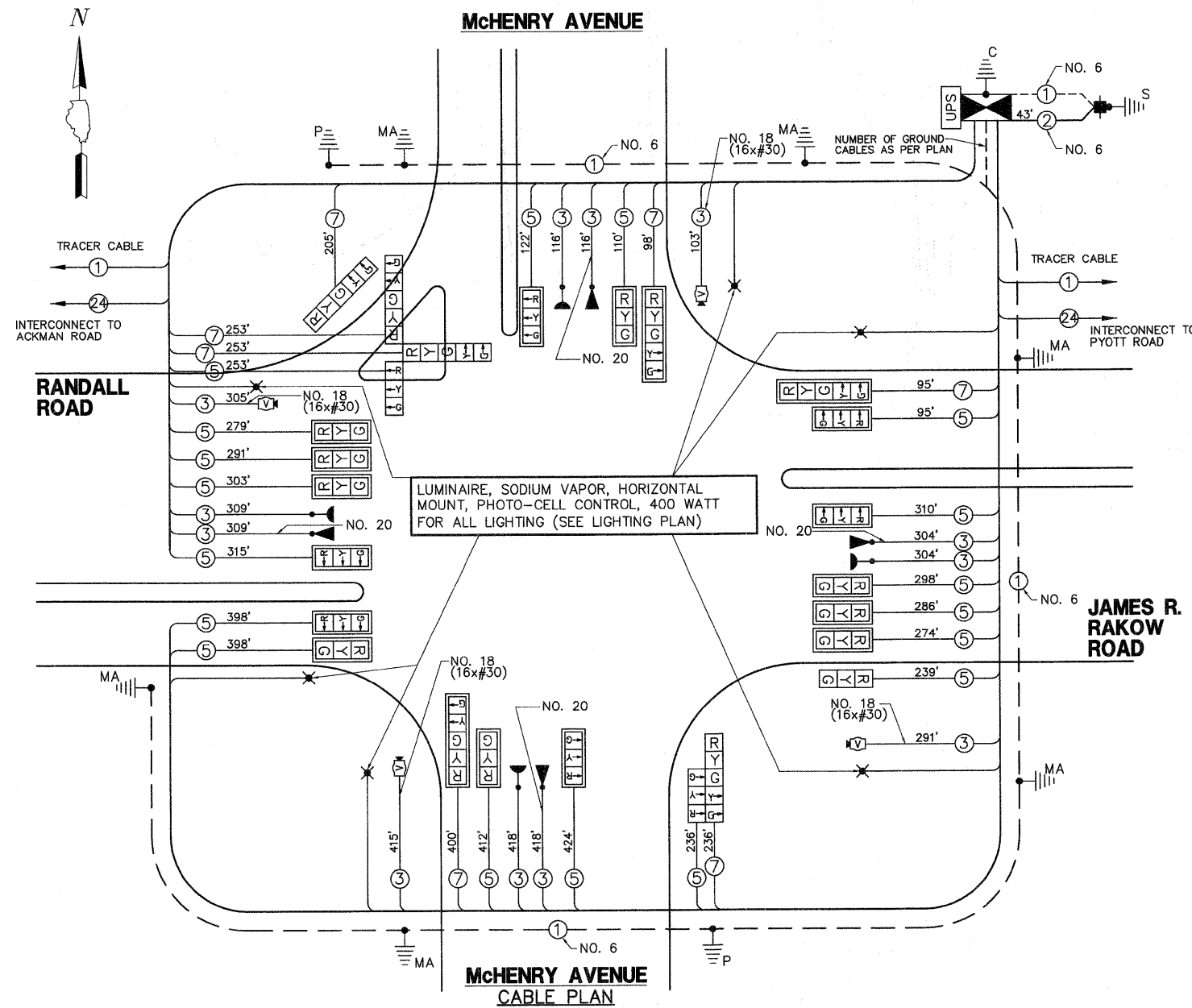


SCHEDULE OF QUANTITIES

JAMES R. RAKOW ROAD AT MCHENRY AVENUE TRAFFIC SIGNAL MODERNIZATION

NO.	QUANT.	UNIT	DESCRIPTION
1.	67.50	SQ FT	SIGN PANEL - TYPE 1
2.	23	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
3.	26	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
4.	76	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
5.	25	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
6.	58	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
7.	611	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
8.	2	EACH	HANDHOLE
9.	2	EACH	DOUBLE HANDHOLE
10.	135	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
11.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
12.	1	EACH	TRANSCEIVER - FIBER OPTIC
13.	1,147	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
14.	5,043	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
15.	1,540	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
16.	1,114	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18 3 PAIR
17.	43	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
18.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
19.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT.
20.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT.
21.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT.
22.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 64 FT.
23.	8	FOOT	CONCRETE FOUNDATION, TYPE A
24.	4	FOOT	CONCRETE FOUNDATION, TYPE C
25.	45	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
26.	63	FOOT	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER
27.	15	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
28.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
29.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
30.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
31.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
32.	1	EACH	SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION, 2-5 SECTION BRACKET MOUNTED
33.	18	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
34.	4	EACH	LIGHT DETECTOR
35.	1	EACH	LIGHT DETECTOR AMPLIFIER
36.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
37.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
38.	15	EACH	REMOVE EXISTING HANDHOLE
39.	12	EACH	REMOVE EXISTING CONCRETE FOUNDATION
40.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
41.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
42.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
43.	720	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
44.	1,147	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
45.	1	EACH	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION
46.	4	EACH	LED INTERNALLY ILLUMINATED STREET NAME SIGN



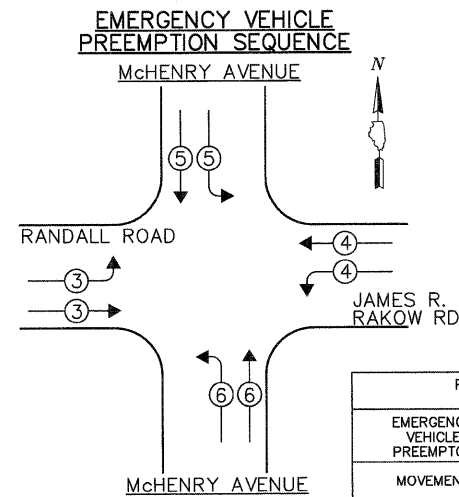
850 Forest Edge Drive • Vernon Hills, IL 60061
Consulting Engineers & Surveyors
847-479-9700
FAX: 847-479-9701



MCHENRY COUNTY DIVISION OF TRANSPORTATION TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	24	135	17	0.50	204.0
SIGNAL (YELLOW)	24	135	25	0.25	150.0
SIGNAL (GREEN)	24	135	15	0.25	90.0
ARROW	24	135	12	0.10	26.4
PED.SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.0
BATTERY BACKUP	1		25	1.00	25.0
VIDEO SYSTEMS	1		150	1.00	150.0
LUMINAIRE	6	400		0.50	1200.0
L.E.D. ST. NAME SIGN	4		64	0.50	128.0
FLASHER				0.05	
TOTAL =					2,073.4

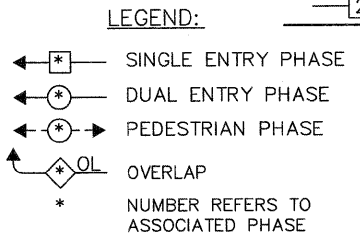
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

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



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	[Symbol]	[Symbol]	[Symbol]	[Symbol]

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5
C	= 6	+ 7
D	= 8	+ 1



CONTROLLER SEQUENCE

