

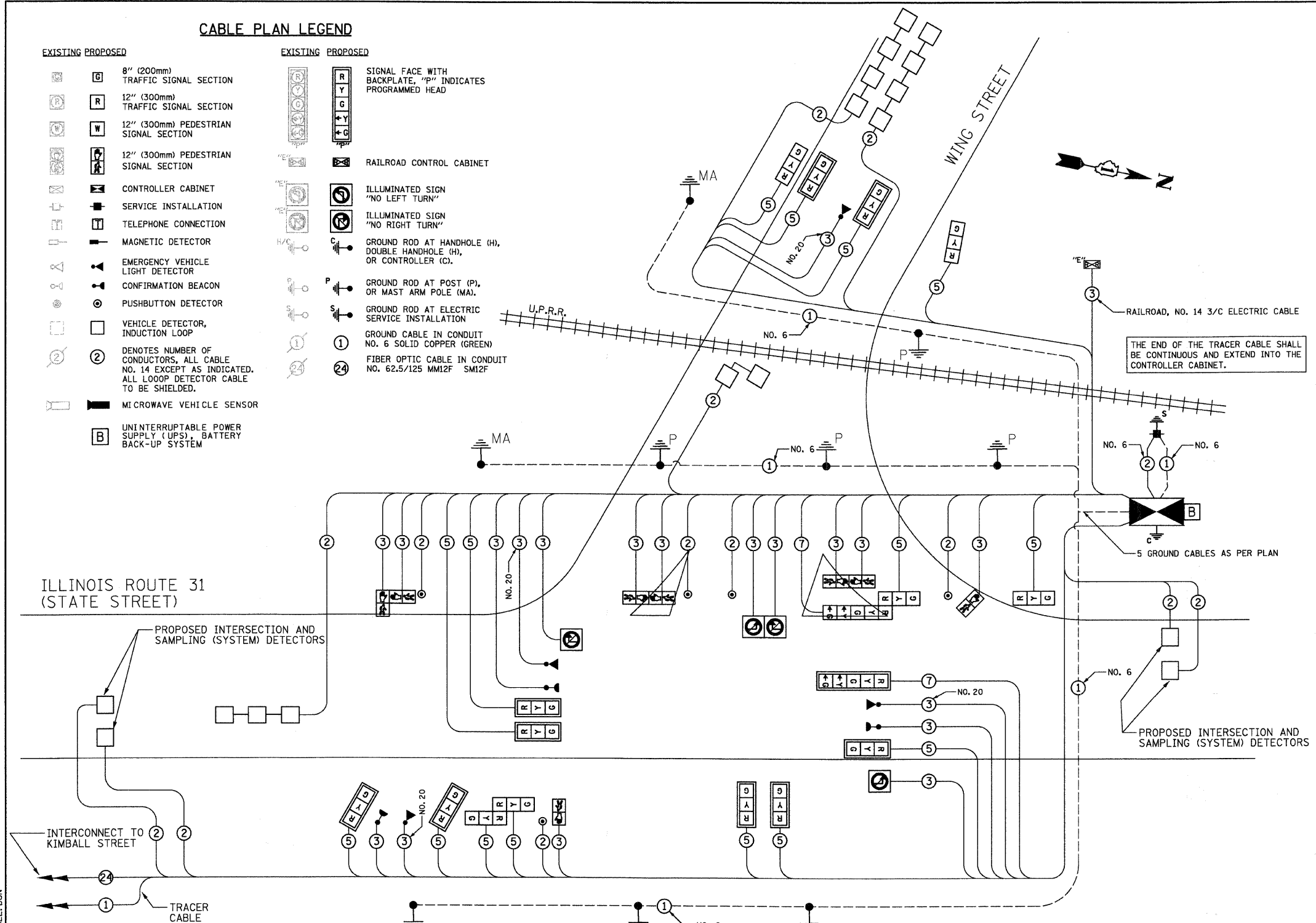
**CABLE PLAN LEGEND**

- |   |   |  |   |
|---|---|--|---|
| <b>EXISTING</b>   | <b>PROPOSED</b>   | <b>EXISTING</b>  | <b>PROPOSED</b>                                       |
|   |   |  |   |
| 8" (200mm) TRAFFIC SIGNAL SECTION   | 12" (300mm) TRAFFIC SIGNAL SECTION  | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD          |   |
|   |   |  |   |
| 12" (300mm) PEDESTRIAN SIGNAL SECTION   | 12" (300mm) PEDESTRIAN SIGNAL SECTION   | RAILROAD CONTROL CABINET   |   |
|   |   |  |   |
| CONTROLLER CABINET  | CONTROLLER CABINET  | ILLUMINATED SIGN "NO LEFT TURN"                                    | ILLUMINATED SIGN "NO RIGHT TURN"                      |
|   |   |  |   |
| SERVICE INSTALLATION  | SERVICE INSTALLATION  | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) | GROUND ROD AT POST (P), OR MAST ARM POLE (MA)         |
|   |   |  |   |
| TELEPHONE CONNECTION  | TELEPHONE CONNECTION  | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)    |
|   |   |  |   |
| MAGNETIC DETECTOR   | MAGNETIC DETECTOR   | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F |
|   |   |  |   |
| EMERGENCY VEHICLE LIGHT DETECTOR  | EMERGENCY VEHICLE LIGHT DETECTOR  | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)    |
|   |   |  |   |
| CONFIRMATION BEACON   | CONFIRMATION BEACON   | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F |
|   |   |  |   |
| PUSHBUTTON DETECTOR   | PUSHBUTTON DETECTOR   | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)    |
|   |   |  |   |
| VEHICLE DETECTOR, INDUCTION LOOP  | VEHICLE DETECTOR, INDUCTION LOOP  | GROUND ROD AT ELECTRIC SERVICE INSTALLATION                        | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F |
|   |   |  |   |
| DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |  |   |
|   |   |  |   |
| MICROWAVE VEHICLE SENSOR  | MICROWAVE VEHICLE SENSOR  |  |   |
|   |   |  |   |
| UNINTERRUPTIBLE POWER SUPPLY (UPS) BATTERY BACK-UP SYSTEM   | UNINTERRUPTIBLE POWER SUPPLY (UPS) BATTERY BACK-UP SYSTEM   |  |   |

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	64
SIGN PANEL - TYPE 2	SQ FT	25
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	576
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	28
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	51
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	118
CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL	FOOT	12
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	51
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	535
HANDHOLE	EACH	7
HEAVY-DUTY HANDHOLE	EACH	3
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	898
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	900
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3500
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3200
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	400
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2700
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	40
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 11 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 30 FT. AND 38 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	22
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	9
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	3
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	8
DETECTOR LOOP, TYPE I	FOOT	541
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	5
ILLUMINATED SIGN, LED	EACH	4
RAILROAD, FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1000
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	1100
ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	120
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
RAILROAD LIABILITY INSURANCE	L SUM	1

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



**CABLE PLAN**

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE (INCAND.)	WATTAGE LED	% OPERATION	
SIGNAL (RED)	17	135	17	0.50	144.50
(YELLOW)	17	135	25	0.25	106.25
(GREEN)	17	135	15	0.25	63.75
ARROW	4	135	12	0.10	4.80
PED. SIGNAL	8	90	25	1.00	200.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN	4		25	0.05	5.00

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION  
 201 WEST CENTER COURT  
 SCHAMBURG, ILLINOIS 60196-1096  
 CONTACT: KATHY NYSTROM  
 PHONE: (847) 816-5489  
 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'
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m±L-0.6m±)	
		CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
		FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA WILL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION WILL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**RH&A**  
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 Consulting Engineers  
 Timbers Professional Center  
 220 West River Drive, St. Charles, IL 60174  
 Phone - 630.584.3530 Fax - 630.584.3047

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 ILLINOIS ROUTE 31 AND WING STREET  
 CABLE PLAN AND SCHEDULE OF QUANTITIES  
 SCALE: VERT. 1"=20'  
 HORIZ. 1"=20'  
 DATE: FEBRUARY 13, 2008  
 DRAWN BY: CMC  
 DESIGN BY: CMC  
 CHECKED BY: JS