PREPARED BY:
CEMCON, Ltd.
Consulting Engineers & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
(630) 851-4566 FAX 851-4040
E-Mail: cad@cemcon.com Website: www.cemcon.com

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	3152WRS	COOK	195	107
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

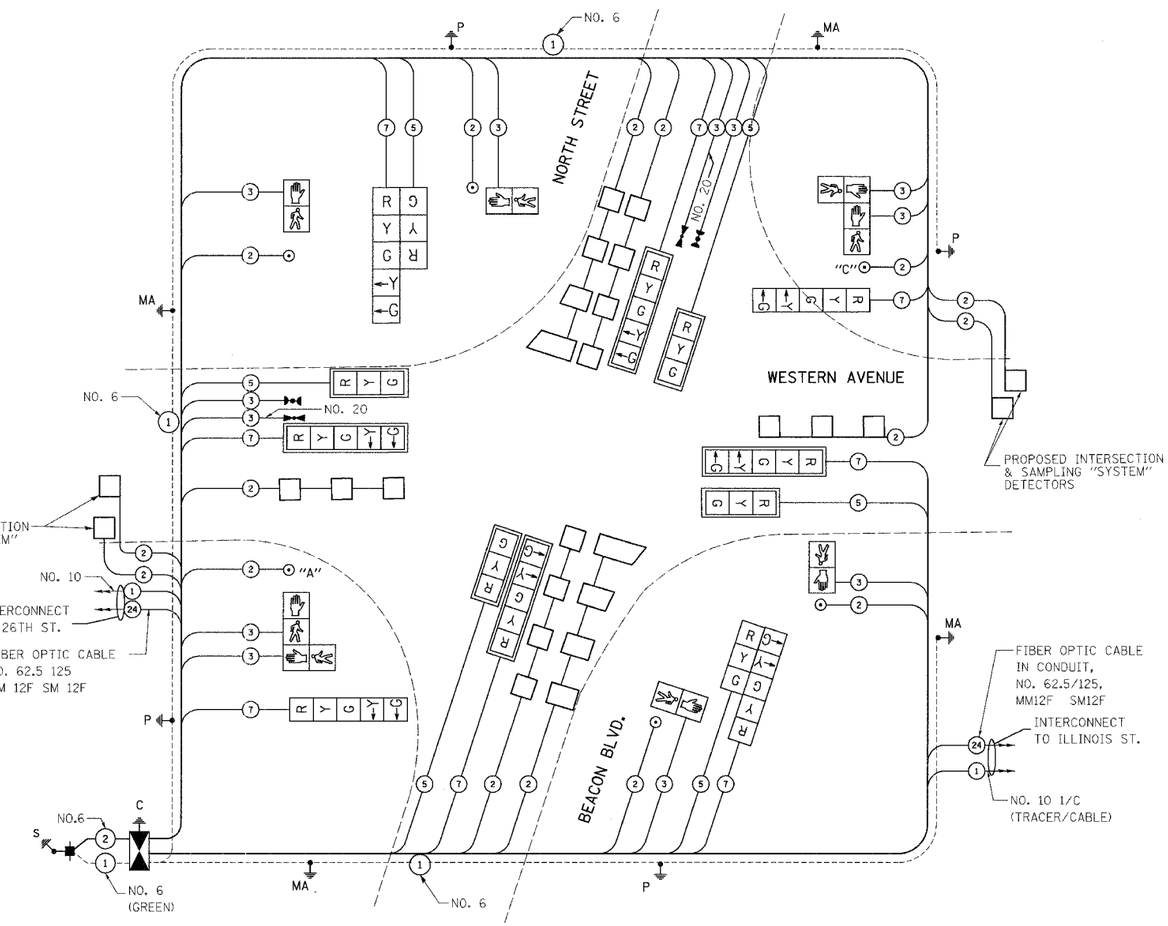
CONTRACT NO. 62742

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	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
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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.
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
		SIGNAL FACE W/BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION

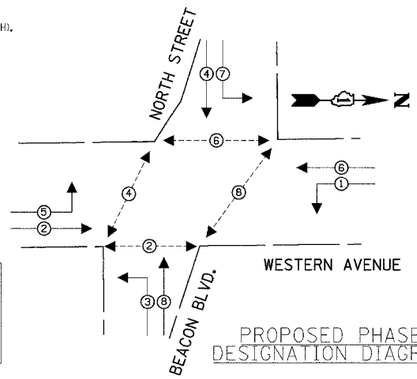
SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL, TYPE 1	SQ FT	48
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	120
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	210
HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	247
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1007
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1957
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	987
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1562
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2569
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	69
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	4
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	24
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	941
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	6
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE	EACH	4
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6391
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	2
REMOVE EXISTING CONCRETE FOUNDATION	EACH	8
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6, 1C	FOOT	585
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	539
UNINTERRUPTIBLE POWER SUPPLY	EACH	1



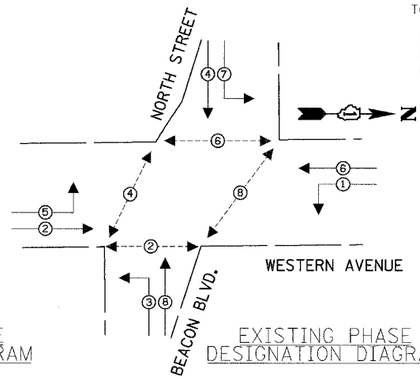
CABLE PLAN

CONTROLLER SEQUENCE



PROPOSED PHASE DESIGNATION DIAGRAM

CONTROLLER SEQUENCE

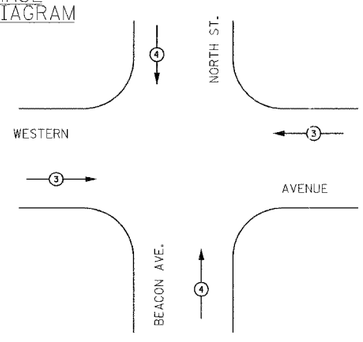


EXISTING PHASE DESIGNATION DIAGRAM

LEGEND
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

PUSH-BUTTON NOTES:

1. PUSH-BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.
2. PUSH-BUTTON "C" SHALL PLACE A CALL TO PHASES 6 AND 8.



EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇌	⇉

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
				TOTAL =	541.2

ENERGY COSTS TO:
VILLAGE OF PARK FOREST
330 VICTORY DRIVE
PARK FOREST, ILLINOIS 60466

ENERGY SUPPLY CONTACT: Jim Werner
PHONE: (708) 235-2694
COMPANY: Commonwealth Edison

FOUNDATION (DEPTH)	FT. (m)	
TYPE A - POST	4	(1.2)
D - CONTROLLER	4	(1.2)
E - M. ARM POLE		
24" (600mm)	10	(3.0)
30" (750mm)	15	(4.6)

CABLE SLACK	FT.	(m)
HANDHOLE	6.5	(2.0)
DOUBLE HANDHOLE	13	(4.0)
SIGNAL POST	0	(0.0)
CONTROLLER CAB.	0	(0.0)
FIBER OPTIC	13	(4.0)
ELECTRIC SERVICE	1	(0.5)
GROUND CABLE	1	(0.5)

VERTICAL	FT.	(m)
ALL FOUNDATIONS	3.0	(1.0)
MAST ARM (L) POLE	20.0	(6.0)
BRACKET MOUNTED	13	(4.0)
PED. PUSH-BUTTON	6	(2.0)
ELECTRIC SERVICE	13.5	(4.1)
SERVICE TO GROUND	13.5	(4.1)
POST MOUNTED	13	(4.0)

REVISIONS NAME	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN,
PHASE DESIGNATION DIAGRAM,
SCHEDULE OF QUANTITIES

WESTERN AVE. AT NORTH ST./BEACON BLVD.

SCALE: VERT. NONE
HORIZ.
DATE 5/17/2007

DRAWN BY JLA
DESIGNED BY KK/BPT
CHECKED BY JTL/BPT

PLOT DATE = 5/18/2007
FILE NAME = j:\comcore\352825\dgn\sht\21.C.NorthBeac.dgn
PLOT SCALE = 1.0000 '/ IN.
USER NAME = JLA