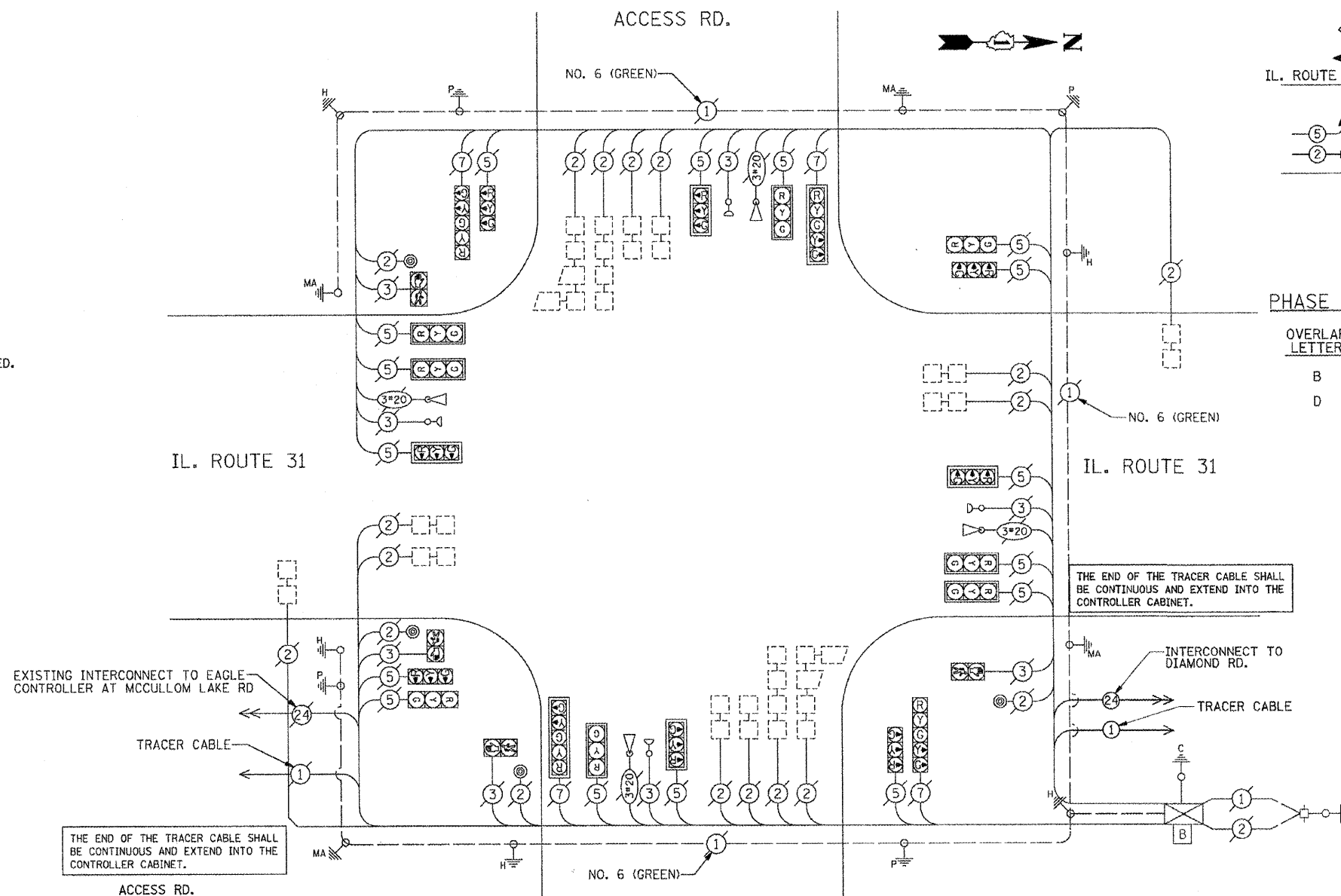


**CABLE PLAN LEGEND**

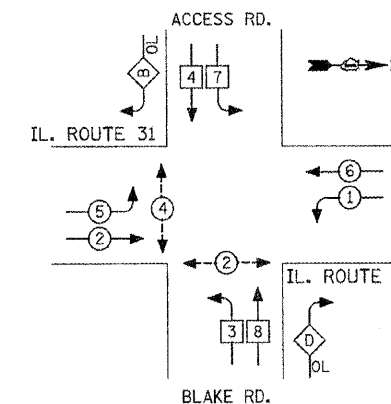
EXISTING PROPOSED

- Ⓞ 8" (200mm) TRAFFIC SIGNAL SECTION
- Ⓡ 12" (300mm) TRAFFIC SIGNAL SECTION
- Ⓢ 12" (300mm) PEDESTRIAN SIGNAL SECTION
- Ⓣ 12" (300mm) PEDESTRIAN SIGNAL SECTION
- Ⓚ CONTROLLER CABINET
- Ⓛ SERVICE INSTALLATION
- Ⓜ TELEPHONE CONNECTION
- Ⓤ VEHICLE DETECTOR, INDUCTION LOOP
- Ⓡ MAGNETIC DETECTOR
- Ⓢ EMERGENCY VEHICLE LIGHT DETECTOR
- Ⓣ CONFIRMATION BEACON
- Ⓛ PUSHBUTTON DETECTOR
- ② DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- ① GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
- ②④ FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
- Ⓡ SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
- Ⓡ RAILROAD CONTROL CABINET
- Ⓢ ILLUMINATED SIGN "NO LEFT TURN"
- Ⓢ ILLUMINATED SIGN "NO RIGHT TURN"
- Ⓡ GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C)
- Ⓡ GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- Ⓡ GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- Ⓡ VIDEO VEHICLE SENSOR
- Ⓡ UNINTERRUPTIBLE POWER SUPPLY

**PROPOSED CABLE PLAN**



**CONTROLLER SEQUENCE**



**LEGEND**

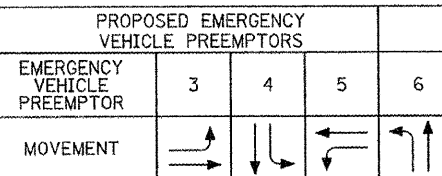
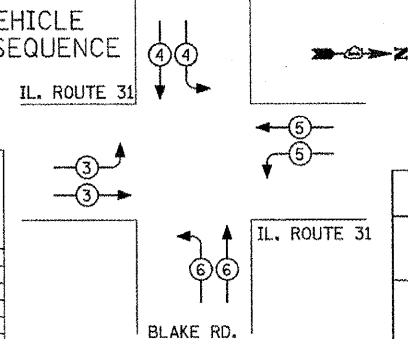
- Ⓢ DUAL ENTRY PHASE
- Ⓢ SINGLE ENTRY PHASE
- Ⓢ OVERLAP
- Ⓢ PEDESTRIAN PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**

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

**NOTE:**  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THE PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM INSTALLATION

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	TRANSCEIVER - FIBER OPTIC
1.0	EACH	DRILL EXISTING HANDHOLE
14.0	EACH	INDUCTIVE LOOP DETECTOR
1.0	EACH	UNINTERRUPTIBLE POWER SUPPLY

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

TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	32		12	0.10	38.4
PED. SIGNAL	4		25	1.00	100.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN					0.50
FLASHER LED					0.50
<b>TOTAL =</b>					<b>460.4</b>

ENERGY COSTS - BILLED TO: CITY OF MCHENRY (ADDRESS)  
ENERGY SUPPLY - CONTACT MR. DENNIS HRURY  
PHONE: 815 334-3313  
COMPANY: COM-ED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±L-2" (6m±L-0.6m)±
E - M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
		24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)
		30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)
		36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)
				ELECTRIC SERVICE	13.5 (4.1)
				SERVICE TO GROUND	13.5 (4.1)
				GROUND CABLE	1 (0.5)
				(POST MOUNTED)	6 (1.8)

FILE NAME = USER NAME = (1224\_user)  
DESIGNED - LC  
DRAWN - BID  
PLOT SCALE = 28,0000' / IN.  
PLOT DATE = 1/23/2009

REVISOR -  
REVISOR -  
REVISOR -  
REVISOR -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, SCHEDULE OF QUANTITIES  
IL. RTE. 31 (RICHMOND RD.) AT BLAKE ROAD**

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

F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
IL 31 2001-125R Mc HENRY 31 12  
CONTRACT NO. 60F79  
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT

**INFRASTRUCTURE ENGINEERING, INC.**  
33 W. MONROE ST., SUITE 1540  
CHICAGO, IL 60603-5322  
PHONE 312.425.9560  
FAX 312.425.9564