

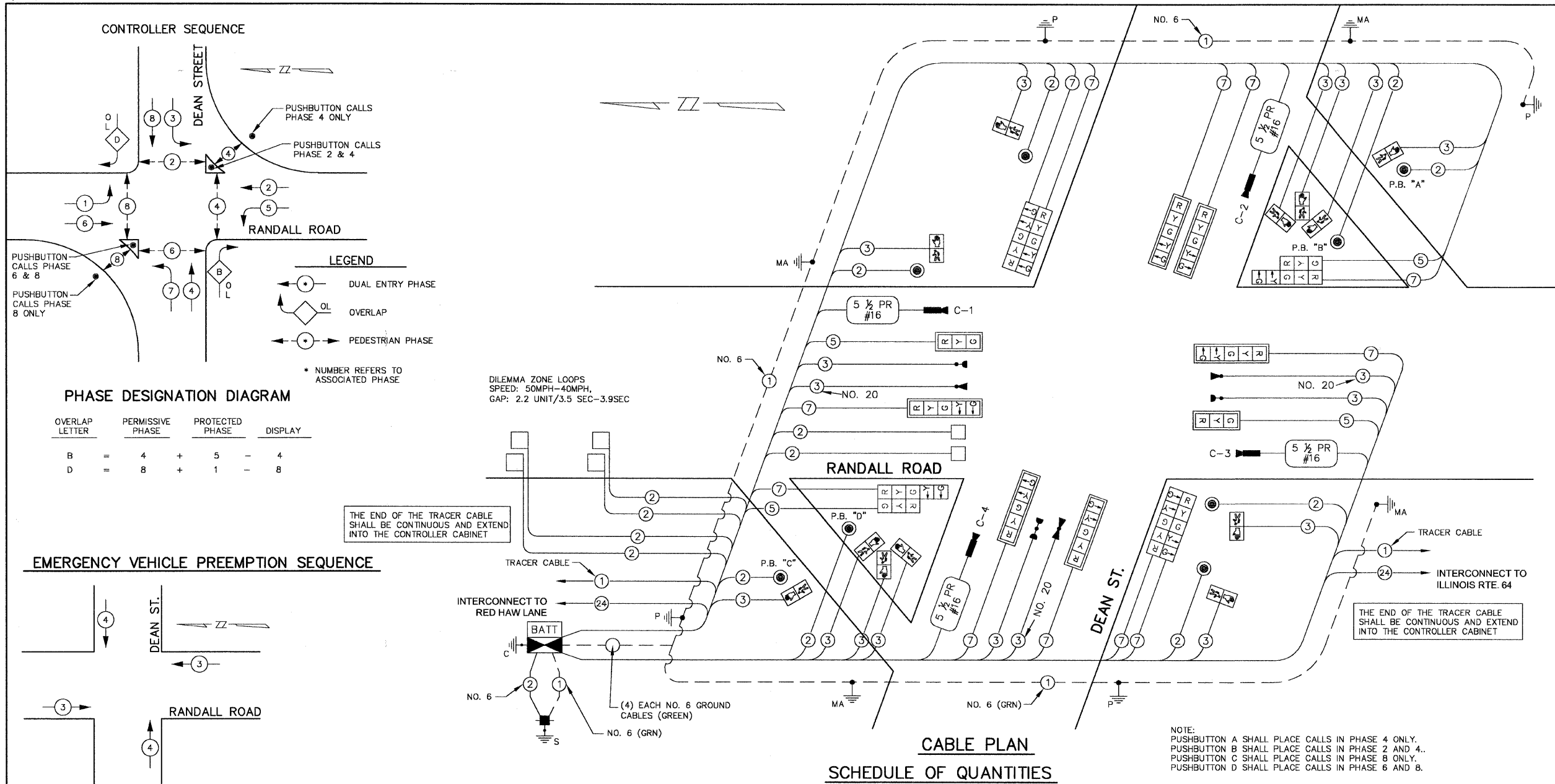
CABLE PLAN LEGEND

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

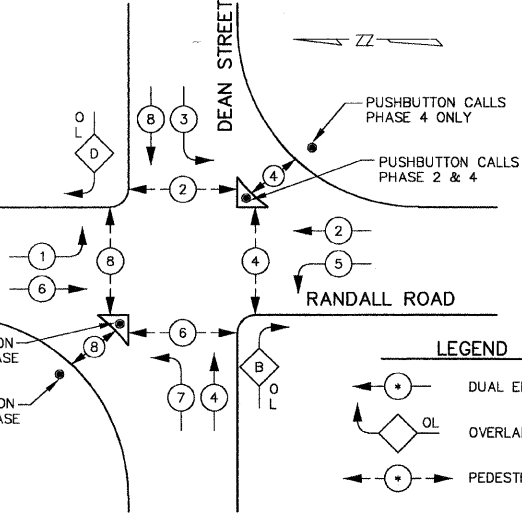
PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE ONLY EAGLE BRAND OF CONTROLLERS & AUTO-SCOPE BRAND OF VIDEO VEHICLE DETECTION EQUIPMENT SO AS TO MATCH EXISTING SYSTEMS OR LOCAL STANDARDS.

NAME	DATE	REVISIONS

DIVISION OF TRANSPORTATION
CABLE PLAN
 PHASE DESIGNATION DIAGRAM
 SCHEDULE OF QUANTITIES
RANDALL RD. & DEAN ST.
 SCALE: NONE
 DATE: SEPTEMBER 23, 2004
 DRAWN BY: JMH
 DESIGNED BY: DMH
 CHECKED BY: JRL



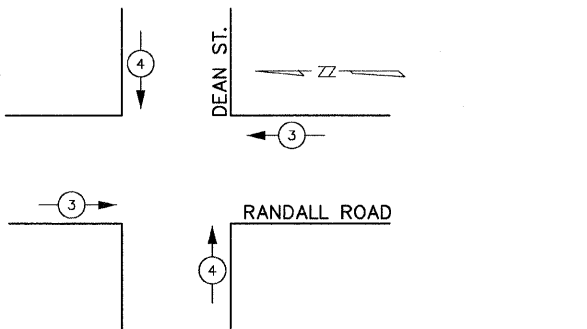
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	←	→	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE	% OPERATION		
SIGNAL (RED)	16	125	17	0.50	136.0
(YELLOW)	16	125	25	0.25	100.0
(GREEN)	16	125	15	0.25	90.0
ARROW	12	125	12	0.10	14.4
PED. SIGNAL	12	125	25	1.00	300.0
CONTROLLER	1	120	100	1.00	100.0
ILLUM. SIGN				0.05	0.0
VIDEO DETECT	4	23	1.00		92.0
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 802.4

CITY OF ST. CHARLES
 2 EAST MAIN STREET
 ST. CHARLES, IL 60174

CONTACT: Tom Lesiewicz (630) 377-4486
 COMPANY: St. Charles Electric Department

QTY	UNIT	ITEM
27	SQ FT	SIGN PANEL - TYPE 1
410	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
70	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
20	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
20	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
16	FOOT	CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL
105	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
560	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6	EACH	HANDHOLE
2	EACH	DOUBLE HANDHOLE
535	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET

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)

CABLE PLAN SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM
1	EACH	TRANSCEIVER - FIBER OPTIC
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1	EACH	VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION)
1	EACH	VIDEO TRANSMISSION SYSTEM
1764	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C
3465	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C
1016	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C
3084	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C
1330	FOOT	ELECTRICAL CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
61	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
832	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
654	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
1120	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION, NO. 16, 5.5 PAIR
2	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT. WITH 15 FT. LIGHTING ARM AT 40 FT. MTD. HEIGHT
19	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D

QTY	UNIT	ITEM
60	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER
8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM
6	EACH	INDUCTIVE LOOP DETECTOR
162	FOOT	DETECTOR LOOP, TYPE 1
3	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
10	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
2	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 3-SECTION, MAST ARM MTD
6	EACH	SIGNAL HEAD, POLY, L.E.D., 1-FACE, 5-SECTION, MAST ARM MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 5-SECTION, BRACKET MTD
2	EACH	SIGNAL HEAD, POLY, L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD
6	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 3-FACE, BRACKET MOUNTED
1	EACH	SERVICE INSTALLATION, GROUND MOUNTED

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