

FOR INFORMATION ONLY

NOTE: PROPOSED INTERCONNECT CABLE NOT SHOWN ON SCHEMATIC.

SCHEDULE OF QUANTITIES

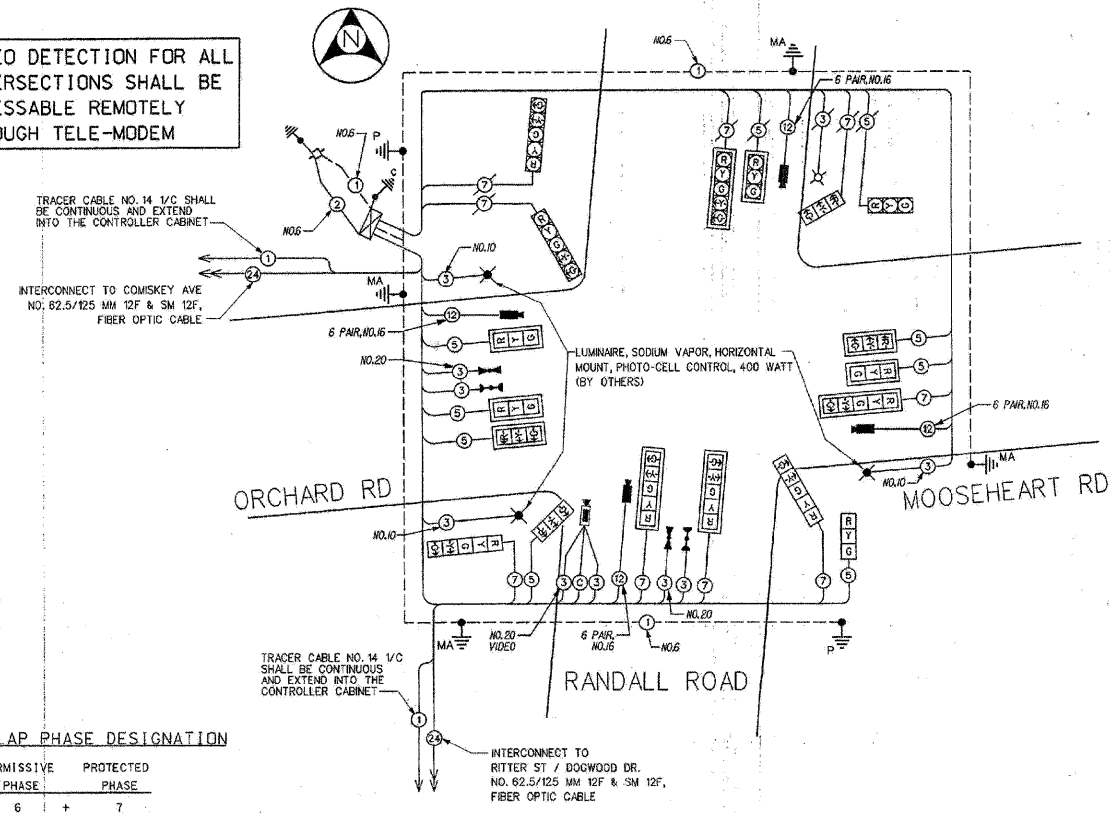
QTY	UNIT	ITEM DESCRIPTION
73	SQ FT	SIGN PANEL - TYPE 1
25	SQ FT	SIGN PANEL - TYPE 2
1	EACH	SERVICE INSTALLATION, POLE MOUNTED
24	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
33	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
106	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
1	EACH	HANDHOLE TO BE ADJUSTED
24	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	TRANSCIVER - FIBER OPTIC
867	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 8 1C
288	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1696	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1499	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1207	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18-8 PAIR
646	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 52 FT
4	FOOT	CONCRETE FOUNDATION, TYPE A
15	FOOT	CONCRETE FOUNDATION, TYPE E
30	FOOT	CONCRETE FOUNDATION, TYPE E
4	EACH	DRILL EXISTING HANDHOLE
5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
3	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
8	EACH	TRAFFIC SIGNAL BACKPLATE
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1787	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
2	EACH	REMOVE EXISTING HANDHOLE
4	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1	EACH	VIDEO VEHICLE DETECTION SYSTEM
179	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
1	EACH	TRAFFIC SIGNAL BATTERY BACKUP
1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
1	EACH	VIDEO TRANSMISSION SYSTEM

CABLE PLAN LEGEND

- EXISTING: 8" (203mm) TRAFFIC SIGNAL SECTION
 - PROPOSED: 12" (305mm) TRAFFIC SIGNAL SECTION
 - 12" (305mm) PEDESTRIAN SIGNAL SECTION
 - 12" (305mm) PEDESTRIAN SIGNAL SECTION
 - CONTROLLER CABINET
 - SERVICE INSTALLATION
 - TELEPHONE CONNECTION
 - MAGNETIC DETECTOR
 - EMERGENCY VEHICLE LIGHT DETECTOR
 - CONFIRMATION BEACON
 - PUSHBUTTON DETECTOR
 - VEHICLE DETECTOR, INDUCTION LOOP
 - IDENTIFIES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
 - SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD
 - RAILROAD CONTROL CABINET
 - ILLUMINATED SIGNAL FIBER OPTIC "NO LEFT TURN"
 - ILLUMINATED SIGNAL FIBER OPTIC "NO RIGHT TURN"
 - GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLLER (C)
 - GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
 - GROUND ROD AT ELECTRIC SERVICE INSTALLATION
 - GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER GREEN
 - NO. 82.5/125 MM 12F & 5M 12F, FIBER OPTIC CABLE
 - NO. 8281 COAXIAL CABLE
 - VIDEO DETECTION CAMERA
 - DOVE P.Z.T. CAMERA
 - LUMINAIRE, SODIUM VAPOR, HORIZ. MOUNT PHOTO CELL CONTROL, 310 W, 120 V BALLAST
- NOTE: ALL NEW GROUND RODS SHALL BE 3/4" 18" LONG COPPER CLAD. THE COST SHALL BE INCIDENTAL TO THE COST OF INSTALLATION.

VIDEO DETECTION FOR ALL INTERSECTIONS SHALL BE ACCESSIBLE REMOTELY THROUGH TELE-MODEM

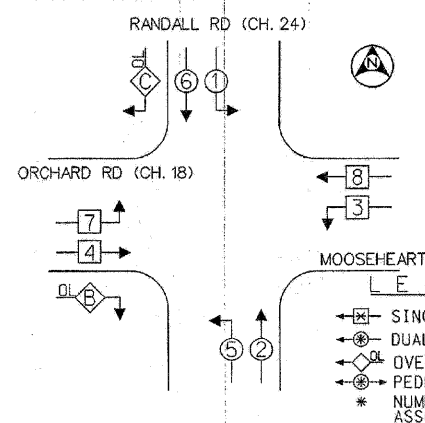
PROPOSED CABLE PLAN



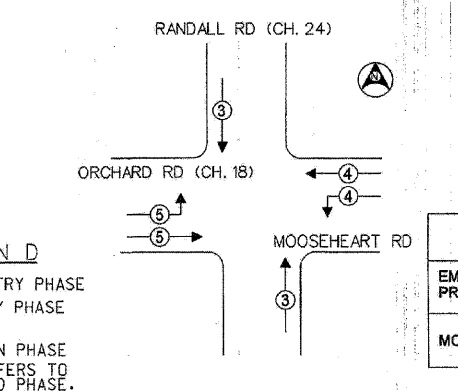
RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
C	= 6	+ 7
B	= 4	+ 5

PROPOSED CONTROLLER SEQUENCE



EMERGENCY VEHICLE PREEMPTION SEQUENCE



THE LIGHT DETECTORS AND LIGHT DETECTOR AMPLIFIER FOR THIS PROJECT SHALL BE "TOMAR OR OPTICOM" TO MEET LOCAL FIRE DEPARTMENT REQUIREMENTS.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

ALL INDICATIONS SHALL BE LED

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA 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, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOO, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

TYPE	NO. OF LAMPS	INCAND	LED	XX OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	87.5
(GREEN)	14	135	15	0.25	52.5
ARROW	28	135	12	0.10	33.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER					0.50
ENERGY COSTS TO:					TOTAL = 392.6

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 (1.1)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2 = (6.1+L-1.0) =
E - M ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

ENERGY SUPPLY - CONTACT: VILLAGE OF NORTH AURORA, ILLINOIS 60133
 COMPANY: CONED



METRO TRANSPORTATION GROUP, INC.
 TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN
 3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000

REVISIONS

NO.	DATE	DESCRIPTION

CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES
 RANDALL ROAD @ ORCHARD ROAD (CH. 18) AND MOOSEHEART ROAD NORTH AURORA, ILLINOIS

FILE NAME: 14-op.dgn	SHEET NO.: 14
DATE: OCTOBER 31, 2006	OF 22
PROJECT NO.: H0510-03	