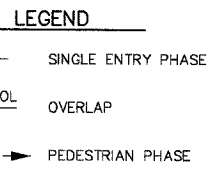
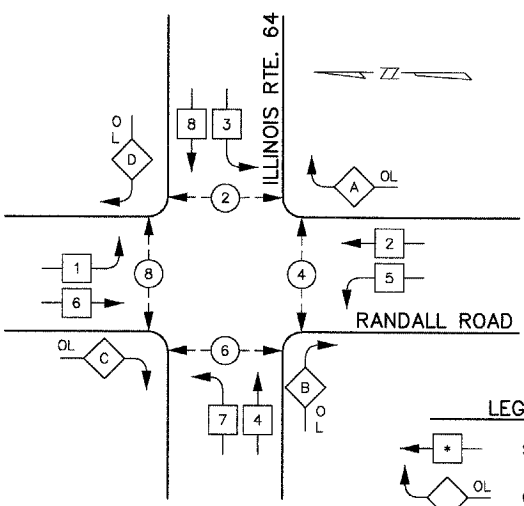


F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHTS.
336	99-00243-00-PV	KANE	268
CONTRACT NO. 83782			
CABLE PLAN			
F.H.W.A. REG.5 ILLINOIS PROJECT F-0336(O)			

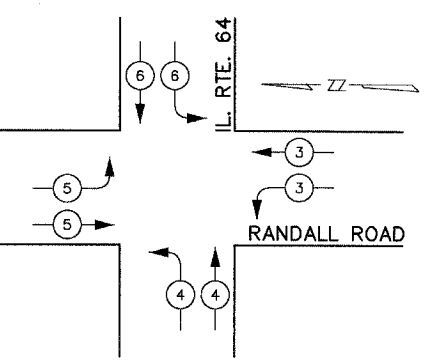
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2	+ 3
B =	4	+ 5
C =	6	+ 7
D =	8	+ 1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS

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

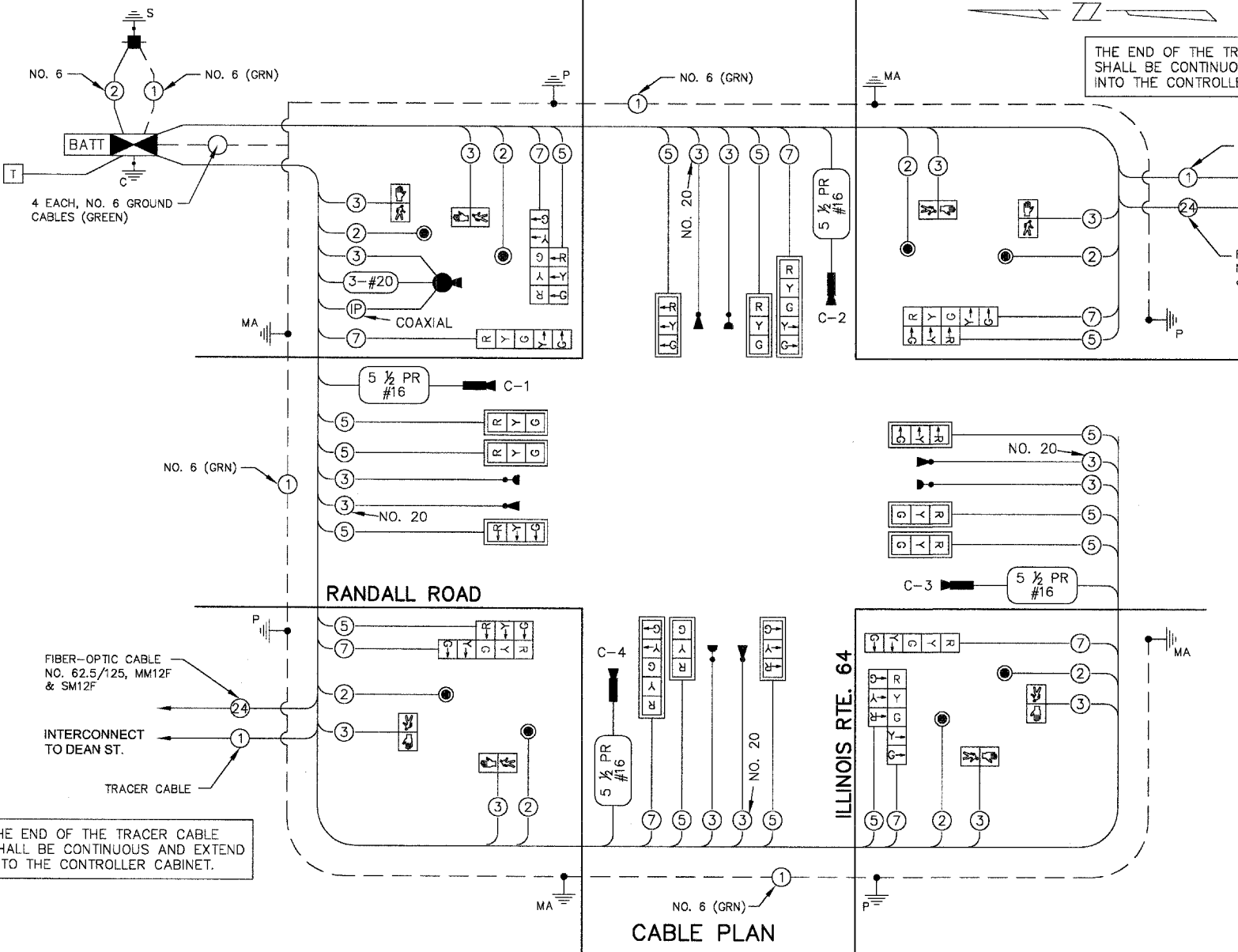
I.D.Q.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	x WATTAGE			TOTAL WATTAGE
		INCAND.	LED	% OPERATION	
SIGNAL (RED)	22	125	17	0.50	187.0
(YELLOW)	22	125	25	0.25	137.5
(GREEN)	22	125	15	0.25	82.5
ARROW	16	125	12	0.10	19.2
PED SIGNAL	8	25	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
VIDEO DETECT	5	25	23	1.00	115.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	841.2

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL 69174

CONTACT: Tom Lesiewicz (630) 377-2488
COMPANY: St. Charles Electric Department

FOUNDATION	DEPTH FT. (m)	CABLE SLACK	FT. (m)	VERTICAL CABLE	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - 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)=
<30' MA 30" (750mm) DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
<40' MA 30" (750mm) DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
<40' MA 36" (900mm) DIA.	11 (3.4)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
<50' MA 36" (900mm) DIA.	13 (4.0)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
>50' MA 36" (900mm) DIA.	15 (4.6)			POST MOUNTED	6(1.8)



THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM
55	SQ FT	SIGN PANEL - TYPE 1
26	SQ FT	SIGN PANEL - TYPE 2
115	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
200	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
170	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
700	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6	EACH	DOUBLE HANDHOLE
485	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1	EACH	VIDEO DETECTION SYSTEM (FULL INTERSECTION)
1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
1	EACH	VIDEO TRANSMISSION SYSTEM
1	EACH	TRANSCIVER - FIBER OPTIC
1933	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C
3215	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C
3870	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C
2205	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C
1140	FOOT	ELECTRICAL CABLE IN CONDUIT, COMMUNICATION NO. 16 5.5 PAIR
126	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 8 2C
996	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1280	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED
85	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL

QTY	UNIT	ITEM
4	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45' M.H.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45' M.H.
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45' M.H.
19	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D
60	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM
4	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
13	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
10	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE, 3-SECTION, MAST ARM MTD
2	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE, 3-SECTION, BRACKET MTD
2	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE, 5-SECTION, MAST ARM MTD
4	EACH	SIGNAL HEAD, POLY. L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD
8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED
1	EACH	SERVICE INSTALLATION, GROUND MOUNTED

* 100% TO BE PAID BY CITY OF ST. CHARLES

CABLE PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
[G]	[G]	8" (200mm) TRAFFIC SIGNAL SECTION
[R]	[R]	12" (300mm) TRAFFIC SIGNAL SECTION
[W]	[W]	12" (300mm) PEDESTRIAN SIGNAL SECTION
[Symbol]	[Symbol]	12" (300mm) PEDESTRIAN SIGNAL SECTION
[Symbol]	[Symbol]	CONTROLLER CABINET
[BATT "E"]	[BATT]	UNINTERRUPTIBLE POWER SUPPLY
[Symbol]	[Symbol]	SERVICE INSTALLATION
[T]	[T]	TELEPHONE CONNECTION
[Symbol]	[Symbol]	MAGNETIC DETECTOR
[Symbol]	[Symbol]	EMERGENCY VEHICLE LIGHT DETECTOR
[Symbol]	[Symbol]	CONFIRMATION BEACON
[Symbol]	[Symbol]	PUSHBUTTON DETECTOR
[Symbol]	[Symbol]	VEHICLE DETECTOR, INDUCTION LOOP
[2]	[2]	DENOTES NUMBER OF CONDUCTORS ALL CABLE NO. 14 EXCEPT AS INDICATED ALL LOOP DETECTOR CABLE TO BE SHIELDED
[1]	[1]	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
[24]	[24]	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F
[IP]	[IP]	SINGLE PAIR IN COAXIAL CABLE
[Symbol]	[Symbol]	MACHINE VISION PROCESSOR (MVP)
[Symbol]	[Symbol]	DOME CAMERA (PTZ)
[Symbol]	[Symbol]	SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD.
[Symbol]	[Symbol]	RAILROAD CONTROL CABINET
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
[H/C]	[H/C]	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER
[P]	[P]	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
[S]	[S]	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE ONLY EAGLE BRAND OF CONTROLLERS & AUTO-SCOPE BRAND OF VIDEO VEHICLE DETECTION EQUIPMENT SO AS TO MATCH EXISTING SYSTEMS OR LOCAL STANDARDS.

DIVISION OF TRANSPORTATION
CABLE PLAN
PHASE DESIGNATION DIAGRAM
SCHEDULE OF QUANTITIES

RANDALL RD. & ILLINOIS RTE. 64

NAME	DATE
REVISIONS	

SCALE: NONE
DATE: SEPTEMBER 23, 2004

DRAWN BY: JMH
DESIGNED BY: DMH
CHECKED BY: JRL