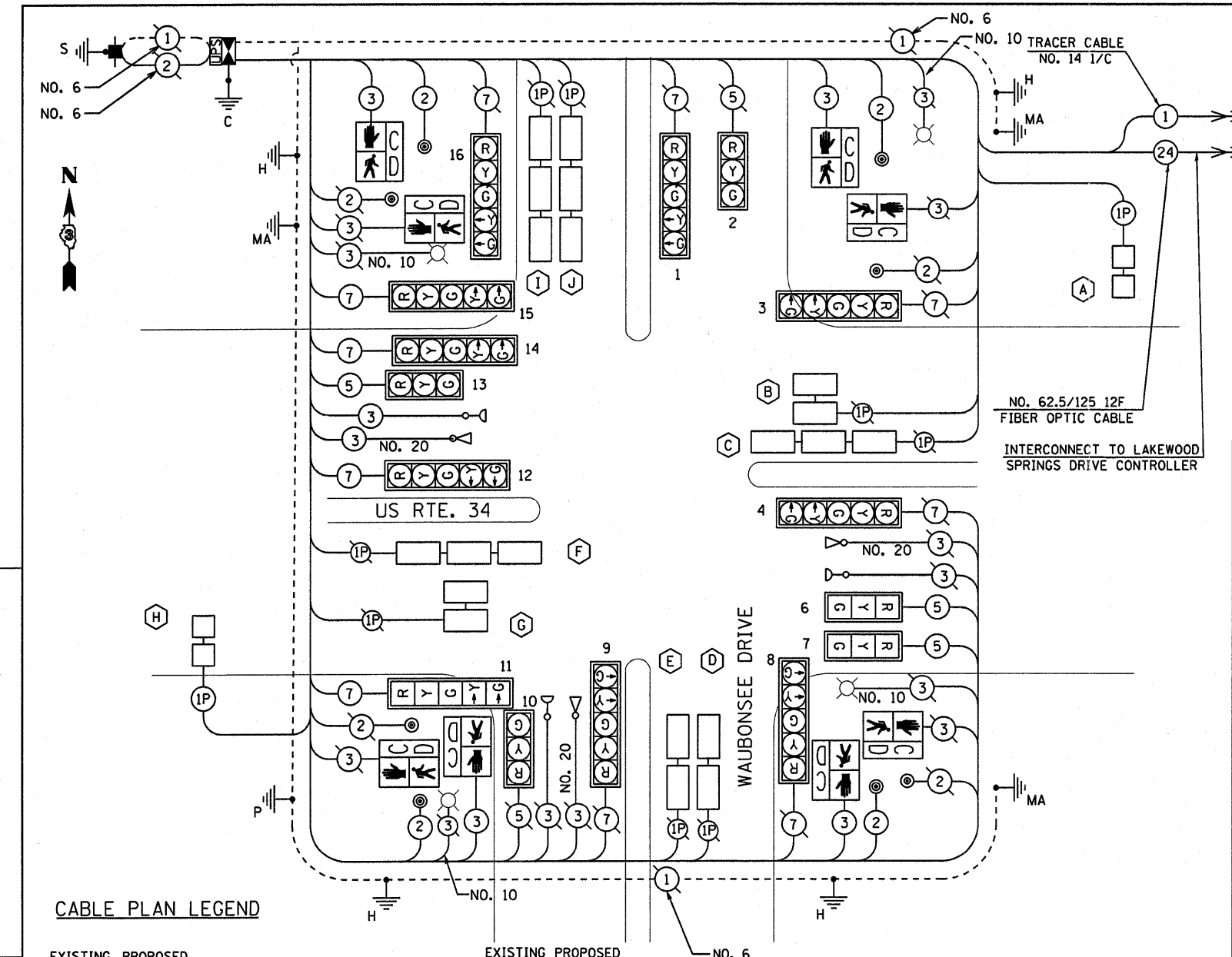


EJM ENGINEERING, INC.
411 South Wells Street Suite 800
Chicago, Illinois 60607



DETECTOR LOOP INDUCTANCE CHART

LOOP SYSTEM	LABEL	NUMBER OF TURNS	INDUCTANCE (MH)	FREQUENCY (HERTZ)	J PIN STATUS
A	PHASE 6 WB FAR	3	293	36,123	ON
B	PHASE 6 WB STBR	3	468	30,510	OFF
C	PHASE 1 WB STBR LL	3	468	21,496	ON
D	PHASE 8 NB STBR	3	104	24,111	ON
E	PHASE 3 NB STBR LL	3	104	24,090	ON
F	PHASE 5 EB STBR LL	3	156	30,352	ON
G	PHASE 2 EB STBR	3	156	35,902	OFF
H	PHASE 2 EB FAR	3	48	24,090	ON
I	PHASE 4 SB STBR	3	132	30,352	ON
J	PHASE 7 EB STBR LL	3	132	35,902	ON

J PIN STATUS:
"ON" MEANS STANDARD DETECTOR SETUP.
"OFF" MEANS THE J WIRE HAS BEEN DISCONNECTED BUT INTACT AT THE HARNESS PANEL WITH THE NECESSARY SPADE CONNECTION ATTACHED, MARKED, AND INSULATED.

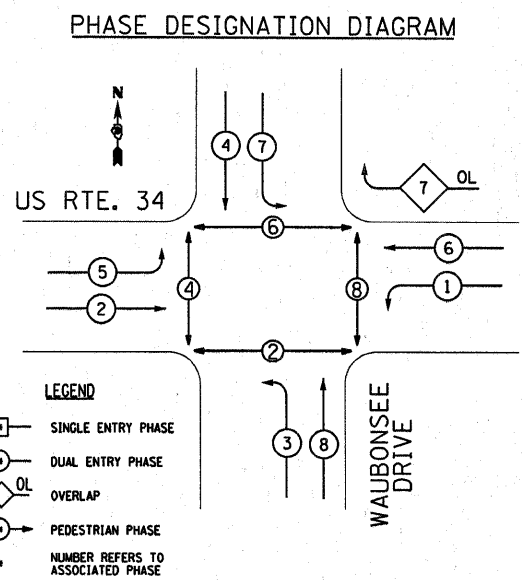
ELECTRICAL LOAD CHART

US RTE. 34			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	9	17	20
YELLOW	9	25	5
GREEN	9	15	75
YELLOW ARROW	6	12	5
GREEN ARROW	6	12	5
WALK (SYMBOL)	4	12.5	50
HAND (SYMBOL)	4	12.5	50

WAUBONSEE DRIVE			
SIGNAL SECTION	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
RED	6	17	75
YELLOW	6	25	5
GREEN	6	15	20
YELLOW ARROW	4	12	20
GREEN ARROW	4	12	20
WALK (SYMBOL)	4	12.5	50
HAND (SYMBOL)	4	12.5	50

TRAFFIC SIGNAL CABINET			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
CONTROLLER	1	100	100
LOOP DETECTORS	10	4	100

LIGHTING			
ITEM	NUMBER	WATTAGE EACH	BURN TIME (PERCENTAGE)
LUMINAIRE	4	250	50



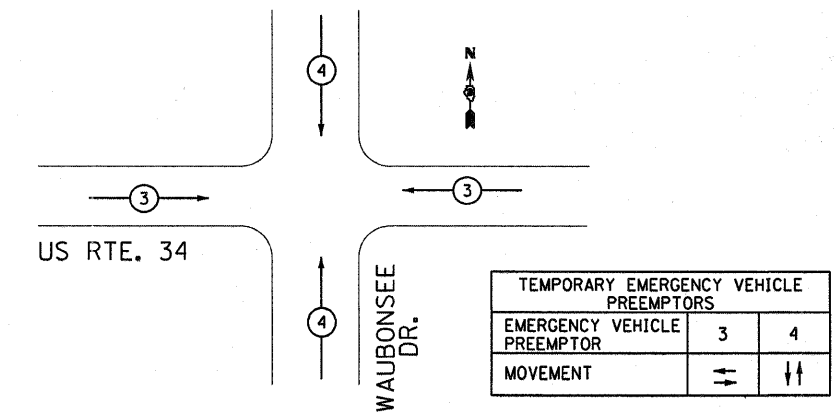
SCHEDULE OF QUANTITIES

DESCRIPTION	UNIT	QUANTITY
UNDERGROUND CONDUIT, PVC, 1" DIA.	FOOT	553
UNDERGROUND CONDUIT, PVC, 2" DIA.	FOOT	896
HANDHOLE, PORTLAND CEMENT CONCRETE	EACH	4
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	107
RELOCATE EXISTING LIGHTING UNIT	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1046
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1102
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	973
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	645
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1360
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT.	EACH	1
DRILL EXISTING HAND HOLE	EACH	21
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	3
INDUCTIVE LOOP DETECTOR	EACH	2
DETECTOR LOOP, TYPE 1	FOOT	1721
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	3
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	3
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	161
RELOCATE LIGHT DETECTOR	EACH	1

CABLE PLAN LEGEND

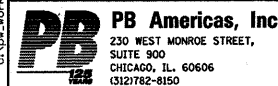
- | | | | | |
|--|------------|---|--|---|
| | G | 8" (200mm) TRAFFIC SIGNAL SECTION | | SIGNAL FACE WITH BACKPLATE |
| | R | 12" (300mm) TRAFFIC SIGNAL SECTION | | H/C GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | MA/P GROUND ROD AT POST OR MAST ARM POLE |
| | W | 12" (300mm) PEDESTRIAN SIGNAL SECTION | | S GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | C | CONTROLLER CABINET | | 1 GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN) |
| | UPS | UNINTERRUPTIBLE POWER SUPPLY | | 24 FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 MM12F & SM12F |
| | S | SERVICE INSTALLATION | | PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER |
| | T | TELEPHONE CONNECTION | | |
| | E | EMERGENCY VEHICLE LIGHT DETECTOR | | |
| | C | CONFIRMATION BEACON | | |
| | P | PUSHBUTTON DETECTOR | | |
| | V | VEHICLE DETECTOR, INDUCTION LOOP | | |
| | 2 | DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | | |
| | L | LUMINAIRE | | |

EMERGENCY VEHICLE PRE-EMPTION SEQUENCE



RESTORATION OF WORK AREA; RESTORATION OF THE TRAFFIC SIGNAL WORK SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL 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 SEED IN ACCORDANCE WITH STANDARD SPECIFICATION 252 AND 250 RESPECTIVELY.

ALL SIGNAL INDICATIONS SHALL BE L.E.D



FILE NAME = dunoanbd	DESIGNED - GR	REVISED - BDD 09/26/2011
PLOT SCALE = 28.0000' / 1" =	DRAWN - GR	REVISED -
PLOT DATE = 9/27/2011	CHECKED - BS	REVISED -
	DATE - 4/8/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND SCHEDULE OF QUANTITIES
US RTE 34 AND WAUBONSEE DRIVE

SCALE: N.T.S. SHEET NO. 3 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
591	13R-2;14R-1 & BR-1(1);15R-1	KENDALL	429	237
				CONTRACT NO. 66985

ILLINOIS FED. AID PROJECT FINAL SUBMITTAL