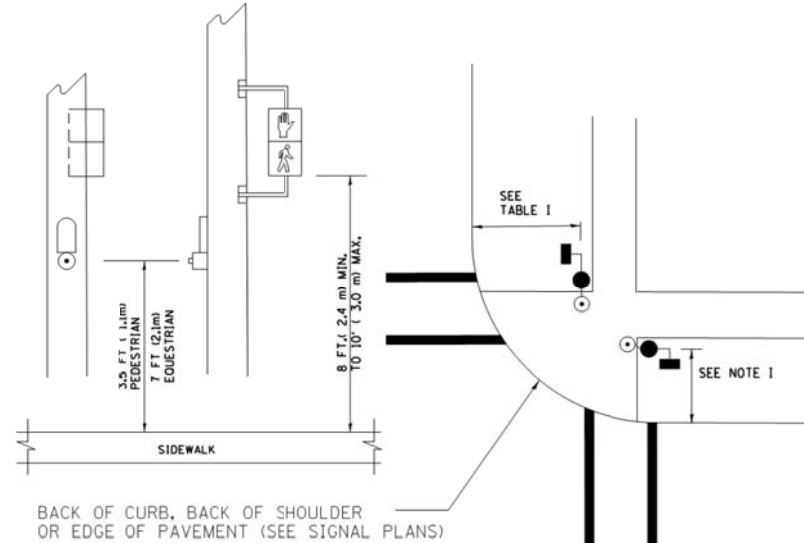
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST  
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR  
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN  
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

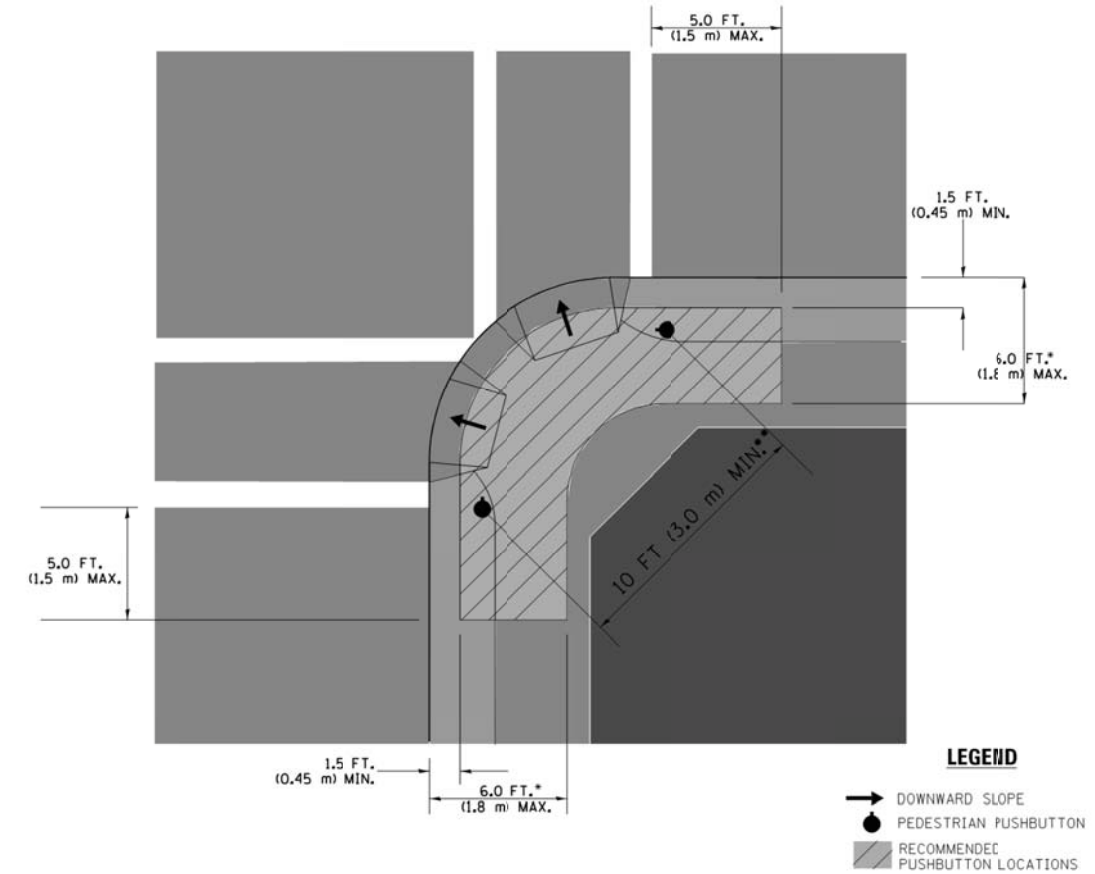
**PEDESTRIAN SIGNAL POST  
AND  
PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



**LEGEND**

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

**NOTES:**

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

**TRAFFIC SIGNAL EQUIPMENT OFFSET**

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

**NOTES:**

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

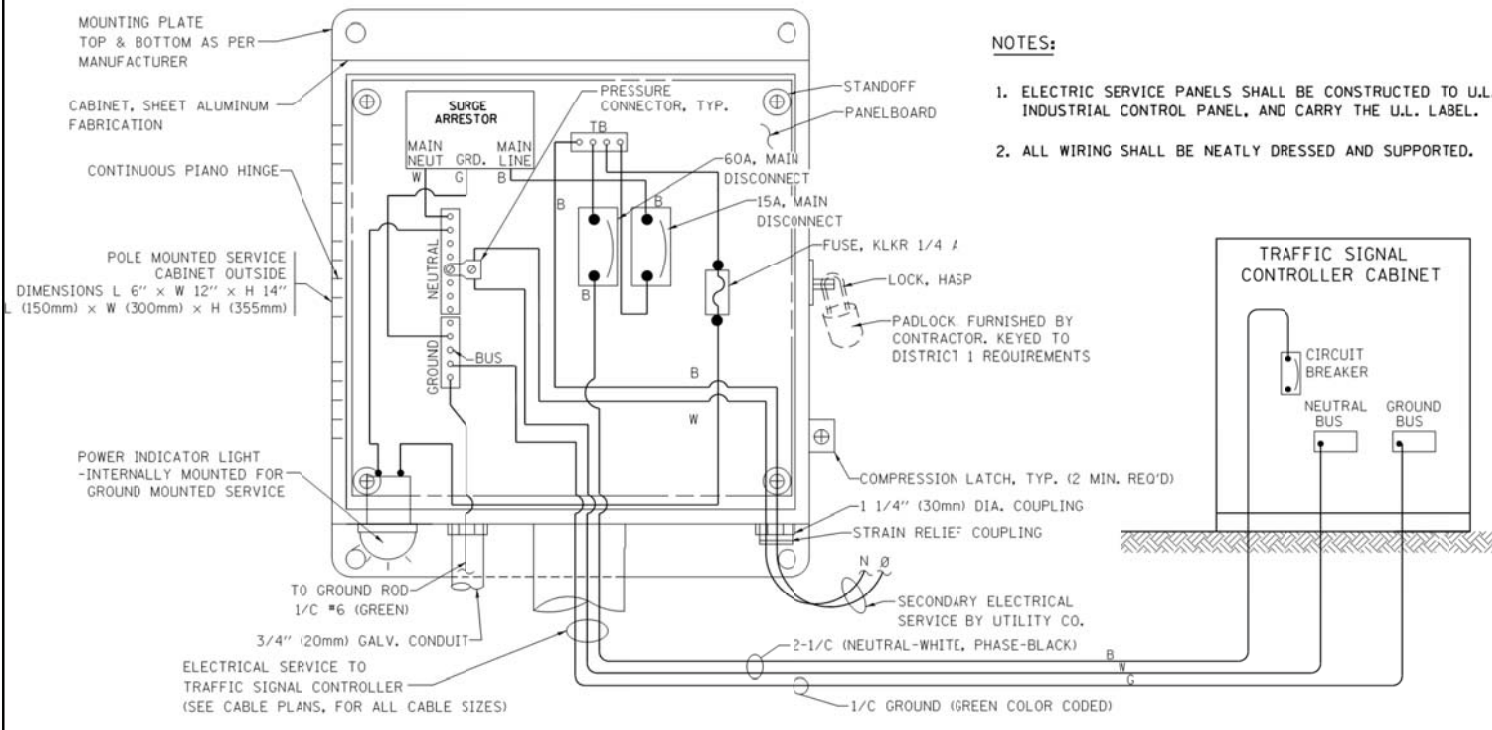
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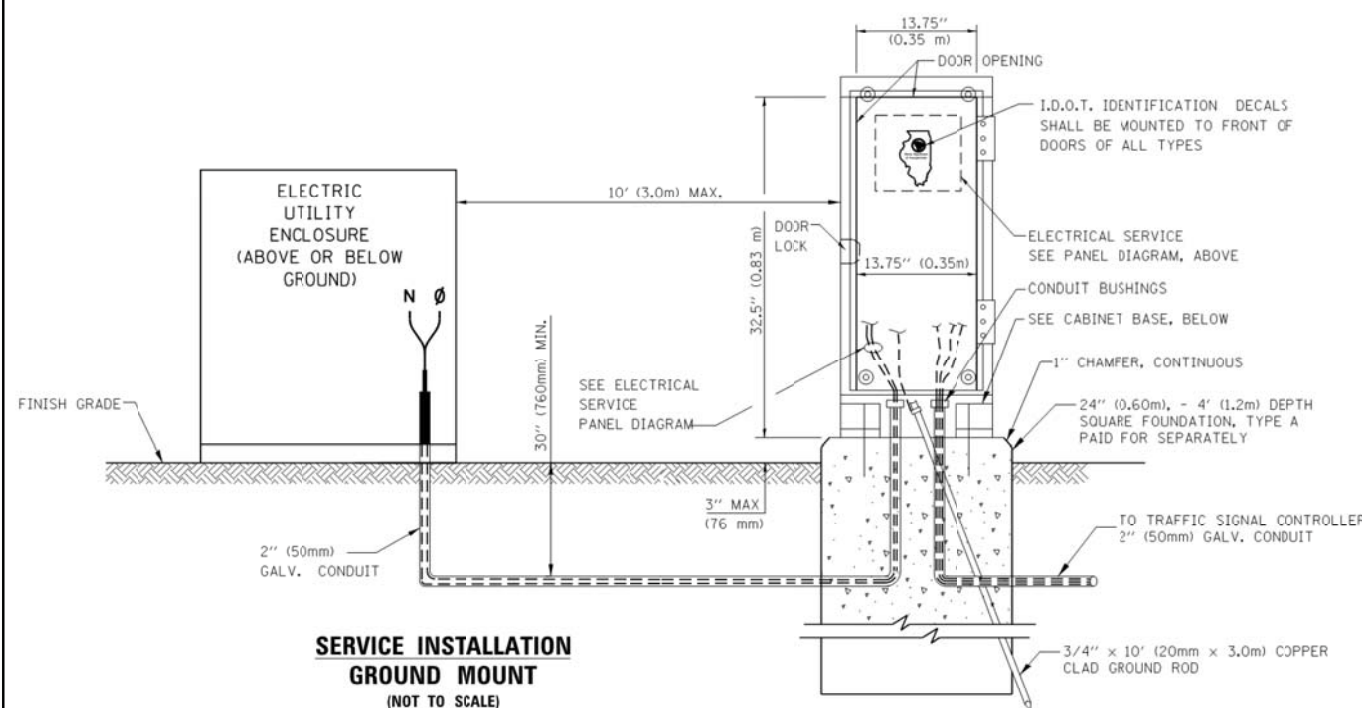
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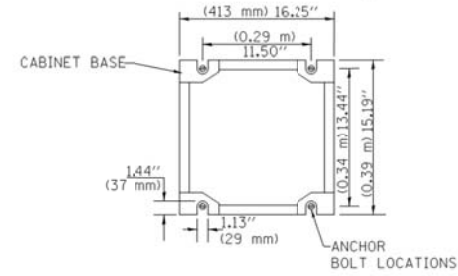


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)**

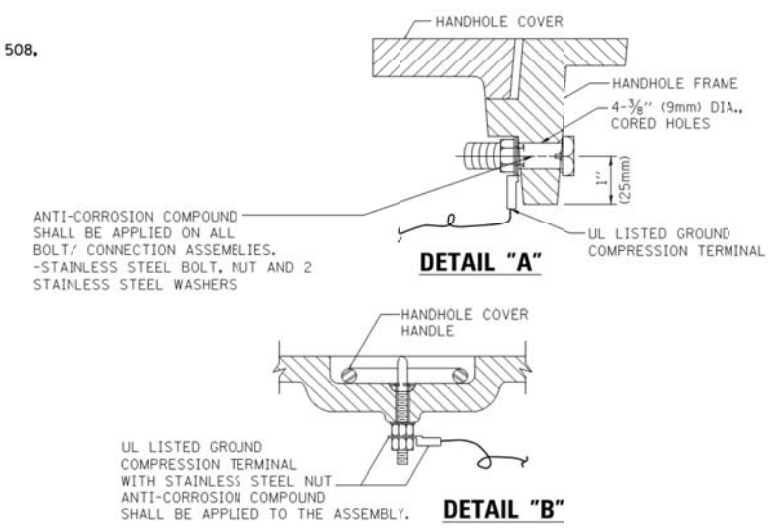


**SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)**

**CABINET - BASE BOLT PATTERN (NOT TO SCALE)**

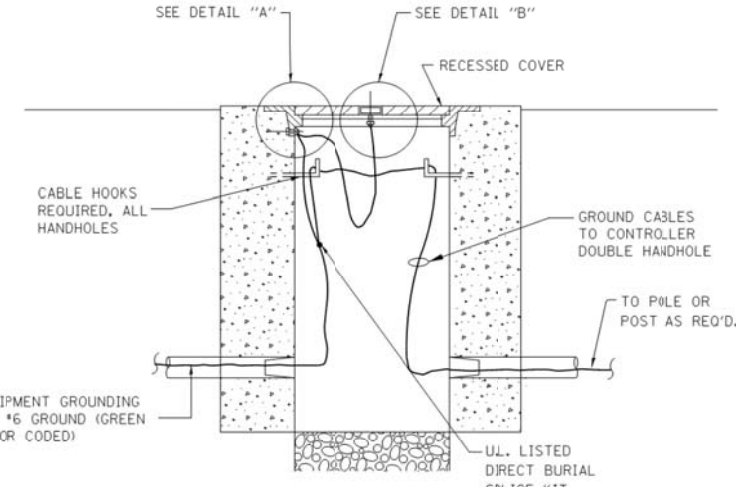


- NOTES:**
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
  2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

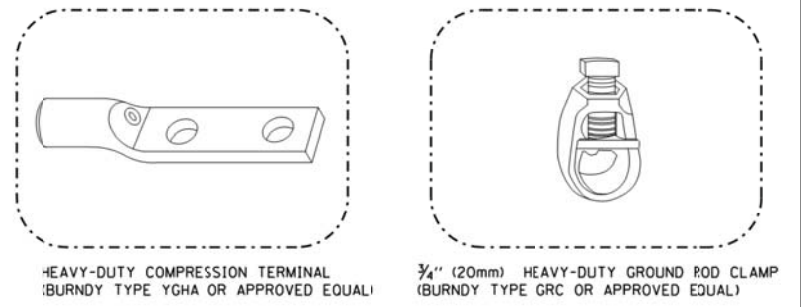


**NOTES:**  
**GROUNDING SYSTEM**

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

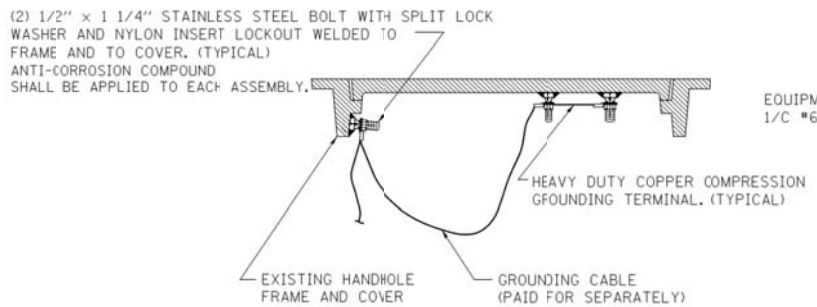


**HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)**

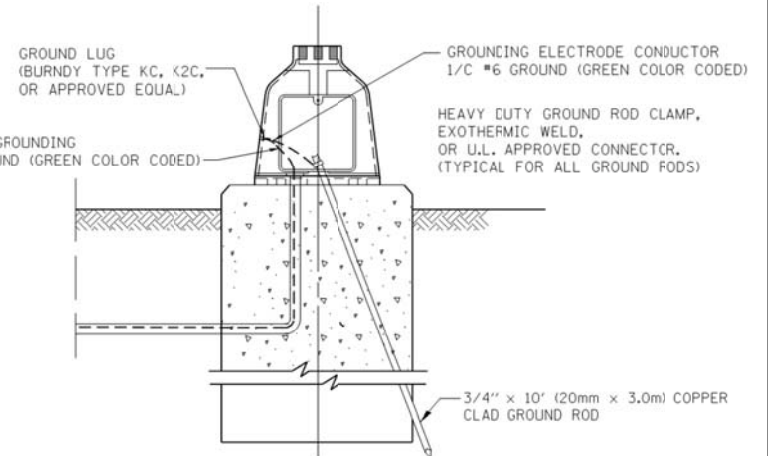


**NOTES:**

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



**EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)**



**MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)**

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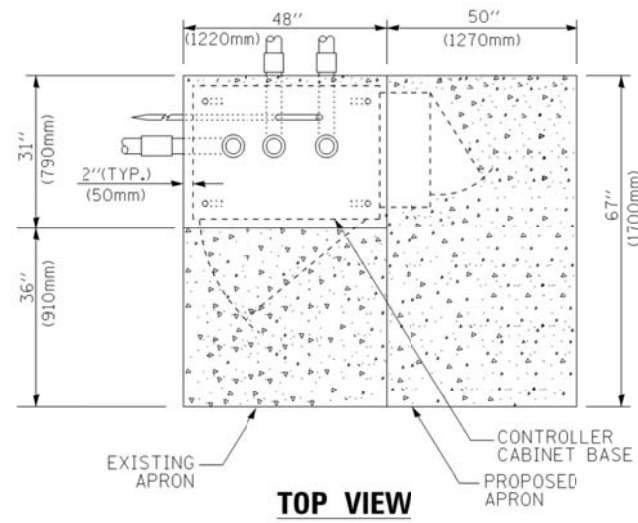
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DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

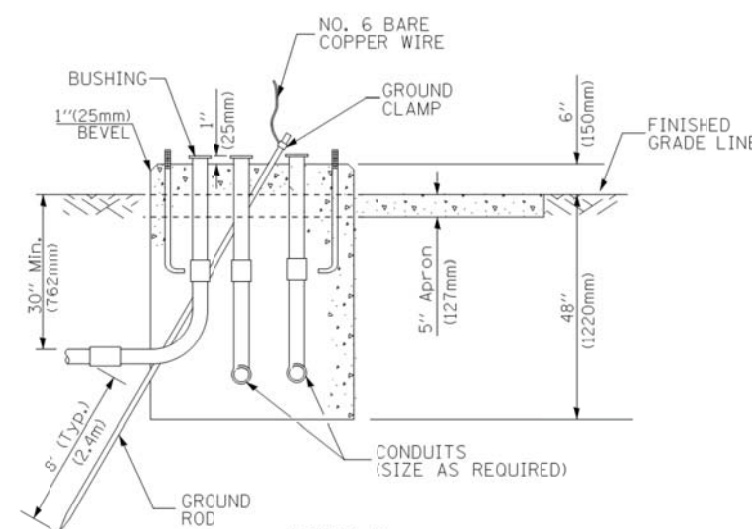
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	2014-090TS		76	13
ILLINOIS			CONTRACT NO. 62A42	

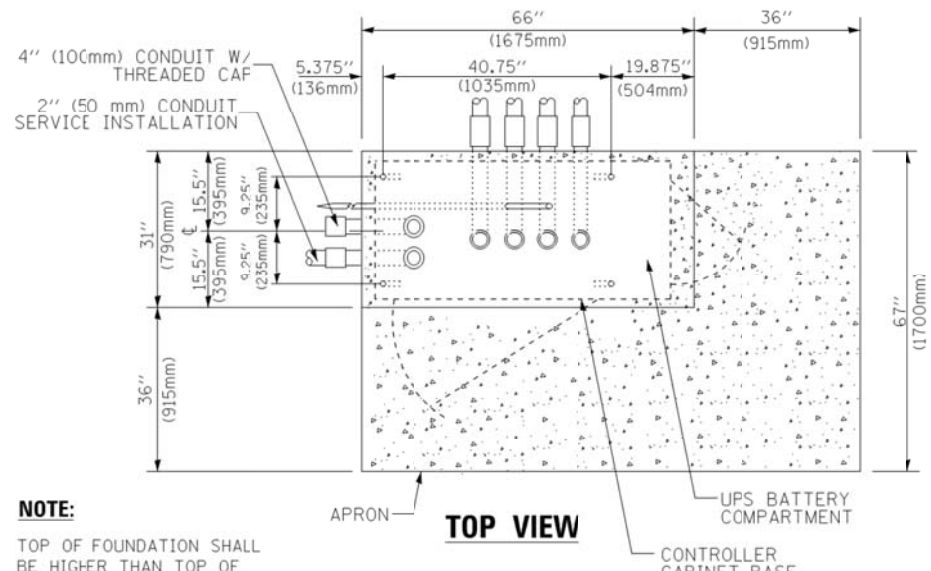
TS-4



**TOP VIEW**

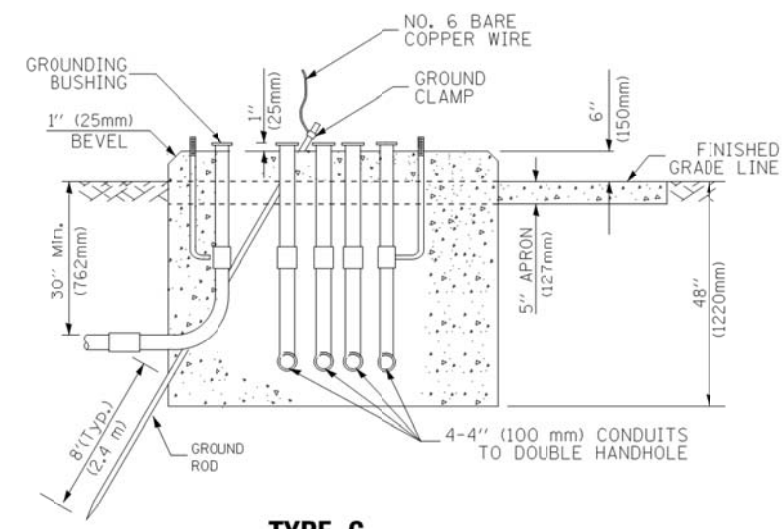


**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**

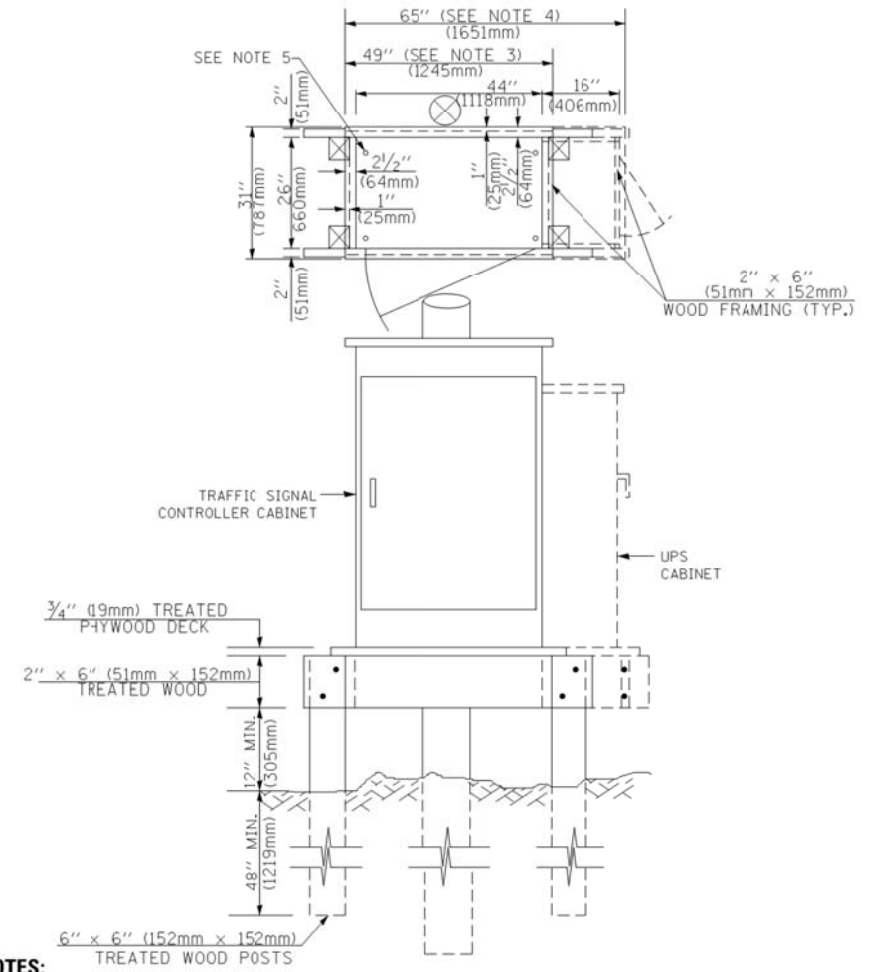


**TOP VIEW**

**NOTE:**  
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C  
FOR GROUND MOUNTED  
SUPER P (TYPE IV) AND SUPER R (TYPE V)  
CONTROLLER CABINETS**



**NOTES:**

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

**CABLE SLACK**

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

**VERTICAL CABLE LENGTH**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

**DEPTH OF FOUNDATION**

MAST ARM LENGTH	Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

**NOTES:**

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**

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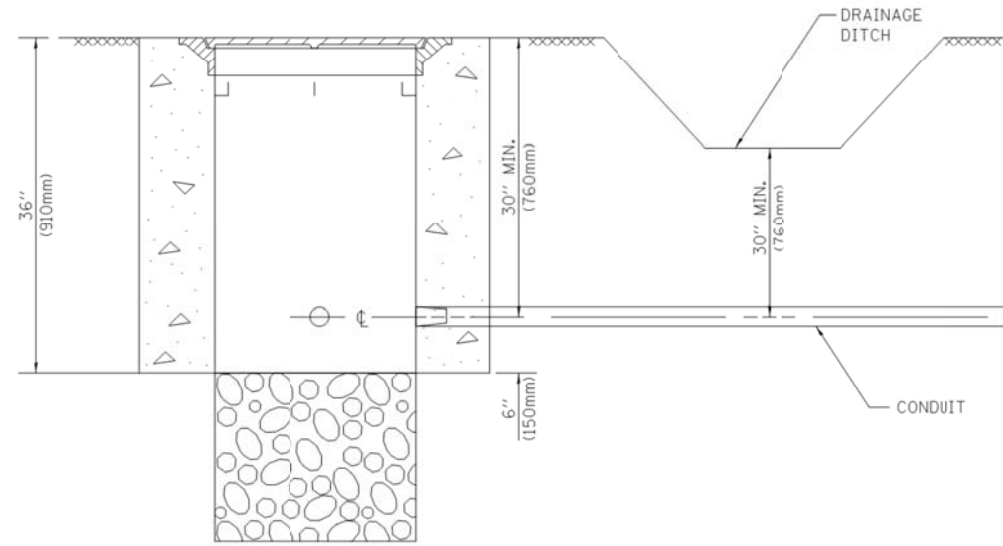
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.T.S. SHEET NO. 5 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	14
ILLINOIS			CONTRACT NO. 62A42	

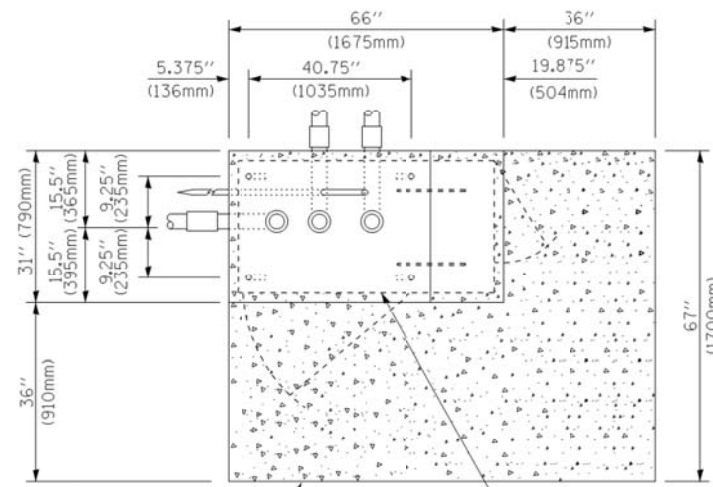
TS-5



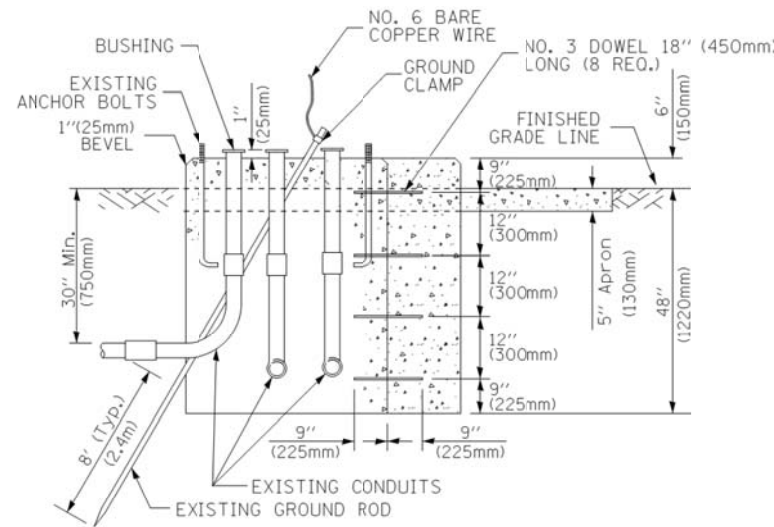
**NOTES:**

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

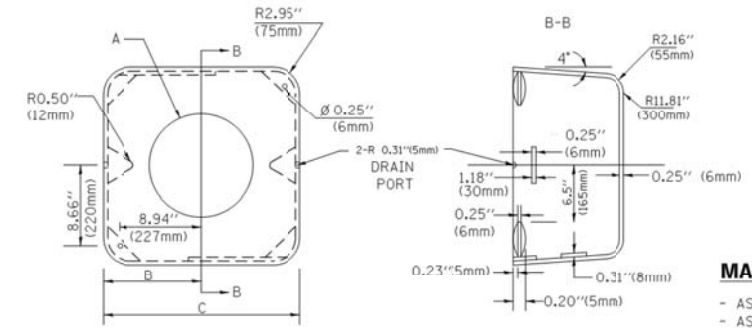
**HANDHOLE WITH MINIMUM CONDUIT DEPTH**  
(NOT TO SCALE)



**TOP VIEW**  
(NOT TO SCALE)



**MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION**  
(NOT TO SCALE)



**MATERIAL:**  
- ASTM A36 STEEL  
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5" (241mm)	19" (483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIABLES	10.75" (273mm)	21.5" (546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIABLES	13.0" (330mm)	26" (660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIABLES	18.5" (470mm)	37" (940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

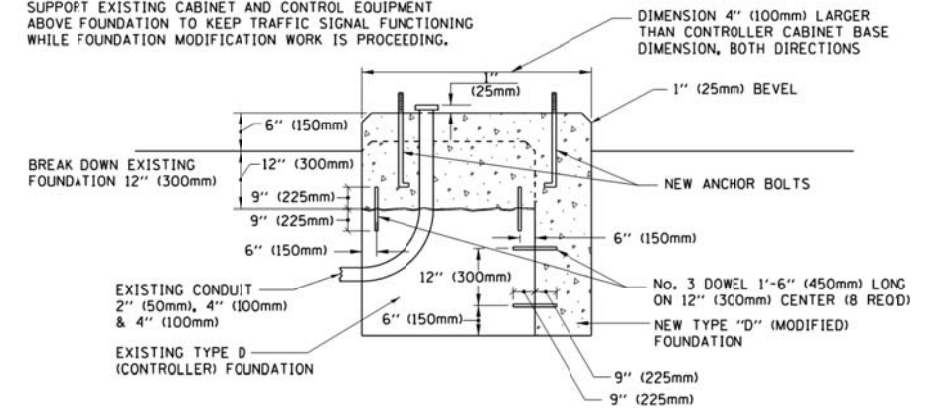
**SHROUD**

**NOTES:**

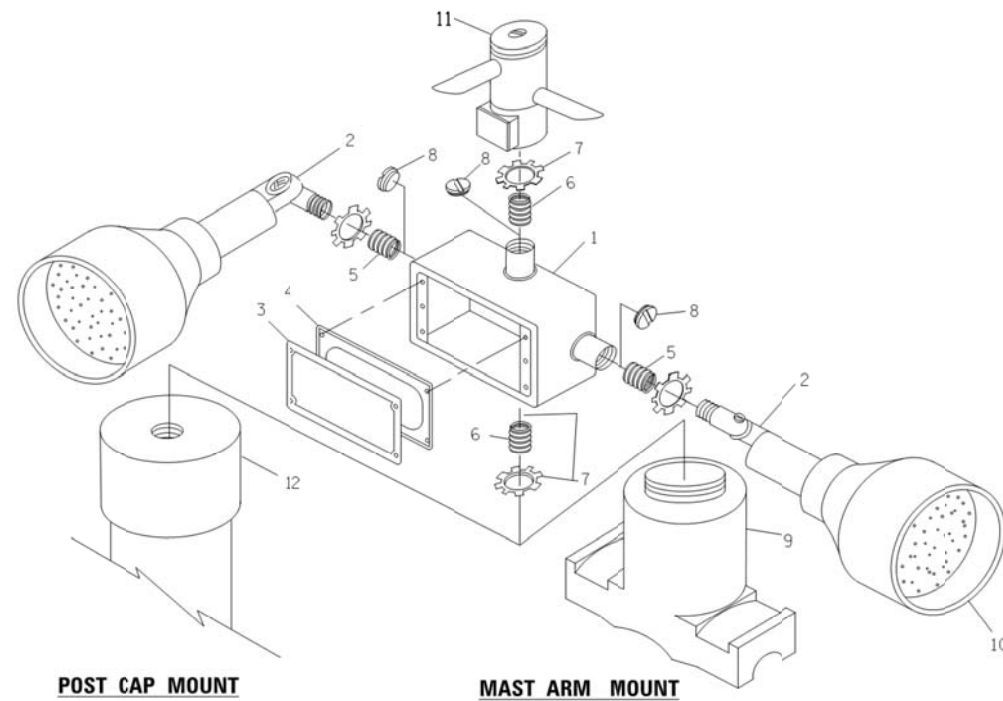
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

**NOTE:**

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



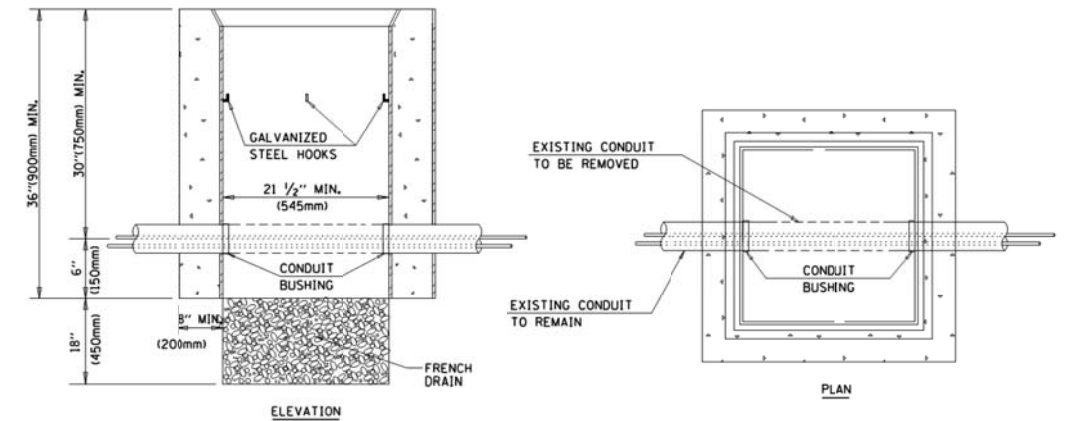
**MODIFY EXISTING TYPE "D" FOUNDATION**



ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0,000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

**NOTES:**

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



**NOTES:**

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 8:4001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

**HANDHOLE TO INTERCEPT EXISTING CONDUIT**

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\Design\CAD\Sheet Files\IDOT DETAIL.dgn

**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000 Ft / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.T.S. SHEET NO. 6 OF 7 SHEETS STA. TO STA.

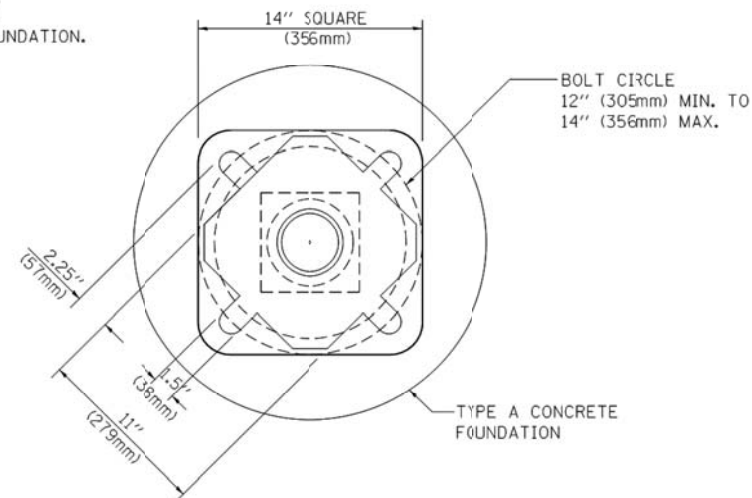
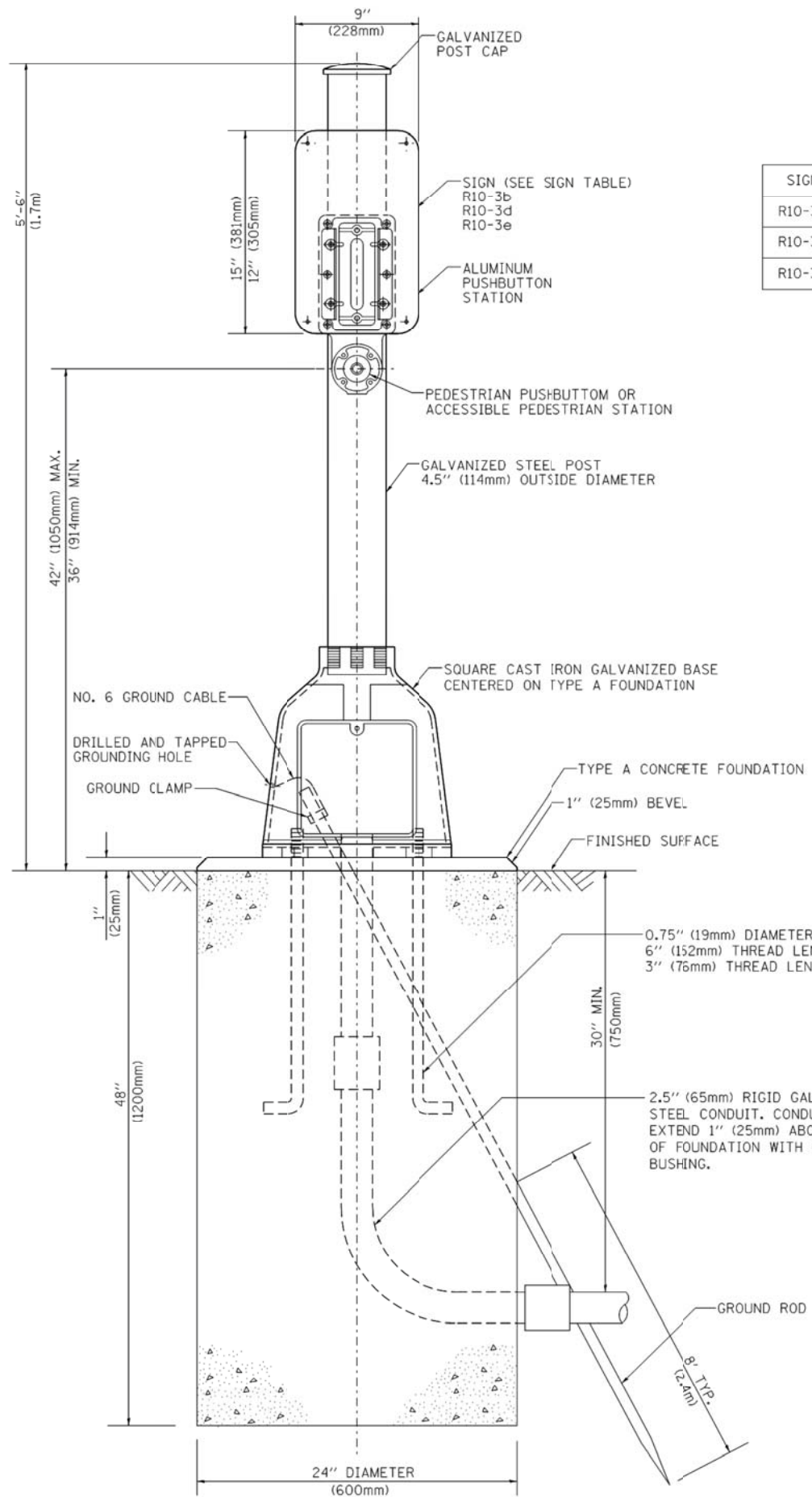
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	15
ILLINOIS			CONTRACT NO. 62A42	

TS-6



**SIGN TABLE**

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



**BOLT PATTERN**  
**PEDESTRIAN PUSH BUTTON POST, TYPE A**

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PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: N.T.S. SHEET NO. 7 OF 7 SHEETS STA. TO STA.

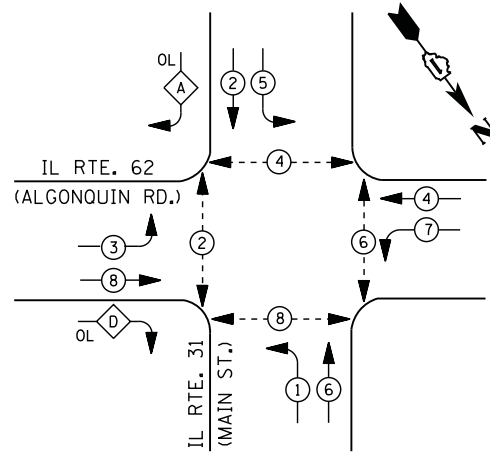
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS		76	16
ILLINOIS			CONTRACT NO. 62A42	

TS-7





### CONTROLLER SEQUENCE

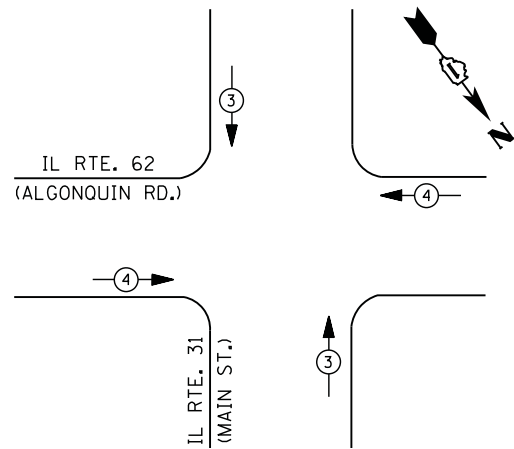


- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
  - NUMBER REFERS TO ASSOCIATED PHASE

### RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2 +	3
D =	8 +	1

### PHASE DESIGNATION DIAGRAM



- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓	←

### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	15	135	17	0.50	128
(YELLOW)	15	135	25	0.25	94
(GREEN)	15	135	15	0.25	57
ARROW	24	135	12	0.10	29
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					608

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MIKE LENOX  
PHONE 815-490-2869  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

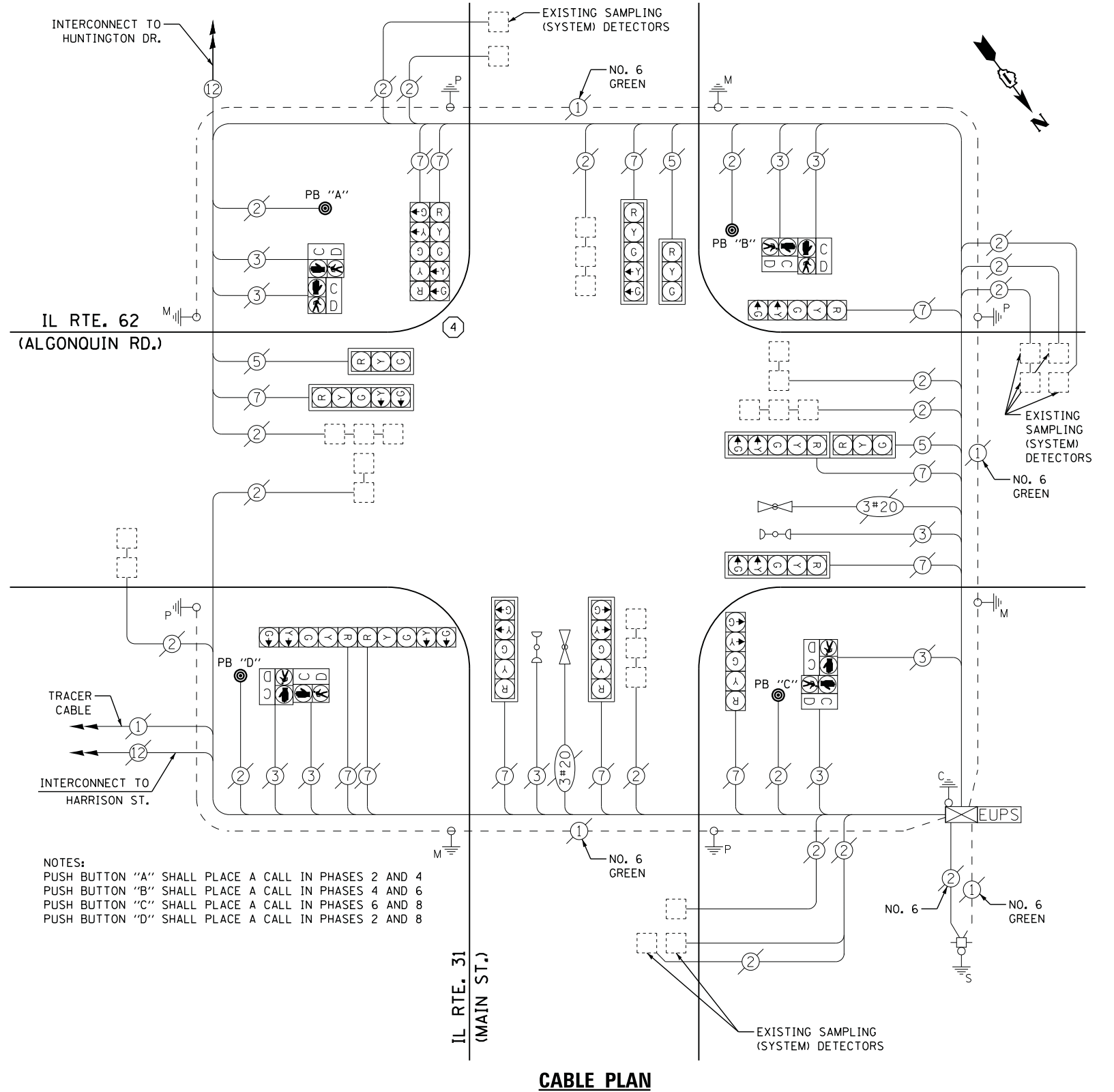
QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
2	EACH	RELOCATE EXISTING SIGNAL HEAD
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	REMOVE AND REPLACE ANCHOR BOLTS
4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 4 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SIGNAL POST



- NOTES:**
- PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
  - PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
  - PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
  - PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

### CABLE PLAN

IL ROUTE 62 (ALGONQUIN ROAD) AT IL ROUTE 31 (MAIN STREET)  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

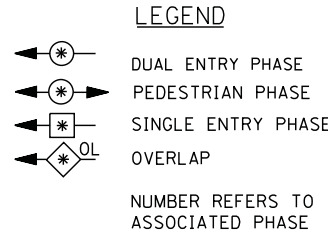
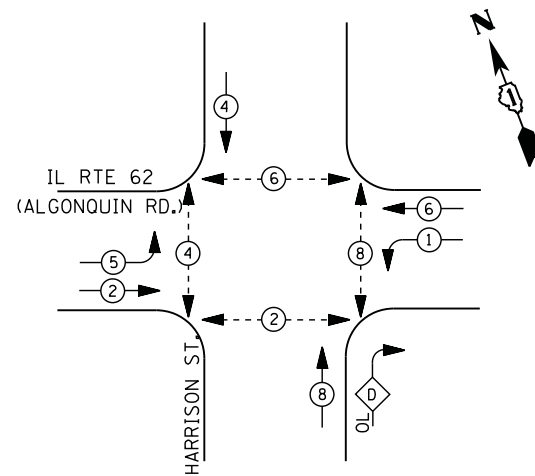
SCALE: SHEET NO. OF SHEETS STA. TO STA.

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			CONTRACT NO. 62A42	

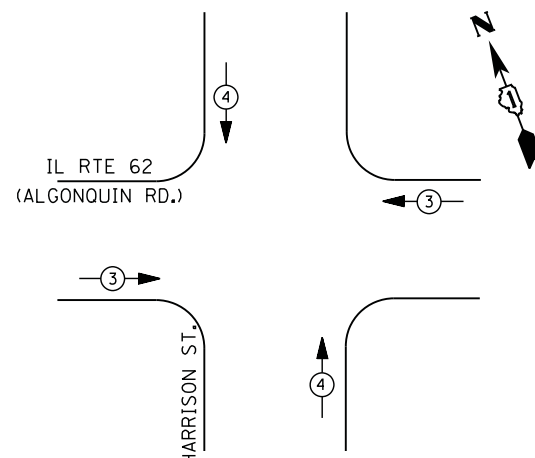
TS #7280  
ALGONQUIN



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	13	135	17	0.50	111
(YELLOW)	13	135	25	0.25	82
(GREEN)	13	135	15	0.25	49
ARROW	12	135	12	0.10	15
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	0
VIDEO SYSTEM		150	150	1.00	0
FLASHER LED					
TOTAL =					557

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MIKE LENOX  
PHONE 815-490-2869  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

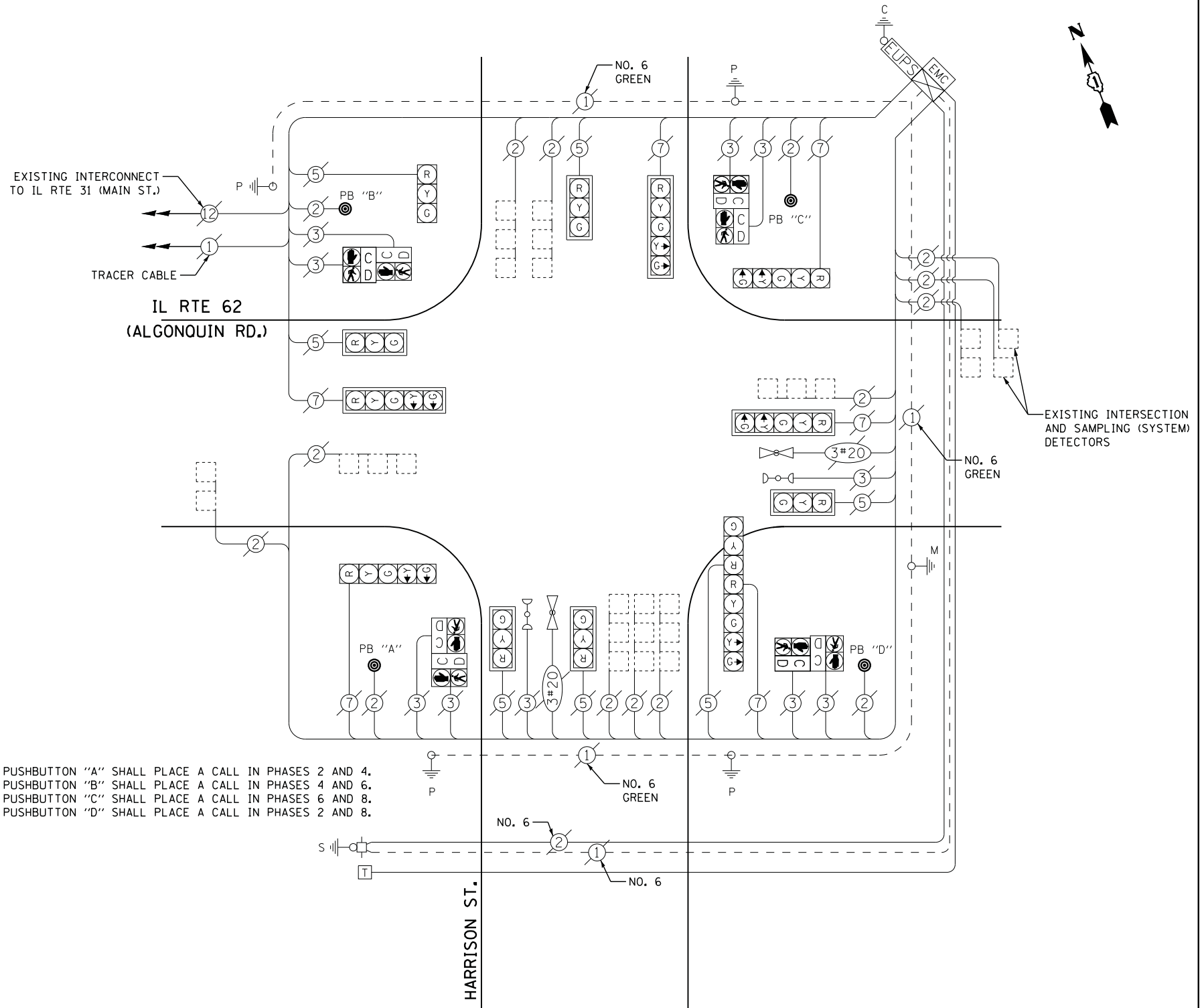
QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

EXISTING INTERCONNECT TO IL RTE 31 (MAIN ST.)

IL RTE 62 (ALGONQUIN RD.)

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

**CABLE PLAN**



**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH PEDESTRIAN PUSH-BUTTON

TS #11580  
ALGONQUIN

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\11580-CAB.McHENRY.dgn

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	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

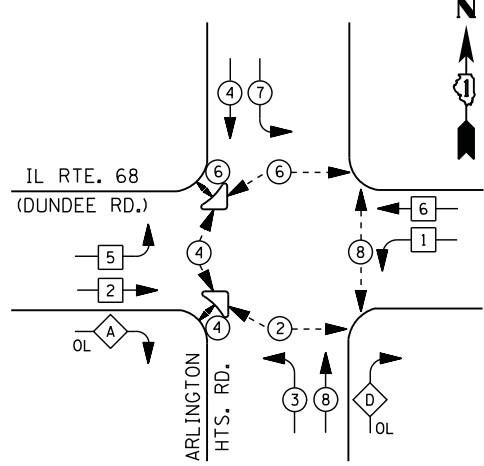
**IL ROUTE 62 (ALGONQUIN ROAD) AT HARRISON STREET  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

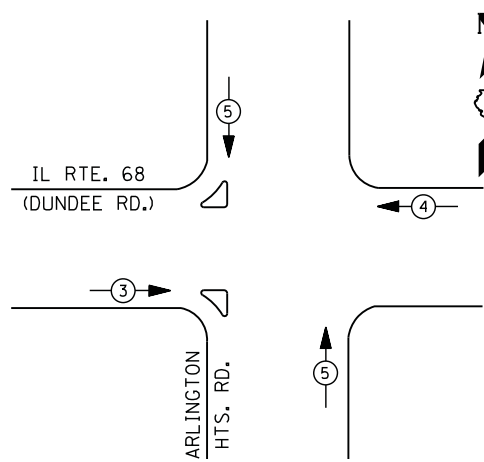
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	18
ILLINOIS			CONTRACT NO. 62A42	



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↕

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	16	135	12	0.10	20
PED. SIGNAL	12	90	25	1.00	300
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					754

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT DAVE SCHACHT  
PHONE 630-437-2129  
COMMONWEALTH EDISON

**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

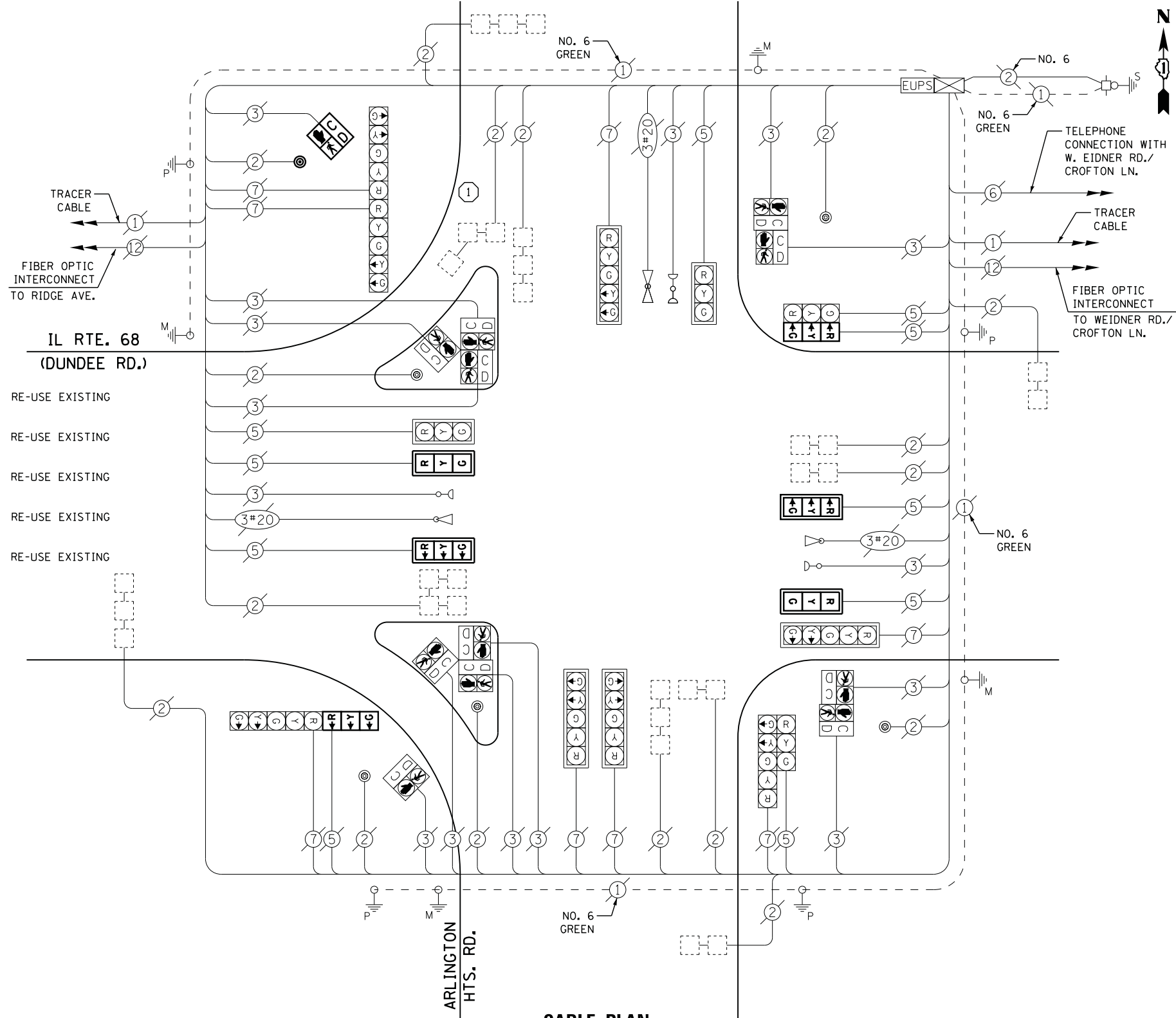
**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
D	= 8	+ 1

- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

6	EACH	SIGNAL HEAD, 3 - SECTION
4	EACH	TRAFFIC SIGNAL BACKPLATE
1	EACH	PEDESTRIAN SIGNAL HEAD
1	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SIGNAL POST

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 68 (DUNDEE ROAD) AT ARLINGTON HEIGHTS ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

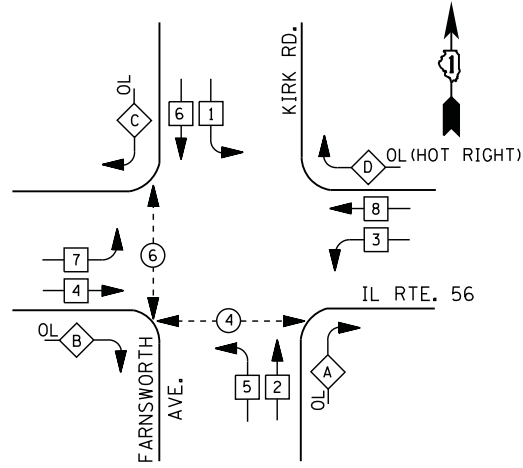
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	19
CONTRACT NO. 62A42				ILLINOIS

TS #3100  
ARLINGTON HEIGHTS



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\11485-CAB-KANE.dgn

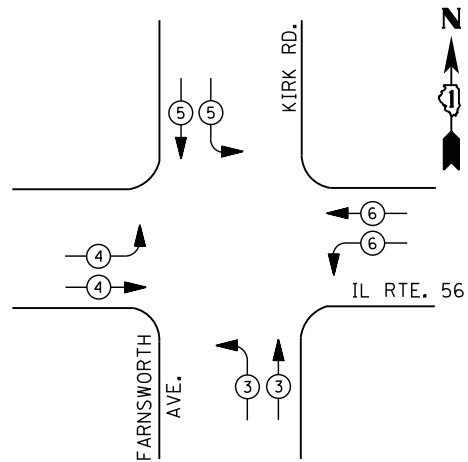
### CONTROLLER SEQUENCE



### LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

### PHASE DESIGNATION DIAGRAM



### RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP PHASE	PERMISSIVE PHASE	PROTECTED PHASE
A =	2 +	3
B =	4 +	5
C =	6 +	7
D =	(HOT) CONTINUOUS GREEN RIGHT ARROW	

### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

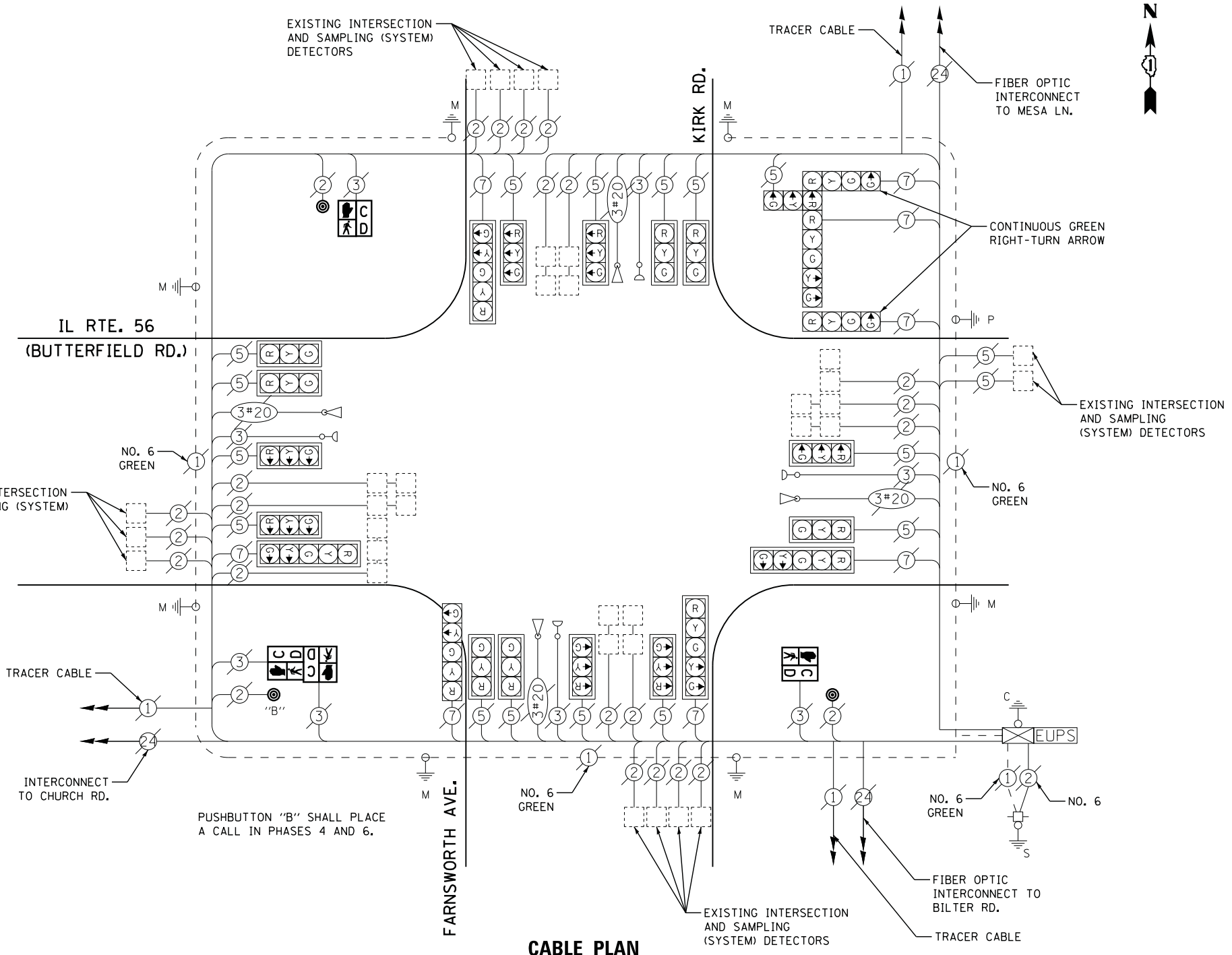
### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	23	135	17	0.50	196
( YELLOW )	23	135	25	0.25	144
( GREEN )	23	135	15	0.25	87
ARROW	12	135	12	0.10	15
WB RT ARROW	2	135	12	1.00	24
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					666

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096  
 CONTACT JOE STACHO  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



### CABLE PLAN

### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	PEDESTRIAN SIGNAL HEAD
3	EACH	PEDESTRIAN PUSH-BUTTON

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 56 (BUTTERFIELD ROAD) AT KIRK ROAD /FARNSWORTH AVENUE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	20
CONTRACT NO. 62A42				

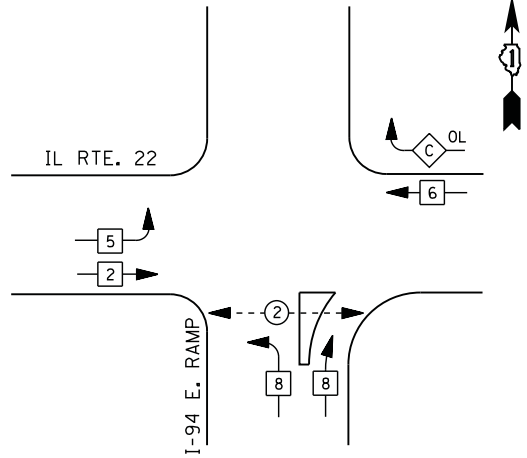
TS #11485  
AURORA

ILLINOIS



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\12380-CAB-LAKE.dgn

**CONTROLLER SEQUENCE**



**LEGEND**

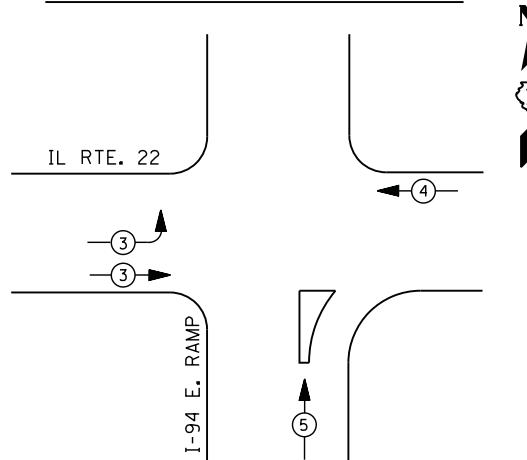
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP

NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
C	= 6	+ 8

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	17	135	17	0.50	145
(YELLOW)	17	135	25	0.25	107
(GREEN)	17	135	15	0.25	64
ARROW	4	135	12	0.10	5
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					471

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT TERRI BLECK**  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

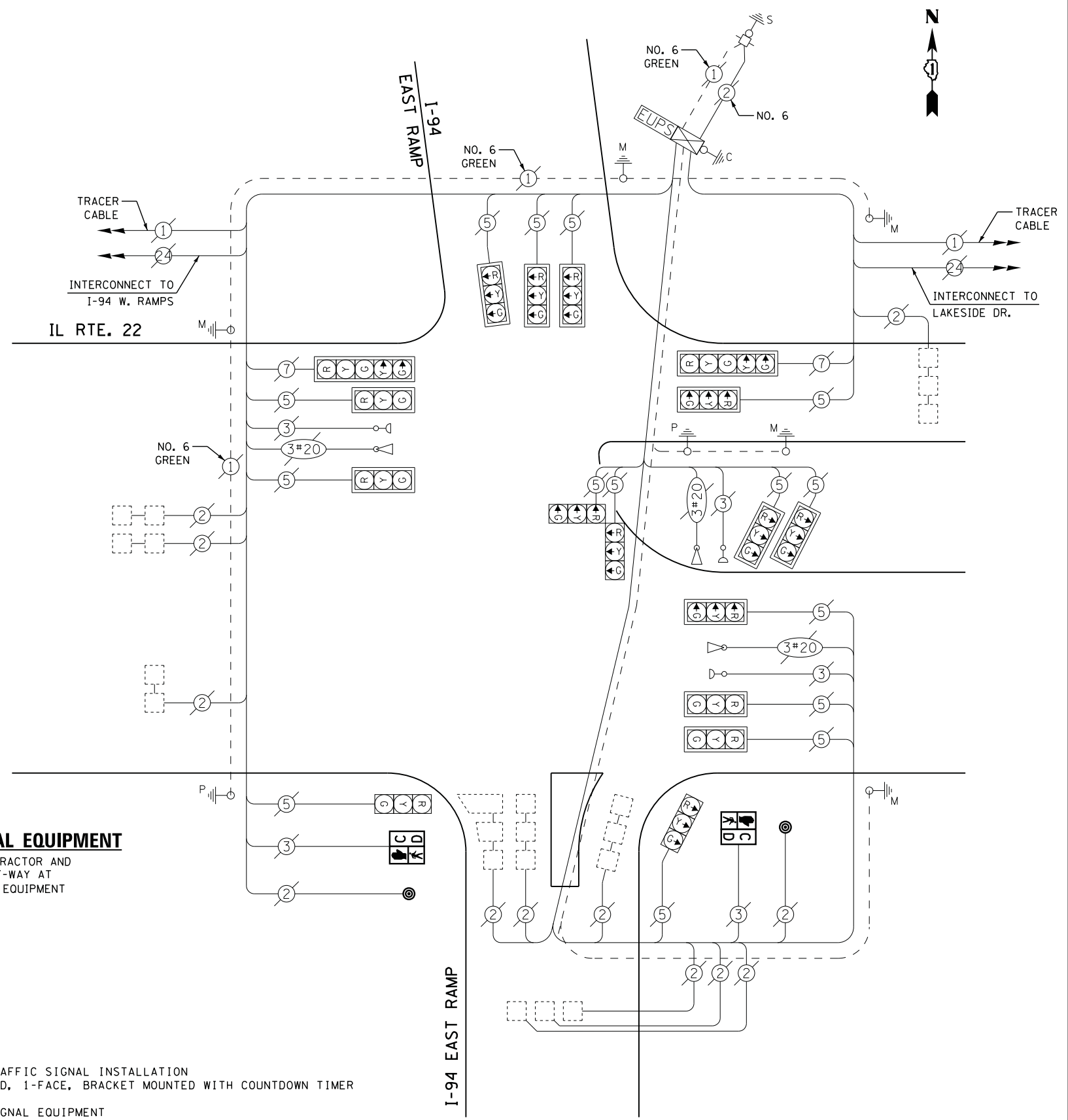
**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 22 AT I-94 EAST RAMP  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	21
CONTRACT NO. 62A42				
ILLINOIS				



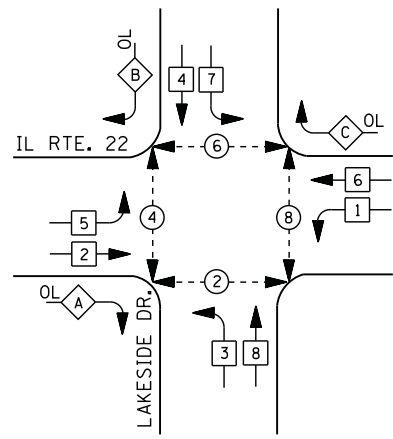
**CABLE PLAN**

TS #12380  
BANNOCKBURN



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\20350\_CAB\_LAKE.dgn

**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP

NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2	3
B =	4	5
C =	6	7

**PHASE DESIGNATION DIAGRAM**

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	19	135	17	0.50	162
(YELLOW)	19	135	25	0.25	119
(GREEN)	19	135	15	0.25	72
ARROW	12	135	12	0.10	15
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					668

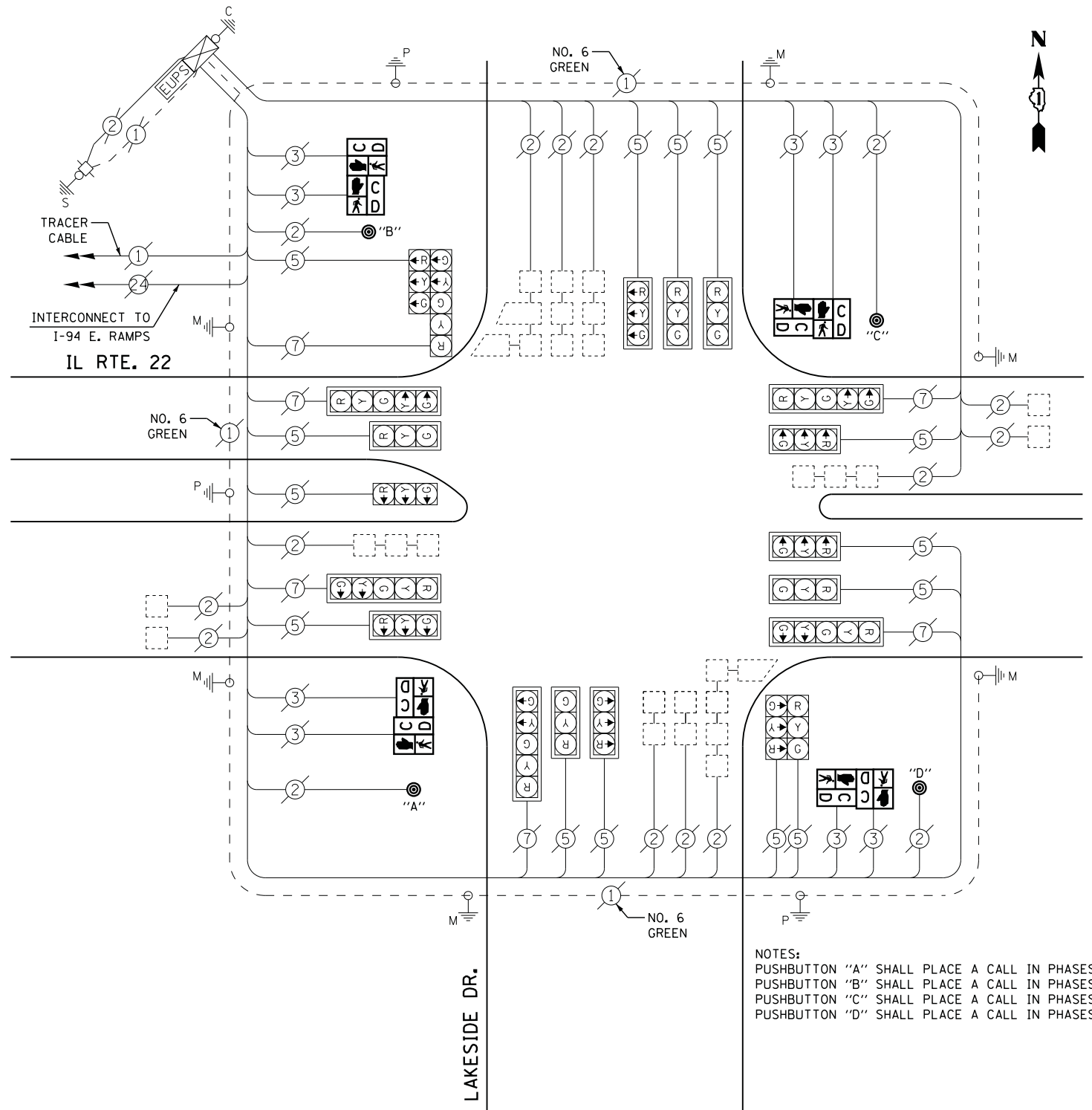
ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**CABLE PLAN**



NOTES:  
 PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

8	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 22 AT LAKESIDE DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	22
ILLINOIS			CONTRACT NO. 62A42	

TS #20350  
BANNOCKBURN



FILE NAME = M:\p\1481\2109 PTB 172-6 IDOT Var Signal\14-022 Various LED\1\Design\CAD\Sheet Files\4695\_CAB\_C000.dgn

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	19	135	17	0.50	162
(YELLOW)	19	135	25	0.25	119
(GREEN)	23	135	15	0.25	87
ARROW	0	135	12	0.10	0
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	2	252	25	0.05	3
VIDEO SYSTEM	1	150	-	1.00	150
TOTAL =					721
ENERGY COSTS-		BILLED TO: IDOT DISTRICT 1			
		201 WEST CENTER COURT			
		SCHAUMBURG, IL 60196-1096			
ENERGY SUPPLY -		CONTACT DAVE SCHACHT			
		PHONE 630-437-2129			
		COMMONWEALTH EDISON			

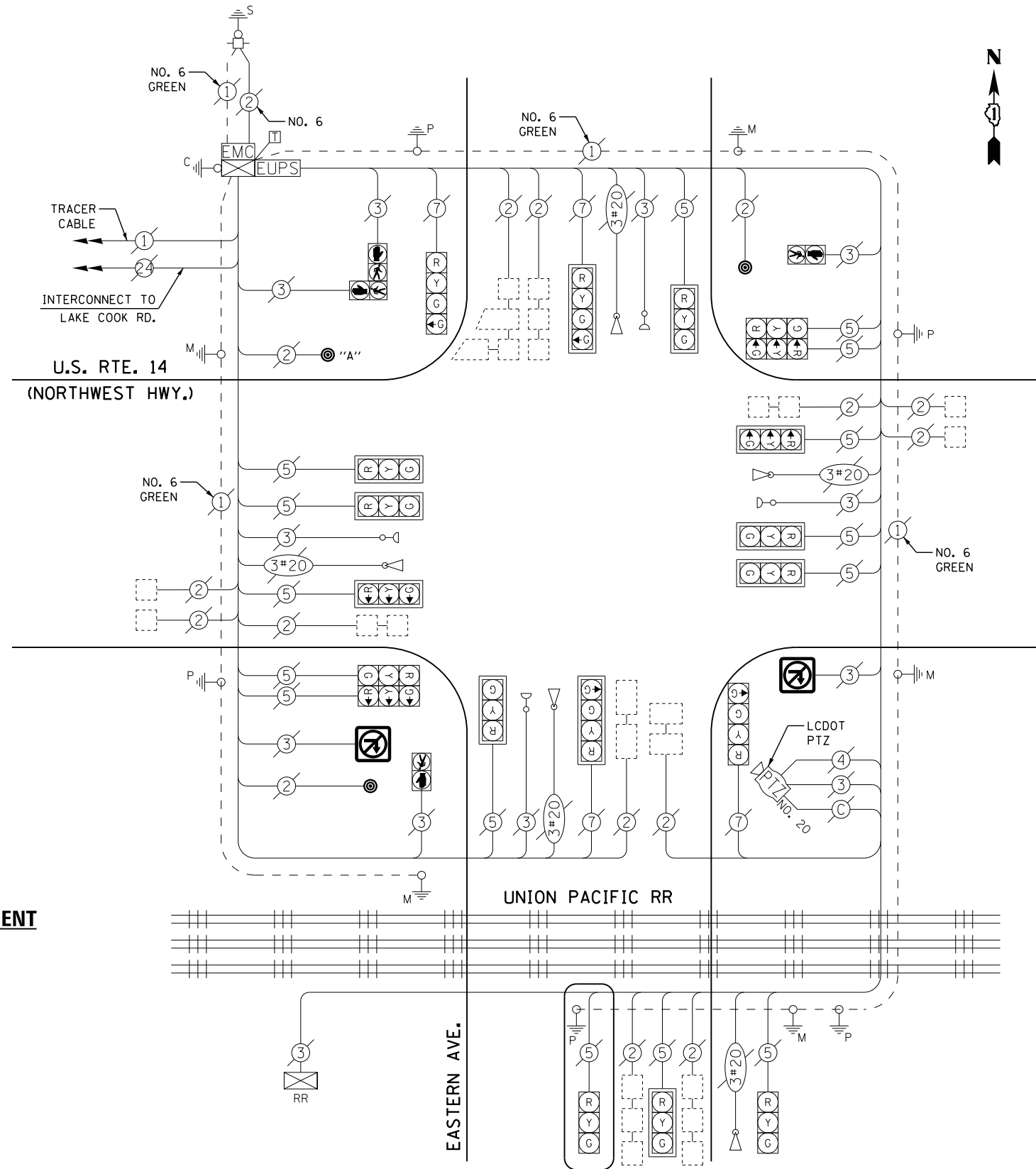
**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH PEDESTRIAN PUSH-BUTTON
- 2 EACH ILLUMINATED SIGN

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	ILLUMINATED SIGN, LED
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



**CABLE PLAN**

NOTES:  
PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 3.

EXISTING UNINTERRUPTIBLE POWER SUPPLY TO BE RECONNECTED TO THE EXISTING CONTROLLER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "MODIFY EXISTING CONTROLLER CABINET"

TS #4695  
BARRINGTON (SH. 1)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT EASTERN AVENUE  
SCHEDULE OF QUANTITIES AND CABLE PLAN

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	23
CONTRACT NO. 62A42				

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

ILLINOIS



SEQUENCE OF OPERATION

Main signal sequence table with columns for MOVEMENT, PHASE, INTERVAL, CHANGE TO, and signal states (R, G, Y, H, P, FH, H) for various movements and phases.

- Legend for signal symbols: TO APPEAR ONLY UPON PUSHBUTTON ACTUATION, FLASHING [symbol] IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE, etc.

RAILROAD PREEMPTION SEQUENCE OF OPERATION

Railroad preemption sequence table with columns for operation interval numbers (1-18) and preemptor numbers (3-6), showing signal states for various movements.

RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

- Legend for railroad symbols: NRT = "NO RIGHT TURN" OR [symbol], NLT = "NO LEFT TURN" OR [symbol]

- Legend for pedestrian symbols: P = ILLUMINATED PERSON = "WALK", FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK, H = ILLUMINATED SOLID HAND = DON'T WALK

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

Emergency vehicle preemption sequence table with columns for operation interval numbers (1-18) and preemptor numbers (3-6), showing signal states for various movements.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Signals\14-022 Various LED\*\Design\CAD\Sheet File\14695A\_CAB.CODK.dgn

Metadata table with columns: USER NAME, DESIGNED, DRAWN, PLOT SCALE, PLOT DATE, REVISED, CHECKED, DATE.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT EASTERN AVENUE SEQUENCE OF OPERATION, RAILROAD PREEMPTION SEQUENCE OF OPERATION, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

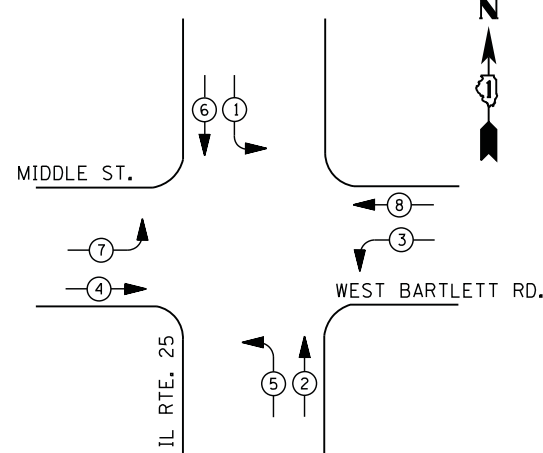
Project information table with columns: F.A. RTE., SECTION, COUNTY, COOK, TOTAL SHEETS, SHEET NO., CONTRACT NO., ILLINOIS.

TS #4695 BARRINGTON (SH. 2)





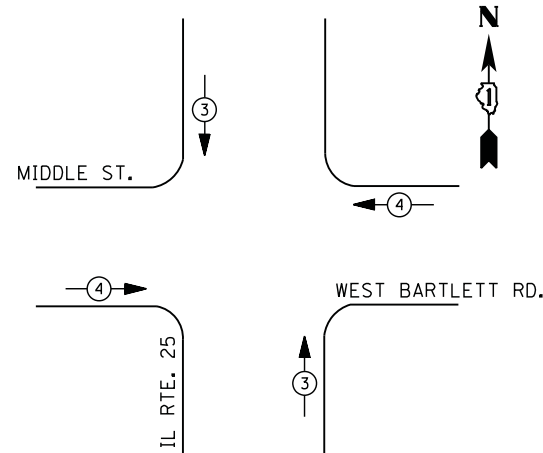
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	←

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

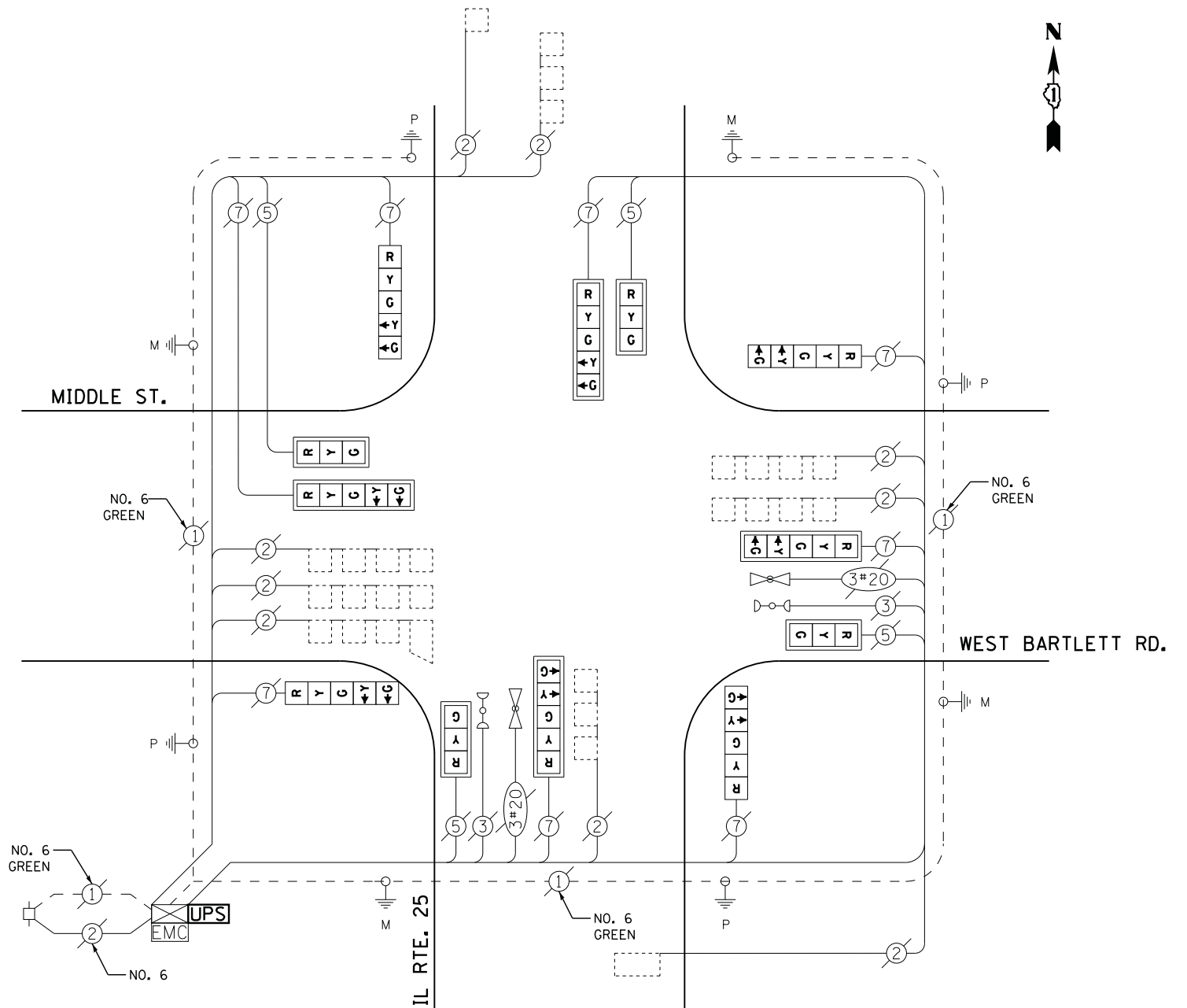
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	20
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					342

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED, RETROFIT



**CABLE PLAN**

RETROFIT ALL EXISTING SIGNAL HEADS TO L.E.D.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\4457 CAB\_KANE.dgn

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
PLOT SCALE = 20.000' / in.	DRAWN - CC	REVISED -
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -
	DATE -	REVISED -

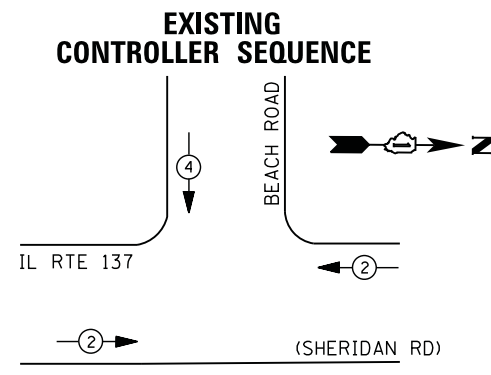
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 25 AT WEST BARTLETT ROAD /MIDDLE STREET  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

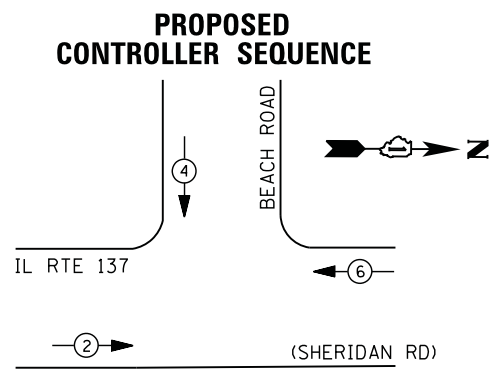
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	25
			CONTRACT NO. 62A42	
ILLINOIS				

TS #4457  
BARTLETT

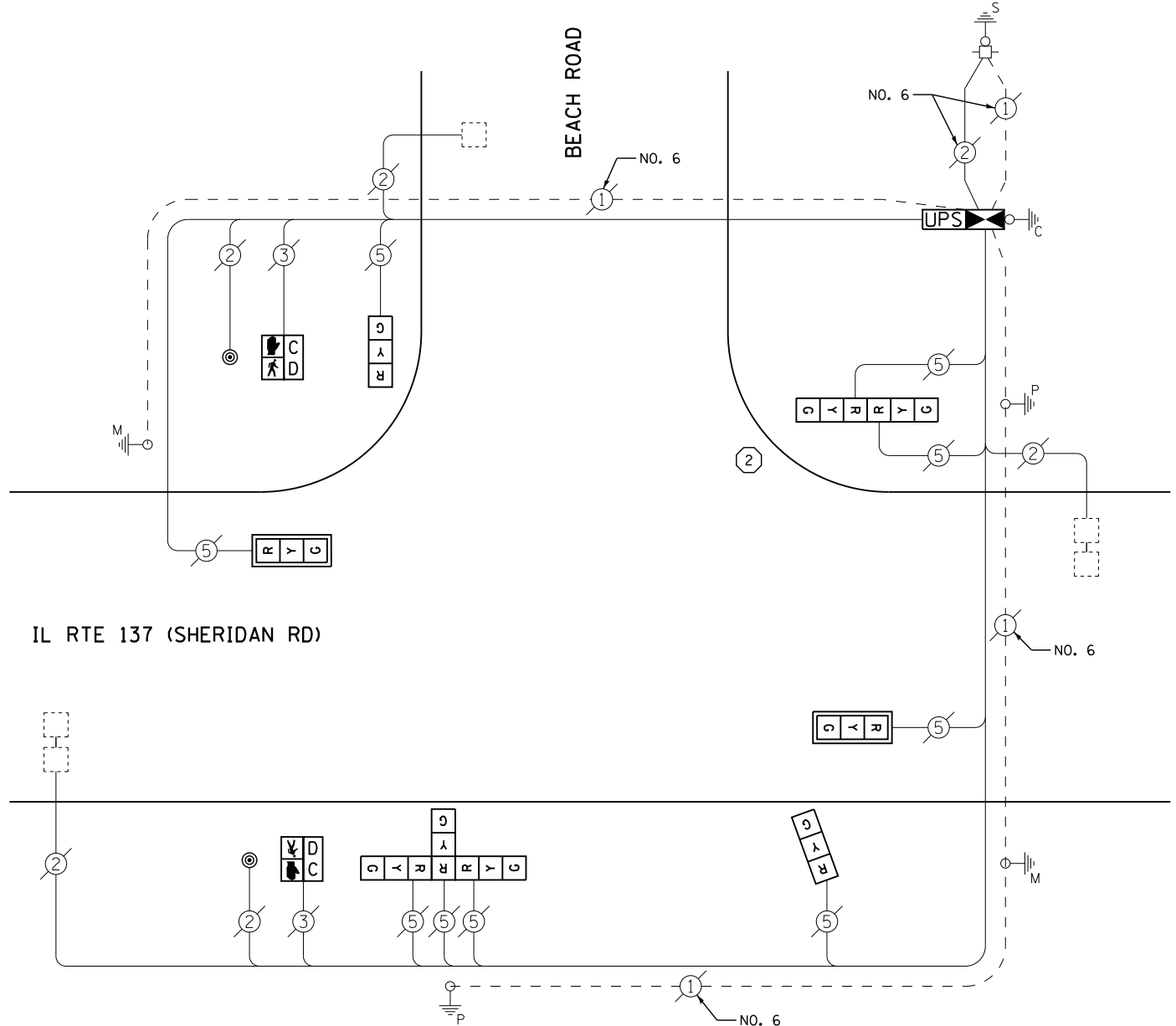


**EXISTING CONTROLLER SEQUENCE  
PHASE DESIGNATION DIAGRAM**



**PROPOSED CONTROLLER SEQUENCE  
PHASE DESIGNATION DIAGRAM**

- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.



**CABLE PLAN**

UPS SHALL BE INSTALLED ON LEFT SIDE OF CONTROLLER CABINET DUE TO PHYSICAL CONSTRAINT, OR AS DIRECTED BY THE ENGINEER

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
3	EACH	INDUCTIVE LOOP DETECTOR
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

9	EACH	SIGNAL HEAD, 3 - SECTION
2	EACH	PEDESTRIAN SIGNAL HEAD
2	EACH	PEDESTRIAN PUSH-BUTTON
2	EACH	TRAFFIC SIGNAL BACKPLATE
1	EACH	SIGNAL POST
1	EACH	CONTROLLER AND CABINET (COMPLETE)

FILE NAME = M:\p\03\1481\2189 PTB 172-6 IDOT Var Signal\14-022 Various LED\1-Design\CAD\Sheet Files\7190\_CAB\_LAKE.dgn

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	9	135	17	0.50	77
( YELLOW )	9	135	25	0.25	57
( GREEN )	9	135	15	0.25	34
ARROW		135	12	0.10	
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					318

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
PLOT SCALE = 20.000' / in.	DRAWN - CC	REVISED -
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

IL ROUTE 137 (SHERIDAN RD) AT BEACH RD SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM			
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA. TO STA.

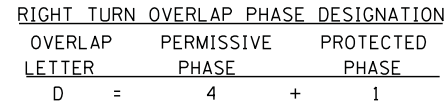
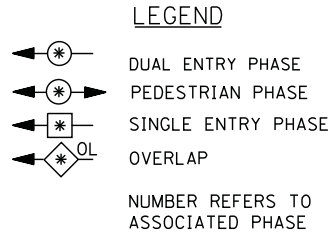
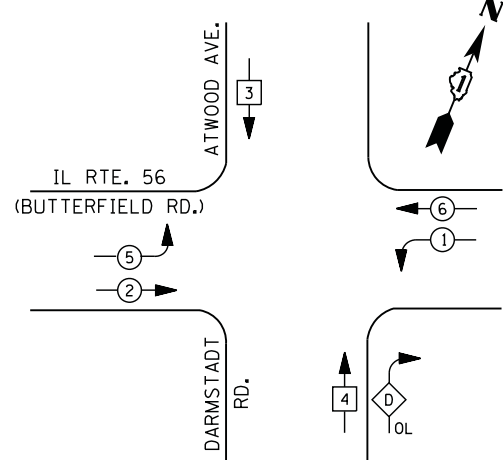
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	26
CONTRACT NO. 62A42				

TS# 7190  
BEACH PARK

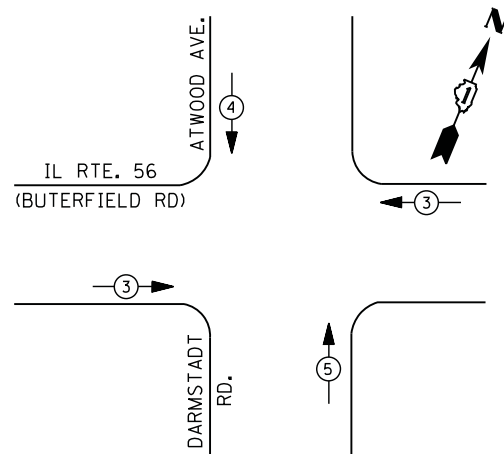
ILLINOIS



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	← →	↓	↑

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	20	135	15	0.25	75
ARROW	14	135	12	0.10	17
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					428

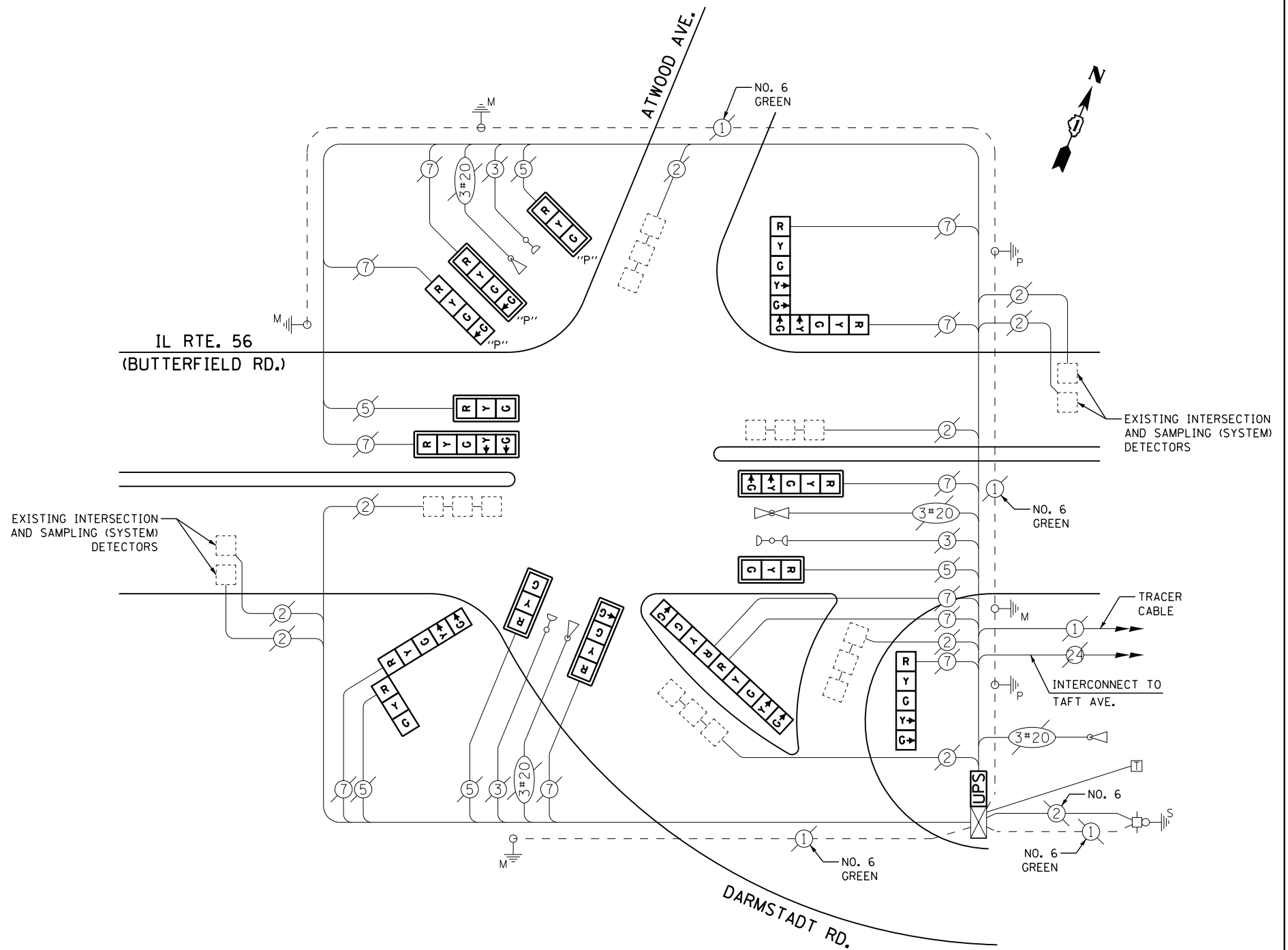
ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED
1	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
1	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
1	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED
8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

**CABLE PLAN**



**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

5	EACH	SIGNAL HEAD, 3 - SECTION
4	EACH	SIGNAL HEAD, 4 - SECTION
7	EACH	SIGNAL HEAD, 5 - SECTION
8	EACH	TRAFFIC SIGNAL BACKPLATE

TS #2693  
BERKELEY

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\2693\_CAB\_C00K.dgn

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

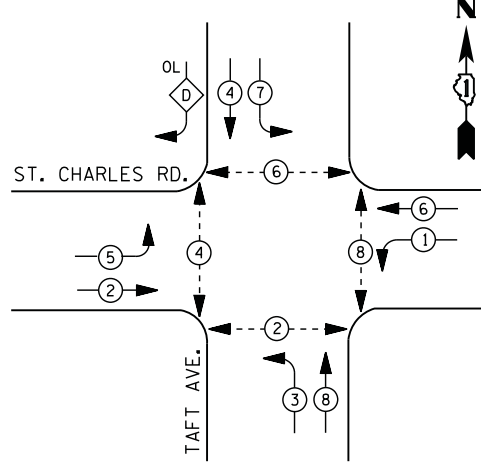
IL ROUTE 56 (BUTTERFIELD ROAD) AT DARMSTADT ROAD /ATWOOD AVENUE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	27
CONTRACT NO. 62A42				
ILLINOIS				



**CONTROLLER SEQUENCE**

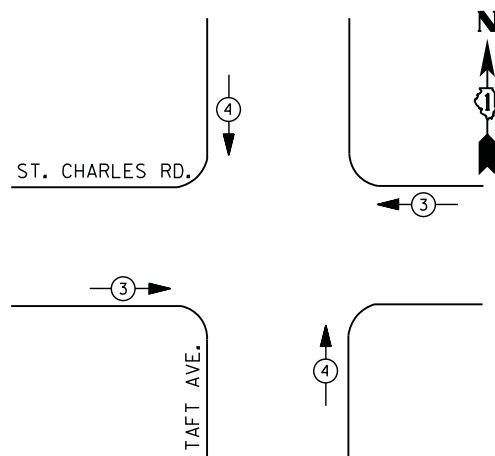


- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

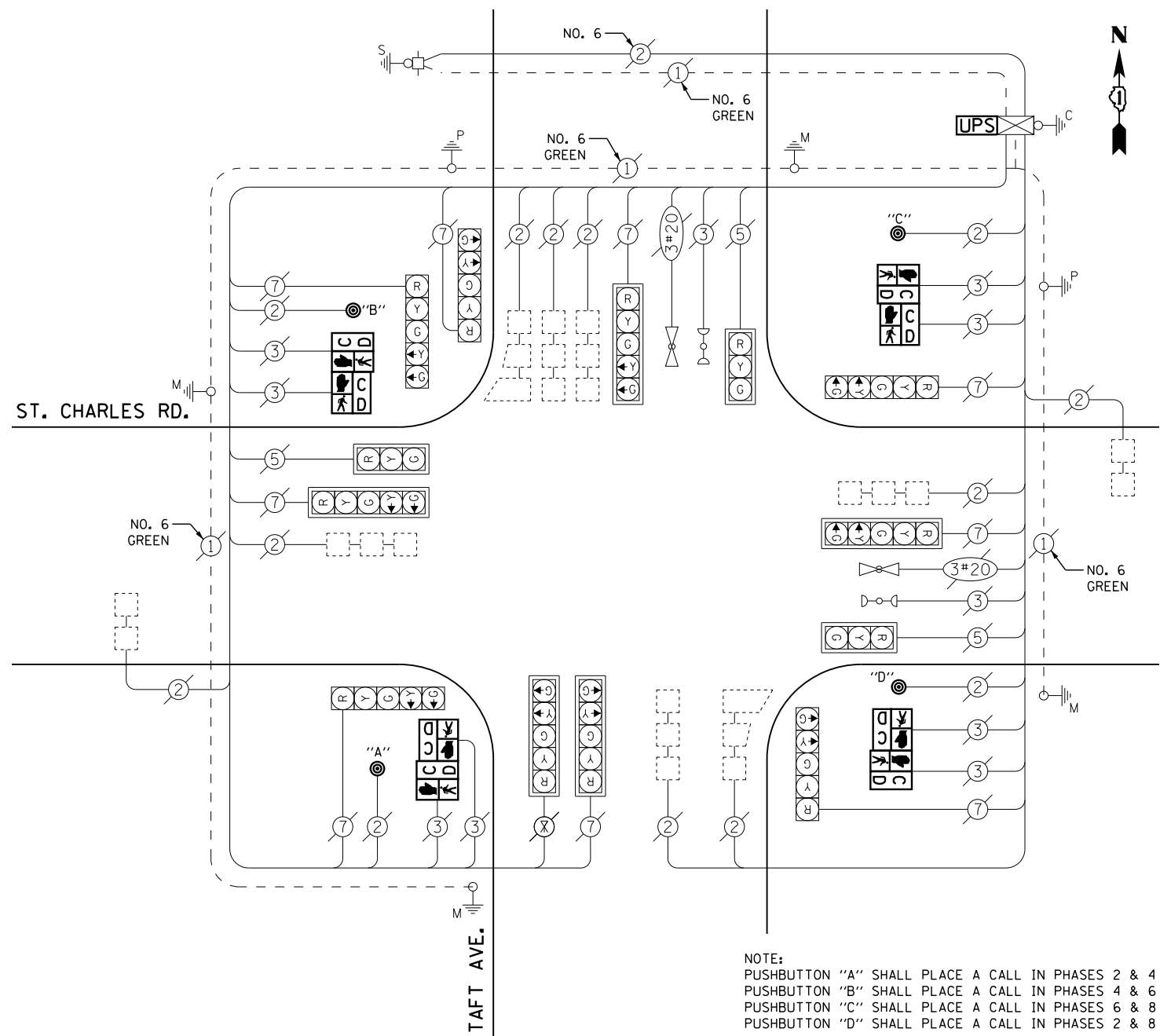
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	13	135	17	0.50	111
( YELLOW )	13	135	25	0.25	82
( GREEN )	13	135	15	0.25	49
ARROW	20	135	12	0.10	24
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					566

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
PHONE 630-424-5704  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



**NOTE:**  
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 & 4  
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 & 6  
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 & 8  
PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 & 8

**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

8	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

TS #5795  
BERKELEY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

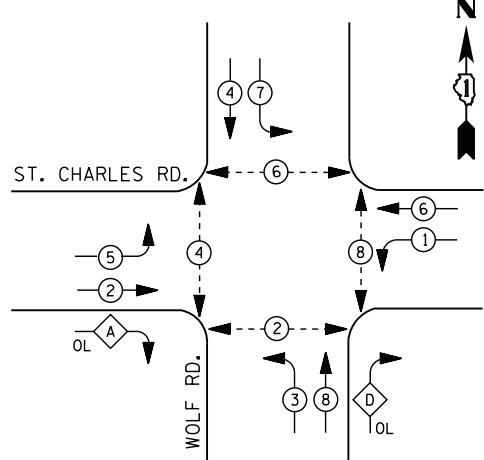
ST. CHARLES ROAD AT TAFT AVENUE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	28
ILLINOIS			CONTRACT NO. 62A42	

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



### CONTROLLER SEQUENCE

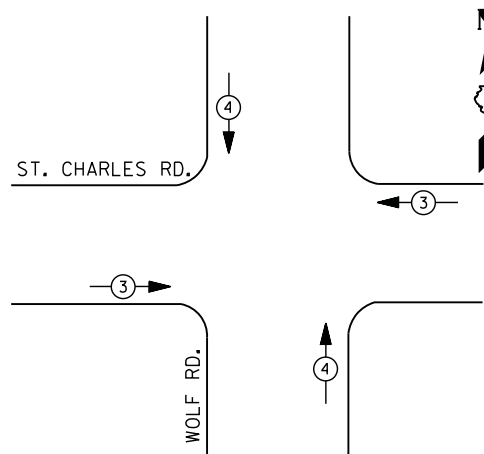


- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2 +	3
D =	8 +	1

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	88
(GREEN)	14	135	15	0.25	53
ARROW	24	135	12	0.10	29
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					589

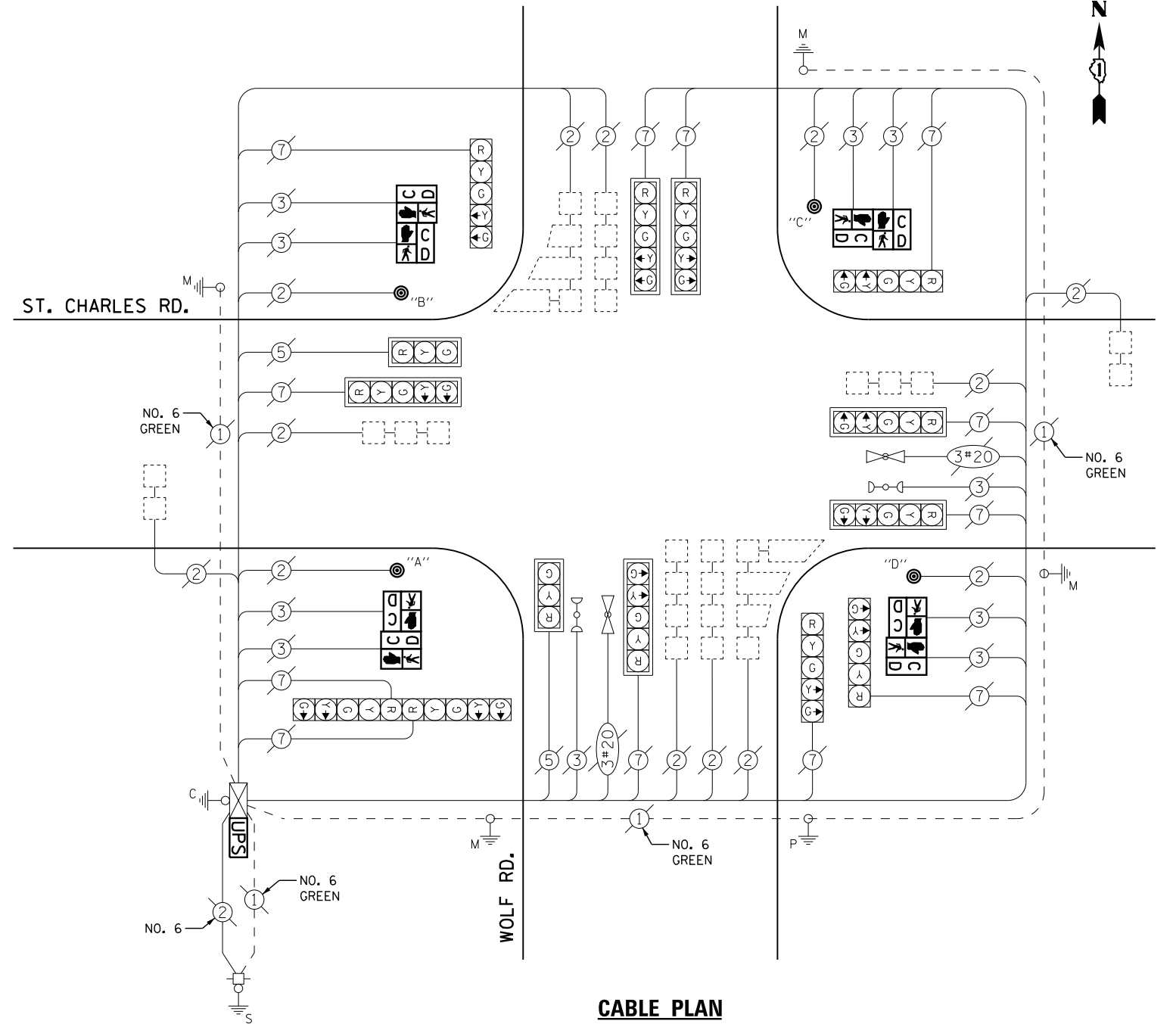
ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
4	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

### CABLE PLAN



- NOTES:**
- PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.
  - PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.
  - PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.
  - PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

TS #5800  
BERKELEY

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

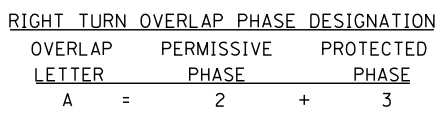
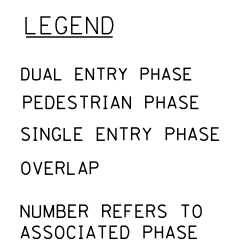
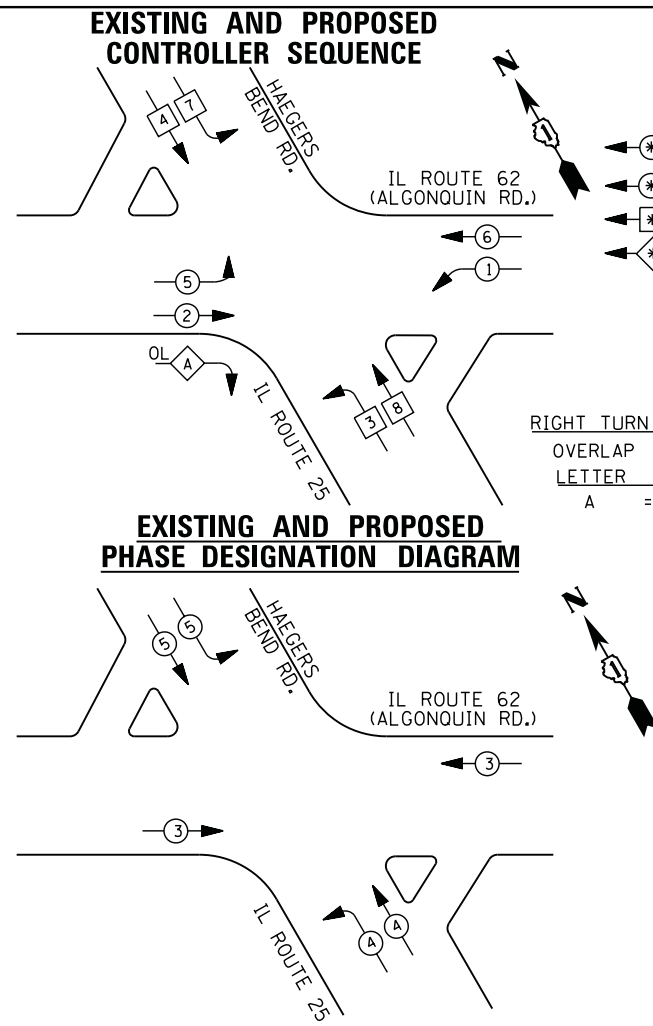
ST. CHARLES ROAD AT WOLF ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	29
CONTRACT NO. 62A42				

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



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\760\_CAB\_KANE.dgn



**EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE**

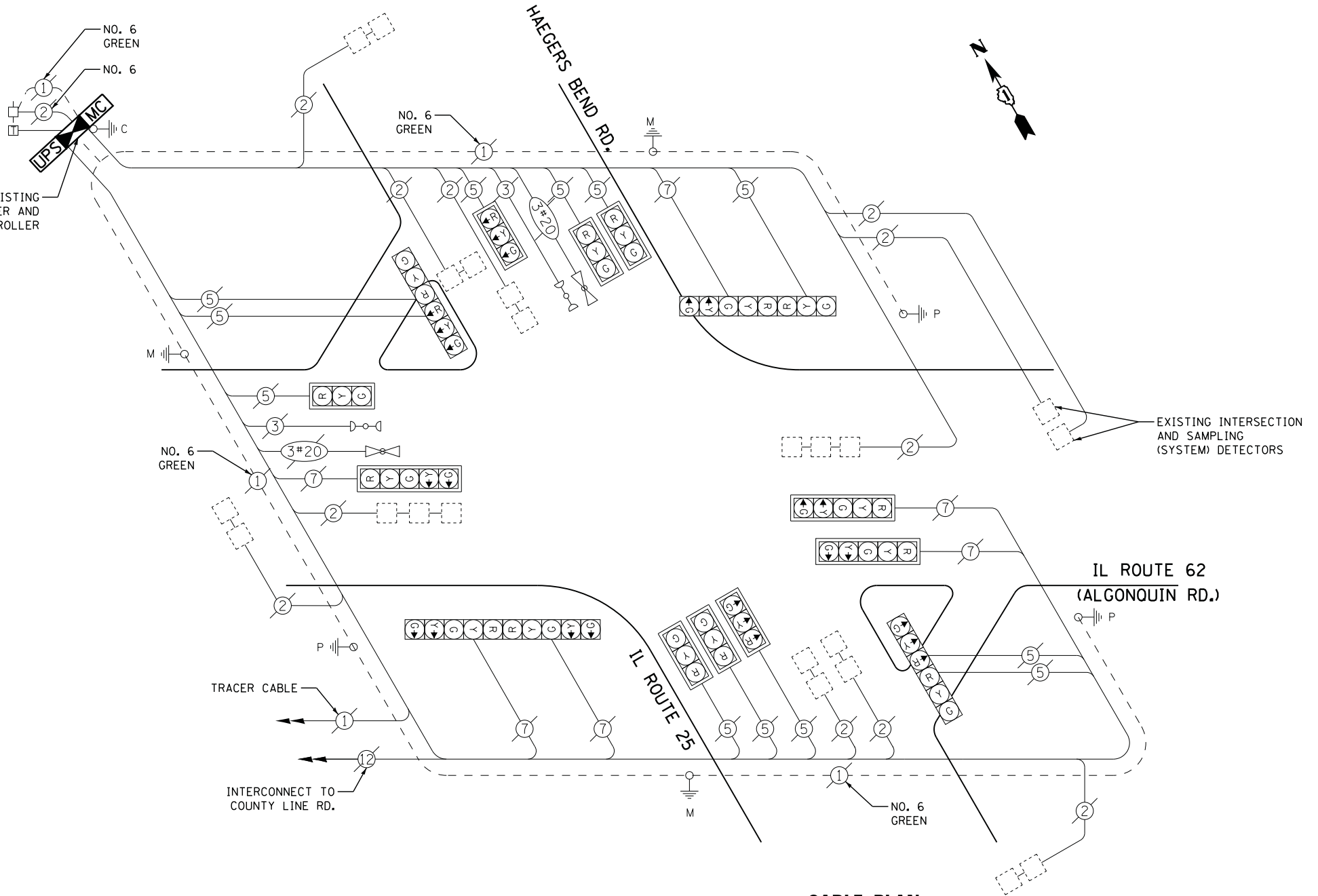
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	← →	← ↑	↓ →

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	12	135	12	0.10	15
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					449

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON



CONTRACTOR SHALL RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. THE COST OF THIS WORK SHALL BE INCLUDED IN THE FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL PAY ITEM.

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRANSCEIVER - FIBER OPTIC
11	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL
1	EACH	MASTER CONTROLLER (SPECIAL)
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

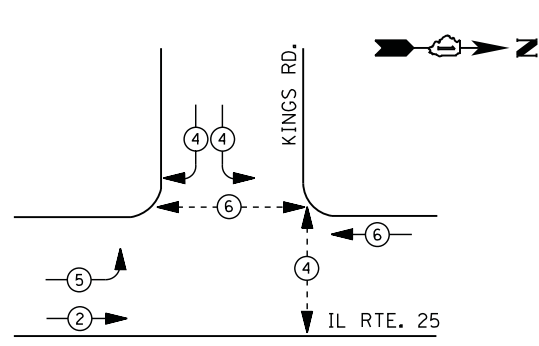
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET (COMPLETE)
1	EACH	MASTER CONTROLLER
1	EACH	UNINTERRUPTABLE POWER SUPPLY

THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM

TS #760  
 CARPENTERSVILLE



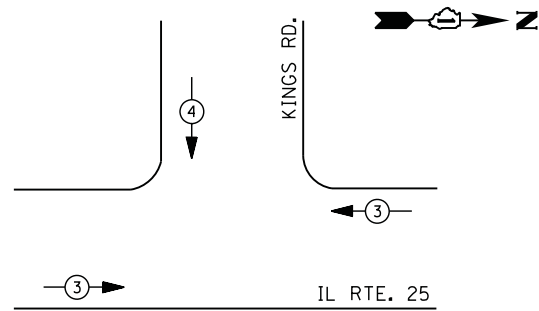
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	11	135	17	0.50	94
( YELLOW )	11	135	25	0.25	69
( GREEN )	11	135	15	0.25	42
ARROW	4	135	12	0.10	5
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					410

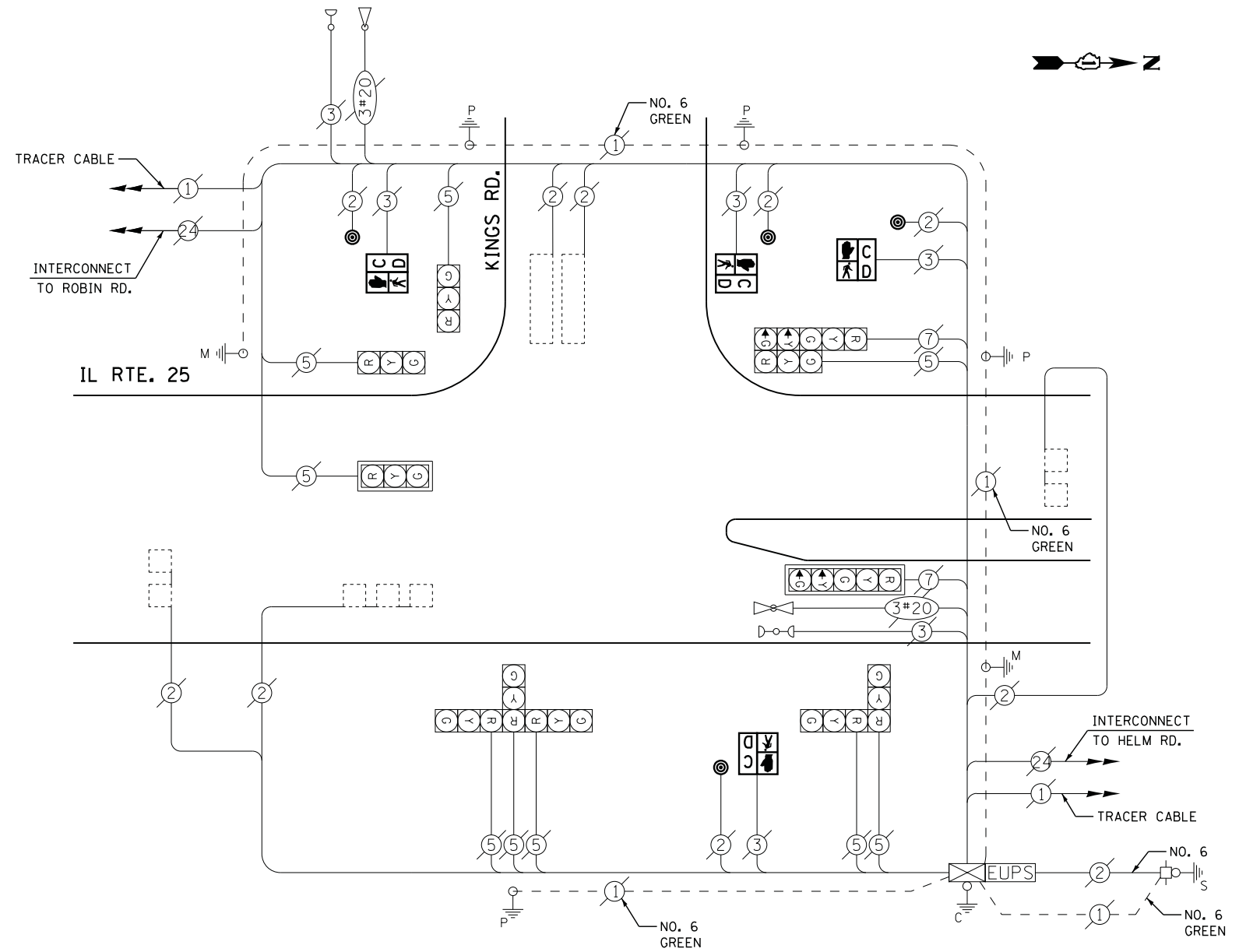
ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**CABLE PLAN**



**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 25 AT KINGS ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

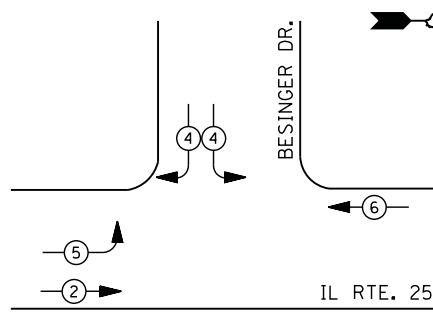
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	31
CONTRACT NO. 62A42				

TS #4310  
CARPENTERSVILLE

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -



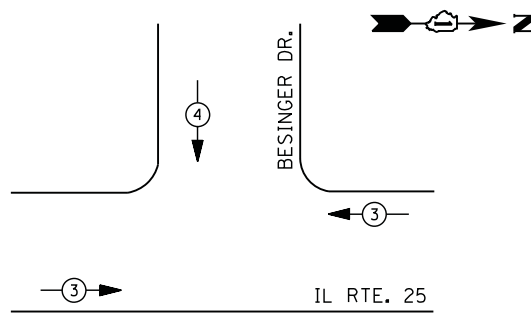
### CONTROLLER SEQUENCE



- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
  - NUMBER REFERS TO ASSOCIATED PHASE

- ① REPLACE 10 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓

#### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	8	135	17	0.50	68
(YELLOW)	8	135	25	0.25	50
(GREEN)	8	135	15	0.25	30
ARROW	4	135	12	0.10	5
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					253

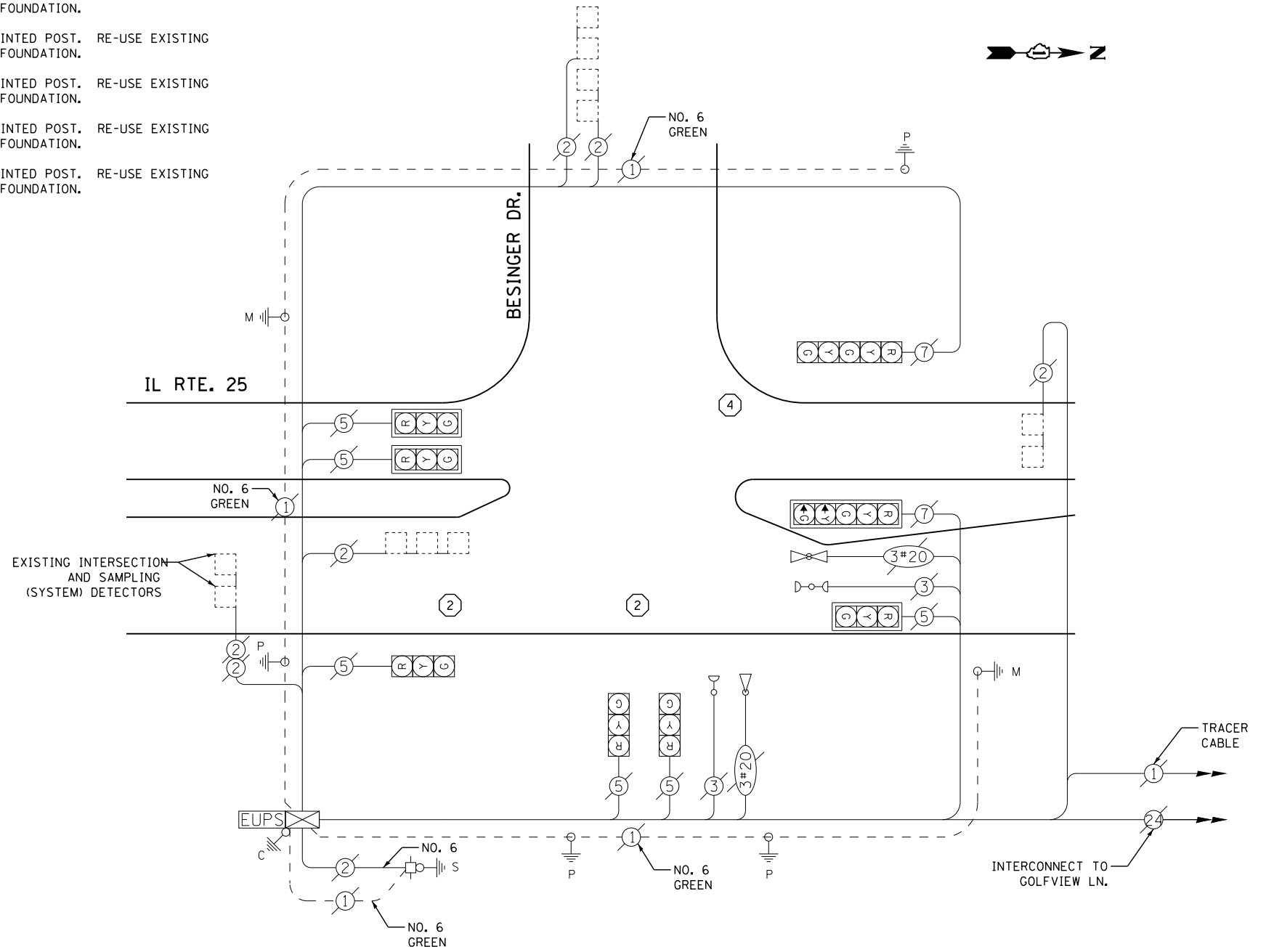
ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
PHONE 630-424-5704  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
3	EACH	RELOCATE EXISTING SIGNAL HEAD
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE AND REPLACE ANCHOR BOLTS

### CABLE PLAN



### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH SIGNAL POST

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 25 AT BESINGER DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

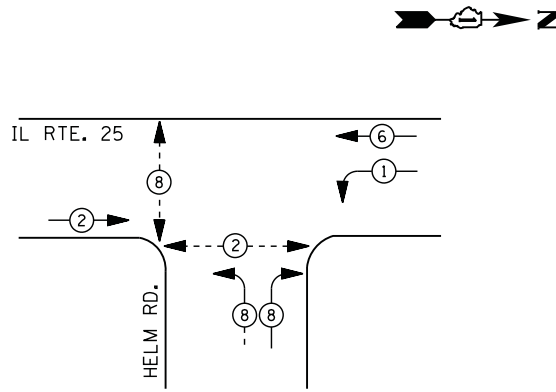
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	32
CONTRACT NO. 62A42				
ILLINOIS				

TS #4315  
CARPENTERSVILLE



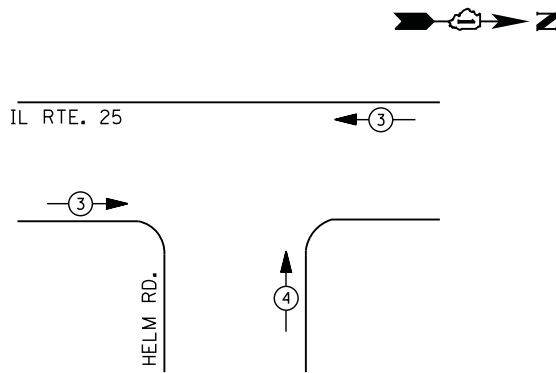


### CONTROLLER SEQUENCE



- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
  - NUMBER REFERS TO ASSOCIATED PHASE

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

#### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	11	135	17	0.50	94
( YELLOW )	11	135	25	0.25	69
( GREEN )	11	135	15	0.25	42
ARROW	4	135	12	0.10	5
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					410

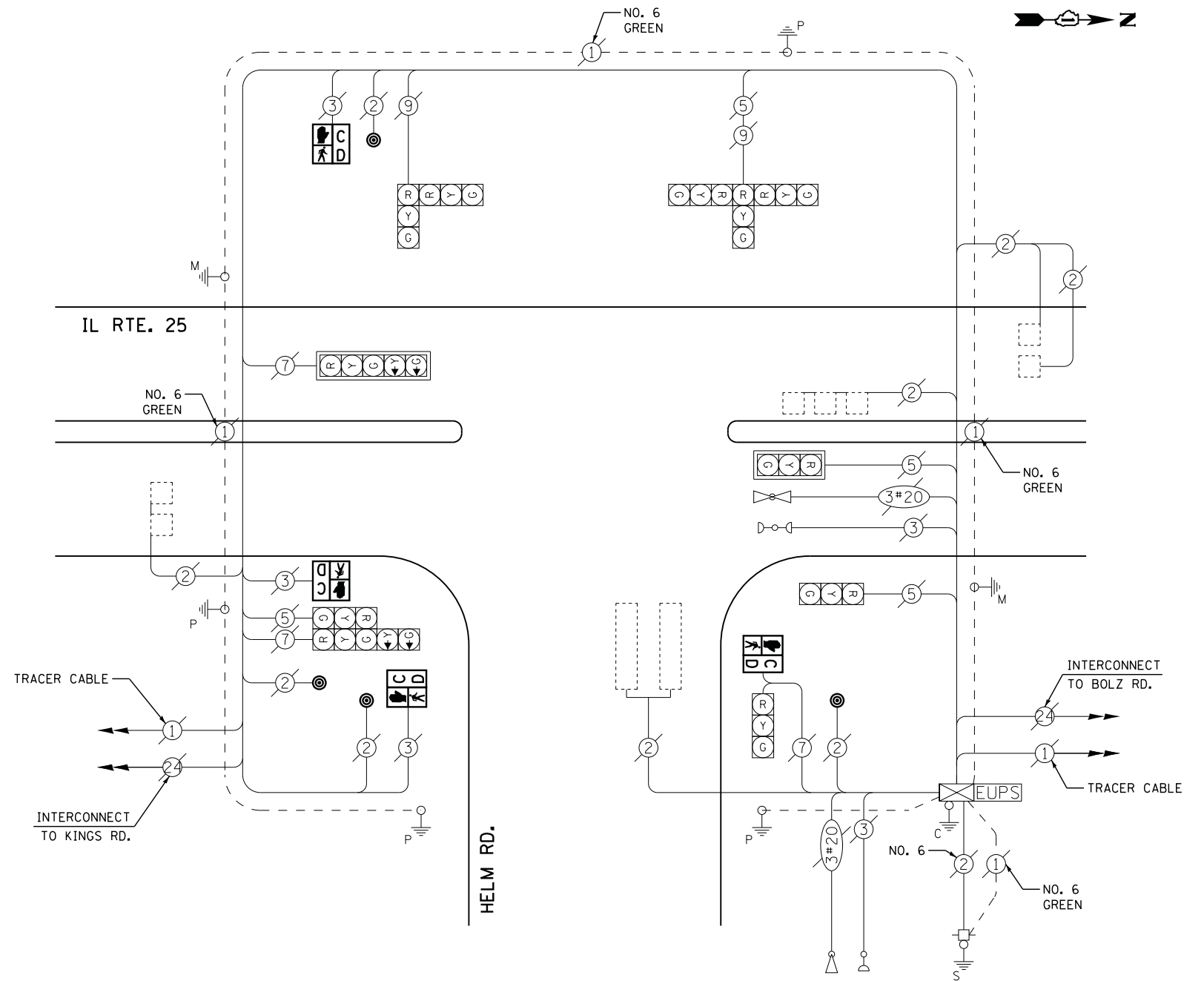
ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
PHONE 630-424-5704  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

### CABLE PLAN



### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 25 AT HELM ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

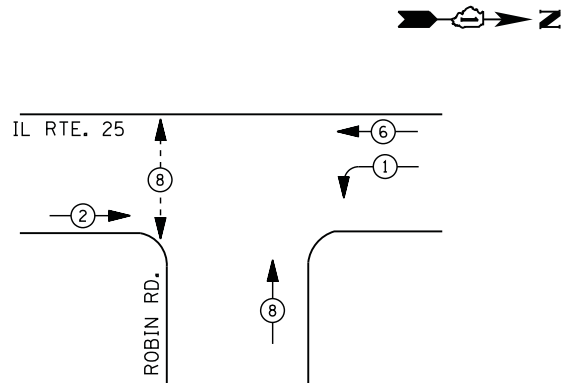
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	33
CONTRACT NO. 62A42				
ILLINOIS				

TS #4320  
CARPENTERSVILLE



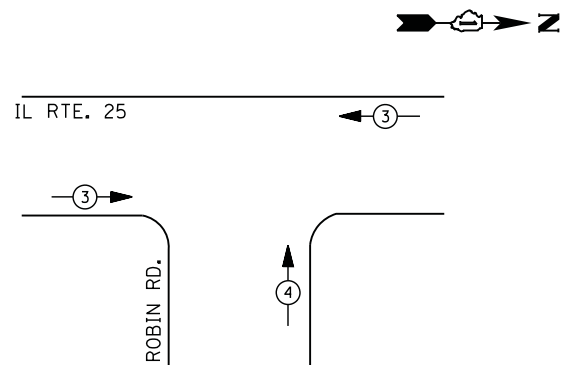
### CONTROLLER SEQUENCE



### LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑

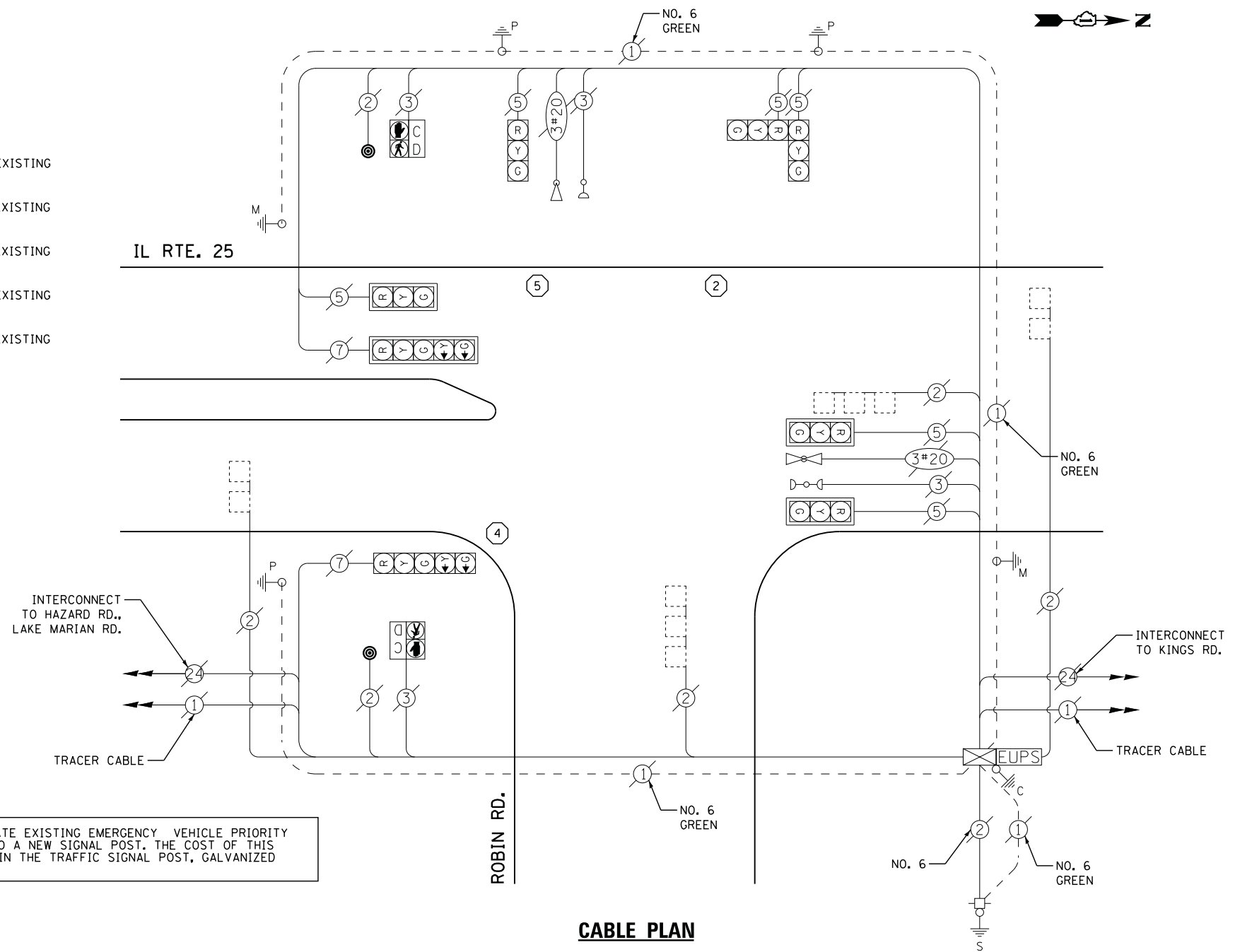
#### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	8	135	17	0.50	68
(YELLOW)	8	135	25	0.25	50
(GREEN)	8	135	15	0.25	30
ARROW	4	135	12	0.10	5
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					303

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.



CONTRACTOR SHALL RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT TO A NEW SIGNAL POST. THE COST OF THIS WORK SHALL BE INCLUDED IN THE TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT. PAY ITEM.

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
2	EACH	PEDESTRIAN PUSH-BUTTON
4	EACH	RELOCATE EXISTING SIGNAL HEAD
1	EACH	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE AND REPLACE ANCHOR BOLTS

### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	PEDESTRIAN PUSH-BUTTON
3	EACH	SIGNAL POST

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 25 AT ROBIN ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

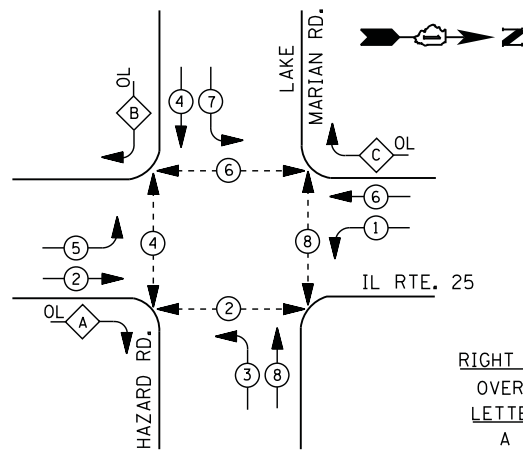
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	34
CONTRACT NO. 62A42				

TS #4325  
CARPENTERSVILLE

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -



### CONTROLLER SEQUENCE



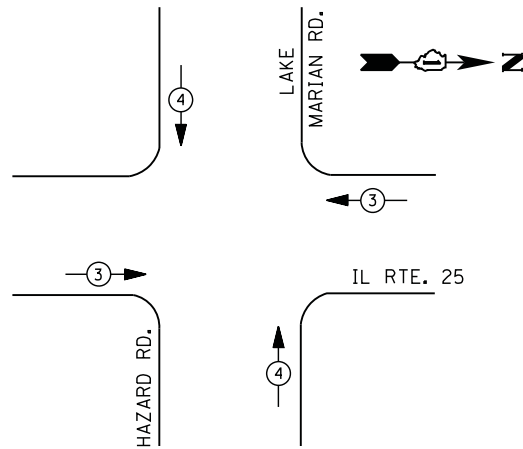
### LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

### RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2 +	3
B =	4 +	5
C =	6 +	7

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	17	135	17	0.50	145
(YELLOW)	17	135	25	0.25	107
(GREEN)	17	135	15	0.25	64
ARROW	28	135	12	0.10	34
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	2	100	100	1.00	200
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					750

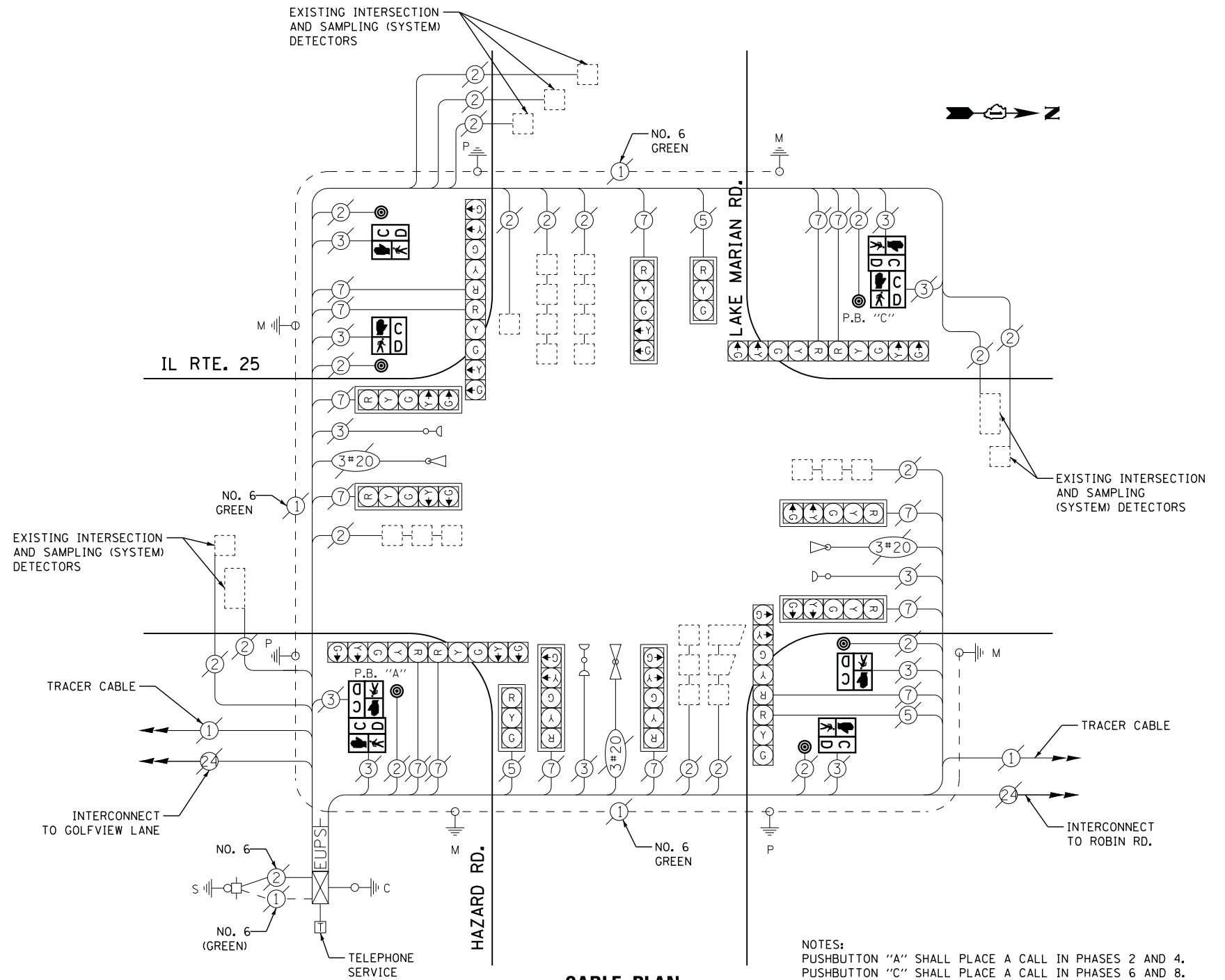
ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

### CABLE PLAN



NOTES:  
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.

### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

8	EACH	PEDESTRIAN SIGNAL HEAD
6	EACH	PEDESTRIAN PUSH-BUTTON

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 25 AT LAKE MARIAN ROAD /HAZARD ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

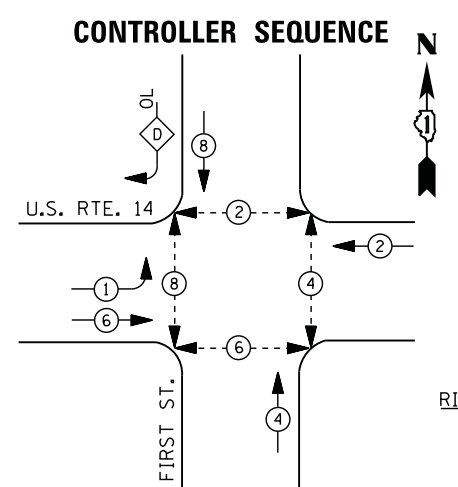
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	35
CONTRACT NO. 62A42				

TS #4390  
CARPENTERSVILLE

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-922 Various LED\1\Design\CAD\Sheet Files\7275\_CAB\_MCHENRY.dgn



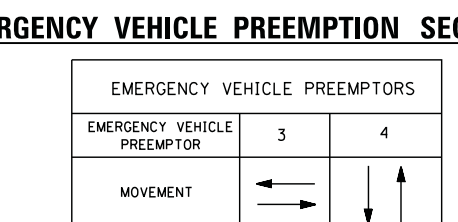
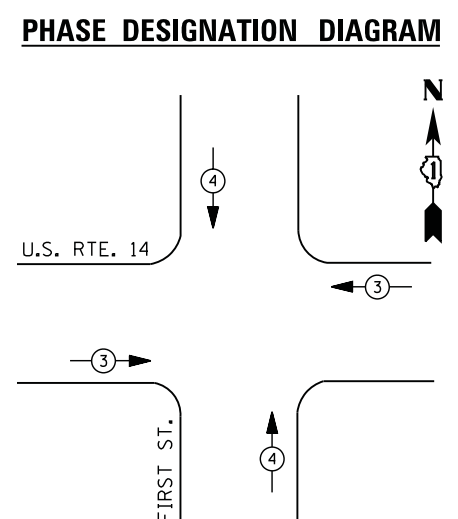
**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP

NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	= 8	+ 1



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

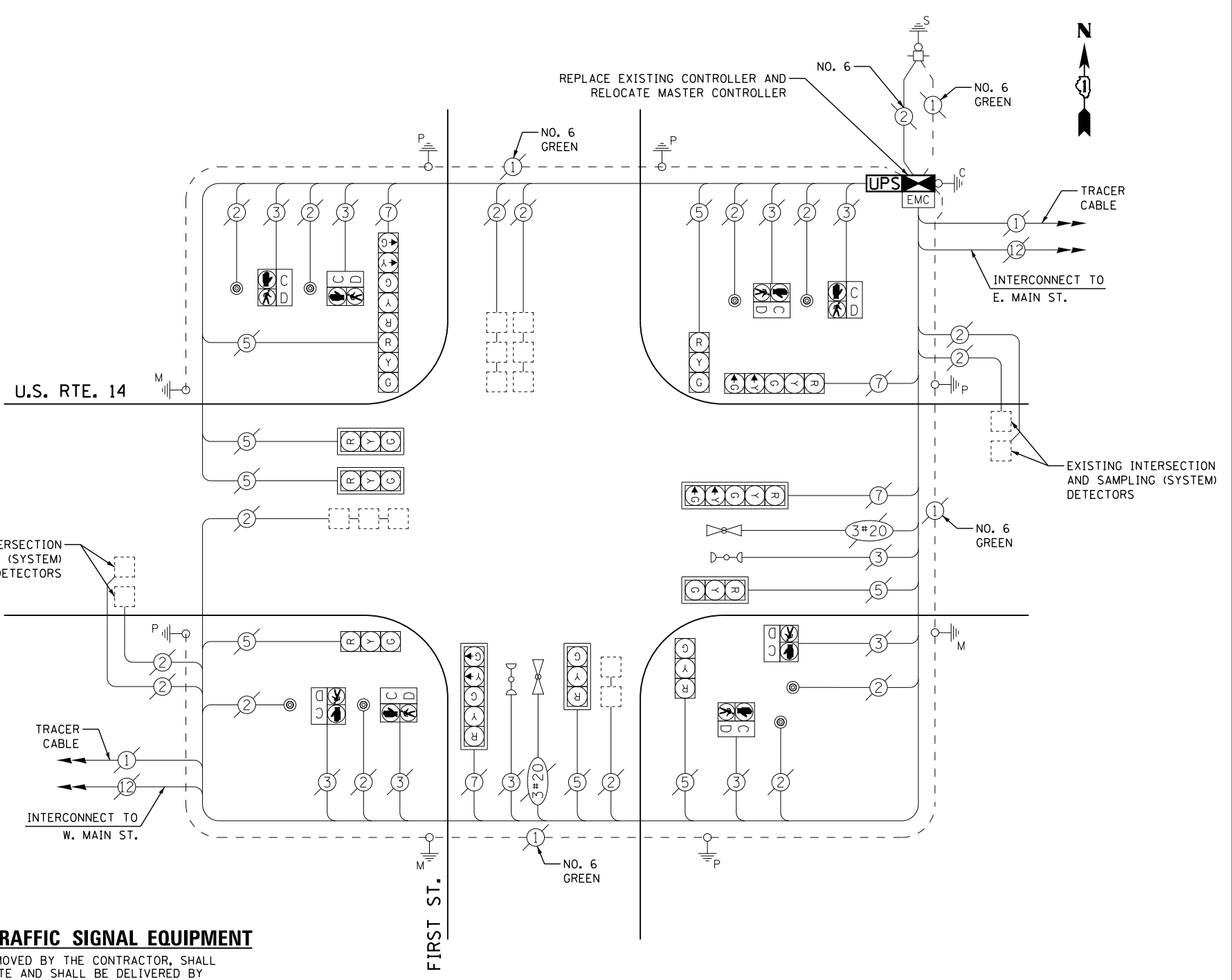
**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	12	135	17	0.50	102
( YELLOW )	12	135	25	0.25	75
( GREEN )	12	135	15	0.25	45
ARROW	8	135	12	0.10	10
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	150	1.00	
LIGHTING			250	1.00	
FLASHER LED					
TOTAL =					532

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT MIKE LENOX**  
 PHONE 815-490-2869  
 COMMONWEALTH EDISON

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH TRAFFIC SIGNAL CONTROLLER AND CABINET (COMPLETE)

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRANSCEIVER - FIBER OPTIC
8	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
1	EACH	RELOCATE EXISTING MASTER CONTROLLER

CONTRACTOR SHALL RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. THE COST OF THIS WORK SHALL BE INCLUDED IN THE FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL PAY ITEM.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14 AT FIRST STREET SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

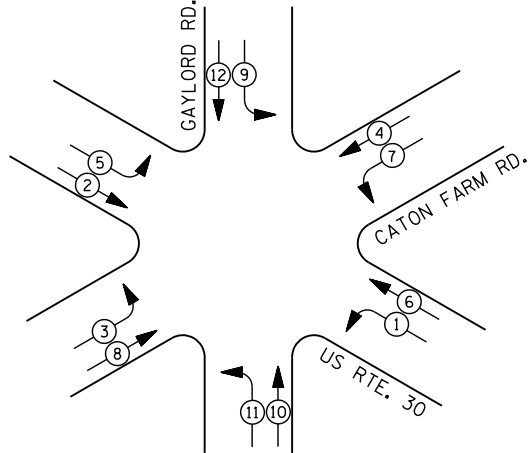
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	36
			CONTRACT NO. 62A42	
ILLINOIS				

TS #7275 CARY

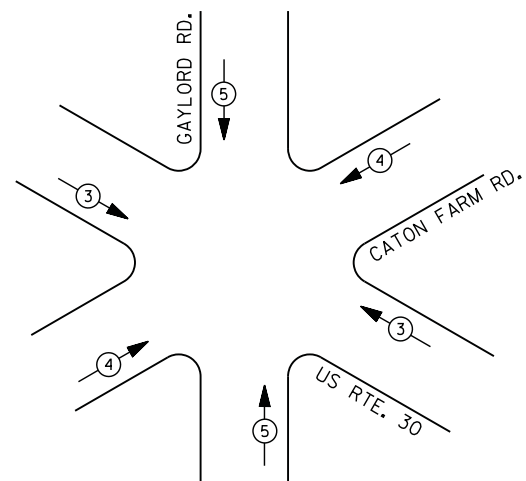


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**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	22	135	17	0.50	187
(YELLOW)	22	135	25	0.25	138
(GREEN)	22	135	15	0.25	83
ARROW	24	135	12	0.10	29
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					537

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE



- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

UPS SHALL BE INSTALLED ON LEFT SIDE OF CONTROLLER CABINET DUE TO PHYSICAL CONSTRAINT, OR AS DIRECTED BY THE ENGINEER

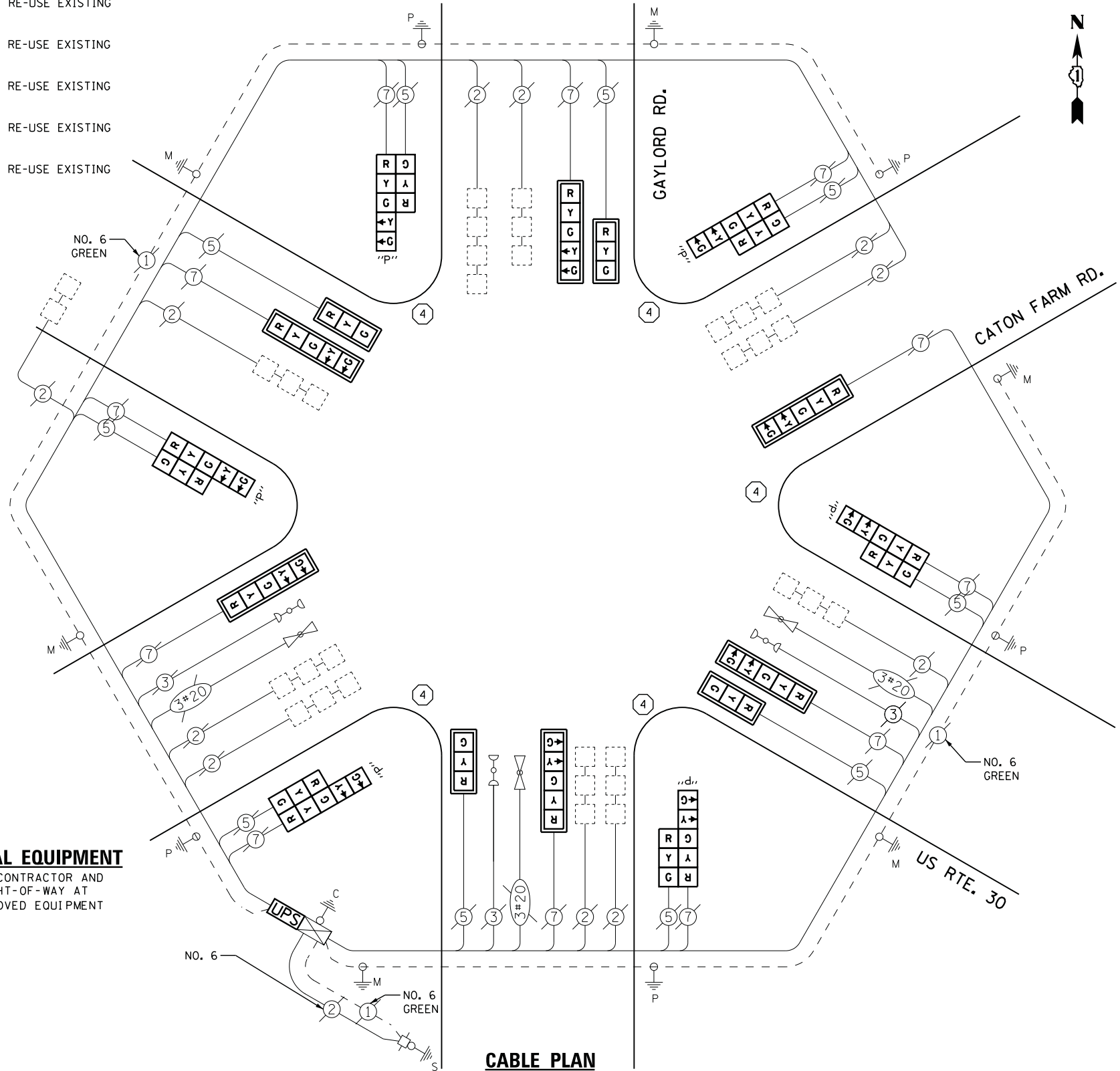
**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 10 EACH SIGNAL HEAD, 3 - SECTION
- 12 EACH SIGNAL HEAD, 5 - SECTION
- 10 EACH TRAFFIC SIGNAL BACKPLATE
- 5 EACH SIGNAL POST

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
5	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
6	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
6	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-5 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL



**CABLE PLAN**



USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

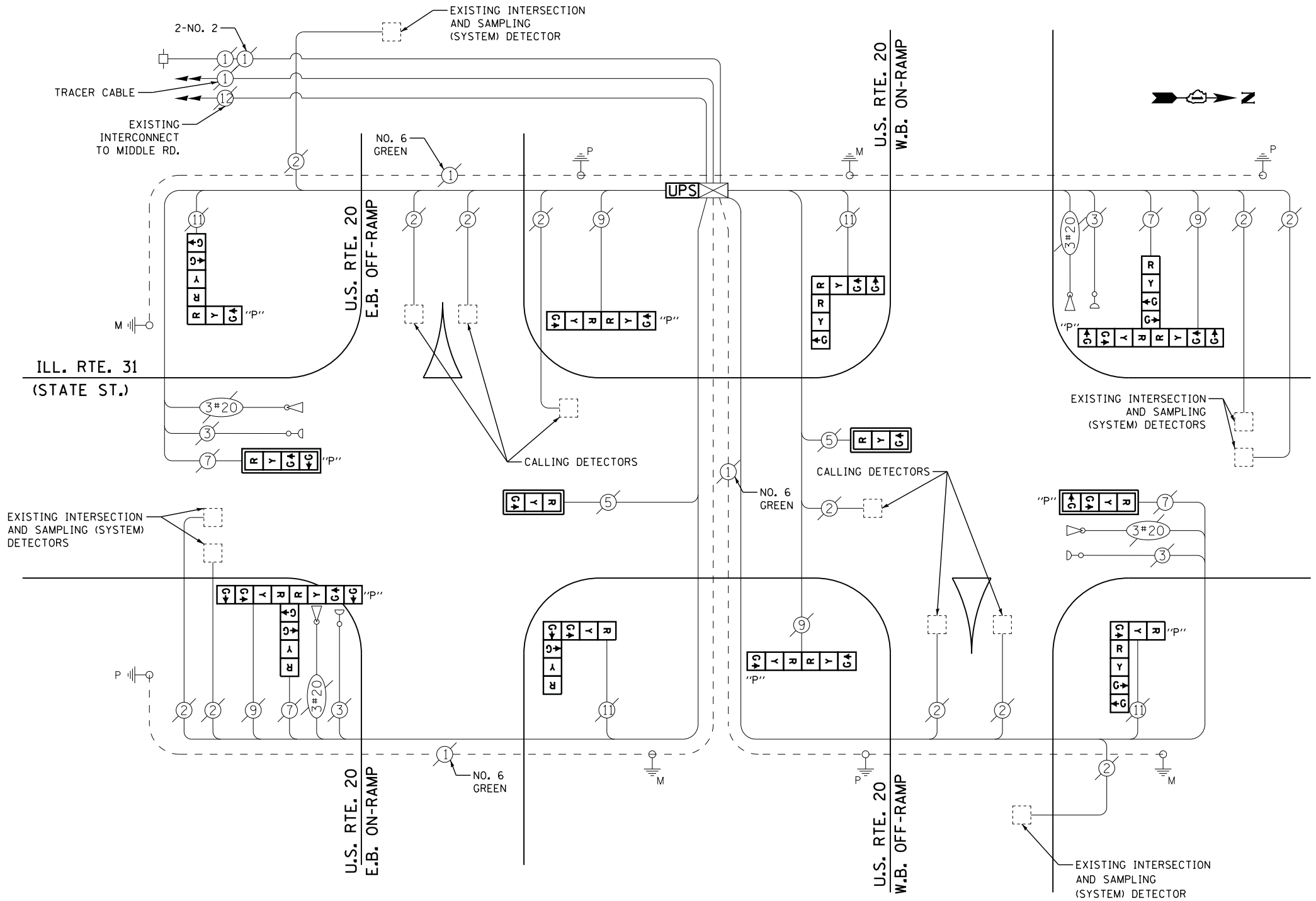
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 30 AT CATON FARM ROAD /GAYLORD ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	WILL	76	37
CONTRACT NO. 62A42				
ILLINOIS				

TS #7430  
CREST HILL



**CABLE PLAN**

I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	22	135	17	0.50	187
(YELLOW)	22	135	25	0.25	138
(GREEN)	34	135	15	0.25	128
ARROW	0	135	12	0.10	0
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	0
VIDEO SYSTEM		150	150	1.00	0
LIGHTING			250	1.00	0
TOTAL =					553

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-4 SECTION, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	SIGNAL HEAD, 3 - SECTION
6	EACH	SIGNAL HEAD, 4 - SECTION
2	EACH	SIGNAL HEAD, 2 - FACE, 1-3 SECTION, 1-4 SECTION
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 3-SECTION
4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 4-SECTION

TS #675  
ELGIN (SH. 1)

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\1481\2189\_CAB\_KANE.dgn



**SEQUENCE OF OPERATION**

MOVEMENT	US RTE 20 EB RAMP												US RTE 20 WB RAMP												FLASH																																																																							
	1	2A	2B	2C	2D	3A	3B	4	5A	5B	5C	5D	6A	6B	7	8A	8B	8C	8D	9A	9B	10	11A	11B		12A	12B	12C	12D																																																																			
PHASE	1												2												3												4																																																											
INTERVAL	1												2 OR 3												4												1 OR 4												2												1												2 OR 3																							
CHANGE TO	2 OR 3												4												1 OR 4												3												1 OR 4												2												1												2 OR 3											
SIGNALS AT EB US RTE 20 EXIT AND ENTRANCE RAMP	[Signal Matrix for EB US RTE 20]																																																																																															
SIGNALS AT WB US RTE 20 EXIT AND ENTRANCE RAMP	[Signal Matrix for WB US RTE 20]																																																																																															

**EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION**

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1										4										7										10										PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 6	CLEAR TO NORMAL SEQUENCE	
	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD																		
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION NUMBER	2										3										4										5															
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2										3 OR 4										5										6															
SIGNALS AT EB US RTE 20 EXIT AND ENTRANCE RAMP	[Signal Matrix for EB US RTE 20 - Emergency]																																													
SIGNALS AT WB US RTE 20 EXIT AND ENTRANCE RAMP	[Signal Matrix for WB US RTE 20 - Emergency]																																													

EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4 OR 5 IS TERMINATED.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-922 Various LED\1\Design\CAD\Sheet Files\14-922\_Various\_LED\_CAB\_KANE.dgn

USER NAME - .USERNAME.	DESIGNED - DW	REVISED -
DRAWN - CC	REVISOR -	
PLOT SCALE - 20.000' / in.	CHECKED - JDH	REVISOR -
PLOT DATE - 2/2/2015	DATE -	REVISOR -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 31 (STATE STREET) AT U.S. ROUTE 20  
SEQUENCE OF OPERATION AND  
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION**

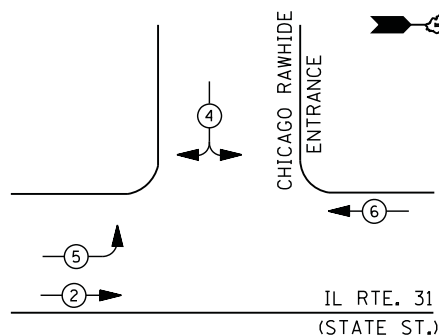
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	39
ILLINOIS			CONTRACT NO. 62A42	

TS \*675  
ELGIN (SH. 2)



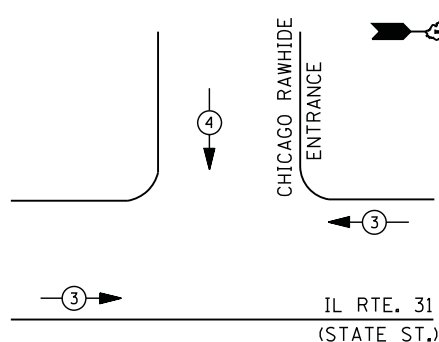
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

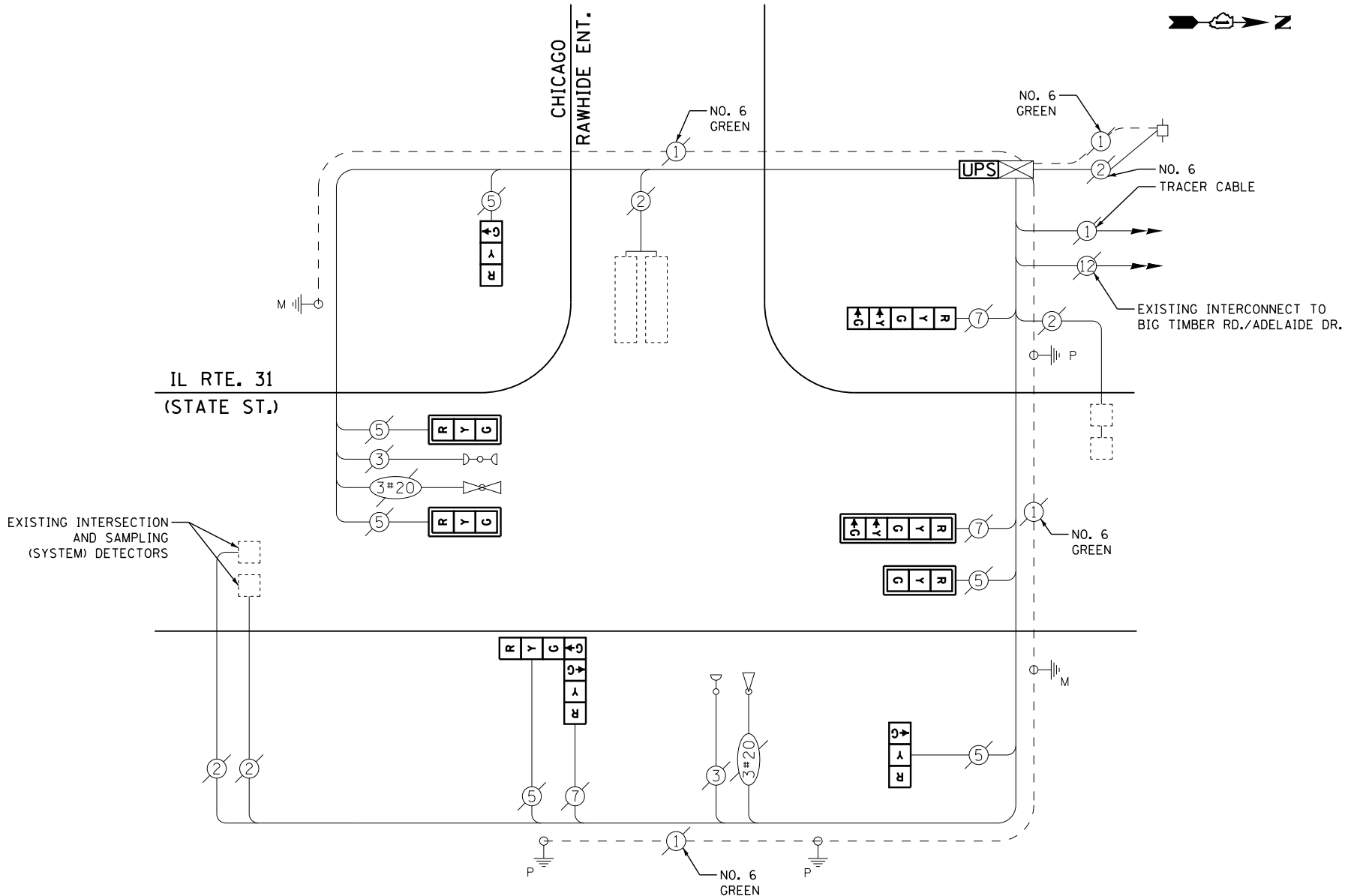
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	9	135	17	0.50	77
( YELLOW )	9	135	25	0.25	57
( GREEN )	10	135	15	0.25	38
ARROW	4	135	12	0.10	5
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					277

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON



**CABLE PLAN**

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

5	EACH	SIGNAL HEAD, 3 - SECTION
2	EACH	SIGNAL HEAD, 5 - SECTION
1	EACH	SIGNAL HEAD, 2 - FACE, 1-3 SECTION, 1-4 SECTION
4	EACH	TRAFFIC SIGNAL BACKPLATE

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 31 (STATE STREET) AT CHICAGO RAWHIDE ENTRANCE  
SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	40
CONTRACT NO. 62A42				

TS #4330  
ELGIN

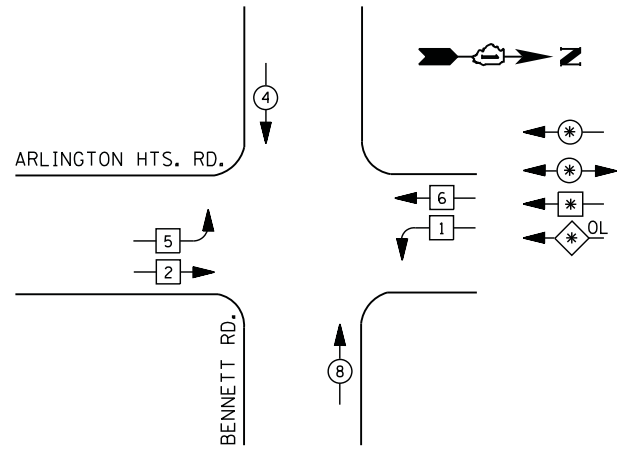
USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
PLOT SCALE = 20.000' / 1" =	DRAWN - CC	REVISED -
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -
	DATE -	REVISED -





FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\22235\_CAB\_C00K.dgn

**CONTROLLER SEQUENCE**

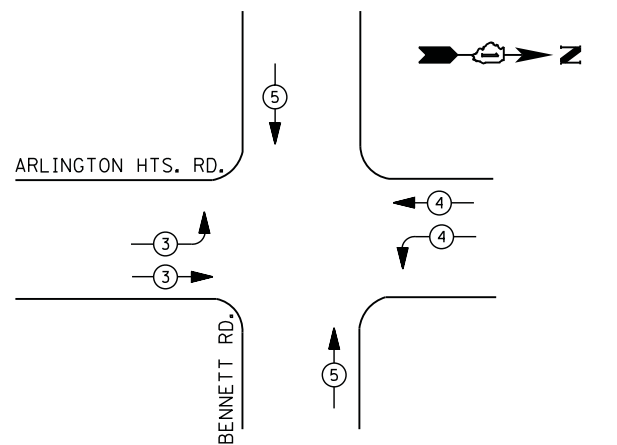


**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP

NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

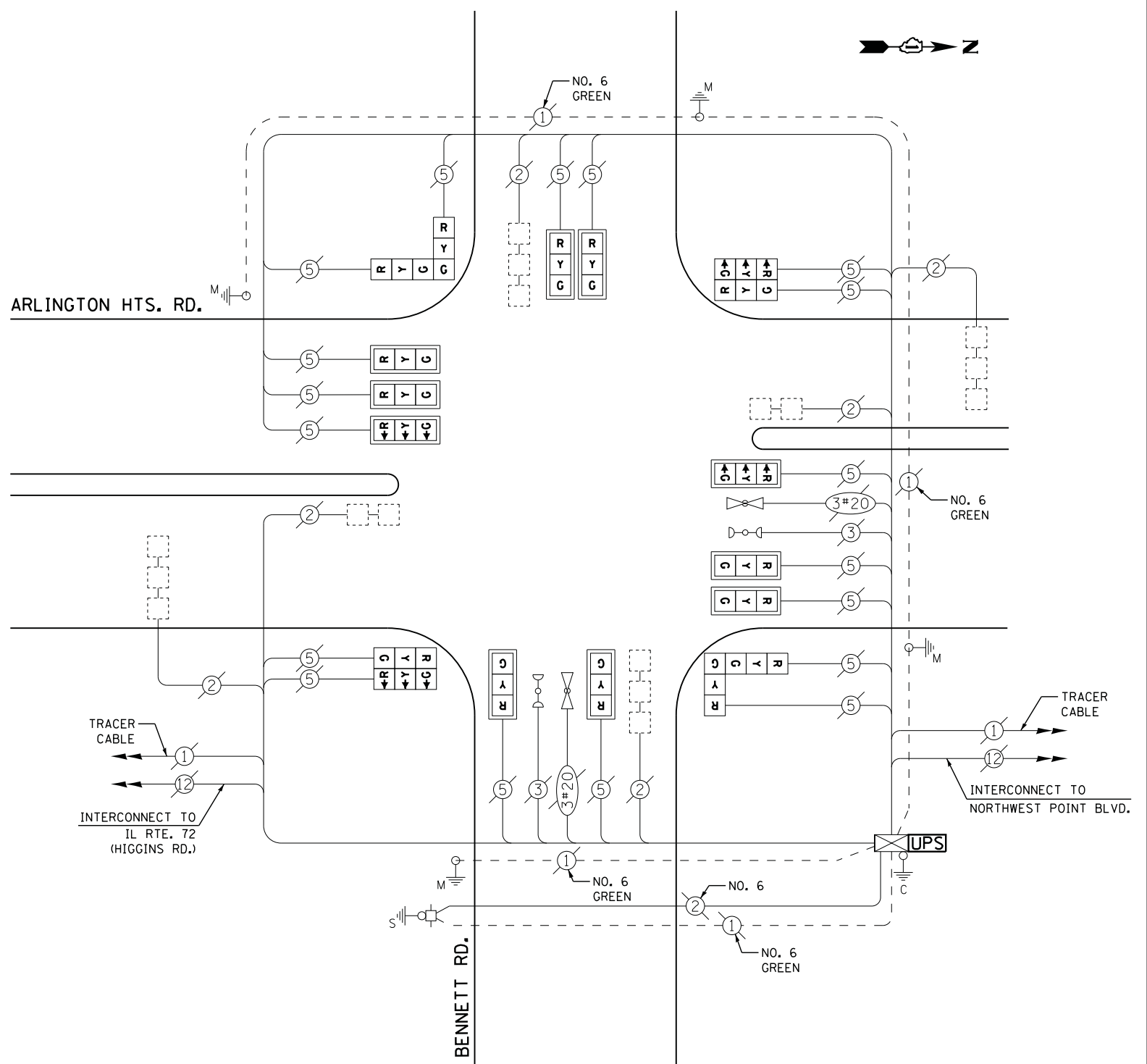
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	0	135	12	0.10	0
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					434

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT DAVE SCHACHT  
PHONE 630-437-2129  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
10	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT
4	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT



**CABLE PLAN**

RETROFIT ALL EXISTING SIGNAL HEADS TO L.E.D.

TS #22235  
ELK GROVE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ARLINGTON HEIGHTS ROAD AT BENNETT ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

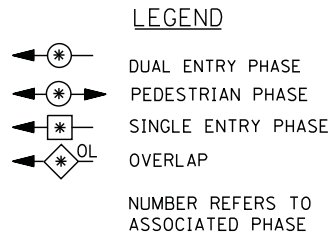
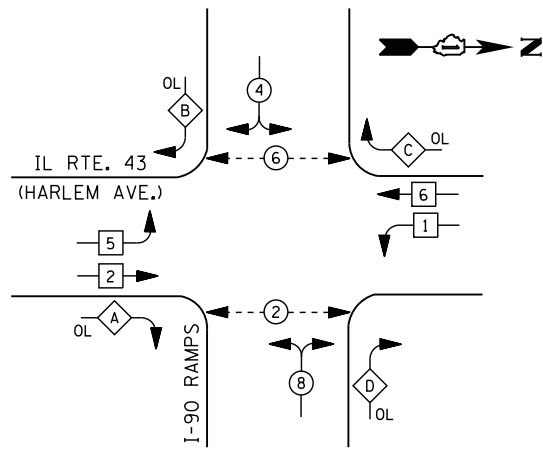
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	41
CONTRACT NO. 62A42				

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

ILLINOIS



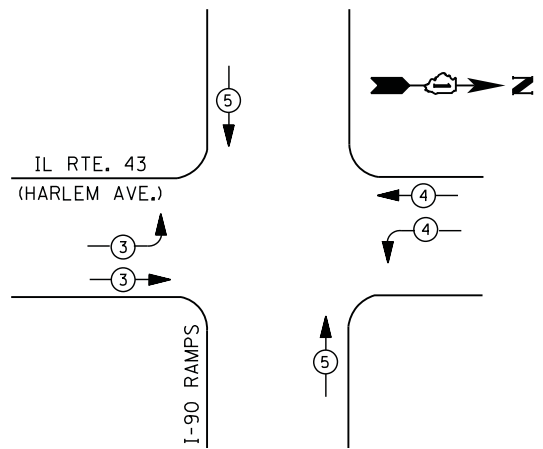
### CONTROLLER SEQUENCE



### RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2	+ 8
B =	4	+ 5
C =	6	+ 4
D =	8	+ 1

### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

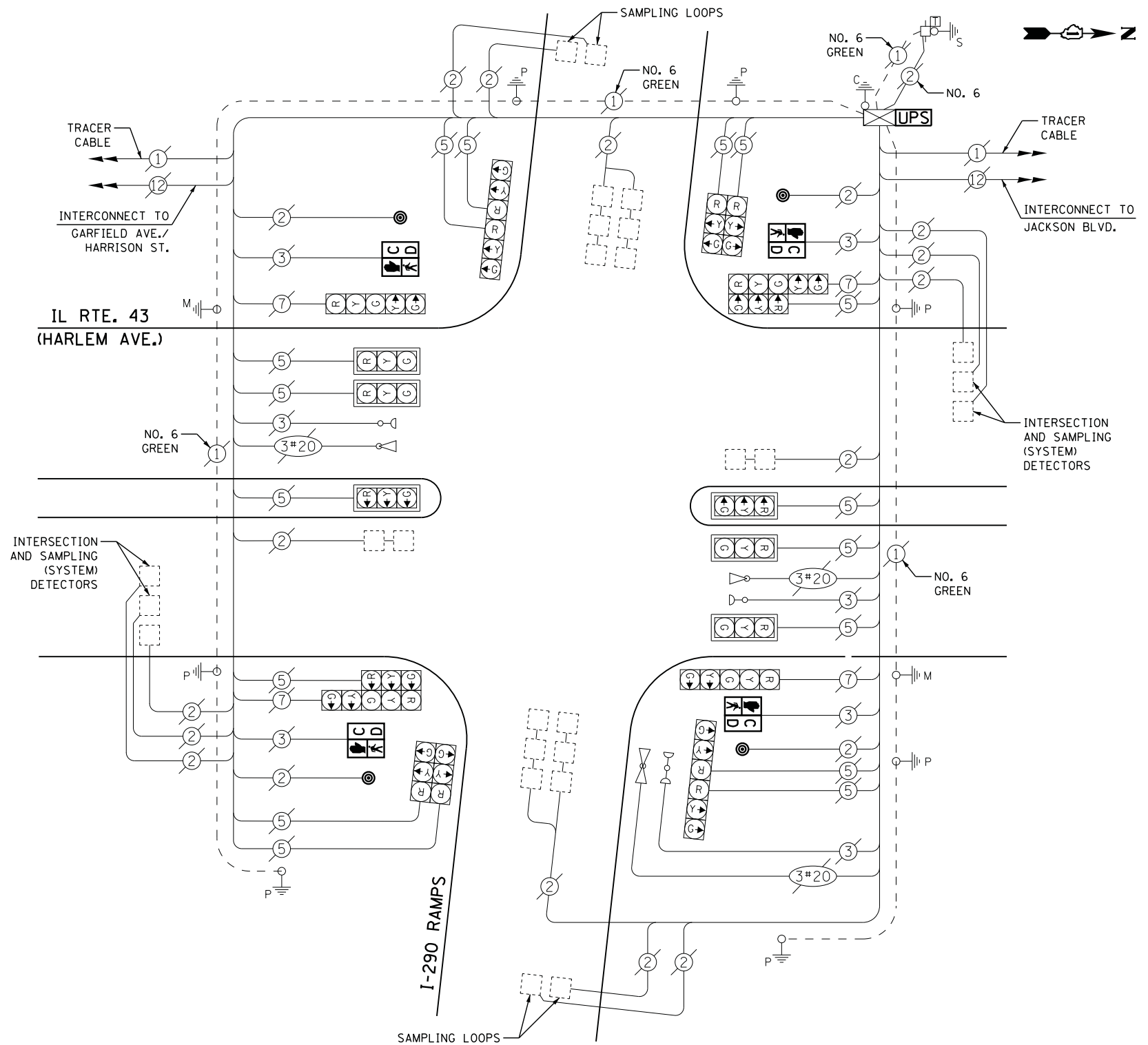
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					580

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL



### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

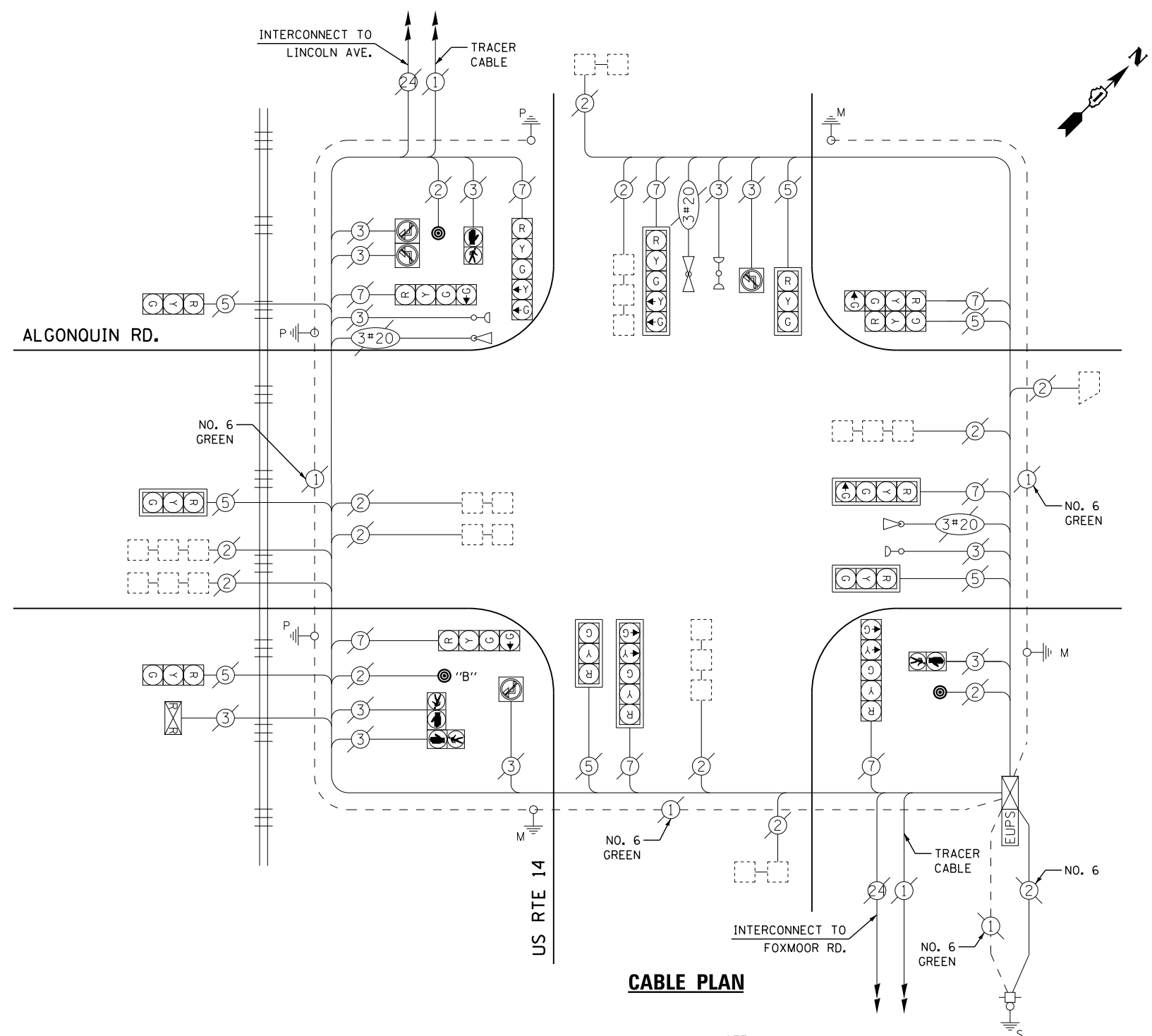
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 43 (HARLEM AVENUE) AT I-290 RAMPS  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	42
CONTRACT NO. 62A42				

TS #85  
FOREST PARK

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -



**CABLE PLAN**

NOTE:  
PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH PEDESTRIAN PUSH-BUTTON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	15	135	17	0.50	128
( YELLOW )	15	135	25	0.25	94
( GREEN )	19	135	15	0.25	72
ARROW	8	135	12	0.10	10
PED. SIGNAL	3	90	25	1.00	75
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	4	252	25	0.05	5
VIDEO SYSTEM		150	-	1.00	
TOTAL =					484

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT DAVE SCHACHT**  
PHONE 630-437-2129  
COMMONWEALTH EDISON

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**US ROUTE 14 AT ALGONQUIN ROAD  
SCHEDULE OF QUANTITIES AND CABLE PLAN**

**TS #1236  
FOX RIVER GROVE (SH. 1)**

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - CC	REVISED -		2014-090TS	McHENRY	76	43	
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -	ILLINOIS		CONTRACT NO. 62A42		
PLOT DATE = 2/2/2015	DATE -	REVISED -	SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA.	TO STA.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Signal\14-022 Various LED\1\Design\CAD\Sheet Files\1236.CAB.McHENRY.dgn



PROPOSED SEQUENCE OF OPERATIONS

MOVEMENT																							
PHASE	1+5 1+6 2+5 2+6 3 4																						
INTERVAL	1	2	3	4	5	6	7	8	9	10	11	12A	12B	13	14A	14B	15	16	17A	17B	17C	17D	
CHANGE TO																							
U.S. 14 Eastbound Far Left and Far Mount Mast Arm Signals	R	R	R	R	G	G	G	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Eastbound Mid Mount Mast Arm Signal	R	R	R	R	G	G	G	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Westbound Far Left and Far Mount Mast Arm Signals	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Westbound Mid Mount Mast Arm Signal	R	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R
Access Drive Southbound Far Left And Far Right Signals	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
Access Drive Southbound Near Right Signal	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
Algonquin Ave Northbound Signals (South of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R
Algonquin Ave Northbound Far Left and End Mount Mast Arm Signals (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	R
Algonquin Ave Northbound Mid Mount Mast Arm Signal (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	R
Pedestrian Crossing Signals for South Leg	DW	DW	DW	DW	W	FL	DW	DW	DW	DW	W	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
Pedestrian Crossing Signals for East Leg	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FL	DW	DW	DW	DW	DW

THIS "WALK" OR FLASHING "DON'T WALK" INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE "WALK" OR FLASHING "DON'T WALK" INTERVALS.  
 - PHASES 2 AND 6 SHALL BE ON RECALL  
 - PHASE 1 ON OMITTS PHASE 5  
 - PHASE 5 ON OMITTS PHASE 1.

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS

INTERVAL FROM NORMAL SEQUENCE	1	5	5	8	8	10	10	13	13	15	15	EMERGENCY VEHICLE INTERVAL	CLEAR TO NORMAL SEQUENCE													
EMERGENCY VEHICLE PREEMPTION INTERVAL	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X			
CHANGE TO	2,3,4	1C	2	1E	1F	3,4	2	1J	3,4	2	1M	1N	3,4	10	2,3	4	1T	1U	1V	1W	24	3	2	3	4	
U.S. 14 Eastbound Far Left and Far Mount Mast Arm Signals	R	G	G	G	Y	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	R	R
U.S. 14 Eastbound Mid Mount Mast Arm Signal	R	G	G	G	Y	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	R	R
U.S. 14 Westbound Far Left and Far Mount Mast Arm Signals	R	Y	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	R	R
U.S. 14 Westbound Mid Mount Mast Arm Signal	R	Y	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	G	R	R
Access Drive Southbound Far Left And Far Right Signals	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	R	R	R	R	R	R	R	G	R	R
Access Drive Southbound Near Right Signal	R	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	R	R	R	R	R	R	R	G	R	R
Algonquin Ave Northbound Signals (South of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	G	R	R
Algonquin Ave Northbound Far Left and End Mount Mast Arm Signals (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	G	R	R
Algonquin Ave Northbound Mid Mount Mast Arm Signal (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	G	R	R
Pedestrian Crossing Signals for South Leg	DW	FL	DW	FL	DW	DW	DW	DW	FL	FL	DW	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	FL	DW	DW
Pedestrian Crossing Signals for East Leg	DW	FL	DW	FL	DW	DW	DW	DW	FL	FL	DW	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	FL	DW	DW

EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2,3 OR 4 IS TERMINATED.

RAILROAD PREEMPTION SEQUENCE OF OPERATIONS

INTERVAL FROM NORMAL SEQUENCE	1	5	8	10	13	15	2	3	4																
INTERNAL FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE																									
RAILROAD PREEMPTION INTERVAL	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J	1K	1L	1M	1N	1P	1Q	1R	1S	2	3A	3B	4	5	6	
CHANGE TO	2	1C	2	1E	2	1G	2	1J	2	1L	2	1N	2	1Q	2	1S	2	3A	3B	4	5	6			
U.S. 14 Eastbound Far Left and Far Mount Mast Arm Signals	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Eastbound Mid Mount Mast Arm Signal	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Westbound Far Left and Far Mount Mast Arm Signals	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
U.S. 14 Westbound Mid Mount Mast Arm Signal	R	Y	R	R	R	Y	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
Access Drive Southbound Far Left And Far Right Signals	R	R	R	R	R	R	Y	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
Access Drive Southbound Near Right Signal	R	R	R	R	R	R	Y	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
Algonquin Ave Northbound Signals (South of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R
Algonquin Ave Northbound Far Left and End Mount Mast Arm Signals (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	R	R	G	Y	R	R
Algonquin Ave Northbound Mid Mount Mast Arm Signal (North of Railroad Tracks)	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	R	R	G	G	R	R	G	Y	R	R
Pedestrian Crossing Signals for South Leg	DW	FL	DW	FL	DW	DW	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
Pedestrian Crossing Signals for East Leg	DW	FL	DW	FL	DW	DW	FL	DW	DW	DW	DW	DW	DW	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
U.S. 14 Eastbound No Right Turn Signs	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
U.S. 14 Westbound No Left Turn Signs	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

THE RAILROAD PREEMPTION SEQUENCE OF OPERATION SHALL HAVE PRIORITY OVER ALL OTHER SEQUENCES OF OPERATION.  
 THE EXISTING PEDESTRIAN CLEARANCE TIME HAS BEEN PROGRAMMED PER AN INTERM I.C.C. ORDER WHICH MANDATED 4 SECONDS OF FLASHING "DON'T WALK" THROUGH THE GREEN INTERVAL. THE TRAFFIC/RAILROAD SIGNAL REPORT PREPARED FOR THIS INTERSECTION RECOMMENDS PEDESTRIAN CLEARANCE TIME ONLY THROUGH THE YELLOW CLEARANCE AND IS REFLECTED IN THIS SEQUENCE OF OPERATIONS.

TS #1236  
FOX RIVER GROVE (SH. 2)

USER NAME - .USERNAME.	DESIGNED - DW	REVISED -
DRAWN - CC	REVISOR -	
PLOT SCALE = 20,000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

US ROUTE 14 AT ALGONQUIN ROAD			
SEQUENCE OF OPERATIONS, EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS, AND RAILROAD PREEMPTION SEQUENCE OF OPERATIONS			
SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	44
			CONTRACT NO.	62A42
ILLINOIS				

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Var. Signals\14-022 Various LED\1\Design\CAD\Sheet\_Files\1236A\_CAB\_McHENRY.dgn





PROPOSED SEQUENCE OF OPERATIONS

Table with columns for MOVEMENT, PHASE, INTERVAL, CHANGE TO, and signal states (R, G, Y, W, FL, DW) for various traffic signals.

THIS 'WALK' OR FLASHING 'DON'T WALK' INTERVAL MAY FINISH TIMING IN THE BI-DIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE 'WALK' OR FLASHING 'DON'T WALK' INTERVALS.

- PHASES 2 AND 6 SHALL BE ON RECALL.
- PHASE 1 ON OMTS PHASE 5
- PHASE 5 ON OMTS PHASE 1

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS

Table showing emergency vehicle preemption sequence with columns for interval from normal sequence (1, 5, 8, 11, 14, 16) and signal states.

EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3 OR 4 IS TERMINATED.

RAILROAD PREEMPTION SEQUENCE OF OPERATIONS

Table showing railroad preemption sequence with columns for interval from normal sequence (1, 5, 8, 11, 14, 16) and signal states.

THE RAILROAD PREEMPTION SEQUENCE OF OPERATION SHALL HAVE PRIORITY OVER ALL OTHER SEQUENCES OF OPERATION.

THE EXISTING PEDESTRIAN CLEARANCE TIME HAS BEEN PROGRAMMED PER AN INTERIM ICC ORDER WHICH MANDATED 4 SECONDS OF FLASHING 'DON'T WALK' THROUGH THE GREEN INTERVAL. THE TRAFFIC SIGNAL REPORT PREPARED FOR THIS INTERSECTION RECOMMENDS PEDESTRIAN CLEARANCE TIME ONLY THROUGH THE YELLOW CLEARANCE AND IS REFLECTED IN THIS SEQUENCE OF OPERATIONS.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\DesignCAD\Sheet File\14237A-CAB-McHENRY.dgn

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

US ROUTE 14 AT LINCOLN AVENUE SEQUENCE OF OPERATIONS, EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATIONS, AND RAILROAD PREEMPTION SEQUENCE OF OPERATIONS

Table with columns: F.A. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO.

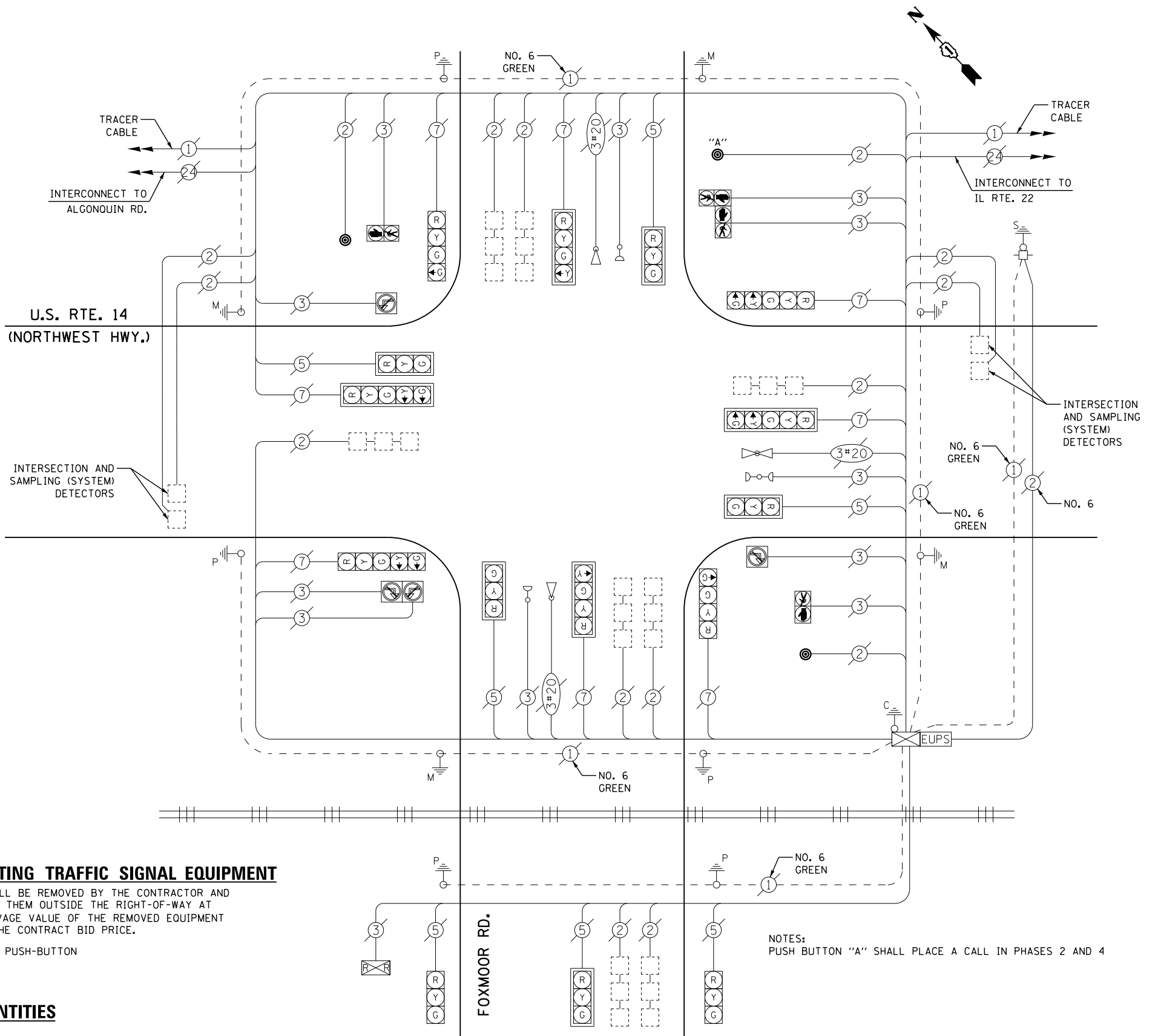
TS #1237 FOX RIVER GROVE (SH. 2)

Table with columns: USER NAME, DESIGNED, DRAWN, PLOT SCALE, PLOT DATE, REVISED, CHECKED, DATE.

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\1238\_CAB\_McHENRY.dgn



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 5 EACH PEDESTRIAN PUSH-BUTTON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

NOTES:  
PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	15	135	17	0.50	128
( YELLOW )	15	135	25	0.25	94
( GREEN )	19	135	15	0.25	72
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	4	252	25	0.05	5
VIDEO SYSTEM		150	-	1.00	
TOTAL =					509
ENERGY COSTS-		BILLED TO: IDOT DISTRICT 1 201 WEST CENTER COURT SCHAUMBURG, IL 60196-1096			
ENERGY SUPPLY -		CONTACT DAVE SCHACHT PHONE 630-437-2129 COMMONWEALTH EDISON			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT FOXMOOR ROAD  
SCHEDULE OF QUANTITIES AND CABLE PLAN**

TS #1238  
FOX RIVER GROVE (SH. 1)

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.	F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO. 2014-090TS McHENRY 76 47 ILLINOIS CONTRACT NO. 62A42
PLOT SCALE = 20.0000' / in.	DRAWN - CC	REVISED -		
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -		
	DATE -	REVISED -		



SEQUENCE OF OPERATION

Table with columns for MOVEMENT, PHASE, INTERVAL, CHANGE TO, and various signal types (R, G, Y, H, P, FH, NRT, NLT) for different road directions and signals.

TO APPEAR ONLY UPON PUSHBUTTON ACTIVATION
FLASHING [Symbol] IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.
THIS [Symbol] OR FLASHING [Symbol] INTERVAL MAY FINISH TIMING IN THE BIDIRECTIONAL STRAIGHT THROUGH MOVEMENT IF THE LEFT ARROW TIME IS NOT SUFFICIENT TO COMPLETE [Symbol] OR FLASHING [Symbol] INTERVALS.

RAILROAD PREEMPTION SEQUENCE OF OPERATION

Table showing the sequence of operation for railroad preemption, including phases, intervals, and signal states for various road and pedestrian signals.

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

Table showing the sequence of operation for emergency vehicle preemption, including phases, intervals, and signal states for various road and pedestrian signals.

P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK
EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3 OR 4 IS TERMINATED.

RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

FILE NAME: M:\p\1481\2189 PTB 172-6 IDOT Var Signals\14-022 Various LED\Design\CAD\Sheet Files\1238A\_CAB-McHENRY.dgn

Table with columns for USER NAME, DESIGNED, DRAWN, PLOT SCALE, PLOT DATE, REVISED, CHECKED, DATE.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT FOXMOOR ROAD SEQUENCE OF OPERATION, EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, AND RAILROAD PREEMPTION SEQUENCE OF OPERATION

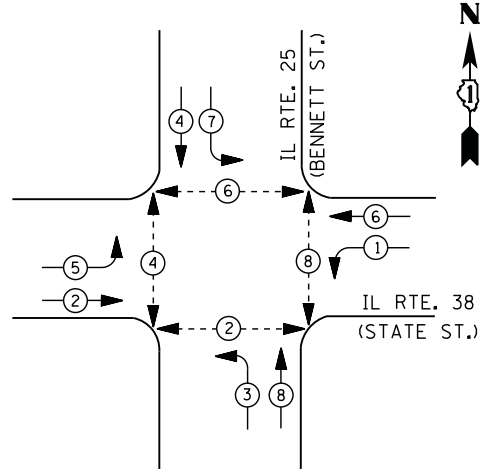
Table with columns for F.A. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO., ILLINOIS.

TS #1238 FOX RIVER GROVE (SH. 2)

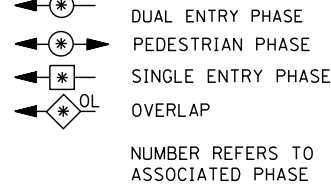




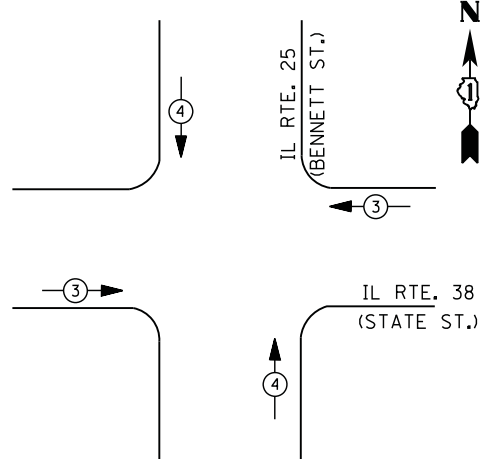
**CONTROLLER SEQUENCE**



**LEGEND**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	16	135	12	0.10	20
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					616

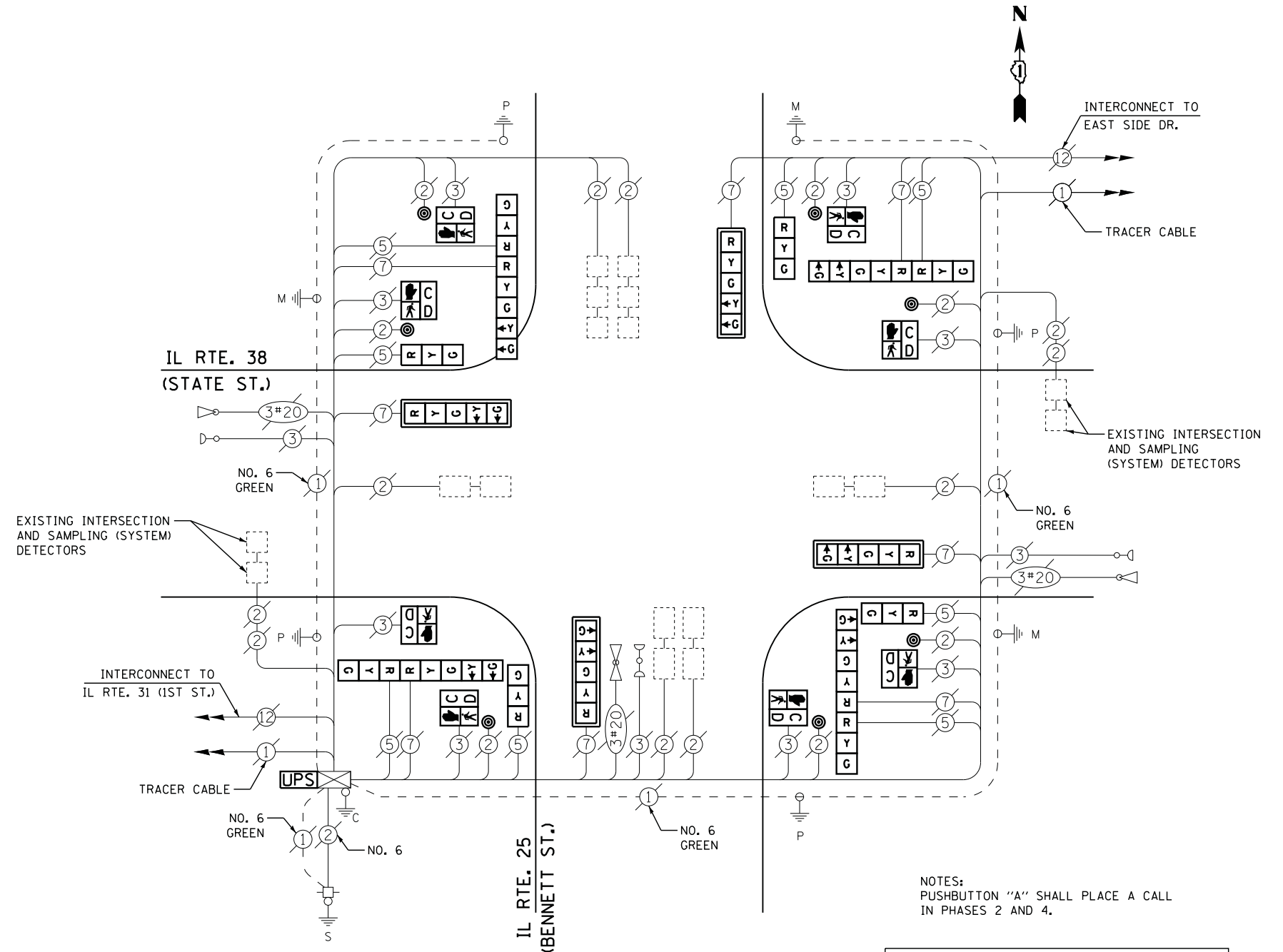
ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
7	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**CABLE PLAN**



NOTES:  
 PUSHBUTTON "A" SHALL PLACE A CALL  
 IN PHASES 2 AND 4.

UPS SHALL BE INSTALLED ON LEFT SIDE OF  
 CONTROLLER CABINET DUE TO PHYSICAL  
 CONSTRAINT, OR AS DIRECTED BY THE ENGINEER

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	SIGNAL HEAD, 3 - SECTION
4	EACH	SIGNAL HEAD, 5 - SECTION
4	EACH	SIGNAL HEAD, 2 - FACE, 1-3 SECTION, 1-5 SECTION
4	EACH	TRAFFIC SIGNAL BACKPLATE
7	EACH	PEDESTRIAN PUSH-BUTTON
8	EACH	PEDESTRIAN SIGNAL HEAD

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 38 (STATE STREET) AT IL ROUTE 25 (BENNETT STREET)  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	49
CONTRACT NO. 62A42				

TS #755  
GENEVA

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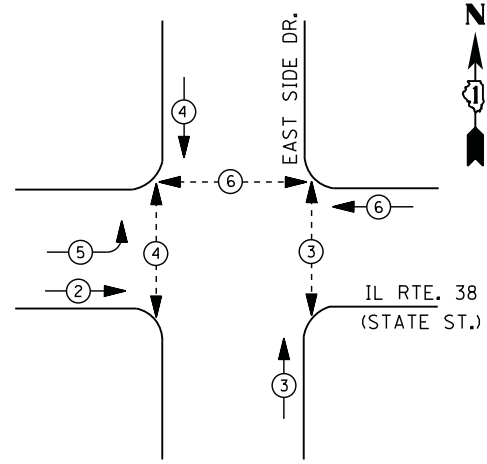
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	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

ILLINOIS



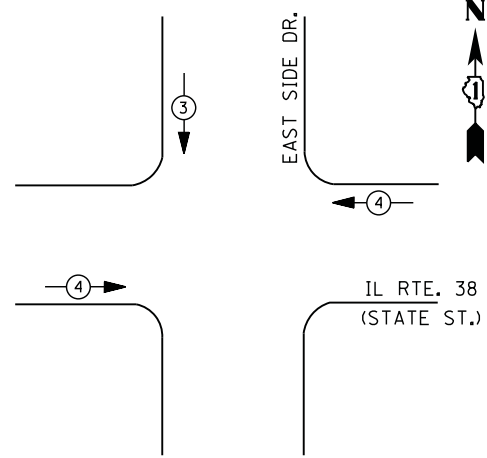
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

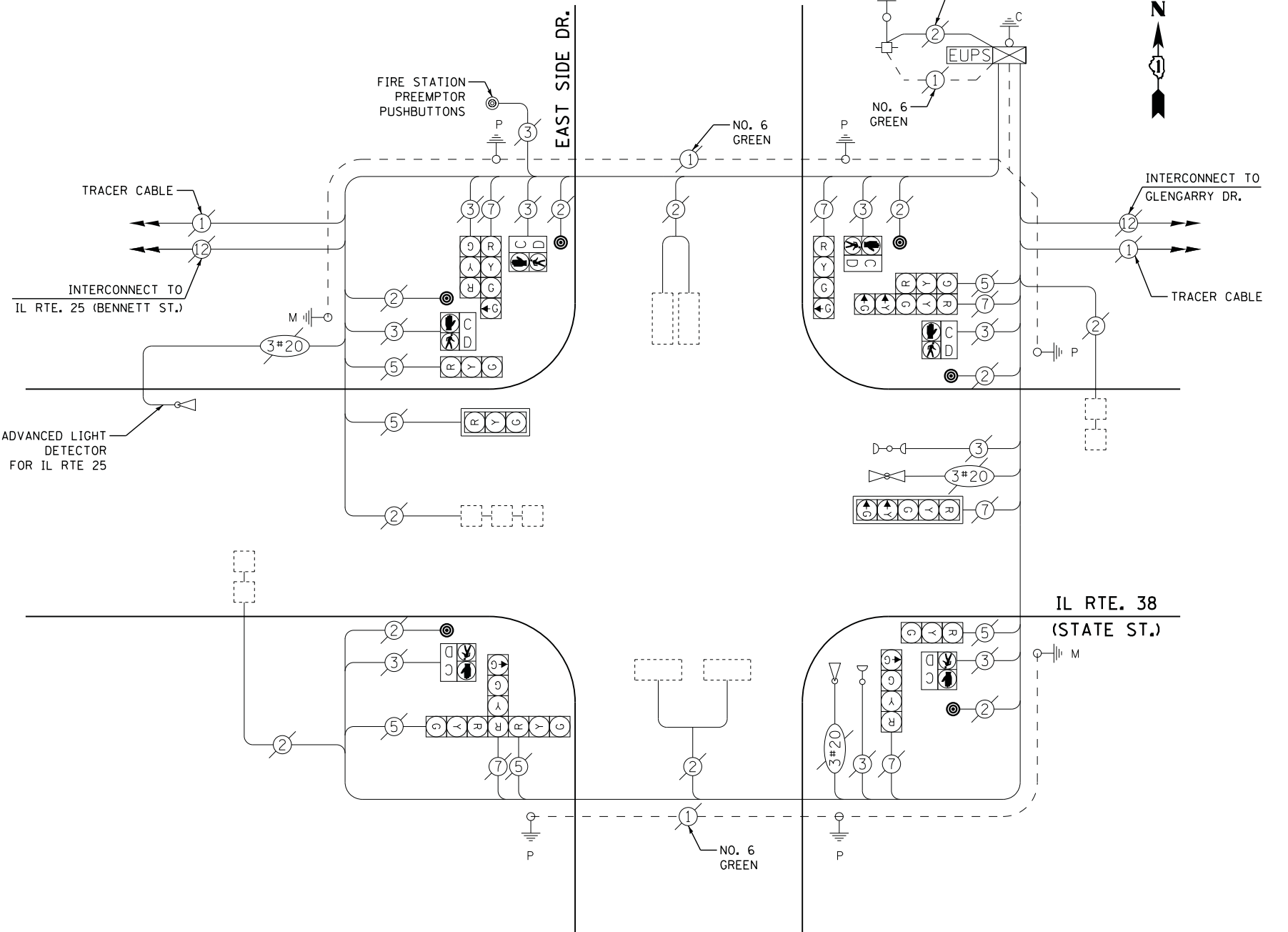
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓	←

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	13	135	17	0.50	111
( YELLOW )	13	135	25	0.25	82
( GREEN )	17	135	15	0.25	64
ARROW	4	135	12	0.10	5
PED. SIGNAL	6	90	25	1.00	150
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					512

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON



**CABLE PLAN**

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
6	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 6 EACH PEDESTRIAN PUSH-BUTTON

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS ROUTE 38 (STATE STREET) AT EAST SIDE DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

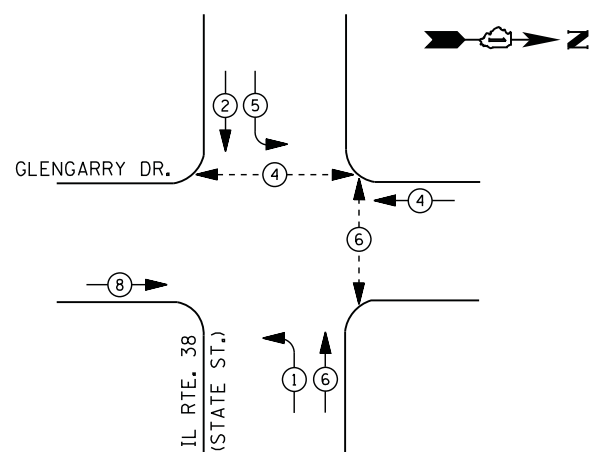
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	50
CONTRACT NO. 62A42				

TS #845  
GENEVA

FILE NAME = M:\p\03\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\845\_CAB\_KANE.dgn



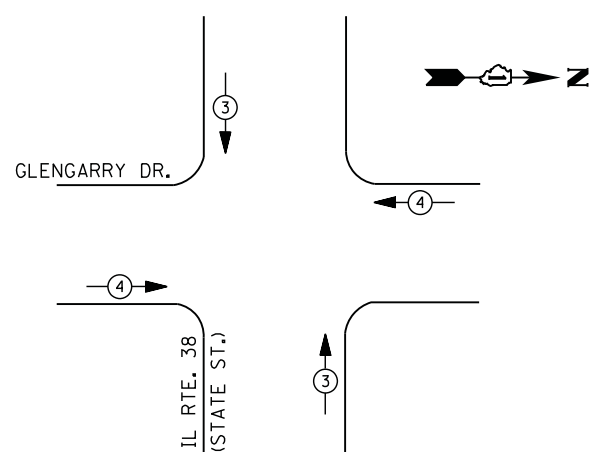
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

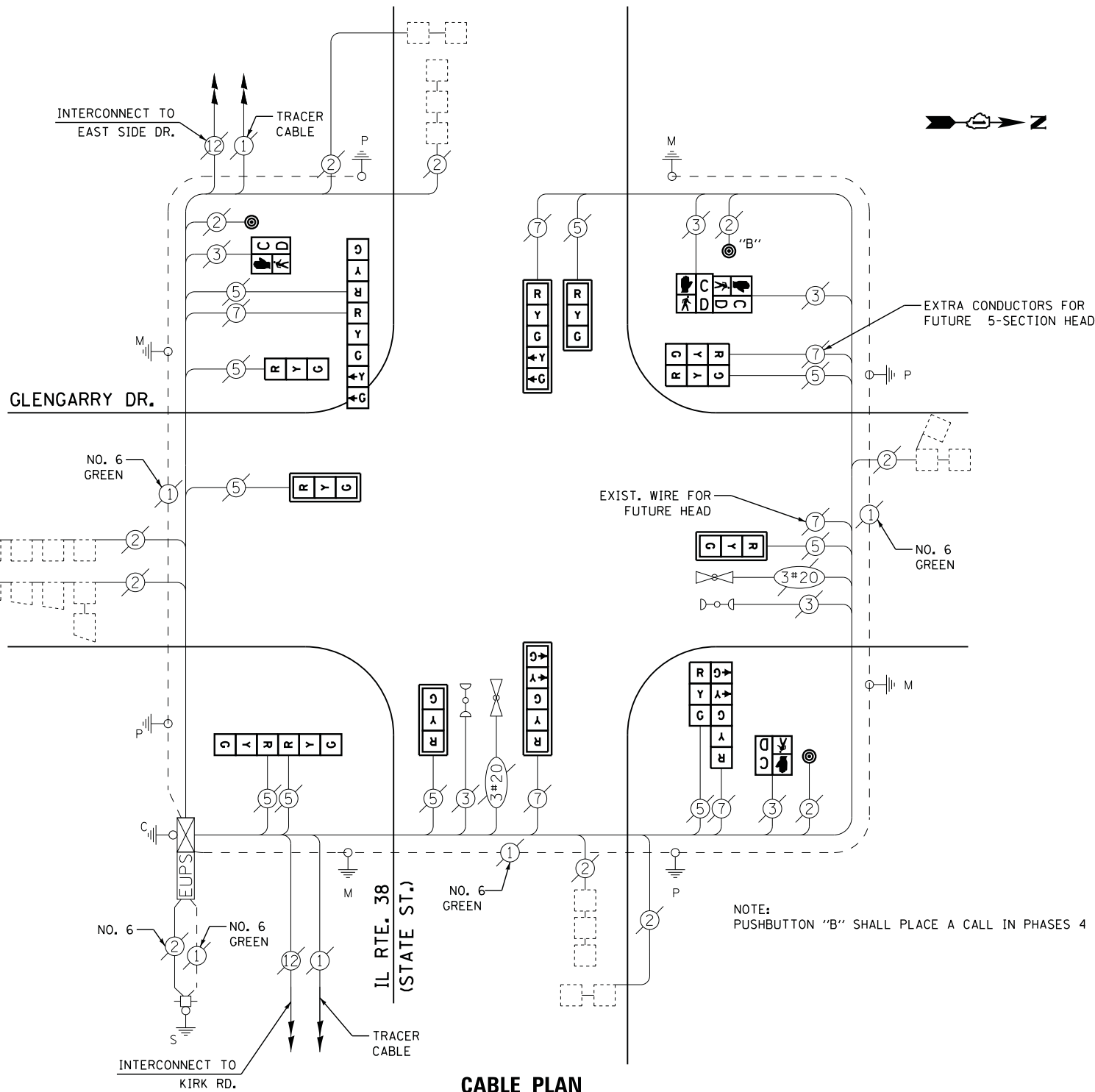
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	15	135	17	0.50	128
( YELLOW )	15	135	25	0.25	94
( GREEN )	15	135	15	0.25	57
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					489

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
6	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

5	EACH	SIGNAL HEAD, 3 - SECTION
2	EACH	SIGNAL HEAD, 5 - SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 3 - SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 1 - 3 SECTION, 1 - 5 SECTION
6	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	PEDESTRIAN SIGNAL HEAD
3	EACH	PEDESTRIAN PUSH-BUTTON

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 38 (STATE STREET) AT GLENGARRY DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

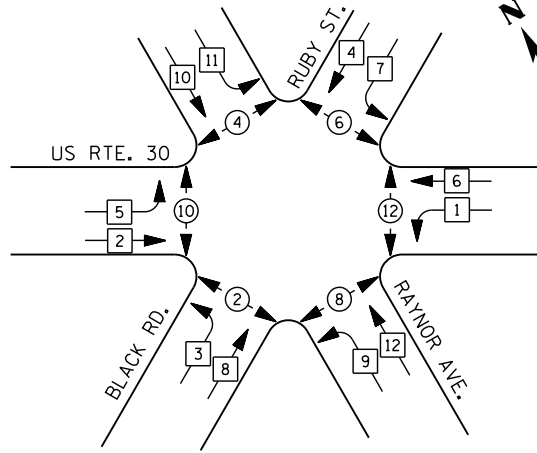
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	51
CONTRACT NO. 62A42				
ILLINOIS				

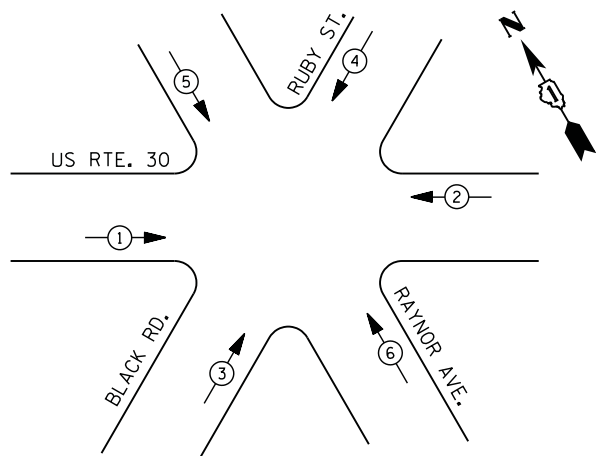
TS #10945  
GENEVA



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS						
EMERGENCY VEHICLE PREEMPTOR	1	2	3	4	5	6
MOVEMENT	→	←	↗	↘	↙	↖

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	30	135	17	0.50	255
(YELLOW)	30	135	25	0.25	188
(GREEN)	30	135	15	0.25	113
ARROW	0	135	12	0.10	0
PED. SIGNAL	12	90	25	1.00	300
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					956

**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

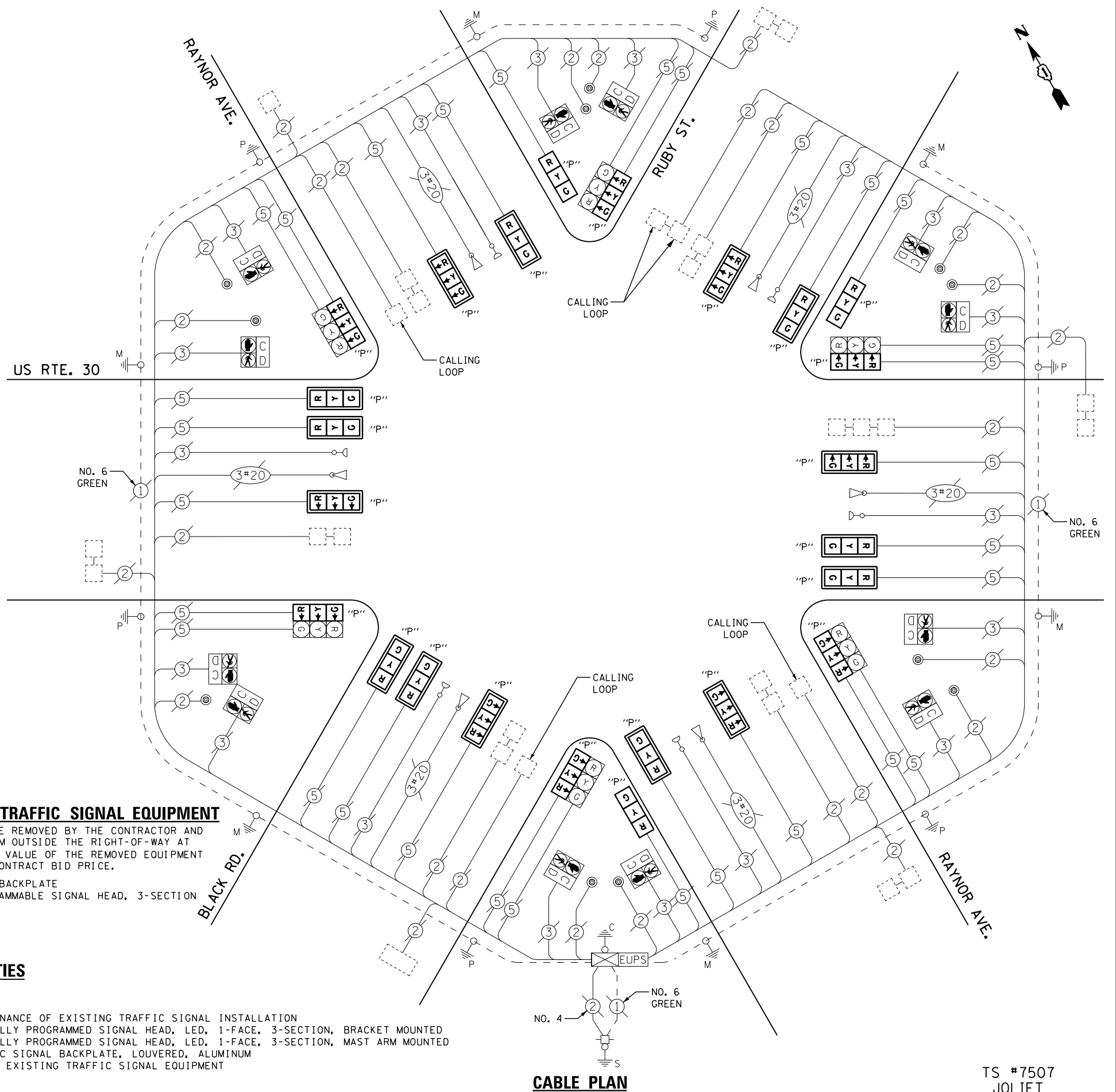
**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 15 EACH TRAFFIC SIGNAL BACKPLATE
- 24 EACH OPTICALLY PROGRAMMABLE SIGNAL HEAD, 3-SECTION

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
9	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
15	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
15	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT



**CABLE PLAN**

TS #7507  
JOLIET

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 30 (PLAINFIELD ROAD) AT RAYNOR AVENUE /BLACK ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	WILL	76	52
CONTRACT NO. 62A42				

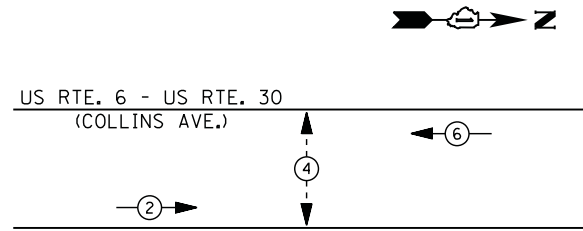
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	CC	REVISION -
	JDH	REVISION -
		REVISION -

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

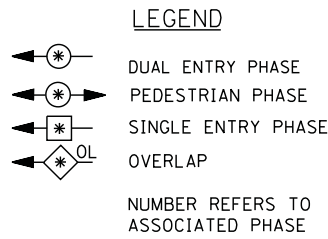
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**CONTROLLER SEQUENCE**

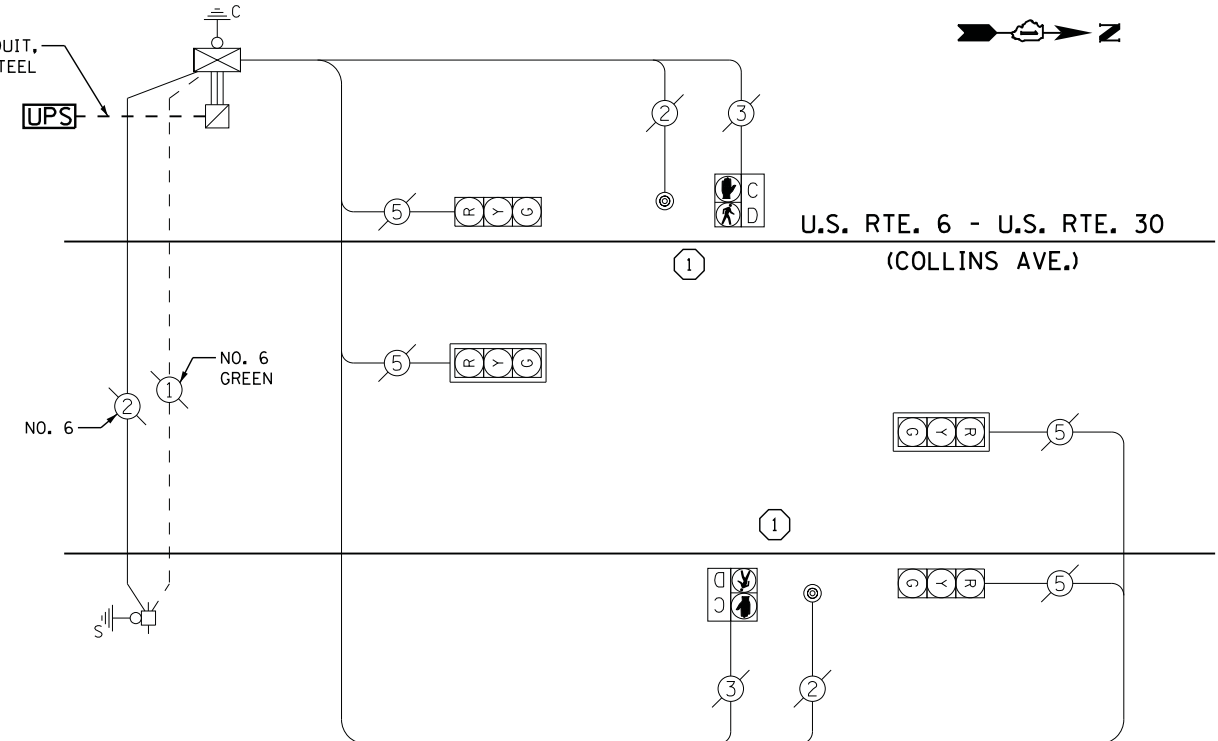


**PHASE DESIGNATION DIAGRAM**



- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.

2" UNDERGROUND CONDUIT,  
GALVANIZED STEEL



**CABLE PLAN**

THE UPS SHALL BE INSTALLED NEXT TO THE EXISTING CONTROLLER CABINET USING HELICAL GROUND ANCHORS DUE TO THE PHYSICAL CONSTRAINTS OR AS DIRECTED BY THE ENGINEER. ALL WORK INCLUDING DRILL EXISTING HANDHOLE, CONDUIT, AND ELECTRICAL CABLE NEEDED TO PROPERLY INSTALL THE UPS SHALL BE INCLUDED IN THE PAY ITEM UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED.

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
2	EACH	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD
2	EACH	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 2 EACH SIGNAL POST

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1-Design\CAD\Sheet Files\22500\_CAB\_MILL.dgn

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	4	135	17	0.50	34
( YELLOW )	4	135	25	0.25	25
( GREEN )	4	135	15	0.25	15
ARROW	0	135	12	0.10	0
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					224

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TIM COSLET  
PHONE 815-724-5010  
COMMONWEALTH EDISON

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 6 - U.S. ROUTE 30 (COLLINS AVENUE) AT JOLIET HIGH SCHOOL  
SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM**

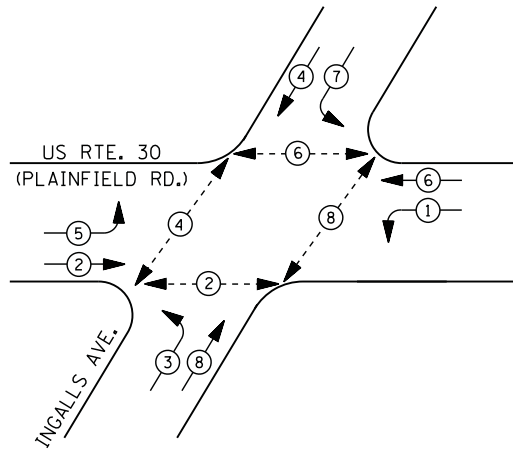
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	WILL	76	53
			CONTRACT NO. 62A42	
ILLINOIS				

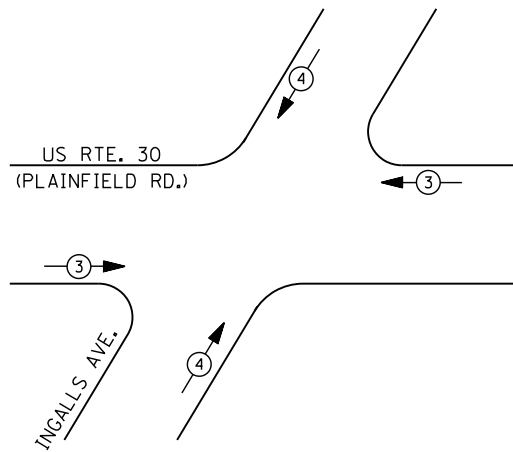
TS #22500  
JOLIET



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↗

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	16	135	12	0.10	20
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					616

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT TIM COSLET**  
 PHONE 815-724-5010  
 COMMONWEALTH EDISON

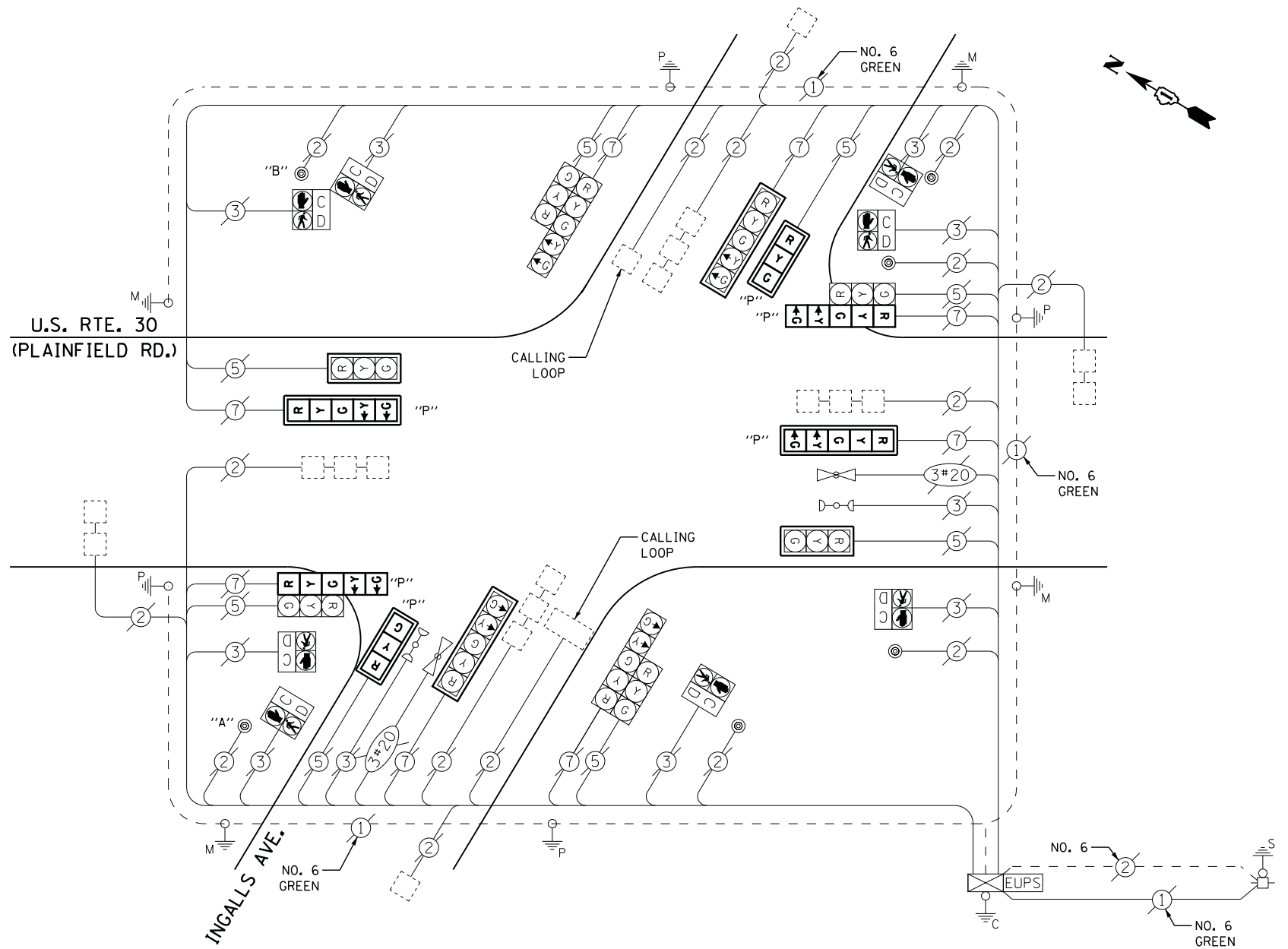
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**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN**



NOTE:  
 PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 3 - SECTION
4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 5 - SECTION
8	EACH	TRAFFIC SIGNAL BACKPLATE

**TS #22565  
JOLIET**

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
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PLOT DATE = 2/2/2015	DATE -	REVISED -

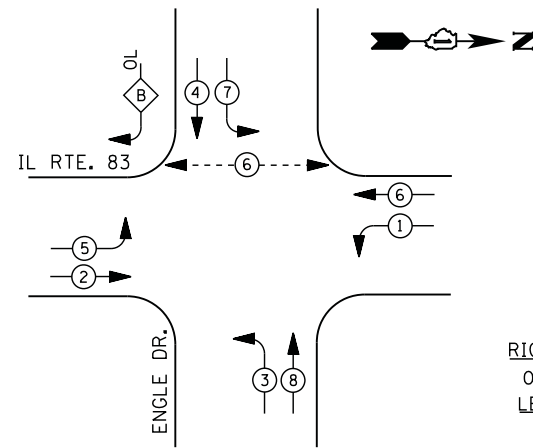
U.S. ROUTE 30 (PLAINFIELD ROAD) AT INGALLS AVENUE SCHEDULE OF QUANTITIES, CABLE PLAN PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	WILL	76	54
ILLINOIS				CONTRACT NO. 62A42





**CONTROLLER SEQUENCE**



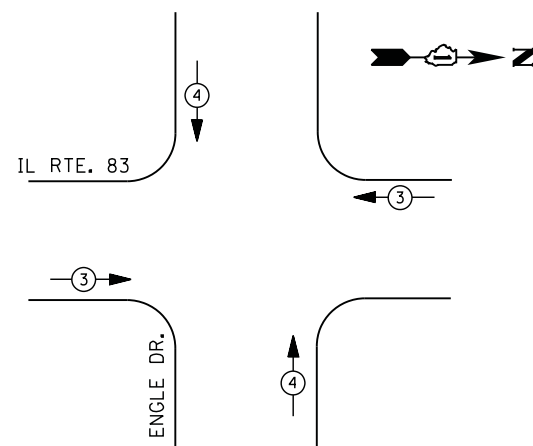
**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	15	135	17	0.50	128
( YELLOW )	15	135	25	0.25	94
( GREEN )	15	135	15	0.25	57
ARROW	20	135	12	0.10	24
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					453

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT TERRI BLECK**  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 2 EACH PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

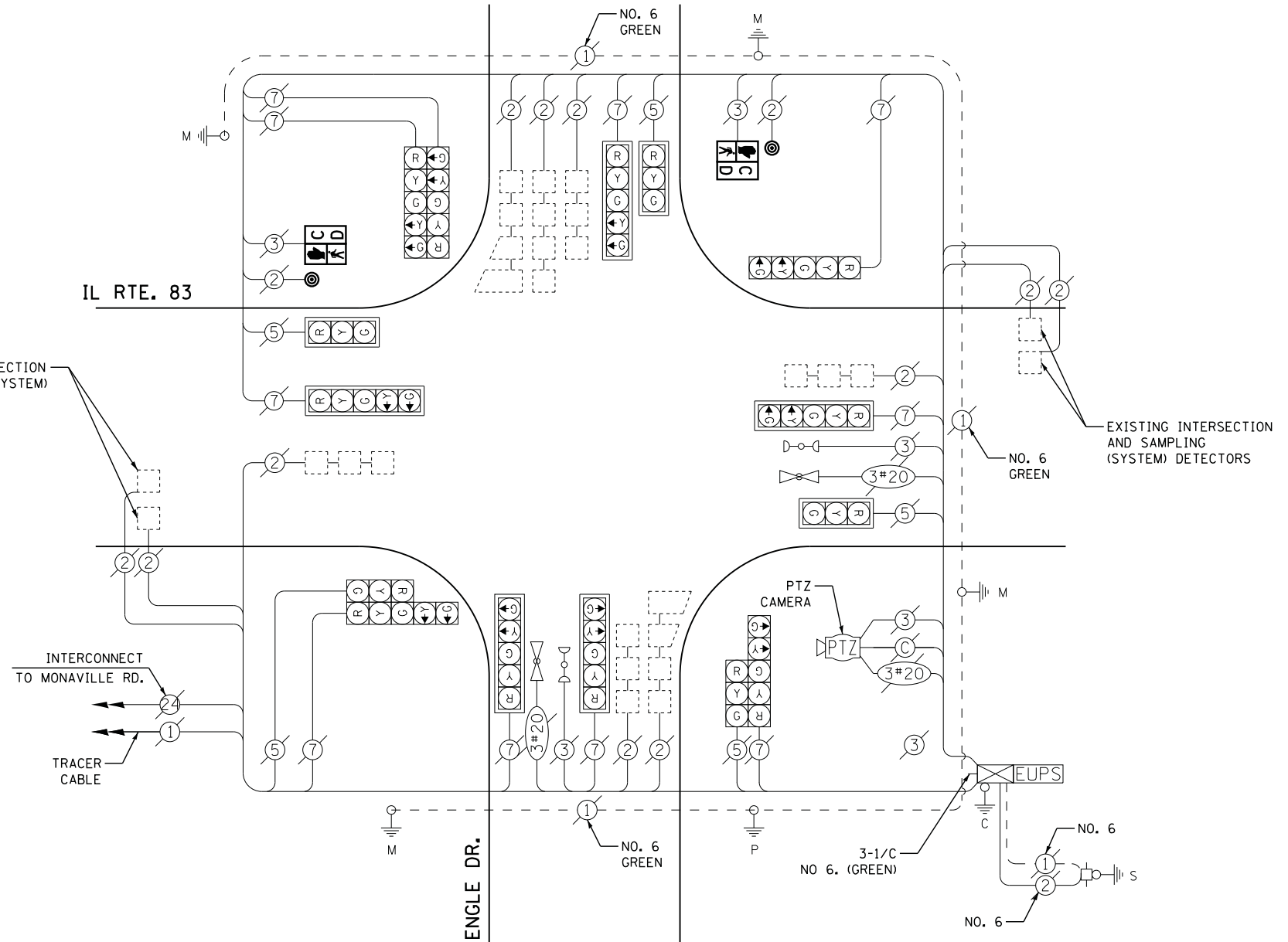
IL RTE. 83

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

INTERCONNECT TO MONAVILLE RD.  
 TRACER CABLE

ENGLE DR.

**CABLE PLAN**



**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 83 AT ENGLE DRIVE SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	56
CONTRACT NO. 62A42				

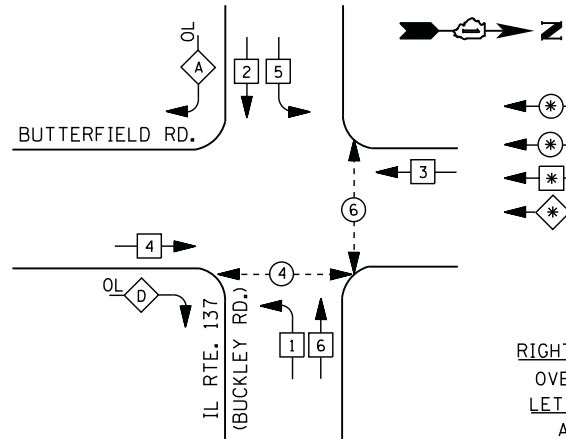
TS #6949  
LAKE VILLA

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
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PLOT DATE = 2/2/2015	DATE -	REVISED -





**CONTROLLER SEQUENCE**



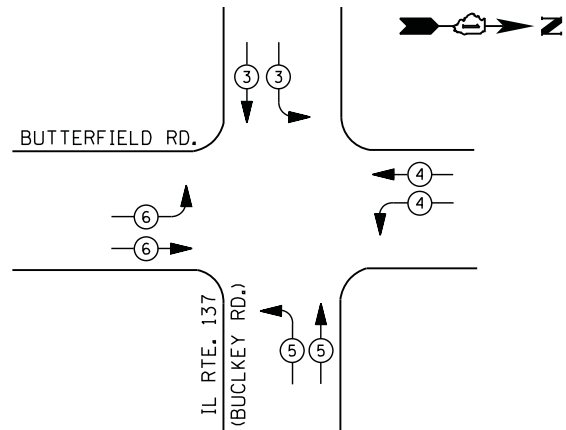
**LEGEND**

- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2	4
D =	4	1

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	22	135	15	0.25	83
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					559

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

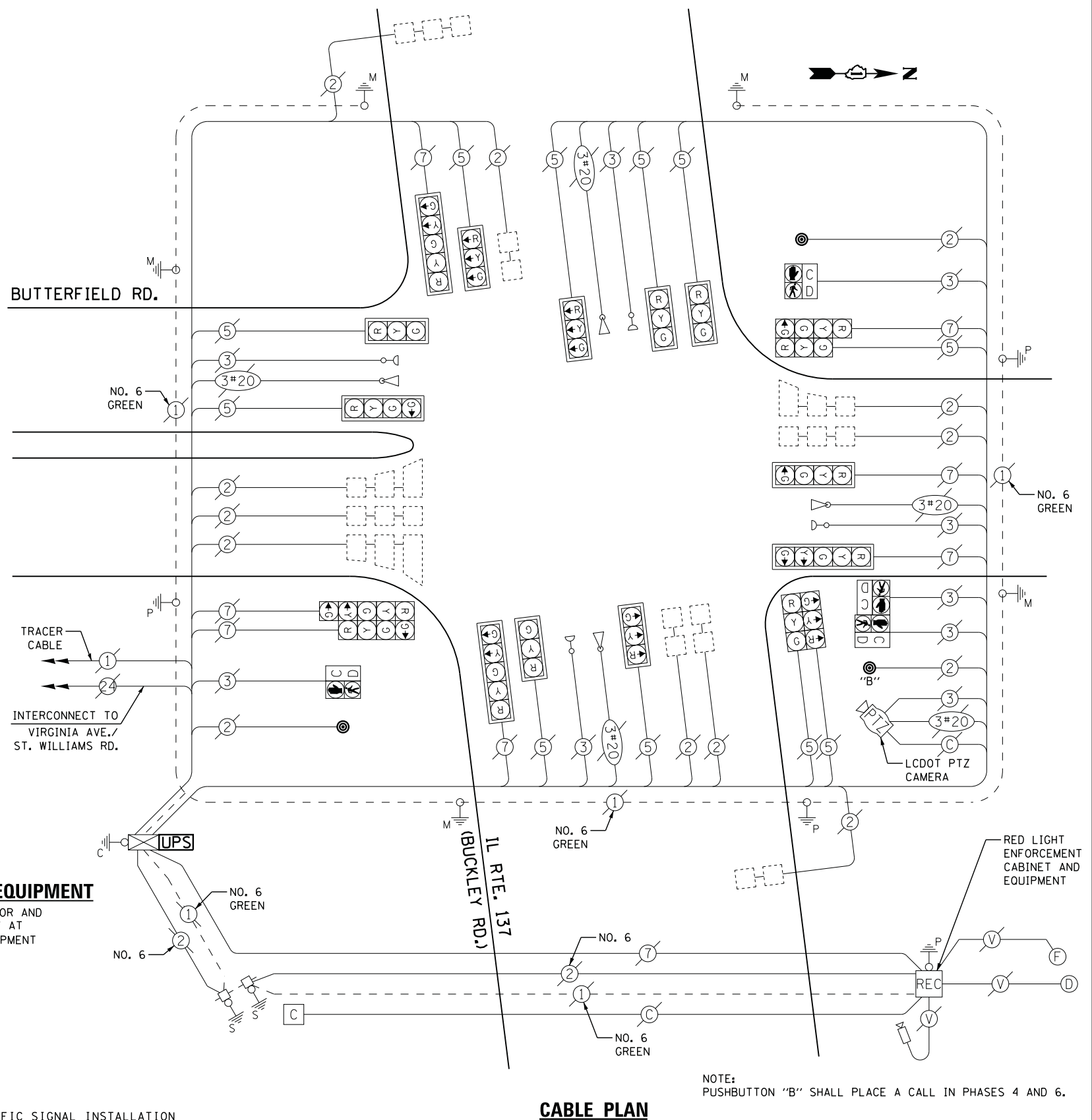
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH PEDESTRIAN PUSH-BUTTON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**BUTTERFIELD RD.**



**CABLE PLAN**

NOTE: PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 137 (BUCKLEY ROAD) AT BUTTERFIELD ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

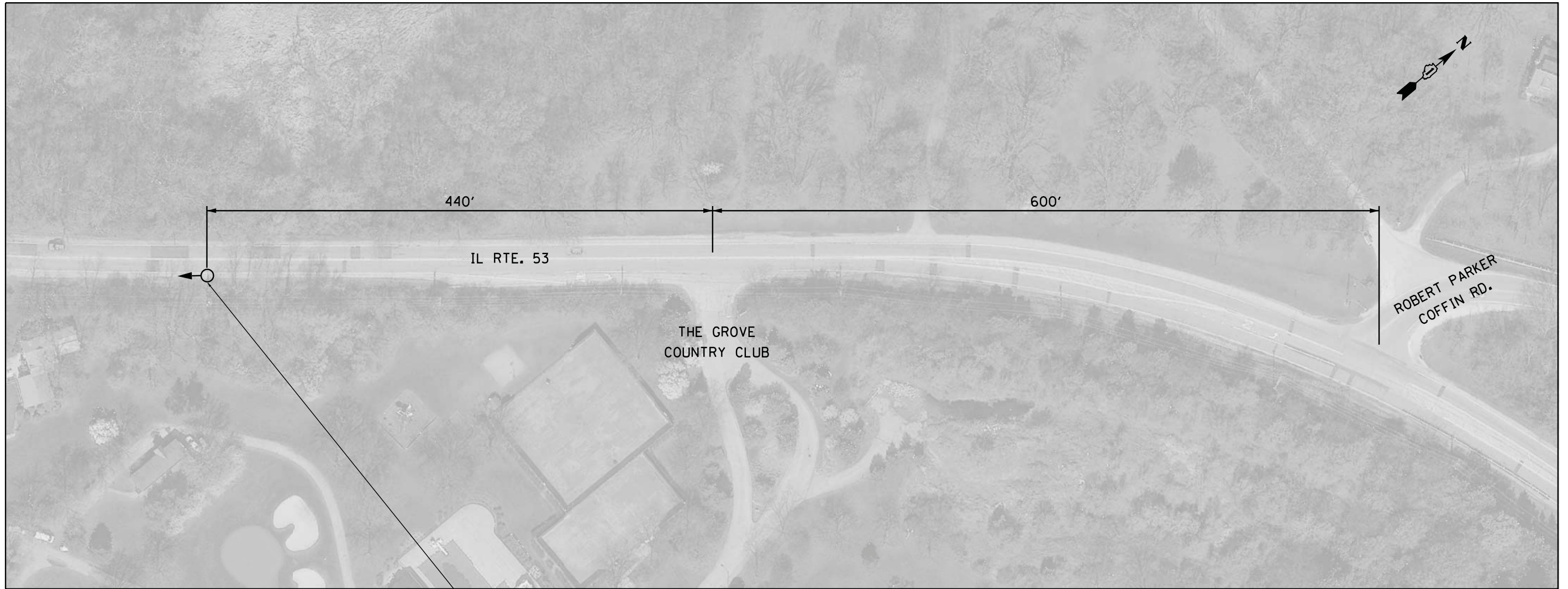
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	57
CONTRACT NO. 62A42				

TS #7095  
LIBERTYVILLE

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	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

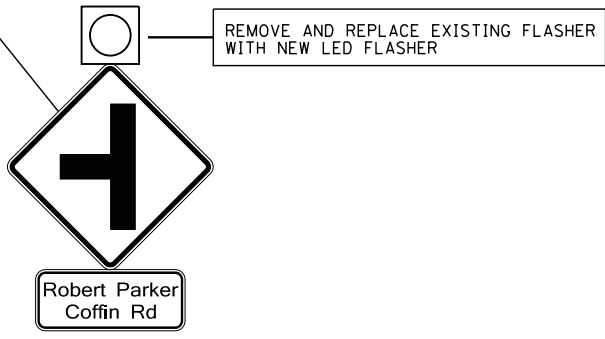
SCALE: SHEET NO. OF SHEETS STA. TO STA.



I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)		135	17	0.50	
(YELLOW)		135	25	0.25	
(GREEN)		135	15	0.25	
ARROW		135	12	0.10	
PED. SIGNAL		90	25	1.00	
CONTROLLER		100	100	1.00	
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED	1		25	0.50	13
TOTAL =					13

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON



**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH SIGNAL HEAD, 1 - SECTION

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING FLASHING BEACON INSTALLATION
1	EACH	SIGNAL HEAD, LED, 1-FACE, 1-SECTION, BRACKET MOUNTED
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 53 AT ROBERT PARKER COFFIN ROAD  
FLASHING BEACON

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

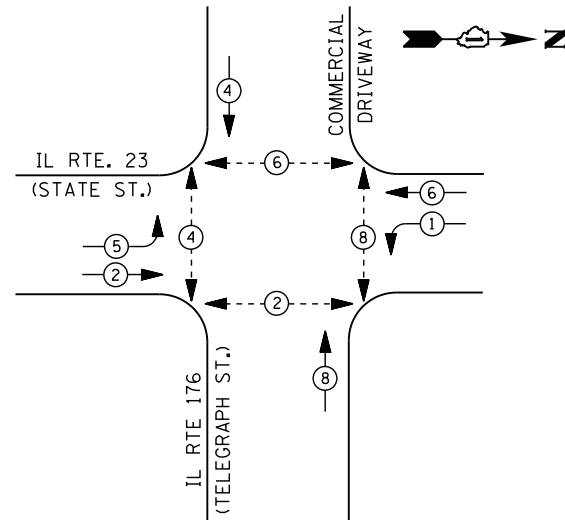
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	58
CONTRACT NO. 62A42				

TS #FL 701  
LONG GROVE

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\VL\_701.dgn

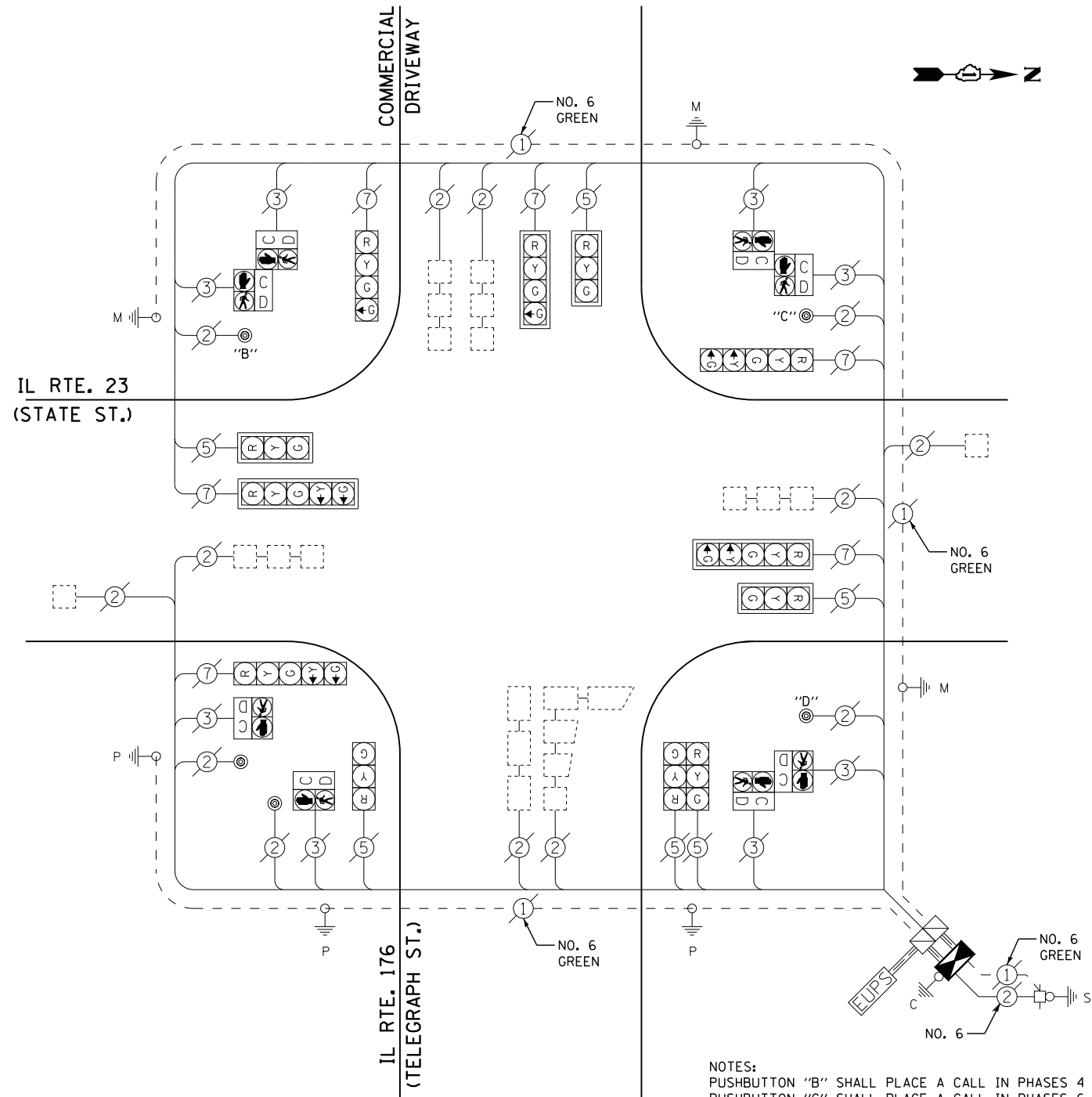


**EXISTING AND PROPOSED CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**

- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE



**CABLE PLAN**

NOTES:  
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.  
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.  
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	12	135	17	0.50	102
( YELLOW )	12	135	25	0.25	75
( GREEN )	14	135	15	0.25	53
ARROW	8	135	12	0.10	10
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					540

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MIKE LENOX  
 PHONE 815-490-2869  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
8	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
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FILE NAME = M:\p\1481\21971\PTB 172-6 IDOT Var. Var. Signals\14-022 Various LED\1\Design\CAD\Sheet File\14-21971-CAB.McHENRY.dgn

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 23 (STATE STREET) AT IL ROUTE 176 (TELEGRAPH STREET)  
SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

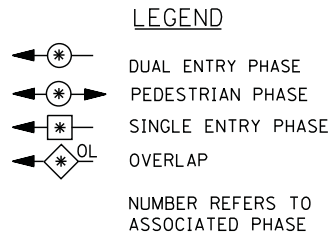
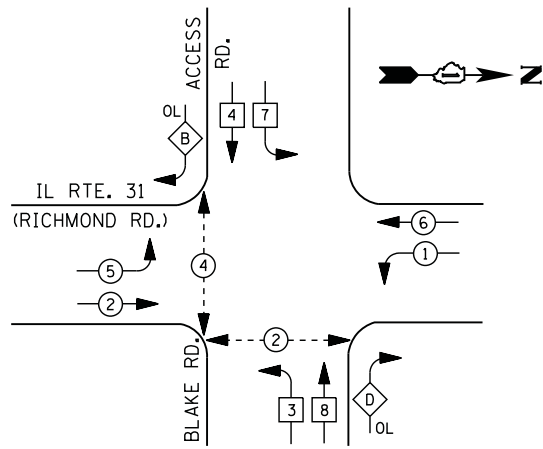
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	59
ILLINOIS			CONTRACT NO. 62A42	

TS #21971  
MARENGO



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet File\11897\_CAB\_McHENRY.dgn

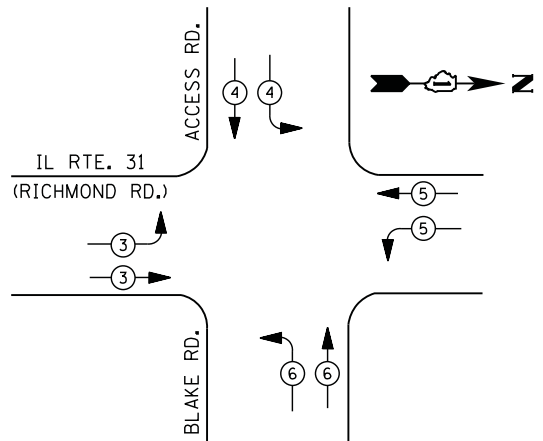
**CONTROLLER SEQUENCE**



**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B =	4 +	5
D =	8 +	1

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

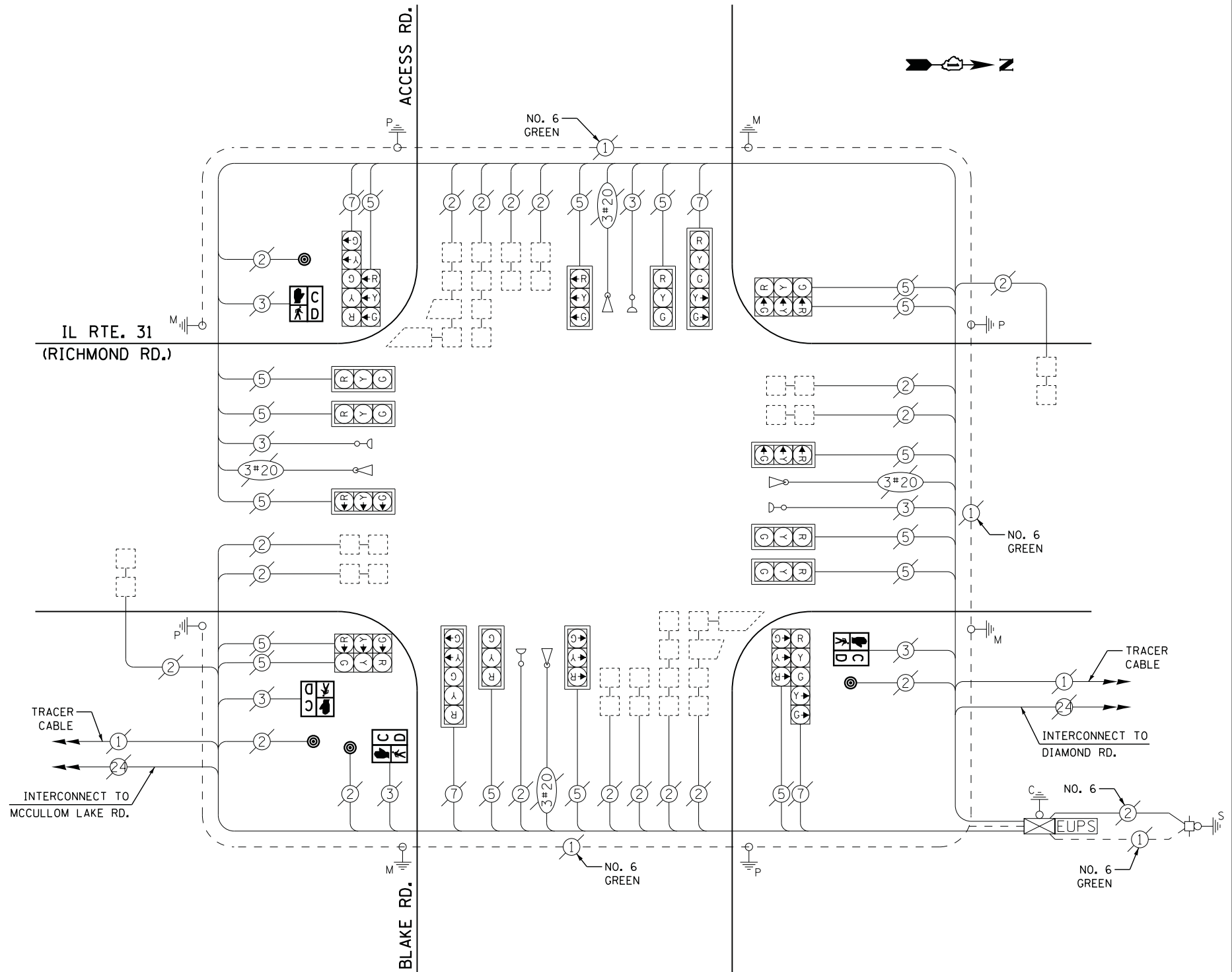
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					580

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MIKE LENOX  
 PHONE 815-490-2869  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSH-BUTTON

TS #11897  
 McHENRY

USER NAME = .JUSERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 31 (RICHMOND ROAD) AT BLAKE ROAD  
 SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	McHENRY	76	60
			CONTRACT NO. 62A42	
ILLINOIS				

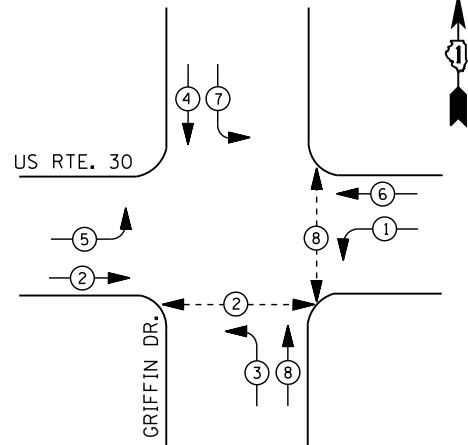






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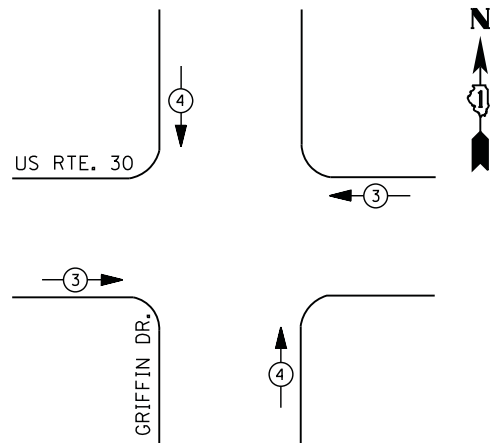
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	12	135	17	0.50	102
( YELLOW )	12	135	25	0.25	75
( GREEN )	12	135	15	0.25	45
ARROW	16	135	12	0.10	20
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					442

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT JOE STACHO**  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

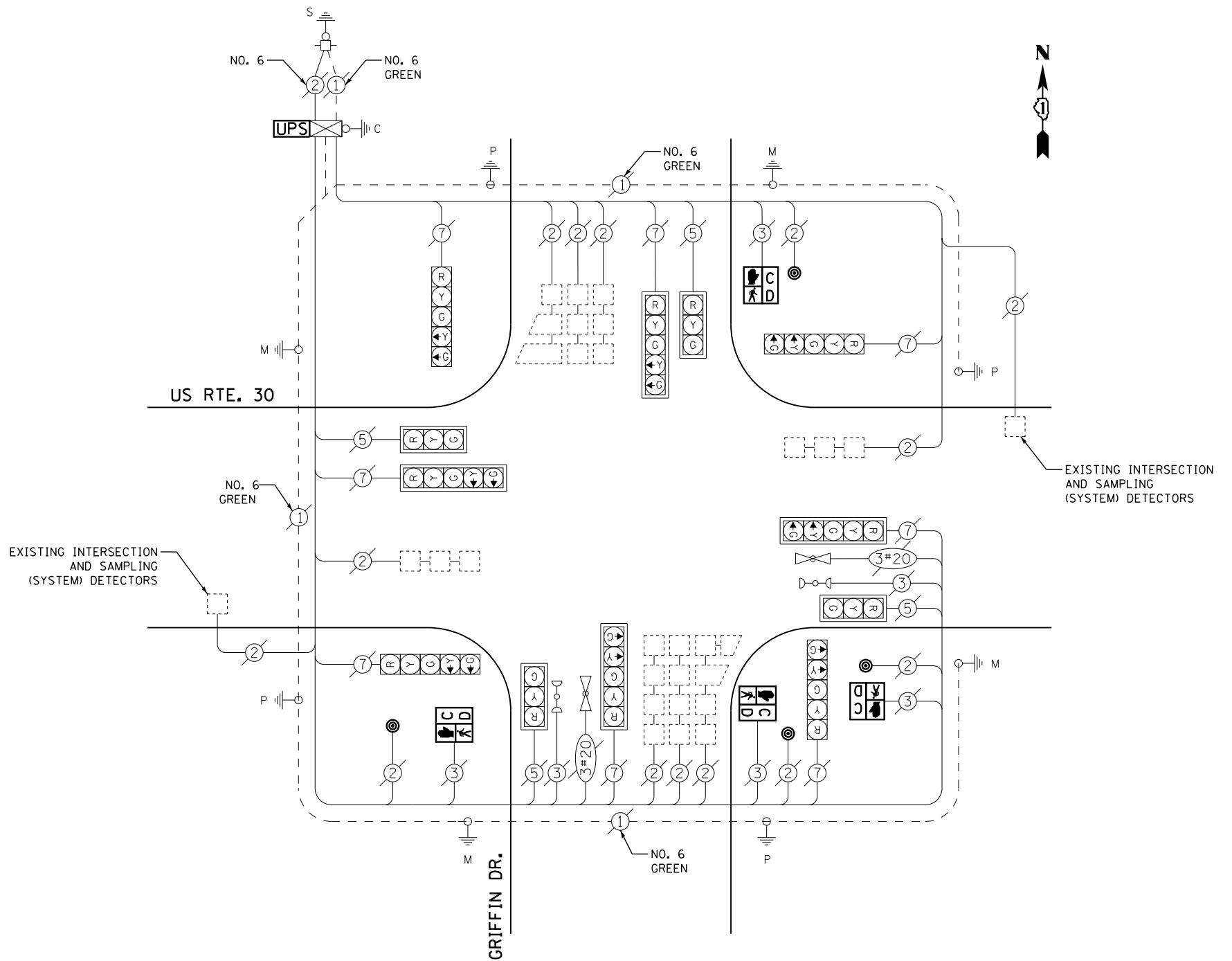
**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH PEDESTRIAN SIGNAL HEAD  
 4 EACH PEDESTRIAN PUSH-BUTTON



**CABLE PLAN**

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 30 AT GRIFFIN DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

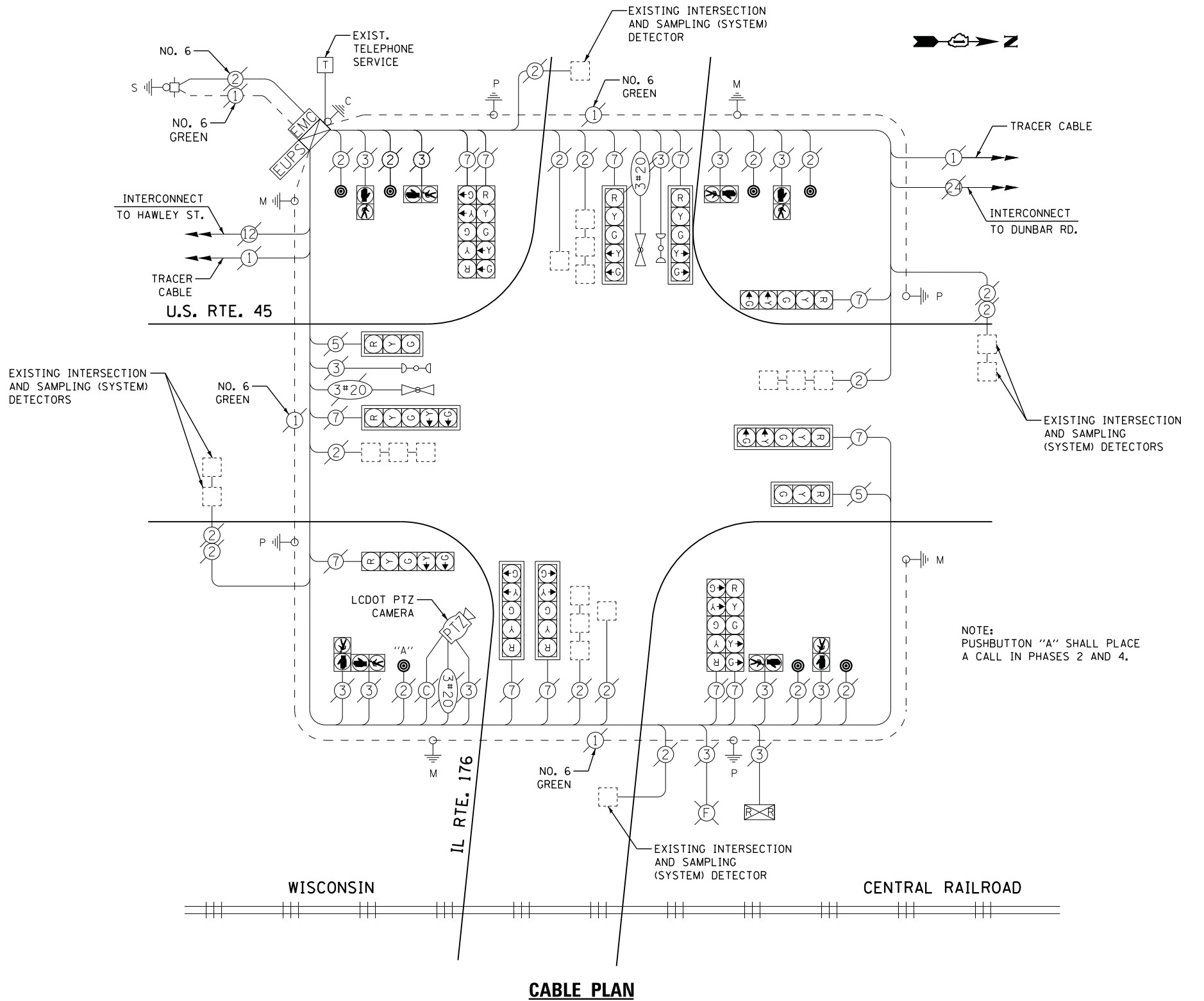
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	63
CONTRACT NO. 62A42				

TS #727  
MONTGOMERY

ILLINOIS



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1\Design\CAD\Sheet Files\6625\_CAB\_LAKE.dgn



NOTE:  
PUSHBUTTON "A" SHALL PLACE  
A CALL IN PHASES 2 AND 4.

**CABLE PLAN**

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	14	135	17	0.50	119
( YELLOW )	14	135	25	0.25	88
( GREEN )	14	135	15	0.25	53
ARROW	24	135	12	0.10	29
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					589

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
7	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

7 EACH PEDESTRIAN PUSH-BUTTON

TS #6625  
MUNDELEIN (SH. 1)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 45 AT IL ROUTE 176  
SCHEDULE OF QUANTITIES AND CABLE PLAN

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	64
CONTRACT NO. 62A42				
ILLINOIS				





SEQUENCE OF OPERATION

Table with columns for MOVEMENT, PHASE, INTERVAL, and various signal states (R, G, Y, P, H, D, FL) for different routes and directions.

PHASES 2+6 SHALL BE PLACED ON RECALL
TO APPEAR ONLY UPON PUSHBUTTON ACTUATION
FLASHING [Symbol] IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE.

P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK
D = DARK
FL = FLASHING YELLOW BEACON

RAILROAD PREEMPTION SEQUENCE OF OPERATION

Table showing RAILROAD PREEMPTION SEQUENCE OF OPERATION with columns for interval numbers and signal states for various routes and directions.

FL = FLASHING YELLOW BEACON
P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK
RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD INTERVAL IS TERMINATED.

EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

Table showing EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION with columns for interval numbers and signal states for various routes and directions.

P = ILLUMINATED PERSON = WALK
FH = ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
H = ILLUMINATED SOLID HAND = DON'T WALK
D = DARK
FL = FLASHING YELLOW BEACON
EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL IS TERMINATED.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Signals\14-922 Various LED\1\Design\CAD\Sheet Files\6625A-CAB-LAKE.dgn

Table with columns for USER NAME, DESIGNED, DRAWN, PLOT SCALE, PLOT DATE, REVISED, CHECKED, DATE.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

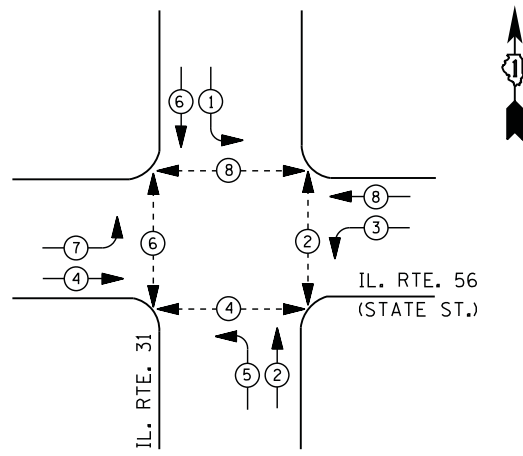
U.S. ROUTE 45 AT IL ROUTE 176 SEQUENCE OF OPERATION, EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, AND RAILROAD PREEMPTION SEQUENCE OF OPERATION

Table with columns for F.A. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., SCALE, SHEET NO. OF SHEETS, STA. TO STA., CONTRACT NO.

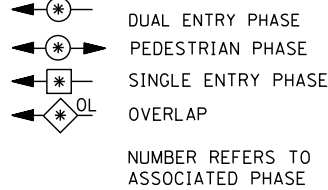
TS #6625 MUNDELEIN (SH. 2)



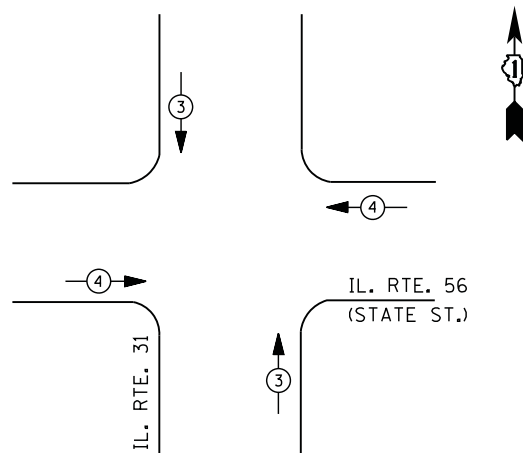
**CONTROLLER SEQUENCE**



**LEGEND**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑ ↓	← →

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	20
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					542

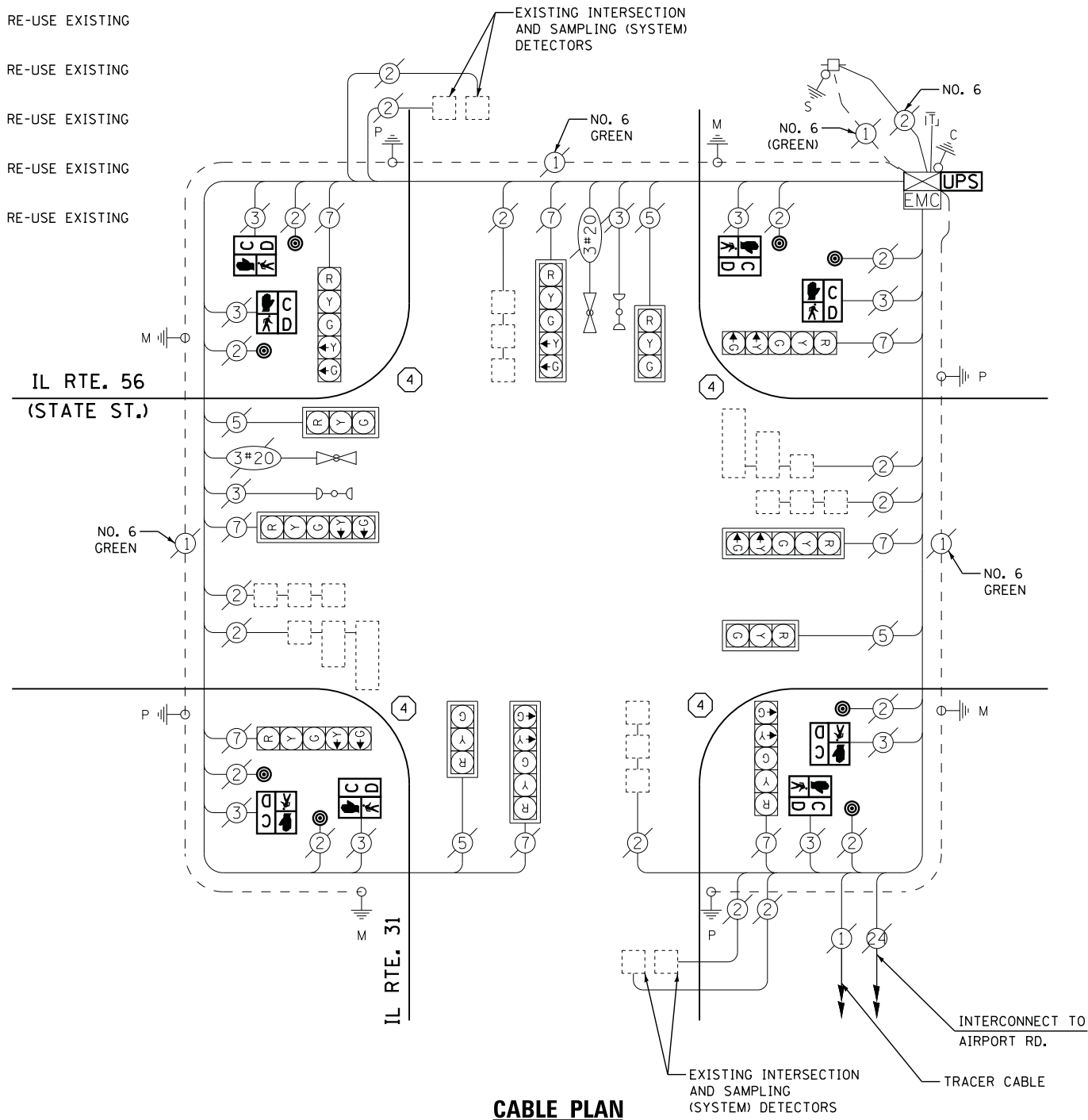
ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
PHONE 630-424-5704  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
8	EACH	PEDESTRIAN PUSH-BUTTON
4	EACH	RELOCATE EXISTING SIGNAL HEAD
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

- ① REPLACE 10 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST. RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.



**CABLE PLAN**

UPS SHALL BE INSTALLED ON LEFT SIDE OF CONTROLLER CABINET DUE TO PHYSICAL CONSTRAINT, OR AS DIRECTED BY THE ENGINEER

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH SIGNAL POST

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 31 AT IL ROUTE 56 (STATE STREET)  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	KANE	76	66
CONTRACT NO. 62A42				

TS #11483  
NORTH AURORA

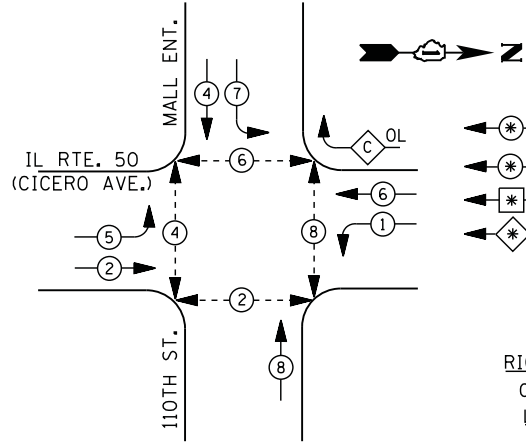
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USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.



**CONTROLLER SEQUENCE**

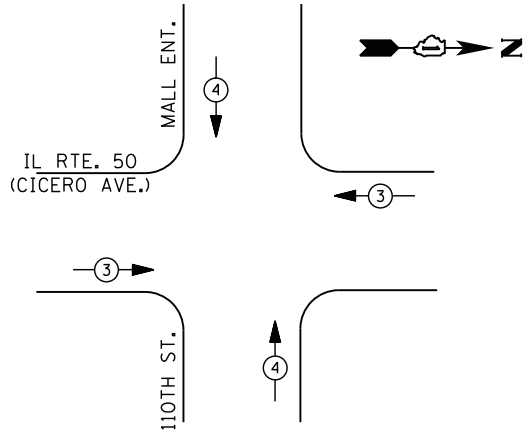


**LEGEND**  
 \* DUAL ENTRY PHASE  
 \* PEDESTRIAN PHASE  
 \* SINGLE ENTRY PHASE  
 \* OL OVERLAP  
 NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
C	= 6	+ 7

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	17	135	17	0.50	145
(YELLOW)	17	135	25	0.25	107
(GREEN)	17	135	15	0.25	64
ARROW	16	135	12	0.10	20
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					636

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT ILYAS MOHIUDDIN  
 PHONE 708-235-2692  
 COMMONWEALTH EDISON

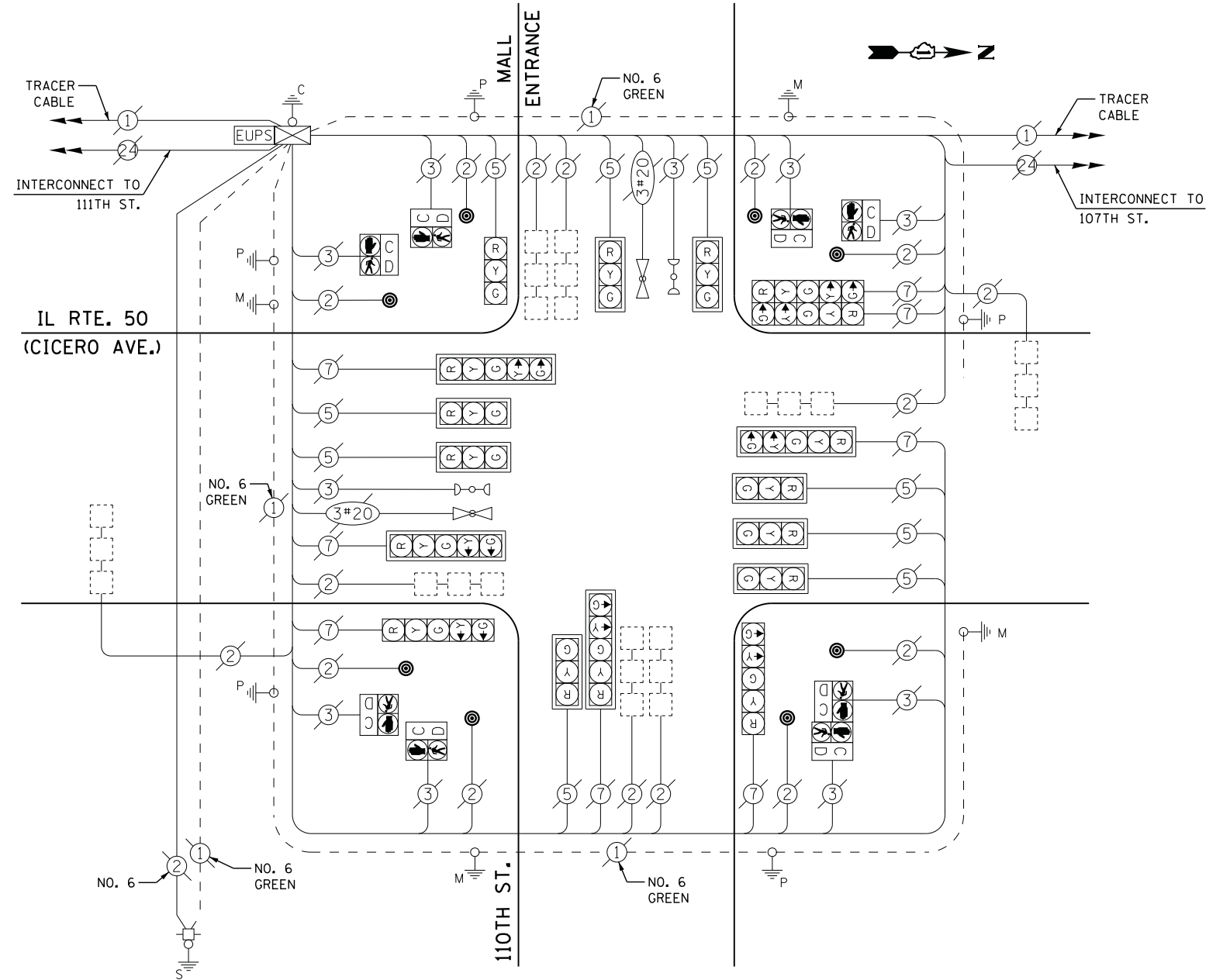
**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

8 EACH PEDESTRIAN PUSH-BUTTON



**CABLE PLAN**

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 50 (CICERO AVENUE) AT 110TH STREET  
 SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	67
CONTRACT NO. 62A42				

TS #2505  
 OAK LAWN

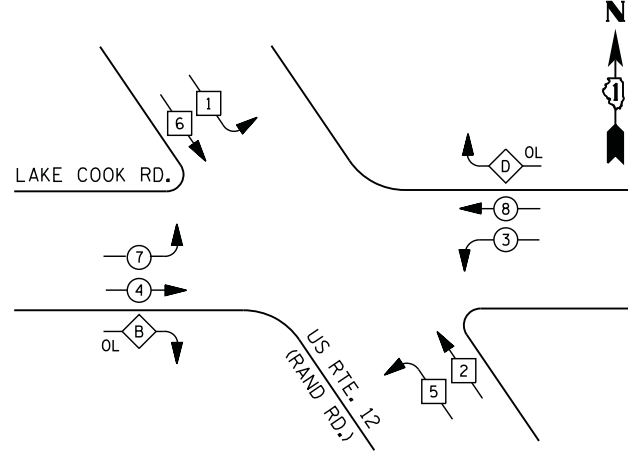
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USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - CC	REVISED -
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -
	DATE -	REVISED -

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



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**

**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5
D	8	1

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	88
(GREEN)	14	135	15	0.25	53
ARROW	28	135	12	0.10	34
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					394

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT DAVE SCHACHT**  
 PHONE 630-437-2129  
 COMMONWEALTH EDISON

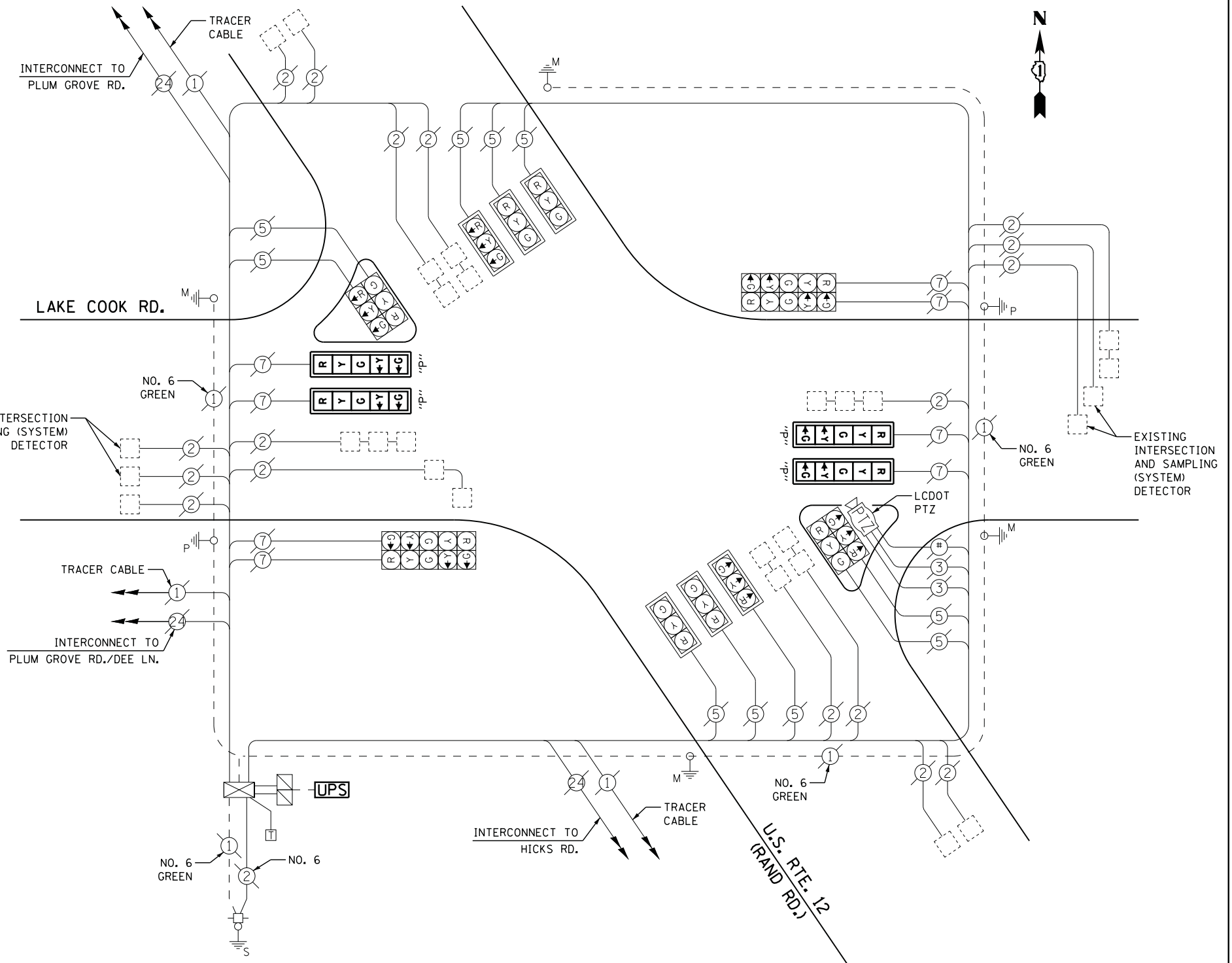
**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 4 EACH OPTICALLY PROGRAMMED SIGNAL HEAD, 3 - SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED



**CABLE PLAN**

THE UPS SHALL BE INSTALLED NEXT TO THE EXISTING CONTROLLER CABINET USING HELICAL GROUND ANCHORS DUE TO THE PHYSICAL CONSTRAINTS OR AS DIRECTED BY THE ENGINEER. ALL WORK INCLUDING DRILL EXISTING HANDHOLE, CONDUIT, AND ELECTRICAL CABLE NEEDED TO PROPERLY INSTALL THE UPS SHALL BE INCLUDED IN THE PAY ITEM UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED.

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\10-CAB-COOK.dgn

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 12 (RAND ROAD) AT LAKE COOK ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	68
CONTRACT NO. 62A42				
ILLINOIS				

**TS #410  
PALATINE**



**SEQUENCE OF OPERATION**

MOVEMENT	1	2	3	4A	4B	5A	5B	6	7A	7B	8	9A	9B	9C	9D	10A	10B	10C	10D	F L A S H
PHASE	2+5		2+6				3				4									
INTERVAL	1	2	3	4A	4B	5A	5B	6	7A	7B	8	9A	9B	9C	9D	10A	10B	10C	10D	
CHANGE TO		2+6	3	4				2+5	2+6											
U.S. ROUTE 14 (NORTHWEST HWY.) E/B FAR LEFT AND END MAST ARM SIGNALS	R	R	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) E/B NEAR RIGHT AND FAR RIGHT SIGNALS	R	R	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT AND END MAST ARM SIGNALS	G	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT SIGNAL	G	G	Y	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HICKS ROAD (SOUTH OF TRACKS) N/B MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HICKS ROAD (NORTH OF TRACKS) N/B ALL SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
PARKING LOT ENTRANCE ALL SIGNALS	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

PHASE 2+6 SHALL BE PLACED ON RECALL

**EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION**

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	1	3	3	6	6	8	8	8	PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	CLEAR TO NORMAL SEQUENCE									
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	2	3	4	
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	3 OR 4	2	1F	3 OR 4	1H	2	4	1L	1M	1N	2	3	1R	1S	1T	4				
U.S. ROUTE 14 (NORTHWEST HWY.) E/B FAR LEFT AND END MAST ARM SIGNALS	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) E/B NEAR RIGHT AND FAR RIGHT SIGNALS	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT AND END MAST ARM SIGNALS	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT SIGNAL	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
HICKS ROAD (SOUTH OF TRACKS) N/B MAST ARM SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
HICKS ROAD (NORTH OF TRACKS) N/B ALL SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇
PARKING LOT ENTRANCE ALL SIGNALS	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇

◇ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3 OR 4 IS TERMINATED.

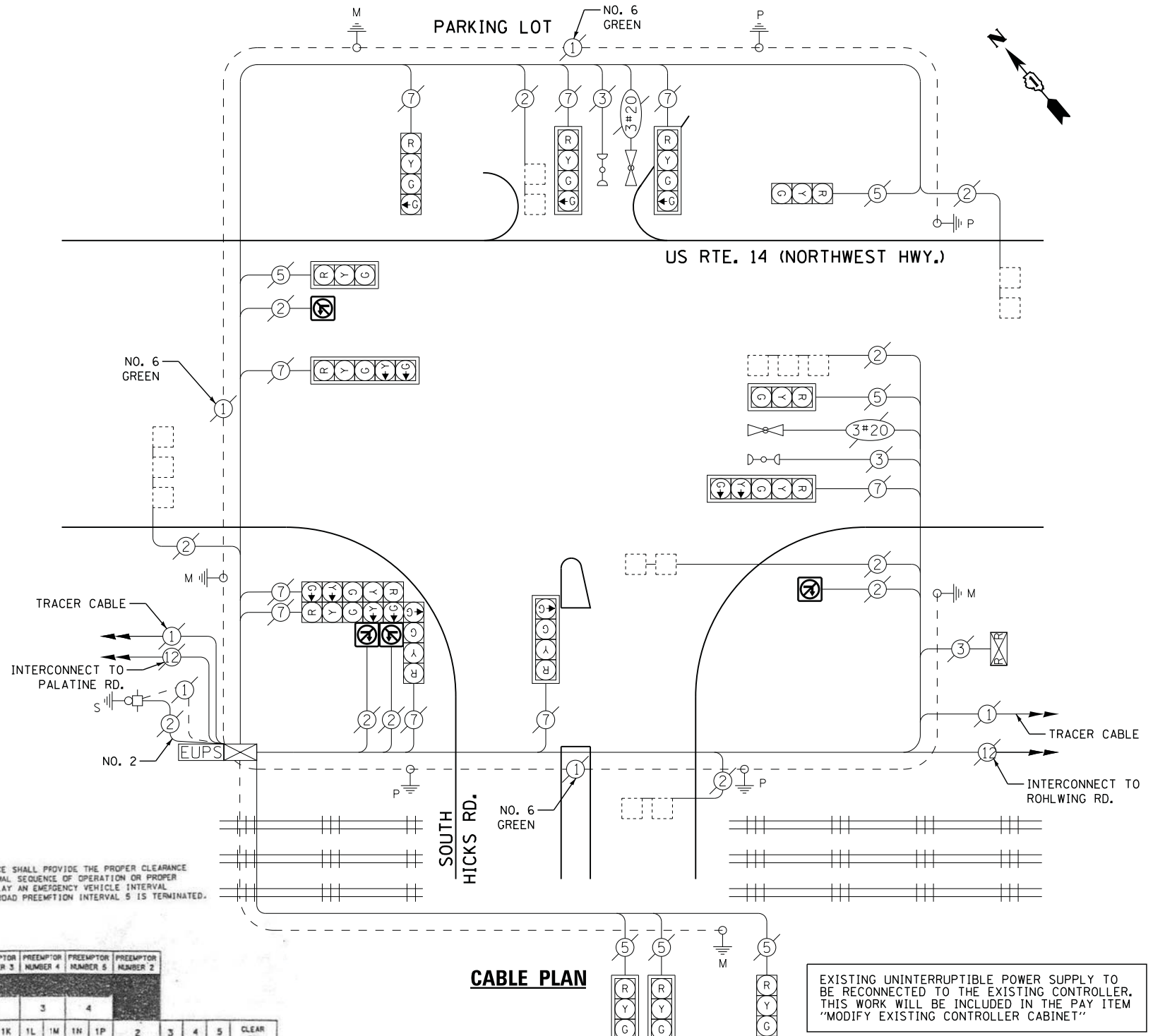
NLT = "NO LEFT TURN" OR

NRT = "NO RIGHT TURN" OR

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED.

**RAILROAD PREEMPTION SEQUENCE OF OPERATION**

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	3	6	8	PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 2	CLEAR TO NORMAL SEQUENCE										
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	2	3	4	5	
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1B	2	1D	2	1F	2	1H	2	1K	2	1M	2	1P	2	3	4	5		
U.S. ROUTE 14 (NORTHWEST HWY.) E/B FAR LEFT AND END MAST ARM SIGNALS	R	R	Y	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) E/B NEAR RIGHT AND FAR RIGHT SIGNALS	R	R	Y	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT AND END MAST ARM SIGNALS	Y	R	Y	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	G	△
U.S. ROUTE 14 (NORTHWEST HWY.) W/B FAR RIGHT SIGNAL	Y	R	Y	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	G	△
HICKS ROAD (SOUTH OF TRACKS) N/B MAST ARM SIGNALS	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	△
HICKS ROAD (NORTH OF TRACKS) N/B ALL SIGNALS	R	R	R	R	R	R	R	G	G	R	R	G	G	R	R	G	Y	R	△
PARKING LOT ENTRANCE ALL SIGNALS	S/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	△
INTERNALLY ILLUMINATED NO RIGHT TURN SIGNS	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	△
INTERNALLY ILLUMINATED NO LEFT TURN SIGNS	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	△



**CABLE PLAN**

EXISTING UNINTERRUPTIBLE POWER SUPPLY TO BE RECONNECTED TO THE EXISTING CONTROLLER. THIS WORK WILL BE INCLUDED IN THE PAY ITEM "MODIFY EXISTING CONTROLLER CABINET"

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH ILLUMINATED SIGN, FIBER OPTIC

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	ILLUMINATED SIGN, LED
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

TS #1225  
PALATINE

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-922 Various LED\1-Design\CAD\Sheet Files\1225\_CAB\_C006.dgn

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	15	135	17	0.50	128
(YELLOW)	15	135	25	0.25	94
(GREEN)	20	135	15	0.25	75
ARROW	16	135	12	0.10	20
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	4	252	25	0.05	5
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					422

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

CONTACT DAVE SCHACHT  
PHONE 630-437-2129  
COMMONWEALTH EDISON

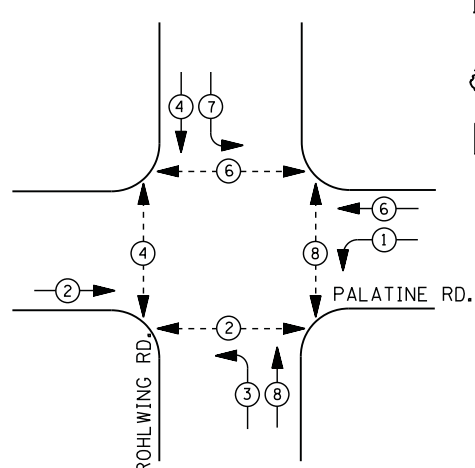
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT HICKS ROAD (SOUTH JCT.) SCHEDULE OF QUANTITIES, CABLE PLAN, SEQUENCE OF OPERATION, EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION, AND RAILROAD PREEMPTION SEQUENCE OF OPERATION				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					2014-090TS	COOK	76	69
				ILLINOIS		CONTRACT NO. 62A42		
SCALE: N.T.S.	SHEET NO.	OF SHEETS	STA.	TO STA.				



FILE NAME = M:\p\03\1481\2189\_PTB\_172-6\_IDOT\_Var\_Signals\14-022\_Various\_LED\1\Design\CAD\Sheet\_Files\5615\_CAB\_C00K.dgn

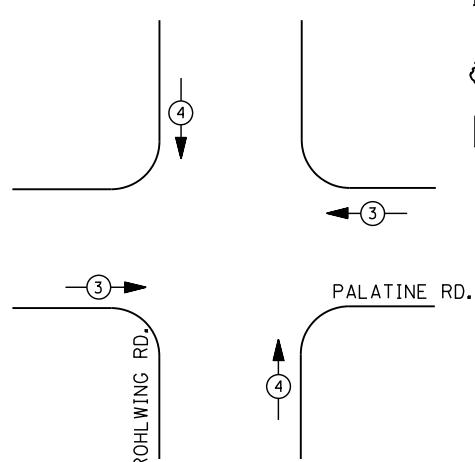
**CONTROLLER SEQUENCE**



**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	12	135	12	0.10	15
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
TOTAL =					537

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT DAVE SCHACHT**  
 PHONE 630-437-2129  
 COMMONWEALTH EDISON

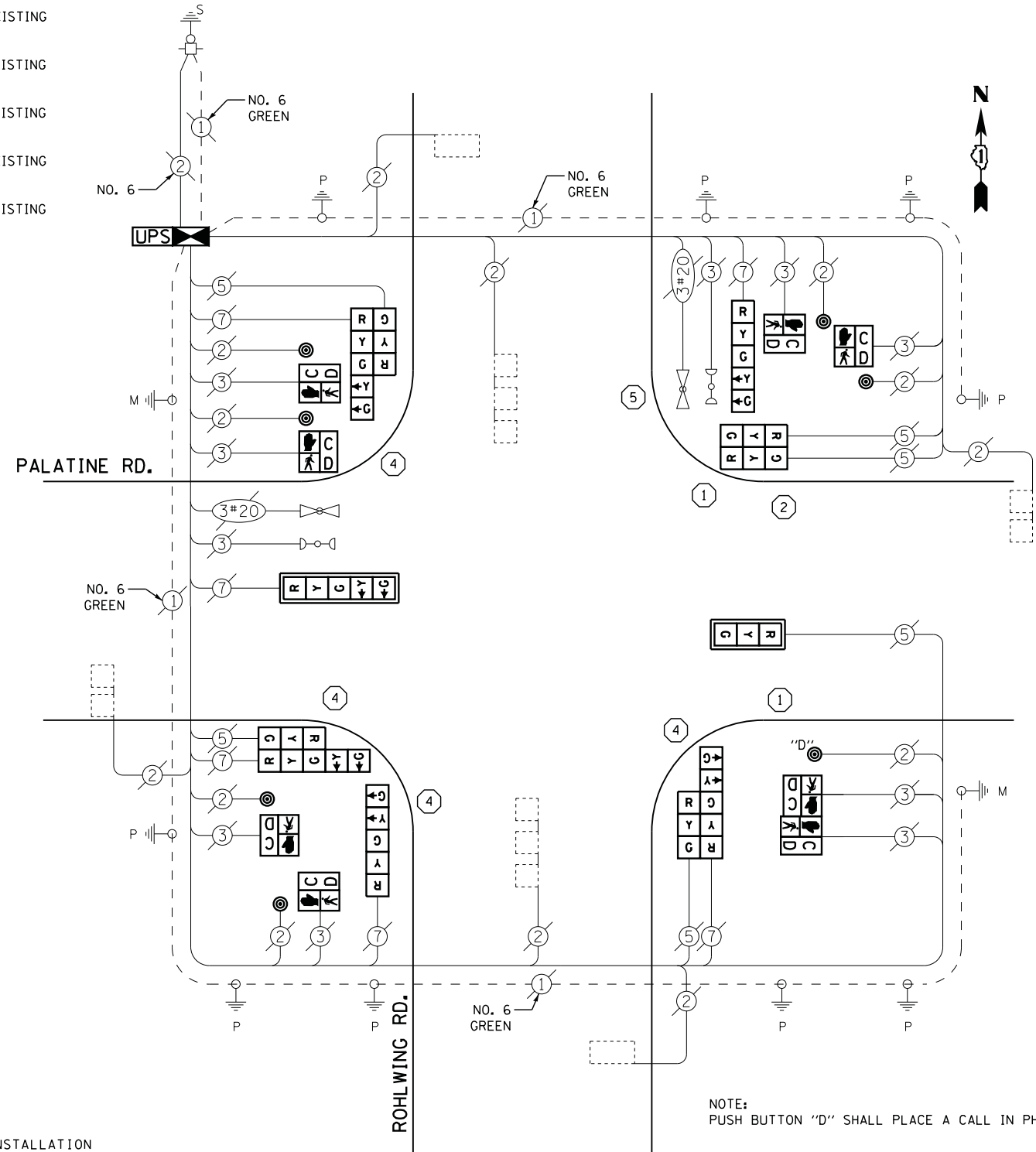
**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH SIGNAL HEAD, 3 - SECTION
- 3 EACH SIGNAL HEAD, 5 - SECTION
- 1 EACH SIGNAL HEAD, 2 - FACE, 3 SECTION
- 3 EACH SIGNAL HEAD, 2 - FACE, 1-3 SECTION, 1-5 SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 7 EACH PEDESTRIAN PUSH-BUTTON
- 8 EACH SIGNAL POST
- 1 EACH CONTROLLER AND CABINET (COMPLETE)

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
3	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
6	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
6	EACH	INDUCTIVE LOOP DETECTOR
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
4	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
7	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING



**CABLE PLAN**

CONTRACTOR SHALL RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT TO A NEW SIGNAL POST. THE COST OF THIS WORK SHALL BE INCLUDED IN THE TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT. PAY ITEM.

CONTRACTOR SHALL RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT TO NEW CONTROLLER CABINET. THE COST OF THIS WORK SHALL BE INCLUDED IN THE FULL ACTUATED CONTROLLER AND TYPE IV CABINET PAY ITEM.

NOTE:  
PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

TS #5615  
PALATINE

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PALATINE ROAD AT ROHLWING ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	70
CONTRACT NO. 62A42				

USER NAME	DESIGNED	REVISION
._USERNAME_	DW	-
	CC	-
	JDH	-
		-

PLOT SCALE = 20.000' / in.  
PLOT DATE = 2/2/2015

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.



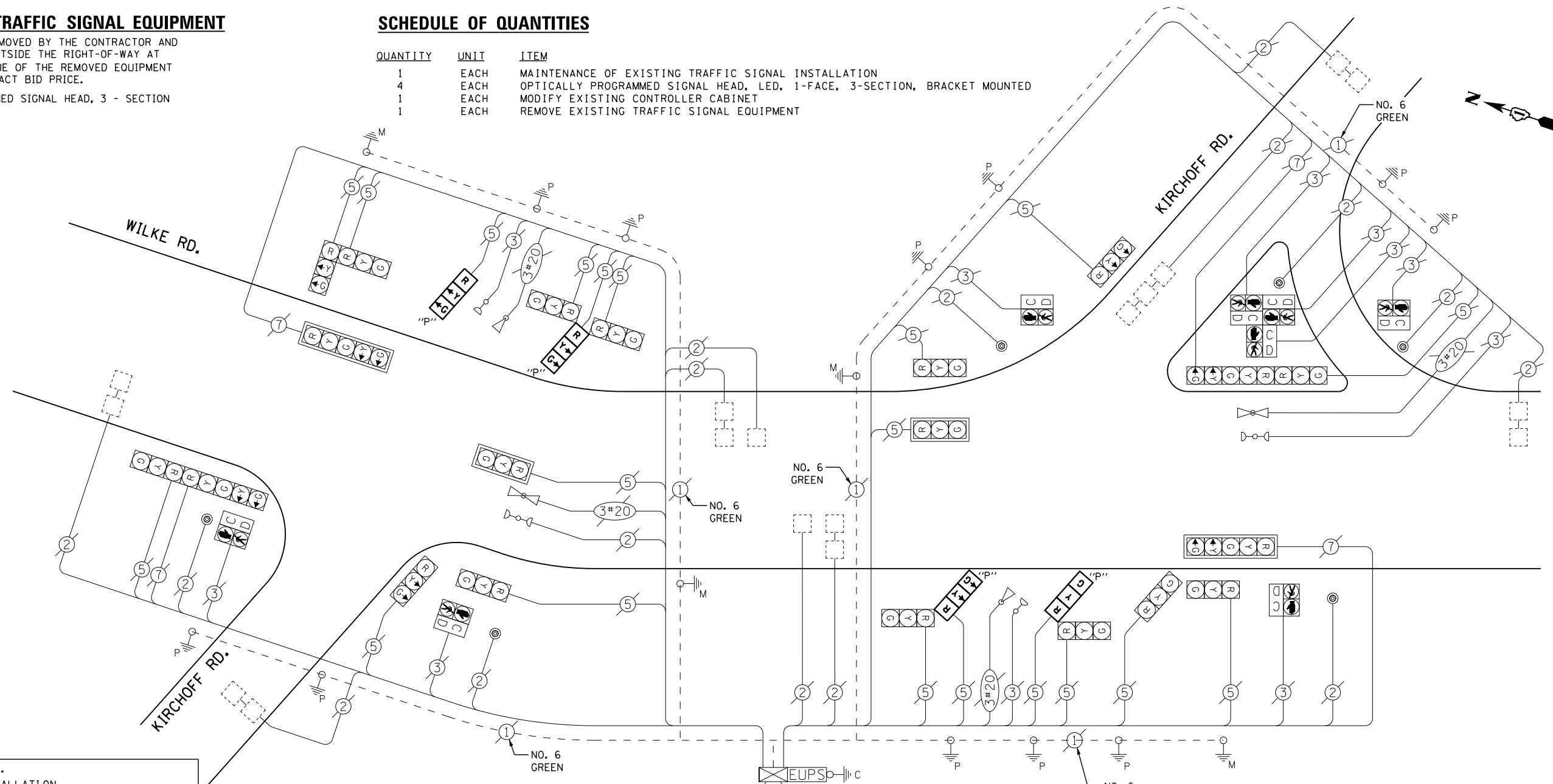
### REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH OPTICALLY PROGRAMMED SIGNAL HEAD, 3 - SECTION

### SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT



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#### I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	24	135	17	0.50	204
(YELLOW)	24	135	25	0.25	150
(GREEN)	24	135	15	0.25	90
ARROW	8	135	12	0.10	10
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					754

ENERGY COSTS-  
ENERGY SUPPLY -

BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

CONTACT DAVE SCHACHT  
PHONE 630-437-2129  
COMMONWEALTH EDISON

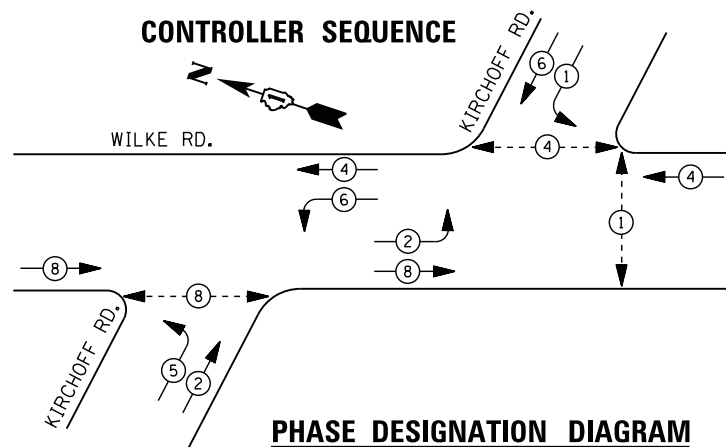
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	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

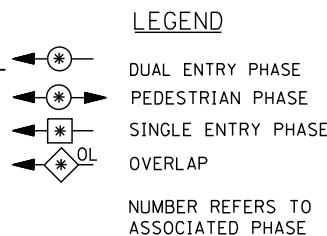
### CABLE PLAN

EXISTING UNINTERRUPTIBLE POWER SUPPLY TO BE RECONNECTED TO THE EXISTING CONTROLLER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "MODIFY EXISTING CONTROLLER CABINET"

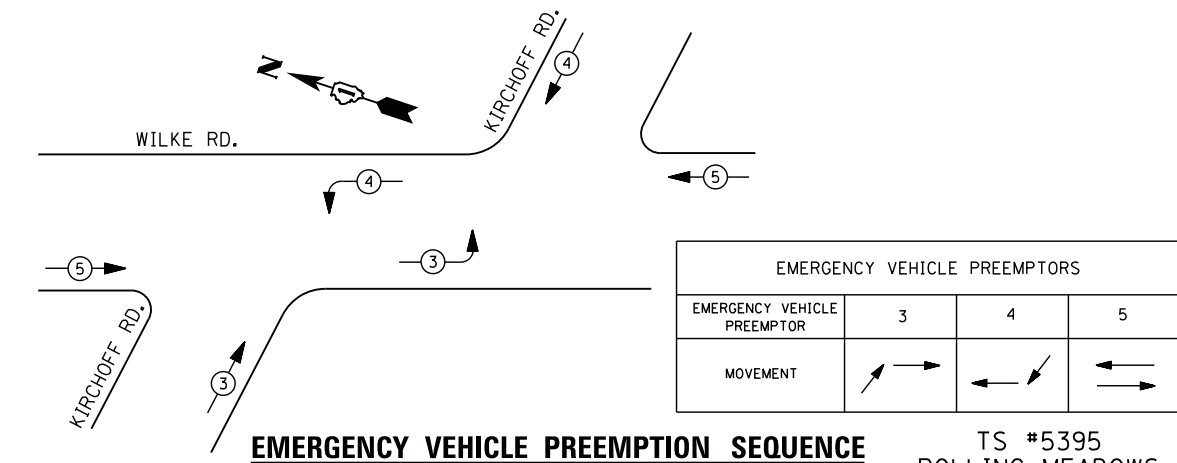
### CONTROLLER SEQUENCE



### PHASE DESIGNATION DIAGRAM



### EMERGENCY VEHICLE PREEMPTION SEQUENCE



EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

TS #5395  
ROLLING MEADOWS

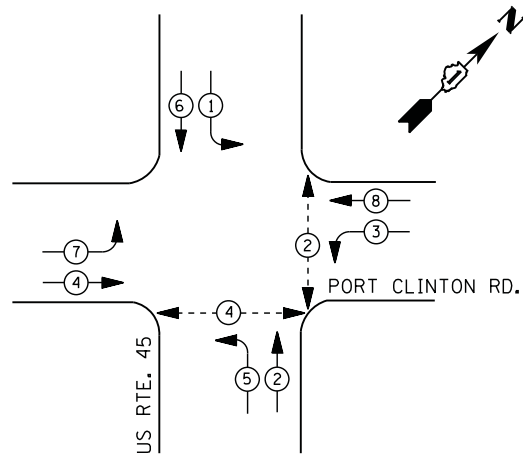
KIRCHHOFF ROAD AT WILKE ROAD  
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	COOK	76	71
CONTRACT NO. 62A42				
ILLINOIS				

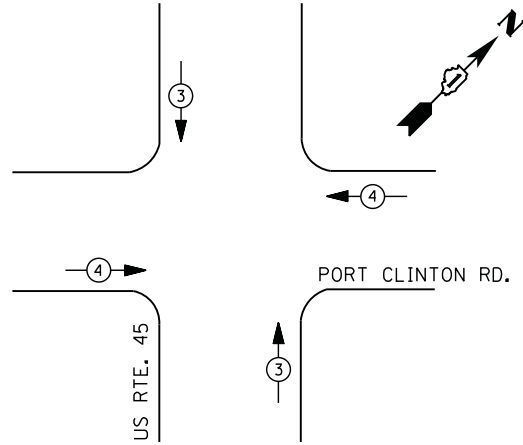


**CONTROLLER SEQUENCE**



- LEGEND**
- DUAL ENTRY PHASE
  - PEDESTRIAN PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
  - NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑ ↓	← →

**I. D. O. T.  
TRAFFIC SIGNAL INSTALLATION  
ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	20
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					442

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

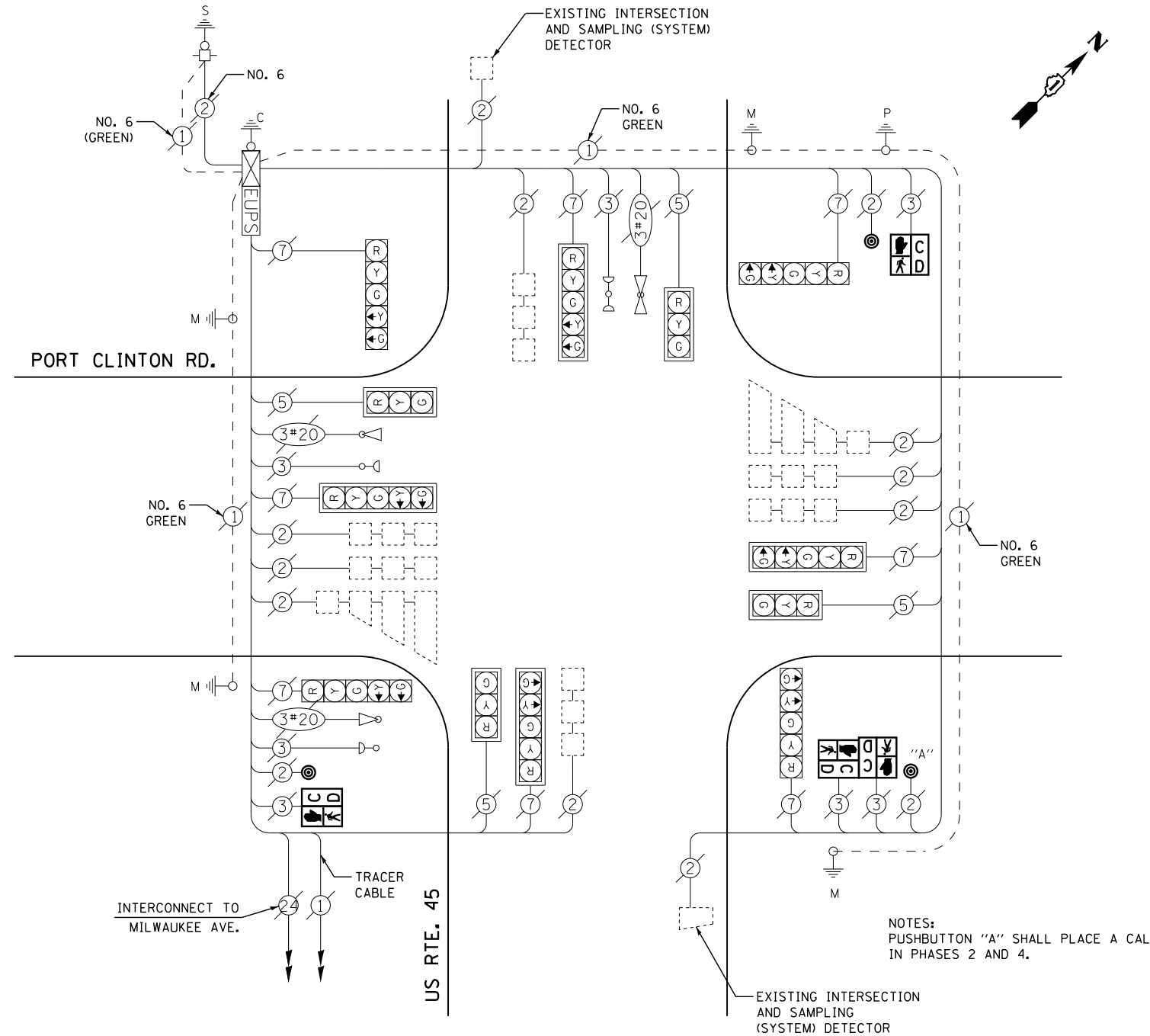
ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	PEDESTRIAN PUSH-BUTTON, NON-LATCHING

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN**



**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH PEDESTRIAN SIGNAL HEAD  
3 EACH PEDESTRIAN PUSH-BUTTON

NOTES:  
PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.

FILE NAME = M:\p\03\1481\2189 PTB 172-6 IDOT Var Var Signals\14-022 Various LED\1\Design\CAD\Sheet Files\6598\_CAB\_LAKE.dgn

USER NAME = .USERNAME.	DESIGNED - DW	REVISED -
	DRAWN - CC	REVISED -
PLOT SCALE = 20.000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

**US ROUTE 45 AT PORT CLINTON ROAD**  
**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,**  
**AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

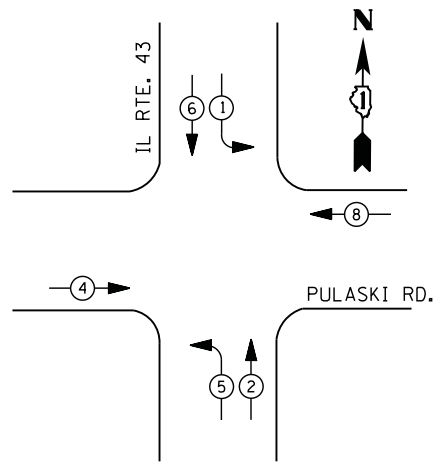
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	72
CONTRACT NO. 62A42				
ILLINOIS				

TS #6598  
VERNON HILLS

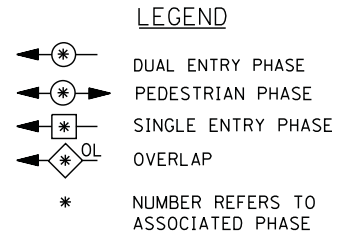




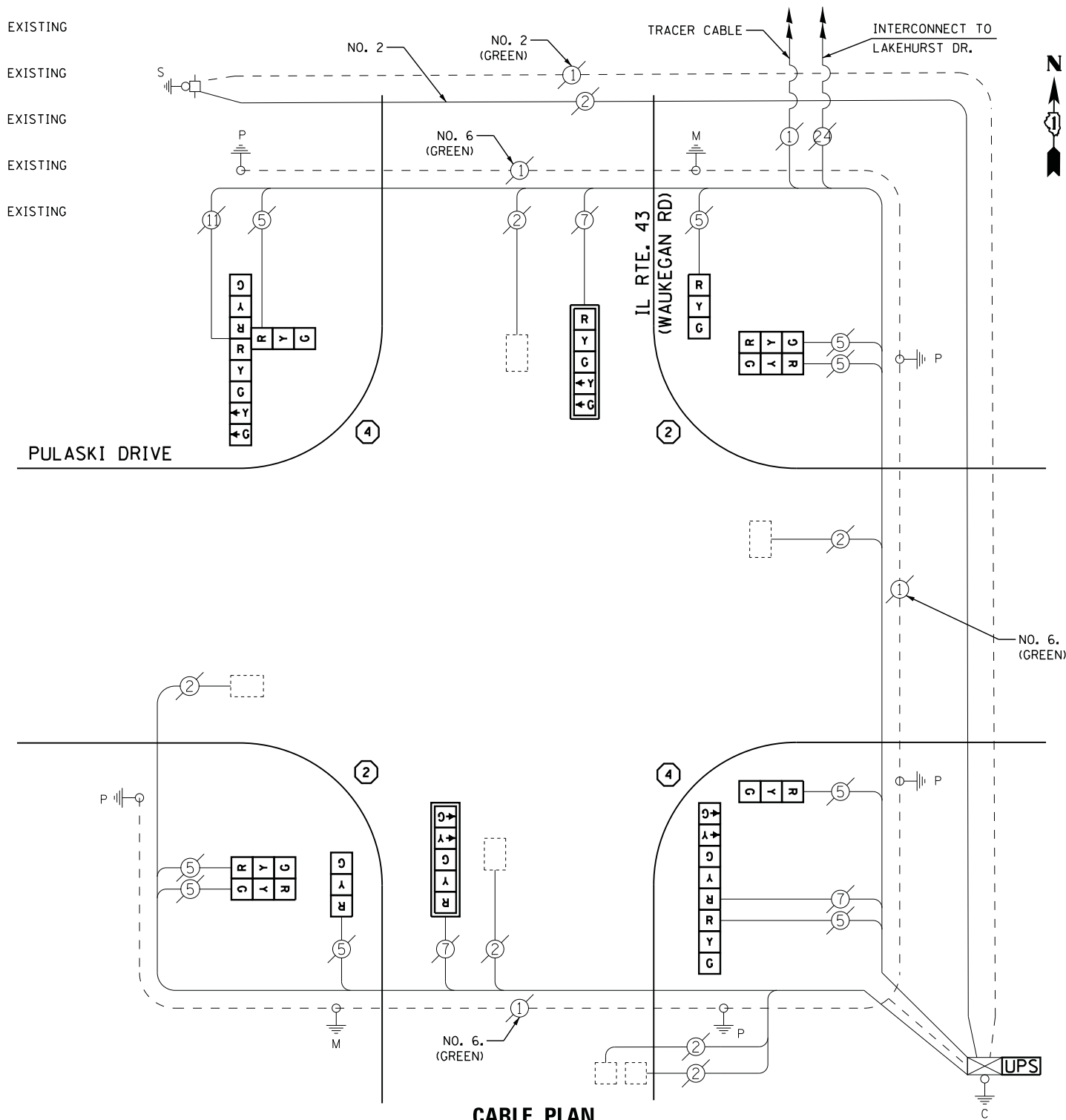
**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



- ① REPLACE 10 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ② REPLACE 14 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 15 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 16 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 18 FT. PAINTED POST, RE-USE EXISTING  
TYPE A CONCRETE FOUNDATION.



**CABLE PLAN**

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 3 EACH SIGNAL HEAD, 3 - SECTION
- 2 EACH SIGNAL HEAD, 5 - SECTION
- 2 EACH SIGNAL HEAD, 2 - FACE, 3 - SECTION
- 1 EACH SIGNAL HEAD, 2 - FACE, 1-3 - SECTION, 1-5 SECTION
- 1 EACH SIGNAL HEAD, 3 - FACE, 2-3 - SECTION, 1-5 SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH SIGNAL POST

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1-Design\CAD\Sheet Files\14904-CAB-LAKE.dgn

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	14	135	17	0.50	119
( YELLOW )	14	135	25	0.25	88
( GREEN )	14	135	15	0.25	53
ARROW	8	135	12	0.10	10
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM		150	-	1.00	--
FLASHER LED					
TOTAL =					370

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK  
PHONE 847-816-5239  
COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
2	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL ROUTE 43 (WAUKEGAN RD) AT PULASKI DRIVE  
SCHEDULE OF QUANTITIES, CABLE PLAN  
AND PHASE DESIGNATION DIAGRAM

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

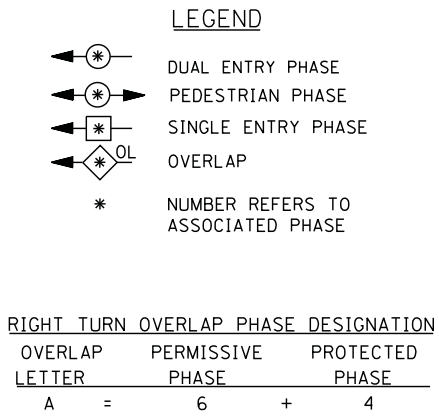
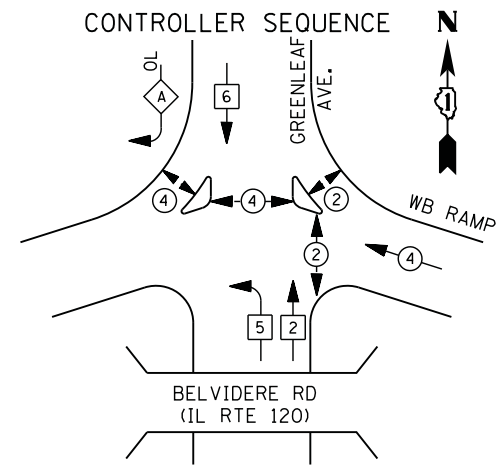
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	73
CONTRACT NO. 62A42				

TS# 14904  
WAUKEGAN

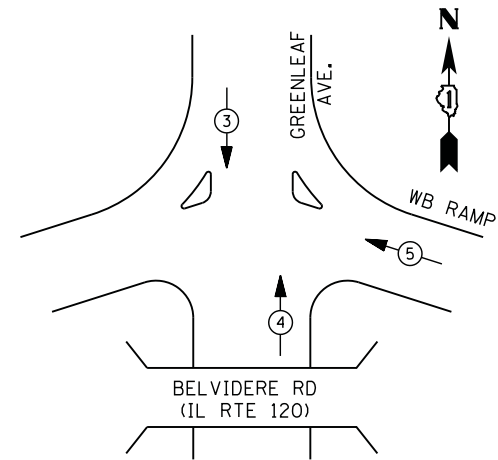
ILLINOIS



FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var Signals\14-922 Various LED\1-Design\CAD\Sheet Files\14925-CAB-LAKE.dgn



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

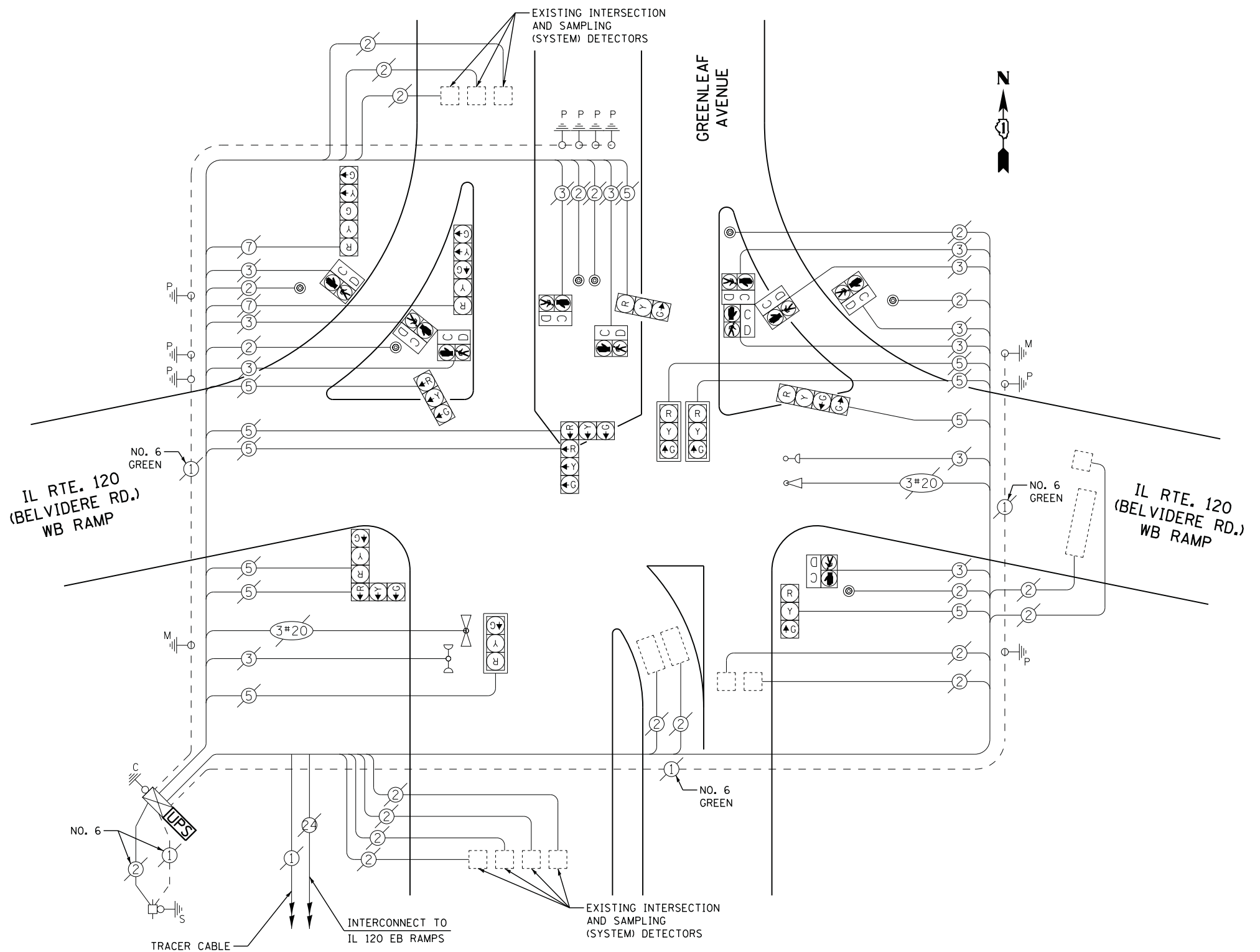
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↓	↑	←

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	13	135	17	0.50	111
( YELLOW )	13	135	25	0.25	82
( GREEN )	14	135	15	0.25	53
ARROW	4	135	12	0.10	5
PED. SIGNAL	10	90	25	1.00	250
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					601

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT TERRI BLECK**  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON



**CABLE PLAN**

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 120 (BELVIDERE ROAD) AT GREENLEAF AVENUE NORTH RAMP SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

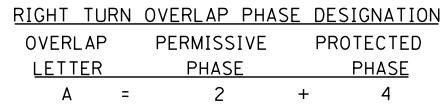
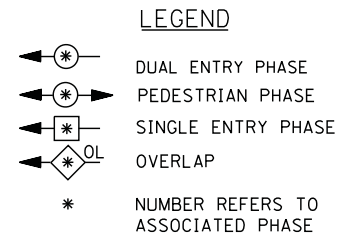
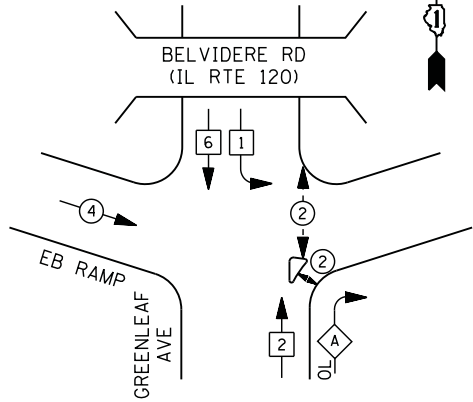
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	74
CONTRACT NO. 62A42				

TS# 14925  
WAUKEGAN

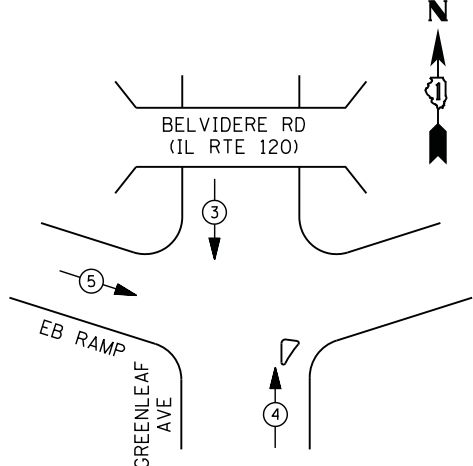
ILLINOIS



**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↓	↑	→

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

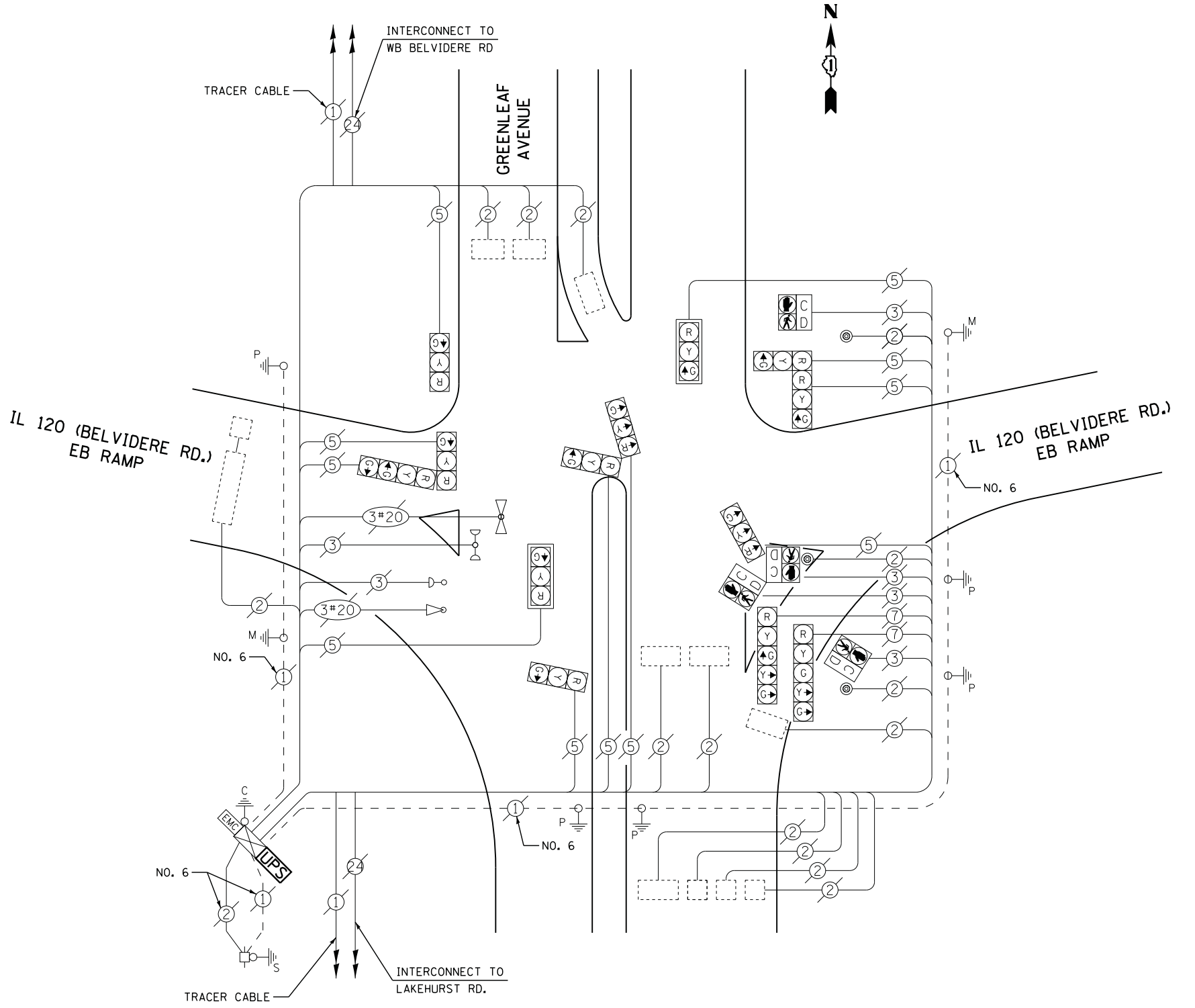
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL ( RED )	13	135	17	0.50	111
( YELLOW )	13	135	25	0.25	82
( GREEN )	14	135	15	0.25	53
ARROW	4	135	12	0.10	5
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	
VIDEO SYSTEM		150	-	1.00	
FLASHER LED					
TOTAL =					451

ENERGY COSTS- **BILLED TO: IDOT DISTRICT 1**  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - **CONTACT TERRI BLECK**  
 PHONE 847-816-5239  
 COMMONWEALTH EDISON

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL



**CABLE PLAN**

FILE NAME = M:\p\1481\2189 PTB 172-6 IDOT Var. Signals\14-022 Various LED\1-Design\CAD\Sheet Files\14930-CAB-LAKE.dgn

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PLOT SCALE = 20.000' / in.	DRAWN - CC	REVISED -
PLOT DATE = 2/2/2015	CHECKED - JDH	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 120 (BELVIDERE ROAD) AT GREENLEAF AVENUE SOUTH RAMP SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE**

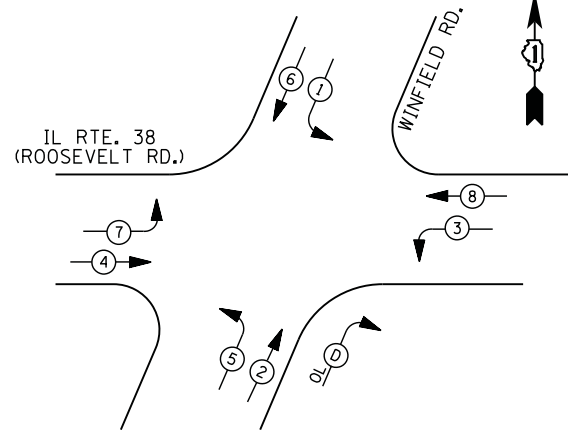
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	LAKE	76	75
			CONTRACT NO. 62A42	
ILLINOIS				

TS# 14930  
WAUKEGAN



**CONTROLLER SEQUENCE**



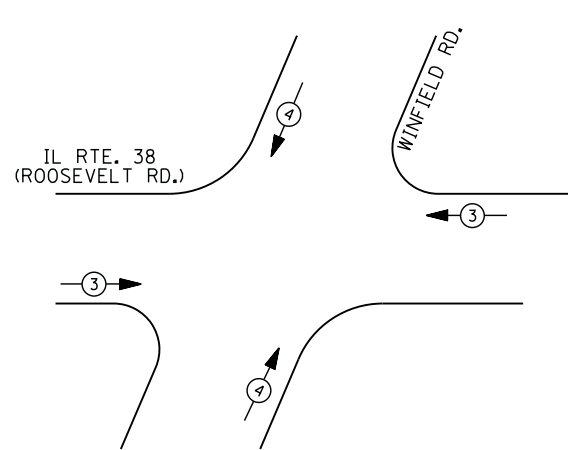
**LEGEND**

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	= 2	+ 3

**PHASE DESIGNATION DIAGRAM**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

**I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

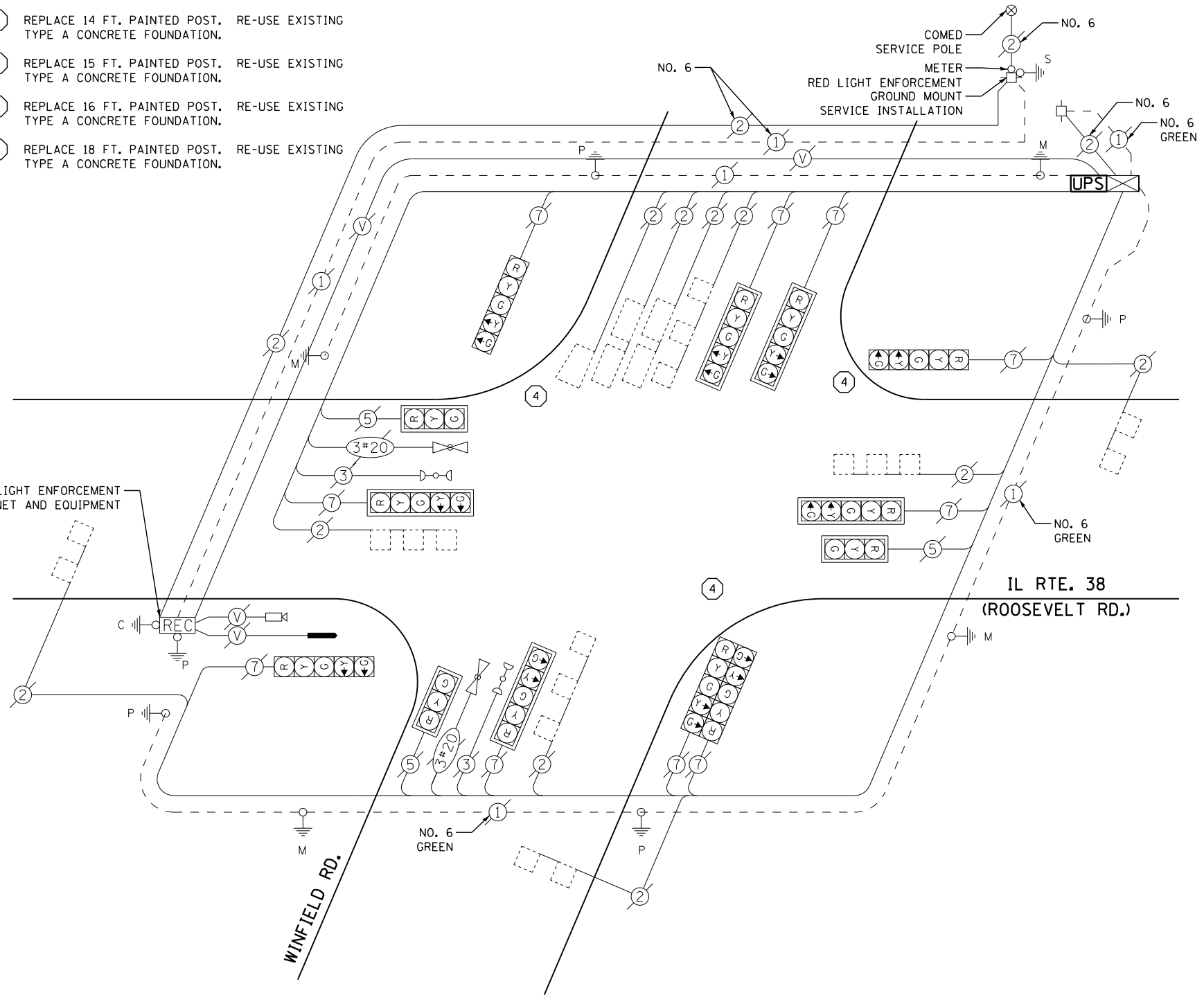
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	13	135	17	0.50	111
(YELLOW)	13	135	25	0.25	82
(GREEN)	13	135	15	0.25	49
ARROW	20	135	12	0.10	24
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	0	252	25	0.05	0
VIDEO SYSTEM	0	150	150	1.00	0
LIGHTING	0		250	1.00	0
FLASHER LED					
TOTAL =					366

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1  
 201 WEST CENTER COURT  
 SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT JOE STACHO  
 PHONE 630-424-5704  
 COMMONWEALTH EDISON

- 1 REPLACE 10 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- 2 REPLACE 14 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- 3 REPLACE 15 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- 4 REPLACE 16 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- 5 REPLACE 18 FT. PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

RED LIGHT ENFORCEMENT CABINET AND EQUIPMENT



**CABLE PLAN**

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
4	EACH	RELOCATE EXISTING SIGNAL HEAD
1	EACH	MODIFY EXISTING CONTROLLER CABINET
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE AND REPLACE ANCHOR BOLTS
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL

**REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT**

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

3 EACH SIGNAL POST

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 38 (ROOSEVELT ROAD) AT WINFIELD ROAD  
 SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM,  
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2014-090TS	DU PAGE	76	76
				CONTRACT NO. 62A42

TS #6200  
 WINFIELD

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	DRAWN - CC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - JDH	REVISED -
PLOT DATE = 2/2/2015	DATE -	REVISED -

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