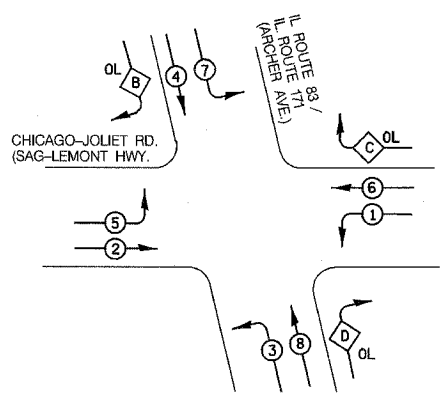


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	2006-004TS	COOK/DUPAGE	19	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 60B19				

**CONSTRUCTION NOTES:**

- ① REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW CONTROLLER AND TYPE IV CABINET, RE-USE EXISTING FOUNDATION.
- ② REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION, INSTALL NEW SIGNAL HEAD, L.E.D. 1-FACE, 5-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- ③ REMOVE EXISTING SIGNAL HEAD, 3-FACE, 5-SECTION, BRACKET MOUNTED, INSTALL NEW SIGNAL HEAD, L.E.D., 3-FACE, 5-SECTION, BRACKET MOUNTED.
- ④ REMOVE EXISTING SIGNAL HEAD, 1-FACE, 3-SECTION, INSTALL NEW SIGNAL HEAD, L.E.D. 1-FACE, 3-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- ⑤ REMOVE EXISTING SIGNAL HEAD, 2-FACE, 5-SECTION, BRACKET MOUNTED, INSTALL NEW SIGNAL HEAD, L.E.D., 2-FACE, 5-SECTION, BRACKET MOUNTED.
- ⑥ REMOVE EXISTING SIGNAL HEAD, 3-FACE, 1-3 SECTION, 2-5 SECTION, BRACKET MOUNTED, INSTALL NEW SIGNAL HEAD, L.E.D., 3-FACE, 1-3 SECTION, 2-5 SECTION, BRACKET MOUNTED.
- ⑦ INSTALL NEW SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED, AND TRAFFIC SIGNAL BACKPLATE.
- ⑧ INSTALL NEW ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO.14, 1 PAIR.
- ⑨ THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

**CONTROLLER SEQUENCE**



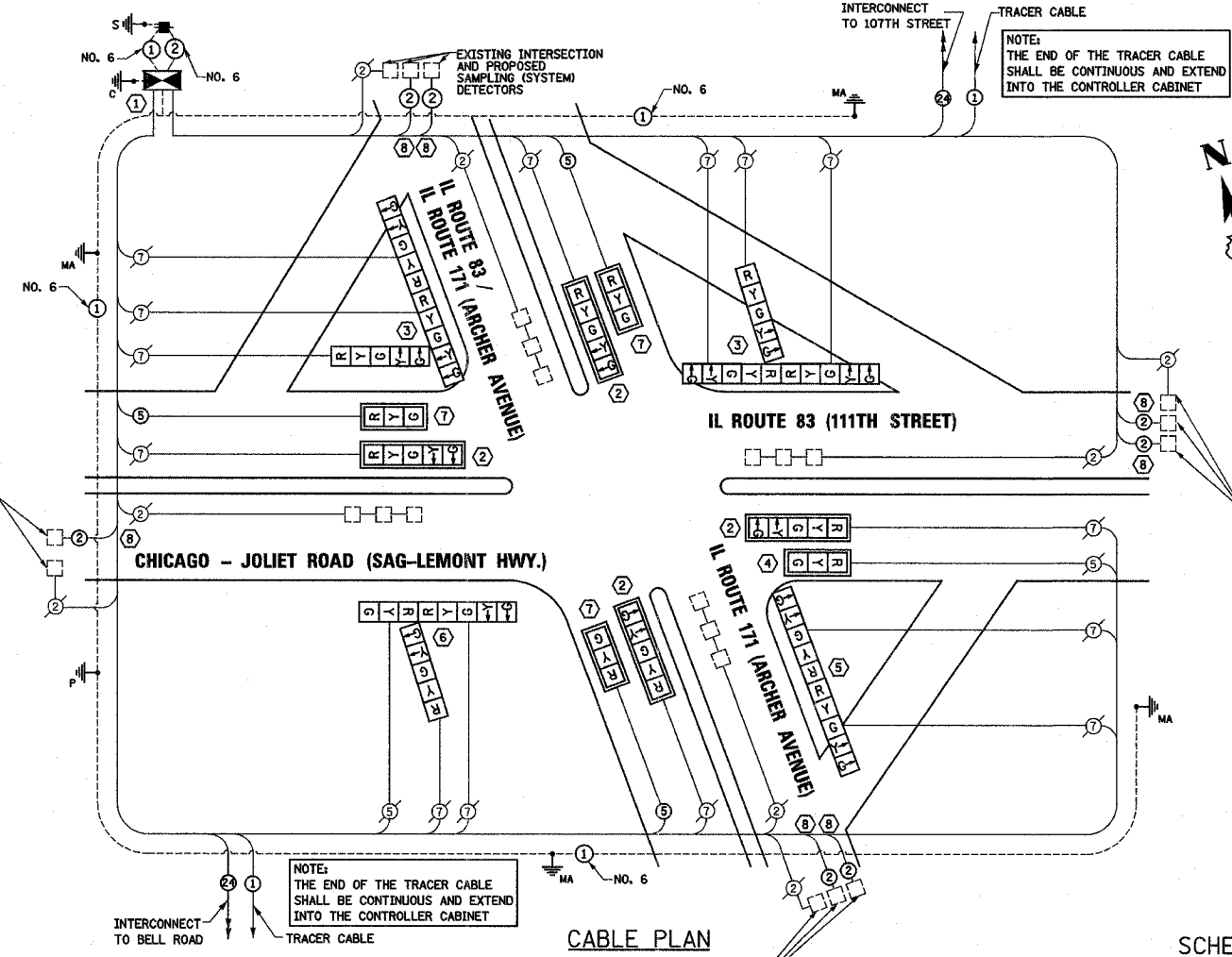
- LEGEND**
- ⊛ DUAL ENTRY PHASE
  - ⊙ SINGLE ENTRY PHASE
  - OL OVERLAP
  - ⊙ PEDESTRIAN PHASE
  - \* NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**

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

**CABLE PLAN LEGEND**

- |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | EXISTING | PROPOSED | 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
- GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)  
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 (H), OR CONTROLLER (C).  
GROUND ROD AT POST (P), OR MAST ARM POLE (MA).  
GROUND ROD AT ELECTRIC SERVICE INSTALLATION  
MICROWAVE VEHICLE SENSOR
- DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.



**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
TRANSCIEVER-FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	169
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	635
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1 PAIR	FOOT	3085
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1089
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 3-FACE, 1-3 SECTION, 2-5 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 3-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	15
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

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

TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE (LED)	XX OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136.0
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	28	135	12	0.10	33.6
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100	1.00	100.0
TOTAL =					429.6

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 - FOUNDATION	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20' + L - 2 = (6m+L-0.6m)=
C - M. ARM POLE		SIGNAL POST	2 (0.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

**SETON ENGINEERING**  
SERVICE CORPORATION  
CIVIL ENGINEERS  
19 S. BOTHWELL STREET  
PALATINE, ILLINOIS 60067  
VOICE: 847-776-7200 FAX: 847-776-7239

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
CABLE PLAN, SEQUENCE OF OPERATIONS, AND SCHEDULE OF QUANTITIES  
IL ROUTE 171 (ARCHER AVENUE) AT IL ROUTE 83 (111TH STREET) LEMONT, ILLINOIS  
SCALE: N.T.S. DRAWN BY BR  
DATE 08-15-06 DESIGNED BY VO  
CHECKED BY TJM