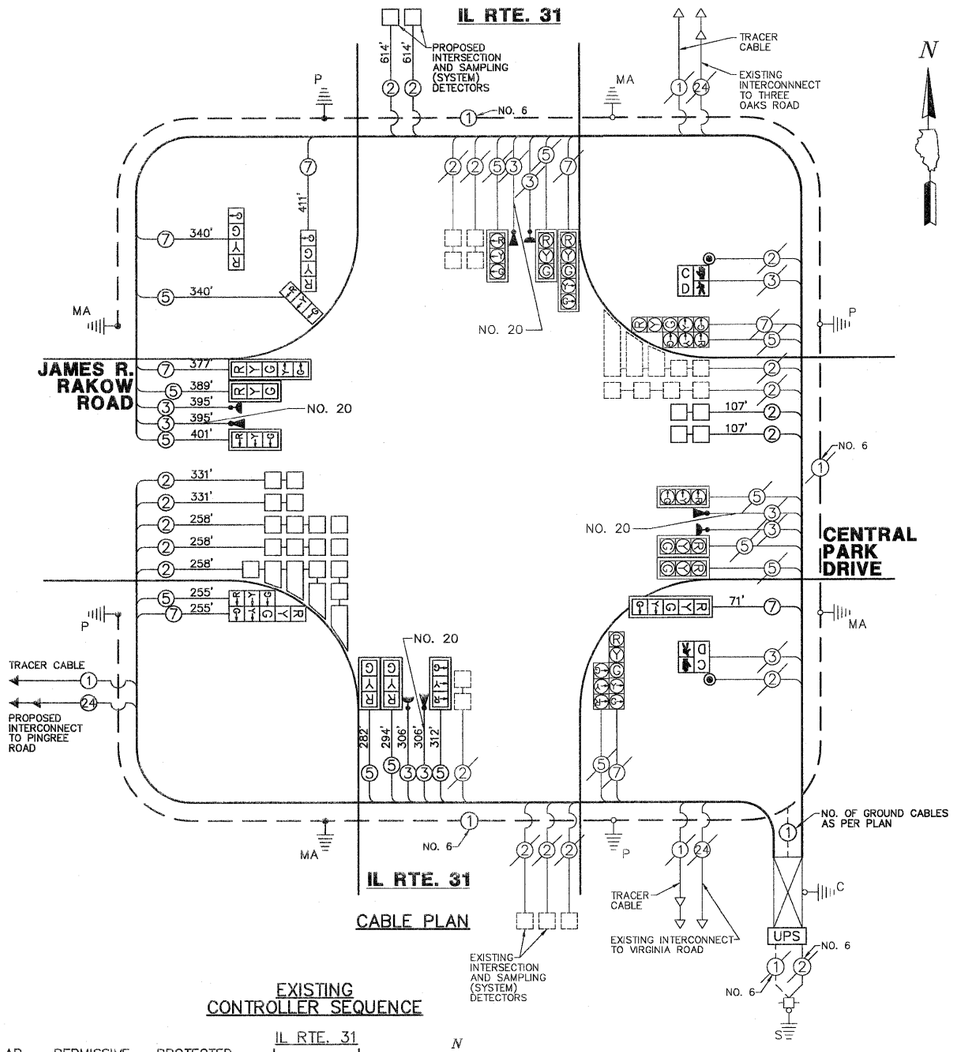
SCHEDULE OF QUANTITIES

JAMES R. RAKOW ROAD AT IL ROUTE 31 TRAFFIC SIGNAL MODERNIZATION

NO.	QUANT.	UNIT	
1.	45.00	SQ FT	SIGN PANEL - TYPE 1
2.	22.50	SQ FT	SIGN PANEL - TYPE 2
3.	178	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
4.	80	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
5.	41	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
6.	190	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
7.	530	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
8.	4	EACH	HANDHOLE
9.	2	EACH	HEAVY-DUTY HANDHOLE
10.	2	EACH	DOUBLE HANDHOLE
11.	281	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
12.	701	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
13.	2,273	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
14.	1,454	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
15.	2,878	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
16.	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT.
17.	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
18.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.
19.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 54 FT.
20.	8	FOOT	CONCRETE FOUNDATION, TYPE A
21.	30	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
22.	4	EACH	DRILL EXISTING HANDHOLE
23.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
24.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
25.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
26.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
27.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
28.	2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
29.	7	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
30.	7	EACH	INDUCTIVE LOOP DETECTOR
31.	1,402	FOOT	DETECTOR LOOP, TYPE I
32.	4	EACH	LIGHT DETECTOR
33.	1	EACH	LIGHT DETECTOR AMPLIFIER
34.	2	EACH	PEDESTRIAN PUSH-BUTTON
35.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
36.	1	EACH	MODIFY EXISTING CONTROLLER
37.	3,230	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
38.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
39.	7	EACH	REMOVE EXISTING HANDHOLE
40.	4	EACH	REMOVE EXISTING CONCRETE FOUNDATION
41.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
42.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
43.	493	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
44.	701	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED



CABLE PLAN

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

GHA GEWALT HAMILTON ASSOCIATES, INC.
850 Forest Edge Drive ▪ Vernon Hills, IL 60061
Consulting Engineers & Surveyors
847-478-9700
FAX: 847-478-9701

PATRICK ENGINEERING INC.
LISLE, ILLINOIS

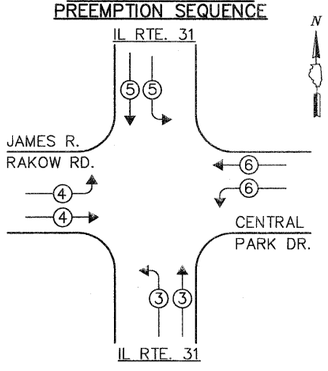
McHENRY COUNTY DIVISION OF TRANSPORTATION
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	22	135	17	0.50	187.0
SIGNAL (YELLOW)	22	135	25	0.25	137.5
SIGNAL (GREEN)	24	135	15	0.25	90.0
ARROW	12	135	12	0.10	14.4
PED.SIGNAL	2	90	25	1.00	50.0
CONTROLLER	1	100	100	1.00	100.0
BATTERY BACKUP	1		25	1.00	25.0
VIDEO SYSTEMS			150	1.00	
LUMINAIRE		400		0.50	
FLASHER				0.05	
				TOTAL =	603.9

ENERGY COSTS – BILLED TO: CITY OF CRYSTAL LAKE
(ADDRESS) 100 WEST MUNICIPAL COMPLEX

ENERGY SUPPLY – CONTACT: MS. AUDREY HELGESEN
PHONE: (847) 816-5225
COMPANY: COMED–LIBERTYVILLE

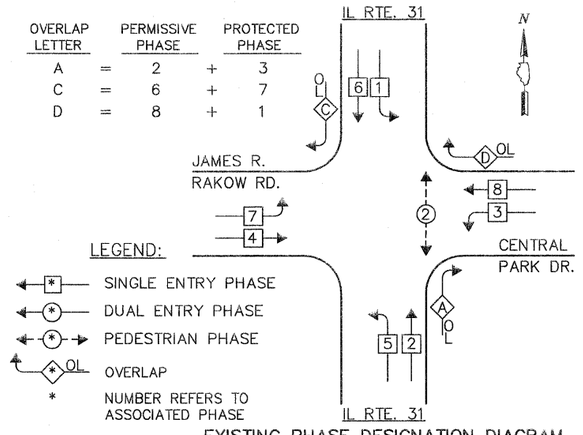
EXISTING & PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING & PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

EXISTING CONTROLLER SEQUENCE

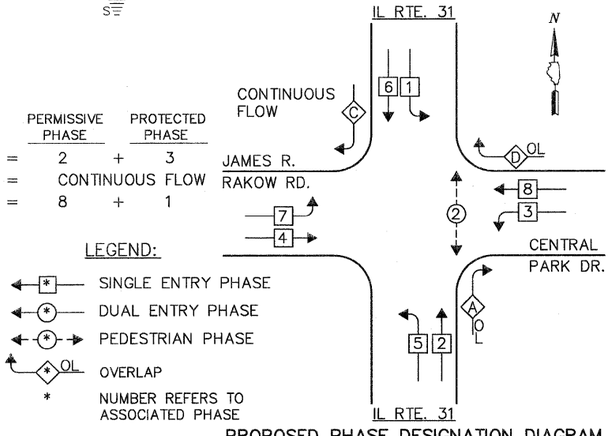
OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
C	=	6	+	7
D	=	8	+	1



EXISTING PHASE DESIGNATION DIAGRAM

PROPOSED CONTROLLER SEQUENCE

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



PROPOSED PHASE DESIGNATION DIAGRAM

FILE NAME = 4153.800–tr1.dwg	USER NAME = GHA	DESIGNED - DPB	REVISED -
		DRAWN - ZCW	REVISED -
	PLOT SCALE = N.T.S.	CHECKED - DPB	REVISED -
	PLOT DATE = 8/2/10	DATE - 8/2/10	REVISED -

MCHENRY COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES
IL RTE. 31 AND JAMES R. RAKOW RD./CENTRAL PARK DR.

SCALE: N.A. | SGNL. SHEET # 50 OF 65 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0336	05–00308–WR	McHENRY	606	359
		CONTRACT #:	63398	
		ILLINOIS FED. AID PROJECT		