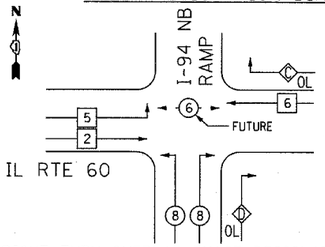
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
335	119R-2	LAKE	439	195
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PHASE DESIGNATION DIAGRAM



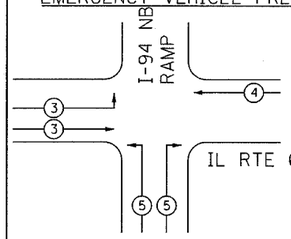
LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- • NUMBER REFERS TO ASSOCIATED PHASE

RIGHT TURN OVERLAP PHASE DESIGNATION

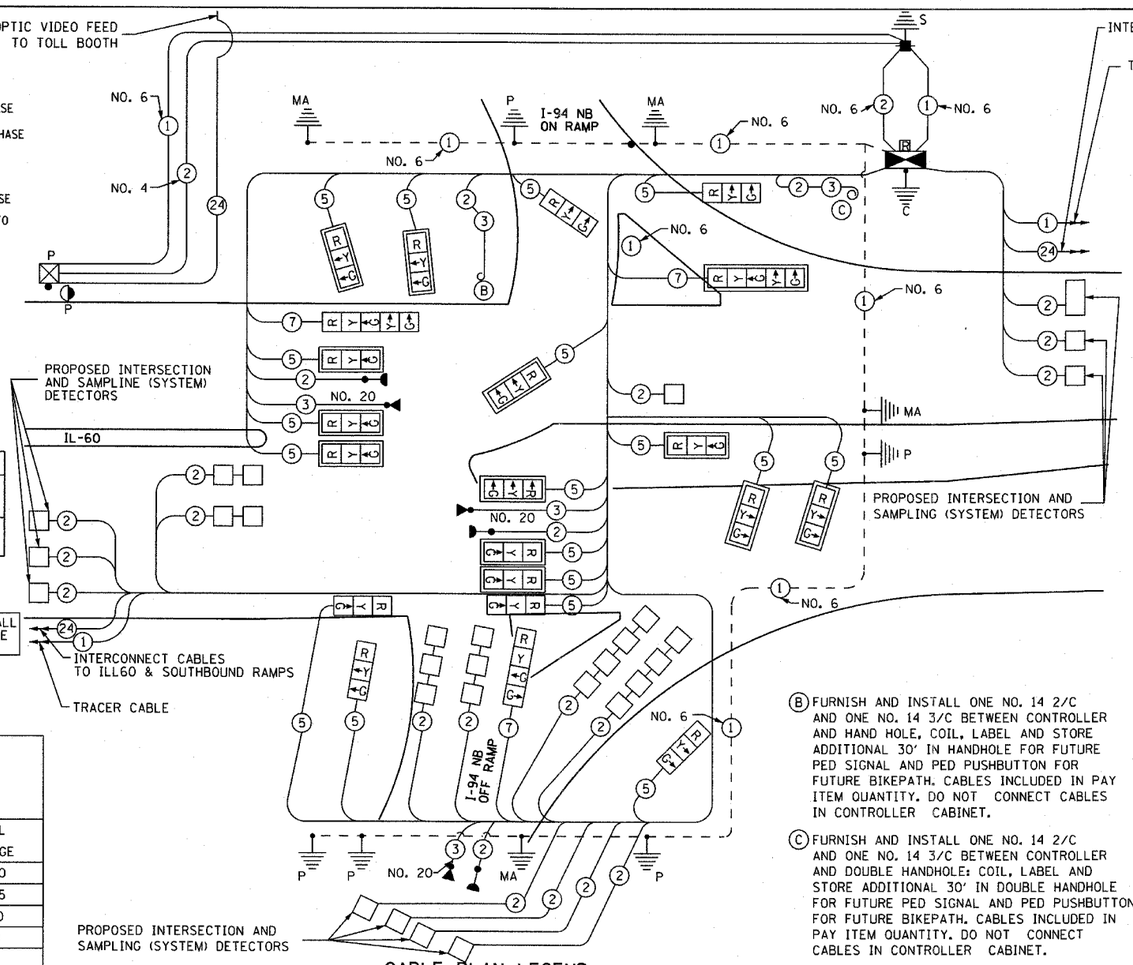
OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	8
D	=	8	+	5

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

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



(B) FURNISH AND INSTALL ONE NO. 14 2/C AND ONE NO. 14 3/C BETWEEN CONTROLLER AND HAND HOLE, COIL, LABEL AND STORE ADDITIONAL 30' IN HANDHOLE FOR FUTURE PED SIGNAL AND PED PUSHBUTTON FOR FUTURE BIKEPATH. CABLES INCLUDED IN PAY ITEM QUANTITY. DO NOT CONNECT CABLES IN CONTROLLER CABINET.

(C) FURNISH AND INSTALL ONE NO. 14 2/C AND ONE NO. 14 3/C BETWEEN CONTROLLER AND DOUBLE HANDHOLE: COIL, LABEL AND STORE ADDITIONAL 30' IN DOUBLE HANDHOLE FOR FUTURE PED SIGNAL AND PED PUSHBUTTON FOR FUTURE BIKEPATH. CABLES INCLUDED IN PAY ITEM QUANTITY. DO NOT CONNECT CABLES IN CONTROLLER CABINET.

SCHEDULE OF QUANTITIES - ILL 60 @ I-94 NB RAMP SIGNALS		
		I-94 NB RAMP
UNIT	ITEM	QUANT.
SQ FT	SIGN PANEL - TYPE 1	10
EACH	SERVICE INSTALLATION, GROUND MOUNT	1
FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	860
FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	243
FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	10
FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	85
FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	486
EACH	HANDHOLE	8
EACH	HEAVY-DUTY HANDHOLE	2
EACH	DOUBLE HANDHOLE	2
FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK	1235
EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	1
EACH	TRANSCEIVER - FIBER OPTIC	1
FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1/C	841
FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2/C	807
FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5/C	4346
FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7/C	575
FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	6553
FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	58
FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED SHIELDED	807
EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT.	4
EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT	1
EACH	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT	1
EACH	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT	1
EACH	STEEL MAST ARM ASSEMBLY AND POLE, 50 FT	1
EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 44FT & 52 FT	1
FOOT	CONCRETE FOUNDATION, TYPE A	24
FOOT	CONCRETE FOUNDATION, TYPE C	4
FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	60
EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	11
EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	7
EACH	SIGNAL HEAD, L.E.D., 1-FACE, 4-SECTION, BRACKET MOUNTED	1
EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	1
EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	1
EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED	12
EACH	INDUCTIVE LOOP DETECTOR	17
EACH	LIGHT DETECTOR	3
EACH	LIGHT DETECTOR AMPLIDIER	2
FOOT	DETECTOR LOOP, TYPE III	1521
EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION	1
EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	1
EACH	REMOVE EXISTING HANDHOLE	15
EACH	REMOVE EXISTING CONCRETE FOUNDATION	9
EACH	UNINTERRUPTABLE POWER SUPPLY	1
EACH	TEMPORARY TRAFFIC SIGNAL TIMINGS	1

REVISED
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS
ILL RTE. 60 & I-94 NORTHBOUND RAMPS

TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	23		17	0.50	195.50
(YELLOW)	23		25	0.25	143.75
(GREEN)	24		15	0.25	90.00
ARROW	4		12	0.10	4.80
PED. SIGNAL	0		25	1.00	0
CONTROLLER	1		100	1.00	100.00
LUMINAIRES	0	310		0.50	0.00
FLASHER	0				0

EXISTING SERVICE LOCATION (REVISED) TOTAL = 534.05

ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING SERVICE LOCATION
ENERGY COSTS TO:
ENERGY SUPPLY CONTACT: JOHN D. PRIBICH
PHONE: 630-437-2212
COMPANY: COMM. EDISON

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 - MAST ARM POLE			SIGNAL POST	2	(1.0)			
24" (600mm)	10	(3.0)	CONTROLLER CAB.	1	(0.5)	BRACKET MOUNTED	13	(4.0)
30" (750mm)	15	(4.6)	FIBER OPTIC	13	(4.0)	PED. PUSHBUTTON	4	(1.2)
36" (900 mm)	15	(4.6)	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)

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
R	R	UNINTERRUPTIBLE POWER SUPPLY (MOUNT ON BACK OF CONTROL CABINET)

EXISTING	PROPOSED	
R Y G Y G "P"	R Y G Y G "P"	SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
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
P		SURVEILLANCE CAMERA
P		CCTV FIELD TERMINAL CABINET

EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
IL RTE 60 & NORTHBOUND I-94 RAMPS

S.N.
SCALE: NONE
DATE: MAY 8, 2007
DESIGNED BY: JM
DRAWN BY: PK
CHECKED BY: CK