

| | | | | |
|--------------------------------|----------------|------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 336 | 06-00346-00-TL | KANE | 69 | 1 |
| FED. ROAD DIST. NO. 1 ILLINOIS | | FED. AID PROJECT | | |

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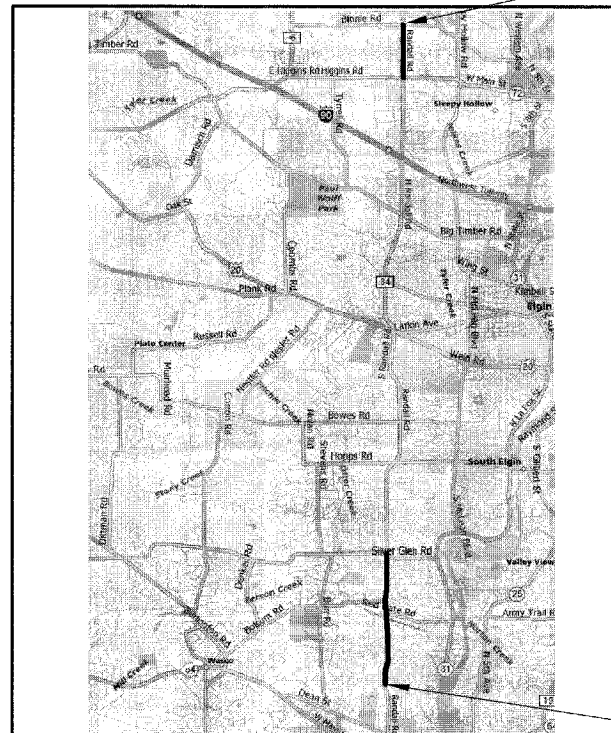
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
TRAFFIC SIGNAL INTERCONNECT**

DISTRICT 1

**CONGESTION MITIGATION AIR QUALITY
F.A.P. 336 RANDALL ROAD
FROM RED HAW LANE TO SILVER GLEN ROAD
AND
FROM IL RTE 72 TO BINNIE ROAD
FEDERAL PROJECT NO.: CMM-8003(759)
SECTION 06-00346-00-TL
KANE COUNTY
JOB NO: C-91-153-07**



PROJECT ENDS
RANDALL ROAD AT BINNIE ROAD

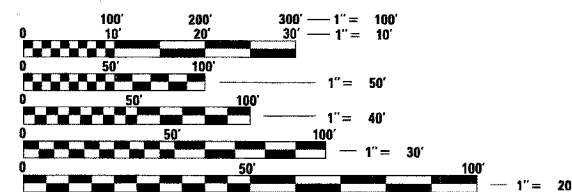


PROJECT BEGINS
RANDALL ROAD AT RED HAW LANE

| STANDARD NO. | DESCRIPTION |
|----------------|---|
| STD. 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| STD. 701011-01 | OFF ROAD MOVING OPERATIONS, 2L 2W, DAY ONLY |
| STD. 701011-01 | OFF ROAD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE |
| STD. 701106-01 | OFF ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY |
| STD. 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| STD. 701601-05 | URBAN LANE CLOSURE, MULTILANE, 2W WITH NON-TRAVERSABLE MEDIAN |
| STD. 701602-03 | URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE |
| STD. 701701-05 | URBAN LANE CLOSURE, MULTI-LANE INTERSECTION |
| STD. 701801-03 | LANE CLOSURE, MULTI-LANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE |
| STD. 701901 | TRAFFIC CONTROL DEVICES |
| STD. 720001 | SIGN PANEL MOUNTING DETAILS |
| STD. 720006 | SIGN PANEL ERECTION DETAILS |
| STD. 780001-C1 | TYPICAL PAVEMENT MARKINGS |
| STD. 814001-01 | CONCRETE HANDHOLES |
| STD. 814006-01 | DOUBLE HANDHOLES |
| STD. 857001 | STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES |
| STD. 862001 | UNINTERRUPTABLE POWER SUPPLY (UPS) |
| STD. 877001-03 | STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55' |
| STD. 878001-06 | CONCRETE FOUNDATION DETAILS |
| STD. 880006 | TRAFFIC SIGNAL MOUNTING DETAILS |

LOCATION MAP

LENGTH OF IMPROVEMENTS =
4.0 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 63011

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED JANUARY 30 20 08
[Signature] KANE COUNTY ENGINEER
LOCAL AGENCY, POSITION

PASSED FEBRUARY 13 2008
[Signature] DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED REVIEW
FEBRUARY 14, 20 08
[Signature] DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

[Signature] 2-7-2008
ENGINEER DATE

GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-45853
EXPIRATION DATE: 11-30-2009
PROFESSIONAL DESIGN FIRM No.: 184-001742
EXPIRATION DATE: 04-30-2009

CHRISTOPHER B. BURKE
ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

FEDERAL AID DESIGN ENGINEER: PHIL MARCYN
(847) 705-4189

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE Y031-1F

| CODE NO. | ITEM | UNIT | Randall Road @ Red Haw Lane | Randall Road @ Crane Road | Randall Road @ Bolcum Road | Randall Road @ Silver Glen Road | Randall Road @ Commercial Entrance | Randall Road @ Thornwood Avenue | Randall Road @ McDonald Road | McDonald Road @ Access Drive | Randall Road @ Gyor Road | Randall Road @ Hopps Road | Randall Road @ Bowes Road | Randall Road @ College Green Drive | Randall Road @ South Street | Randall Road @ Weld Road | Randall Road @ US 20 Ramps C & D |
|----------|---|--------|-----------------------------|---------------------------|----------------------------|---------------------------------|------------------------------------|---------------------------------|------------------------------|------------------------------|--------------------------|---------------------------|---------------------------|------------------------------------|-----------------------------|--------------------------|----------------------------------|
| 67000400 | ENGINEER'S FIELD OFFICE TYPE A | CAL MO | | | | | | | | | | | | | | | |
| 67100100 | MOBILIZATION | L SUM | | | | | | | | | | | | | | | |
| 70101700 | TRAFFIC CONTROL AND PROTECTION | L SUM | | | | | | | | | | | | | | | |
| 81000600 | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | | 14 | | | | | | | | | | | | | |
| 81000700 | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL | FOOT | | 17 | | | | | | | | | | | | | |
| 81000800 | CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL | FOOT | | 39 | | | | | | | | | | | | | |
| 81001000 | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL | FOOT | | 76 | | | | | | | | | | | | | |
| 81018500 | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | | | | | | | | | | | | | | | |
| 81018600 | CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL | FOOT | | 167 | | | | | | | | | | | | | |
| 81018700 | CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL | FOOT | | 48 | | | | | | | | | | | | | |
| 81018900 | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL | FOOT | | 295 | | | | | | | | | | | | | |
| 81100600 | CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL | FOOT | | | | | | | | | | | | | | | |
| 81300810 | JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 12" X 8" | EACH | | | | | | | | | | | | | | | |
| 81400100 | HANDHOLE | EACH | | 3 | | | | | | | | | | | | | |
| 81400200 | HEAVY-DUTY HANDHOLE | EACH | | 4 | | | | | | | | | | | | | |
| 81400300 | DOUBLE HANDHOLE | EACH | | 2 | | | | | | | | | | | | | |
| 81700215 | ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 2-1/C NO. 10 | FOOT | | 586 | | | | | | | | | | | | | |
| 81900200 | TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | | 140 | | | | | | | | | | | | | |
| 82103310 | LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 310 WATT | EACH | | 2 | | | | | | | | | | | | | |
| 85000200 | MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 85700205 | FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | | 1 | | | | | | | | | | | | | |
| 85700305 | FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL | EACH | | | | | | | | | | | | | | | |
| 85700505 | FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 87301215 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | | 141 | | | | | | | | | | | | | |
| 87301225 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | | 159 | | | | | | | | | | | | | |
| 87301245 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C | FOOT | | 3992 | | | | | | | | | | | | | |
| 87301305 | ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR | FOOT | | | | | | | | | | 1375 | | | | | |
| 87301805 | ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C | FOOT | | 29 | | | | | | | | | | | | | |
| 87502480 | TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT. | EACH | | 3 | | | | | | | | | | | | | |
| 87700200 | STEEL MAST ARM ASSEMBLY AND POLE, 32 FT. | EACH | | 1 | | | | | | | | | | | | | |
| 87700220 | STEEL MAST ARM ASSEMBLY AND POLE, 36 FT. | EACH | | 1 | | | | | | | | | | | | | |
| 87702930 | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT. | EACH | | 1 | | | | | | | | | | | | | |
| 87702990 | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 54 FT. | EACH | | 1 | | | | | | | | | | | | | |
| 87800100 | CONCRETE FOUNDATION, TYPE A | FOOT | | 12 | | | | | | | | | | | | | |
| 87800200 | CONCRETE FOUNDATION, TYPE D | FOOT | | 4 | | | | | | | | | | | | | |
| 87800400 | CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER | FOOT | | 30 | | | | | | | | | | | | | |
| 87800415 | CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER | FOOT | | 30 | | | | | | | | | | | | | |
| 87900200 | DRILL EXISTING HANDHOLE | EACH | | | | | | | | | | | | | | | |
| 88030020 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED | EACH | | 10 | | | | | | | | | | | | | |
| 88030050 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED | EACH | | 2 | | | | | | | | | | | | | |
| 88030210 | SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED | EACH | | 2 | | | | | | | | | | | | | |
| 88102717 | PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER | EACH | | 2 | | | | | | | | | | | | | |
| 88200210 | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM | EACH | | 10 | | | | | | | | | | | | | |
| 88500100 | INDUCTIVE LOOP DETECTOR | EACH | | | | | | | | | | 2 | | | | | |
| 88800100 | PEDESTRIAN PUSH-BUTTON | EACH | | 2 | | | | | | | | | | | | | |
| 89501410 | RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT | EACH | | | | | | | | | | | | | | | |
| 89502210 | MODIFY EXISTING CONTROLLER CABINET | EACH | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 89502375 | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 89502385 | REMOVE EXISTING CONCRETE FOUNDATION | EACH | | 2 | | | | | | | | | | | | | |
| X0322925 | ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C | FOOT | | | | | | | | | | | | | | | |
| X0325705 | RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL II | EACH | 1 | 1 | 1 | | | | | | | | | | | | |
| X8050015 | SERVICE INSTALLATION - POLE MOUNTED | EACH | | 1 | | | | | | | | | | | | | |
| X8620020 | UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | |
| X8730027 | ELECTRIC CABLE IN CONDUIT, GROUND NO. 6 1C | FOOT | | 846 | | | | | | | | | | | | | |
| XX005230 | VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION) | L SUM | | 1 | | | | | | | | | | | | | |
| XX005800 | RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM | EACH | | | | | | | | | | | | | | | |
| XX005940 | REMOTE-CONTROLLED VIDEO SYSTEM | EACH | | | | | | | | | | | | | | | |
| XX006654 | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F | FOOT | | | | | | | | | | | | | | | 1 |
| Z0076600 | TRAINEES | HOUR | | | | | | | | | | | | | | | |
| X0323151 | COMMUNICATION OFFICE MONITORING SYSTEM | L SUM | | | | | | | | | | | | | | | |
| X0007282 | ETHERNET KIT | EACH | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| X0007283 | ETHERNET HUB KIT | EACH | | | | 1 | | | | | | | | | | | 1 |
| X0007284 | CONFLICT MONITOR | EACH | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| X0007285 | MODIFY VIDEO PROCESSING UNIT | EACH | | | | | | | | 1 | | | | | | | |

△ = Y080

SURVEYED BY: DATE:
 PLOTTED BY: DATE:
 CHECKED BY: DATE:
 RT. OF WAY CHECKED BY: DATE:
 CAD FILE NAME:
 PLAN:
 NOTE BOOK NO.:
 SURVEYED BY: DATE:
 PLOTTED BY: DATE:
 CHECKED BY: DATE:
 RT. OF WAY CHECKED BY: DATE:
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 RT. OF WAY CHECKED BY: DATE:
 CAD FILE NAME:

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE Y031-1F

| CODE NO. | ITEM | UNIT | TOTAL | Randall Road @ US 20 Ramps A & B | Randall Road @ Highland Avenue | Randall Road @ Royal Blvd. | Randall Road @ Big Timber Road | Randall Road @ Fox Lane | Randall Road @ Alt Lane | Randall Road @ I-90 Ramps B & C | Randall Road @ I-90 Ramps A & C | Randall Road @ Point Blvd. | Randall Road @ Joy Lane/Northwest Pkw | Randall Road @ Illinois Rte. 72 | Randall Road @ Binnie Road | Interconnect |
|----------|---|--------|-------|----------------------------------|--------------------------------|----------------------------|--------------------------------|-------------------------|-------------------------|---------------------------------|---------------------------------|----------------------------|---------------------------------------|---------------------------------|----------------------------|--------------|
| 67000400 | ENGINEER'S FIELD OFFICE TYPE A | CAL MO | 10 | | | | | | | | | | | | | 10 |
| 67100100 | MOBILIZATION | L SUM | 1 | | | | | | | | | | | | | 1 |
| 70101700 | TRAFFIC CONTROL AND PROTECTION | L SUM | 1 | | | | | | | | | | | | | 1 |
| 81000600 | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | 17613 | | | | | | | | | | | | | 17599 |
| 81000700 | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 17 | | | | | | | | | | | | | |
| 81000800 | CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL | FOOT | 39 | | | | | | | | | | | | | |
| 81001000 | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL | FOOT | 76 | | | | | | | | | | | | | |
| 81018500 | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | 2127 | | | | | | | | | | | | | 2127 |
| 81018600 | CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 167 | | | | | | | | | | | | | |
| 81018700 | CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL | FOOT | 48 | | | | | | | | | | | | | |
| 81018900 | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL | FOOT | 295 | | | | | | | | | | | | | |
| 81100600 | CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL | FOOT | 176 | | | | | | | | | | | | | 176 |
| 81300810 | JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 12" X 8" | EACH | 2 | | | | | | | | | | | | | 2 |
| 81400100 | HANDHOLE | EACH | 35 | | | | | | | | | | | | | 32 |
| 81400200 | HEAVY-DUTY HANDHOLE | EACH | 4 | | | | | | | | | | | | | |
| 81400300 | DOUBLE HANDHOLE | EACH | 2 | | | | | | | | | | | | | |
| 81700215 | ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 2-1/C NO. 10 | FOOT | 566 | | | | | | | | | | | | | |
| 81900200 | TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 17739 | | | | | | | | | | | | | 17599 |
| 82103310 | LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 310 WATT | EACH | 2 | | | | | | | | | | | | | |
| 85000200 | MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 85700205 | FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 6 | | | | | 1 | 1 | 1 | 1 | | | | | |
| 85700305 | FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL | EACH | 1 | | 1 | | | | | | | | | | | |
| 85700505 | FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 18 | 1 | | 1 | 1 | | | | | 1 | 1 | | | |
| 87301215 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | 141 | | | | | | | | | | | | | |
| 87301225 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | 159 | | | | | | | | | | | | | |
| 87301245 | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C | FOOT | 3992 | | | | | | | | | | | | | |
| 87301305 | ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR | FOOT | 1375 | | | | | | | | | | | | | |
| 87301805 | ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2C | FOOT | 29 | | | | | | | | | | | | | |
| 87502480 | TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT. | EACH | 3 | | | | | | | | | | | | | |
| 87700200 | STEEL MAST ARM ASSEMBLY AND POLE, 32 FT. | EACH | 1 | | | | | | | | | | | | | |
| 87700220 | STEEL MAST ARM ASSEMBLY AND POLE, 36 FT. | EACH | 1 | | | | | | | | | | | | | |
| 87702930 | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT. | EACH | 1 | | | | | | | | | | | | | |
| 87702990 | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 54 FT. | EACH | 1 | | | | | | | | | | | | | |
| 87800100 | CONCRETE FOUNDATION, TYPE A | FOOT | 12 | | | | | | | | | | | | | |
| 87800200 | CONCRETE FOUNDATION, TYPE D | FOOT | 4 | | | | | | | | | | | | | |
| 87800400 | CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER | FOOT | 30 | | | | | | | | | | | | | |
| 87800415 | CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER | FOOT | 30 | | | | | | | | | | | | | |
| 87900200 | DRILL EXISTING HANDHOLE | EACH | 5 | | | | | | | | | | | | | 5 |
| 88030020 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED | EACH | 10 | | | | | | | | | | | | | |
| 88030050 | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 2 | | | | | | | | | | | | | |
| 88030210 | SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 2 | | | | | | | | | | | | | |
| 88102717 | PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER | EACH | 2 | | | | | | | | | | | | | |
| 88200210 | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM | EACH | 10 | | | | | | | | | | | | | |
| 88500100 | INDUCTIVE LOOP DETECTOR | EACH | 72 | | 11 | | | 10 | 11 | 15 | 15 | | | 8 | | |
| 88800100 | PEDESTRIAN PUSH-BUTTON | EACH | 2 | | | | | | | | | | | | | |
| 89501410 | RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT | EACH | 1 | | | | | | | | | | | 1 | | |
| 89502210 | MODIFY EXISTING CONTROLLER CABINET | EACH | 20 | 1 | | 1 | 1 | | | | | 1 | 1 | | 1 | |
| 89502375 | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 89502385 | REMOVE EXISTING CONCRETE FOUNDATION | EACH | 2 | | | | | | | | | | | | | |
| X0322925 | ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C | FOOT | 21925 | | | | | | | | | | | | | 21925 |
| X0325705 | RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL II | EACH | 3 | | | | | | | | | | | | | |
| X8050015 | SERVICE INSTALLATION - POLE MOUNTED | EACH | 1 | | | | | | | | | | | | | |
| X8620020 | UNINTERRUPTIBLE POWER SUPPLY | EACH | 16 | | 1 | | 1 | 1 | 1 | 1 | | | | 1 | | |
| X8730027 | ELECTRIC CABLE IN CONDUIT, GROUND NO. 6 1C | FOOT | 846 | | | | | | | | | | | | | |
| XX005230 | VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION) | L SUM | 1 | | | | | | | | | | | | | |
| XX005800 | RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM | EACH | 2 | | | | | | | | 1 | | | | | |
| XX005940 | REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 7 | 1 | | 1 | 1 | | | 1 | 1 | | | 1 | | |
| XX006654 | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F | FOOT | 21975 | | | | | | | | | | | | | 21975 |
| Z0076800 | TRAINEES | HOUR | 500 | | | | | | | | | | | | | 500 |
| X0323151 | COMMUNICATION OFFICE MONITORING SYSTEM | L SUM | 1 | | | | | | | | | | | | | 1 |
| XX007282 | ETHERNET KIT | EACH | 22 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | |
| XX007283 | ETHERNET HUB KIT | EACH | 4 | | 1 | | | | | 1 | | | | | | |
| XX007284 | CONFLICT MONITOR | EACH | 19 | 1 | | 1 | 1 | | | | | 1 | 1 | | | |
| XX007285 | MODIFY VIDEO PROCESSING UNIT | EACH | 1 | | | | | | | | | | | | | |

△ = Y080

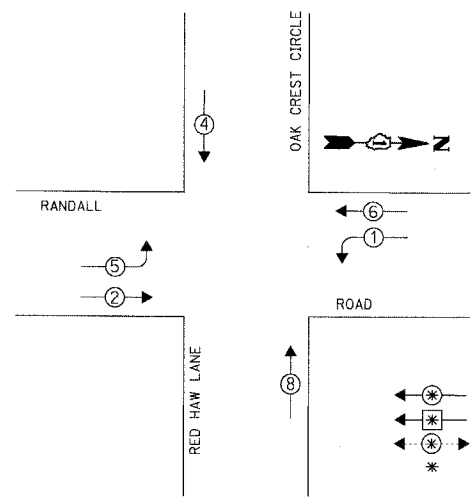
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 NOTE BOOK NO.
 PROFILE NO.
 STRUCTURE NOTATIONS OK'D

CHRISTOPHER B. BURKE
 ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 PROFILE: _____ NOTED: _____ B.M. NOTED: _____
 STRUCTURE NOTATIONS: CPAD

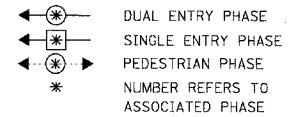
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CONTROLLER SEQUENCE



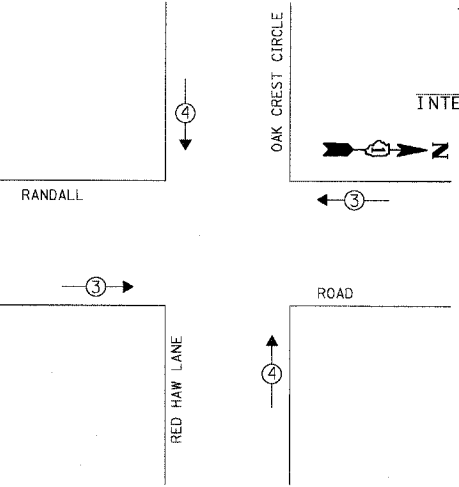
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

LEGEND



PHASE DESIGNATION DIAGRAM

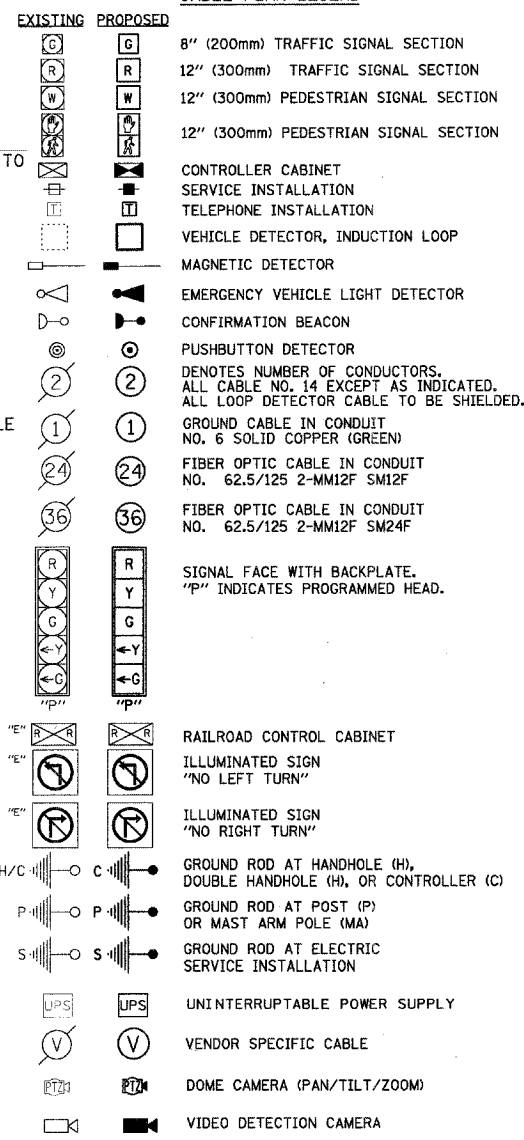
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS

| | | |
|-----------------------------|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
| MOVEMENT | ← | ↑ |

CABLE PLAN LEGEND



SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL II | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

CONSTRUCTION NOTES:

- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- INSTALL ETHERNET KIT.
- INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

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

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

| TYPE | NO. OF LAMPS | WATTAGE INCAND. LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|------------------------|-------------|------------------|
| SIGNAL (RED) | 12 | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | 15 | 0.25 | 45.00 |
| ARROW | 8 | 12 | 0.10 | 9.60 |
| PED. SIGNAL | - | 25 | 1.00 | - |
| CONTROLLER | 1 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | - |
| VIDEO SYSTEM | - | 150 | 1.00 | - |
| FLASHER | - | - | 0.50 | - |

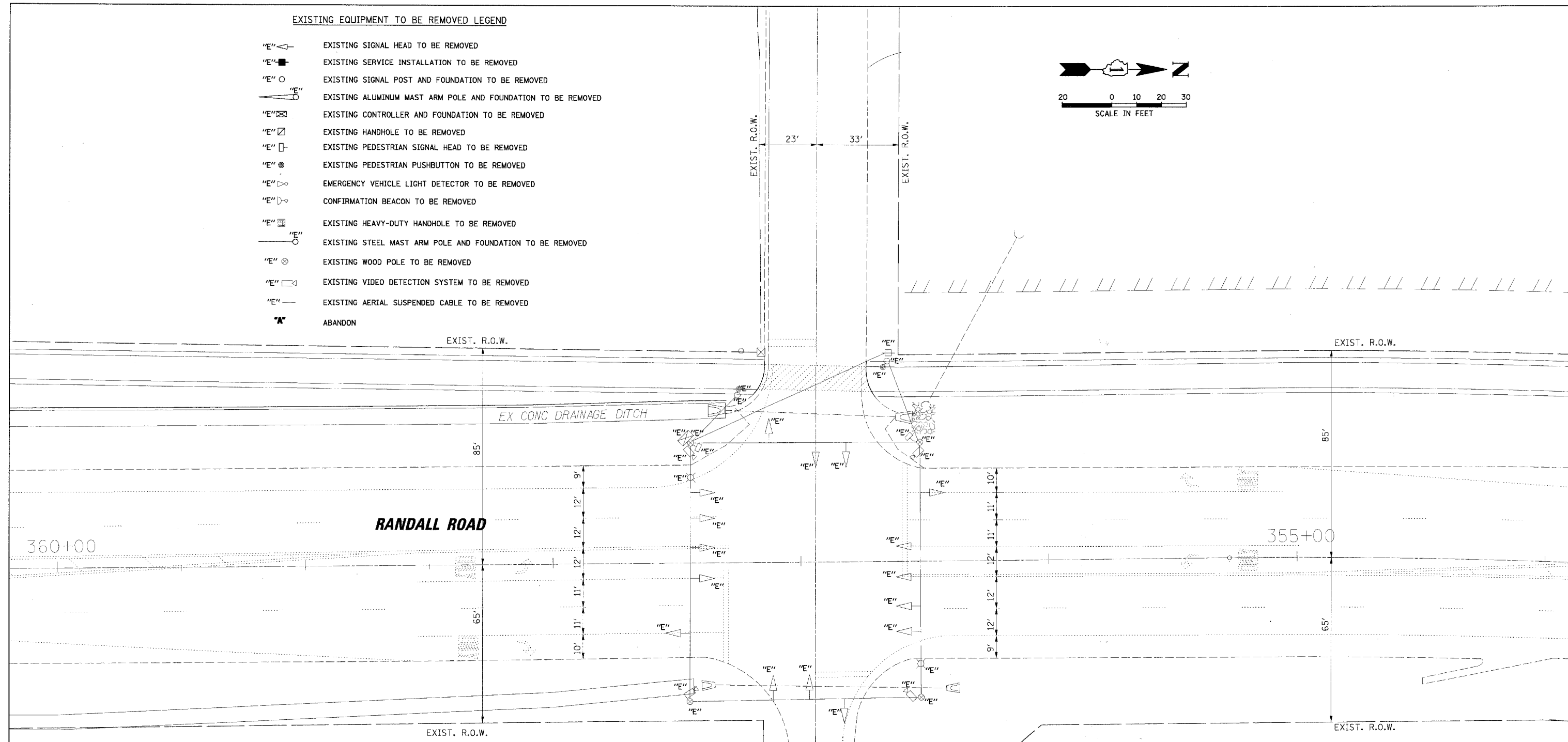
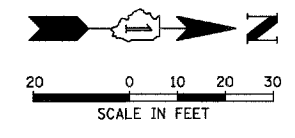
ENERGY COSTS TO: TOTAL = 331.60
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. ARM POLE | - | SIGNAL POST | 2 (1.0) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ DATE: _____
 PI AN: _____ NO. _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
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 Rosemont, Illinois 60018
 (847) 823-0500
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ DATE: _____
 STRUCTURE NOTATIONS: CPK

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- "E" EXISTING SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- "E" EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- "E" EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- "E" EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- "E" CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" EXISTING WOOD POLE TO BE REMOVED
- "E" EXISTING VIDEO DETECTION SYSTEM TO BE REMOVED
- "E" EXISTING AERIAL SUSPENDED CABLE TO BE REMOVED
- "A" ABANDON



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF KANE COUNTY, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 4 EACH VIDEO DETECTION CAMERA

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 16 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 1 EACH SERVICE INSTALLATION
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN PUSH-BUTTON
- 2 EACH SIGNAL POST
- 4 EACH WOOD POLE
- 2 EACH LUMINAIRE

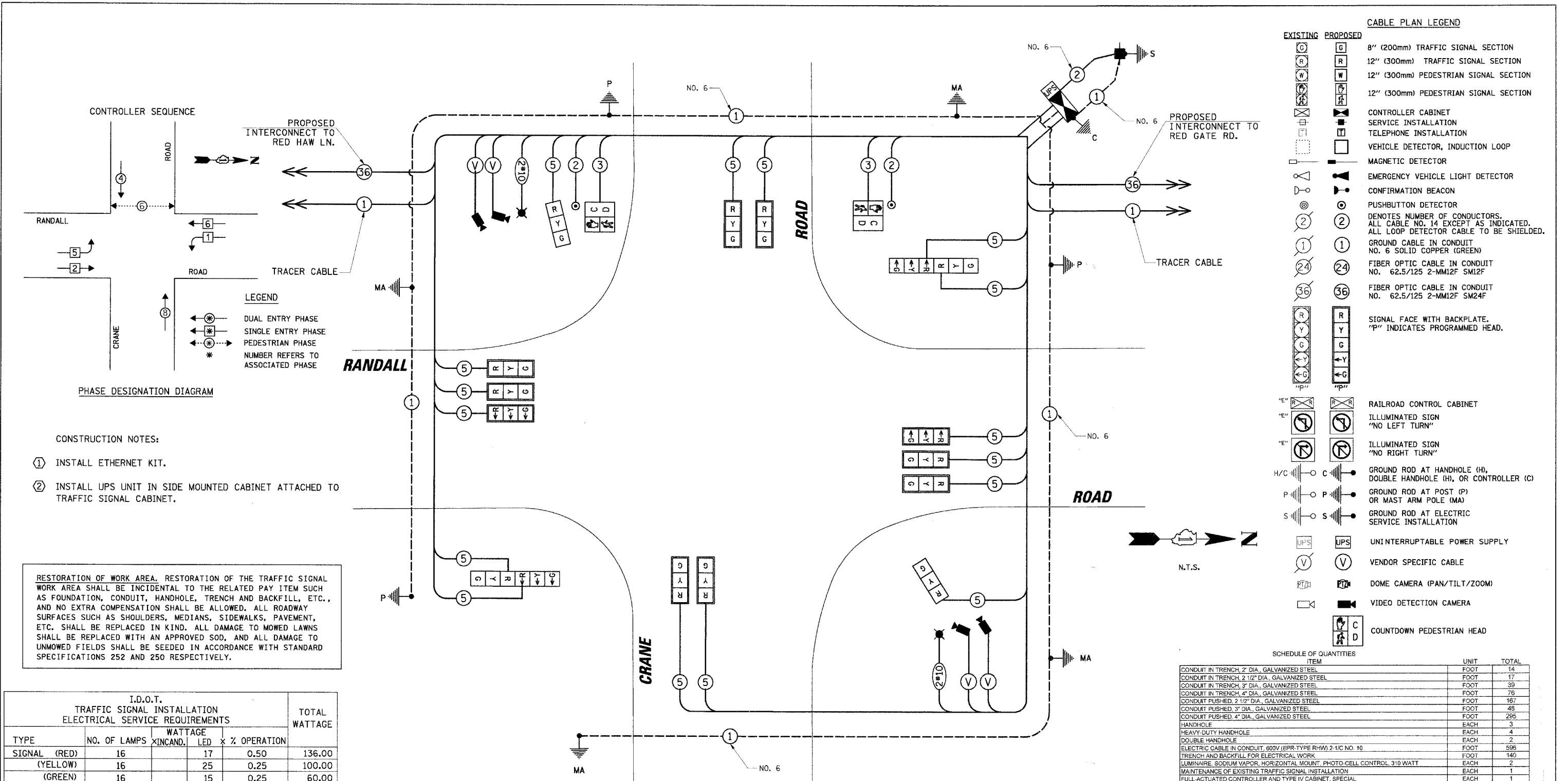
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|---|-----------------------|------------|-----------|---|--|---|---------------------------|----------------|--------------------|----------------|
| FILE NAME = N:\kane\county\70616\Traffic\TMP_crane.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TEMPORARY TRAFFIC SIGNAL AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT RANDALL ROAD AT CRANE ROAD | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 5 |
| | PLOT SCALE = 20' | DRAWN - | REVISED - | | | CONTRACT NO. 63011 | | | | |
| | PLOT DATE = 1/28/2008 | CHECKED - | REVISED - | | | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | | | | |
| | | DATE - | REVISED - | | | SCALE: | | | | |

DATE: _____ BY: _____
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 CAD FILE NAME: _____

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 PLOTTED: _____
 NOTE BOOK NO. _____
 CAD FILE NAME: _____

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 Rosemont, Illinois 60018
 (847) 823-0500



CABLE PLAN LEGEND

| | |
|--|---|
| | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | CONTROLLER CABINET |
| | SERVICE INSTALLATION |
| | TELEPHONE INSTALLATION |
| | VEHICLE DETECTOR, INDUCTION LOOP |
| | MAGNETIC DETECTOR |
| | EMERGENCY VEHICLE LIGHT DETECTOR |
| | CONFIRMATION BEACON |
| | PUSHBUTTON DETECTOR |
| | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM12F |
| | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM24F |
| | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| | RAILROAD CONTROL CABINET |
| | ILLUMINATED SIGN "NO LEFT TURN" |
| | ILLUMINATED SIGN "NO RIGHT TURN" |
| | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C) |
| | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | UNINTERRUPTIBLE POWER SUPPLY |
| | VENDOR SPECIFIC CABLE |
| | DOMED CAMERA (PAN/TILT/ZOOM) |
| | VIDEO DETECTION CAMERA |
| | COUNTDOWN PEDESTRIAN HEAD |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|-------|-------|
| CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | 14 |
| CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 17 |
| CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL | FOOT | 39 |
| CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL | FOOT | 78 |
| CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 167 |
| CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL | FOOT | 48 |
| CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL | FOOT | 295 |
| HANDHOLE | EACH | 3 |
| HEAVY-DUTY HANDHOLE | EACH | 4 |
| DOUBLE HANDHOLE | EACH | 2 |
| ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 2-1/C NO. 10 | FOOT | 596 |
| TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 140 |
| LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 310 WATT | EACH | 2 |
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2/C | FOOT | 141 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3/C | FOOT | 159 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5/C | FOOT | 3992 |
| ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 2/C | FOOT | 29 |
| TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT. | EACH | 3 |
| STEEL MAST ARM ASSEMBLY AND POLE, 32 FT. | EACH | 1 |
| STEEL MAST ARM ASSEMBLY AND POLE, 36 FT. | EACH | 1 |
| STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT. | EACH | 1 |
| STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 54 FT. | EACH | 1 |
| CONCRETE FOUNDATION, TYPE A | FOOT | 12 |
| CONCRETE FOUNDATION, TYPE D | FOOT | 4 |
| CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER | FOOT | 30 |
| CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER | FOOT | 30 |
| SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED | EACH | 10 |
| SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 2 |
| SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 2 |
| PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER | EACH | 2 |
| TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM | EACH | 10 |
| PEDESTRIAN PUSH-BUTTON | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| REMOVE EXISTING CONCRETE FOUNDATION | EACH | 2 |
| RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL II | EACH | 1 |
| SERVICE INSTALLATION - POLE MOUNTED | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, GROUND NO. 6 1/C | FOOT | 846 |
| VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION) | L SUM | 1 |
| ETHERNET KIT | EACH | 1 |

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

| TYPE | NO. OF LAMPS | WATTAGE | INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|---------|------|-------------|---------------|
| SIGNAL (RED) | 16 | 17 | 0.50 | | | 136.00 |
| (YELLOW) | 16 | 25 | 0.25 | | | 100.00 |
| (GREEN) | 16 | 15 | 0.25 | | | 60.00 |
| ARROW | - | 12 | 0.10 | | | - |
| PED. SIGNAL | 2 | 25 | 1.00 | | | 50.00 |
| CONTROLLER | 1 | 100 | 1.00 | | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | | - |
| VIDEO SYSTEM | 1 | - | 150 | 1.00 | | 150.00 |
| LUMINAIRE | 2 | 310 | 0.50 | | | 310.00 |
| FLASHER | - | - | 0.50 | | | - |

ENERGY COSTS TO: TOTAL = 906.00

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

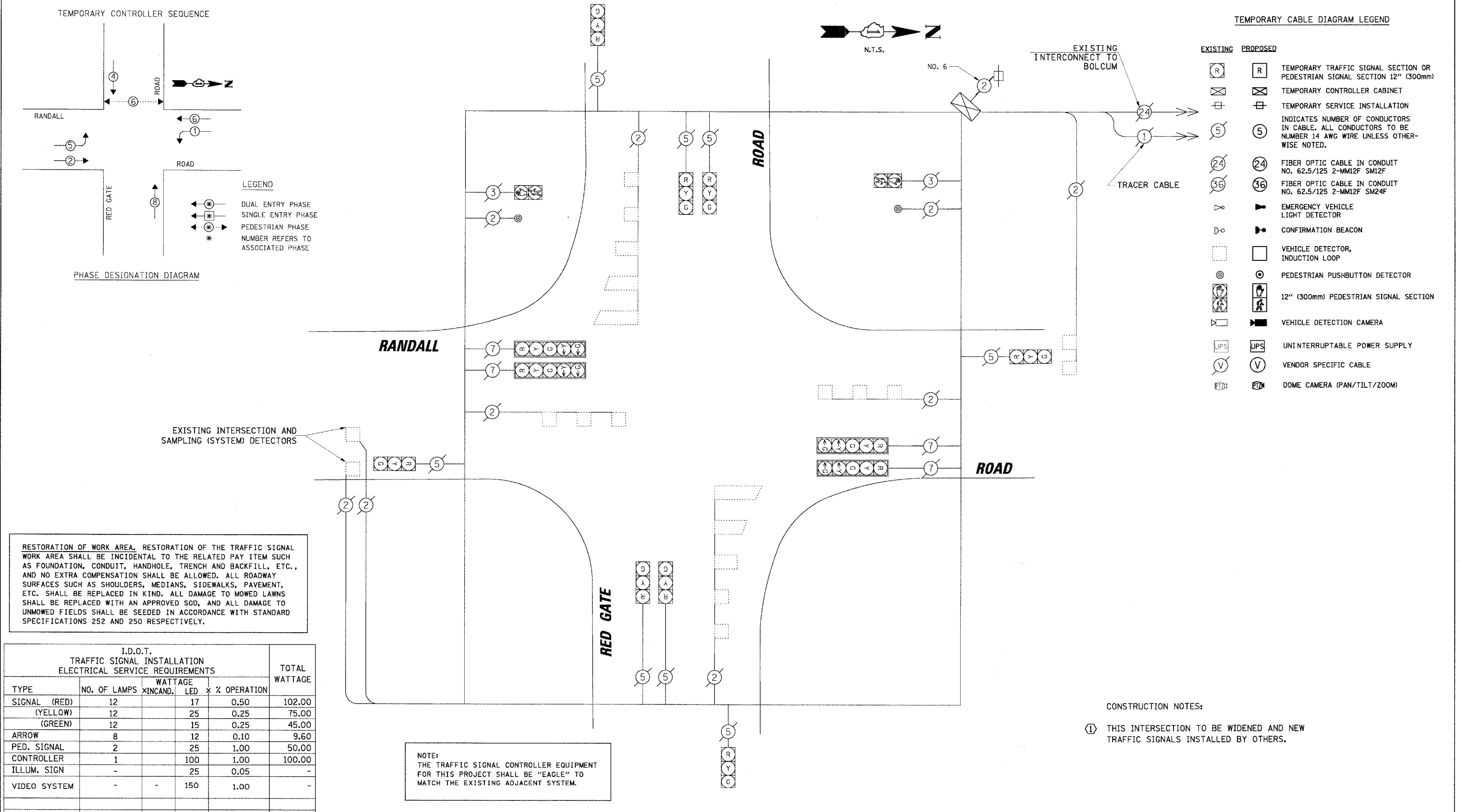
| FOUNDATION (DEPTH) | FT. (m) | CABLE SLACK | FT. (m) | VERTICAL | FT. (m) |
|--------------------|---------|-----------------|-----------|-------------------|-------------|
| TYPE A - POST | 4 (1.2) | HANDHOLE | 6.5 (2.0) | ALL FOUNDATIONS | 3.5 (1.0) |
| D - CONTROLLER | 4 (1.2) | DOUBLE HANDHOLE | 13 (4.0) | MAST ARM (L) POLE | 20'+L-2' |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | | (6m+L-0.6m) |
| | | 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) |
| | | 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) |
| | | 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) |
| | | | | ELECTRIC SERVICE | 13.5 (4.1) |
| | | | | SERVICE TO GROUND | 13.5 (4.1) |
| | | | | GROUND CABLE | 1 (0.5) |
| | | | | POST MOUNTED | 6 (1.8) |

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

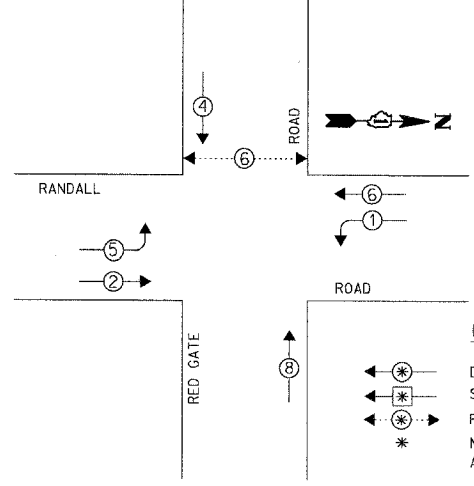
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 CHECKED: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____



TEMPORARY CONTROLLER SEQUENCE



LEGEND
 * DUAL ENTRY PHASE
 ◀ SINGLE ENTRY PHASE
 ▶ PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

TEMPORARY CABLE DIAGRAM LEGEND

- | | | |
|----------|----------|--|
| EXISTING | PROPOSED | |
| | | TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm) |
| | | TEMPORARY CONTROLLER CABINET |
| | | TEMPORARY SERVICE INSTALLATION |
| | | INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED. |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | PEDESTRIAN PUSHBUTTON DETECTOR |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | VEHICLE DETECTION CAMERA |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | VENDOR SPECIFIC CABLE |
| | | DOMED CAMERA (PAN/TILT/ZOOM) |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

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

CONSTRUCTION NOTES:
 ① THIS INTERSECTION TO BE WIDENED AND NEW TRAFFIC SIGNALS INSTALLED BY OTHERS.

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-------------------|------|-------------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | |
| SIGNAL (RED) | 12 | 17 | 0.50 | | 102.00 |
| (YELLOW) | 12 | 25 | 0.25 | | 75.00 |
| (GREEN) | 12 | 15 | 0.25 | | 45.00 |
| ARROW | 8 | 12 | 0.10 | | 9.60 |
| PED. SIGNAL | 2 | 25 | 1.00 | | 50.00 |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | - | 150 | 1.00 | | - |
| FLASHER | - | | 0.50 | | - |

ENERGY COSTS TO: TOTAL = 381.60
 KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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= |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m+L-0.6m)= | |
| 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" (900mm) | 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) |

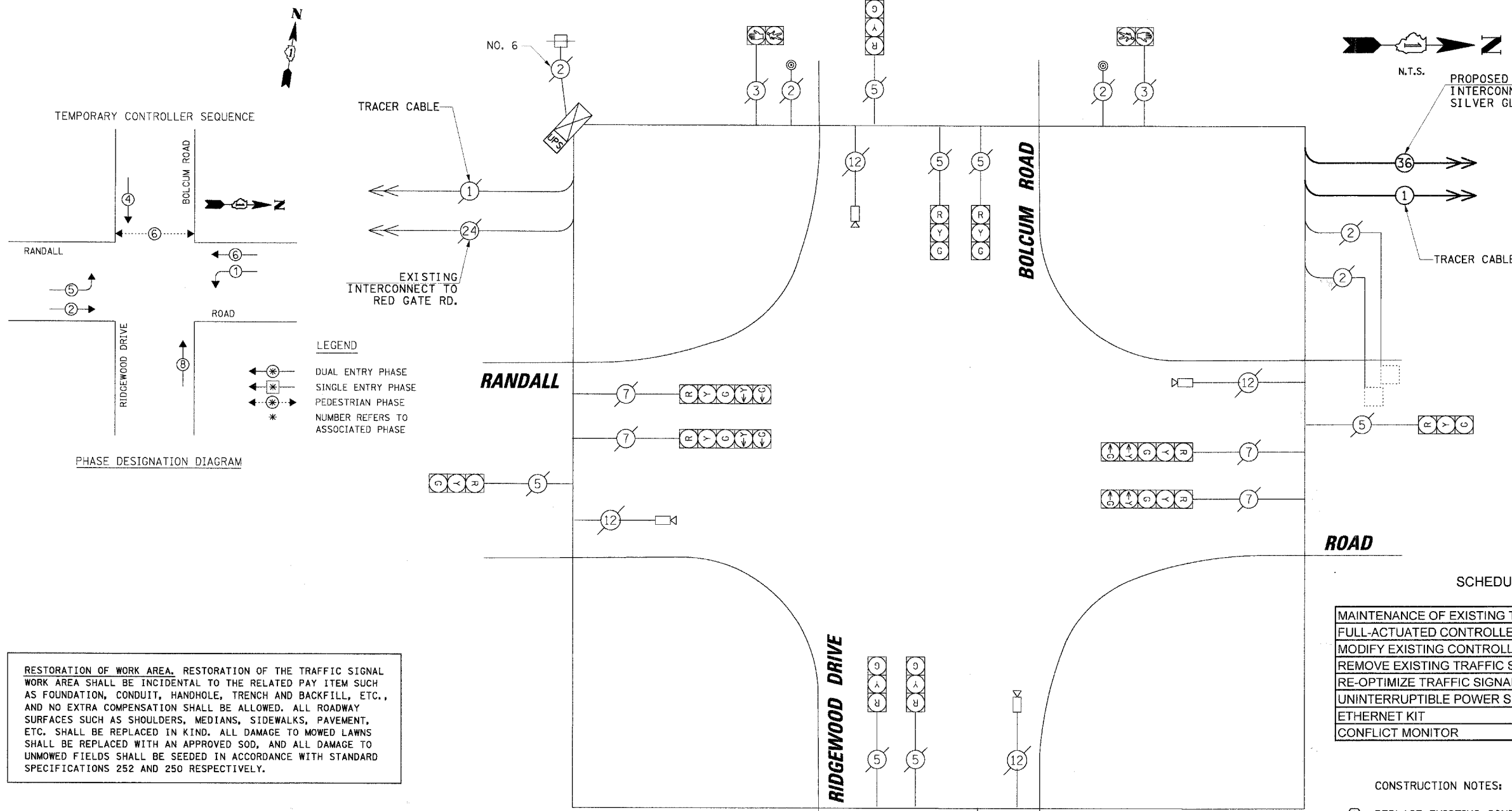
FOR INFORMATION ONLY

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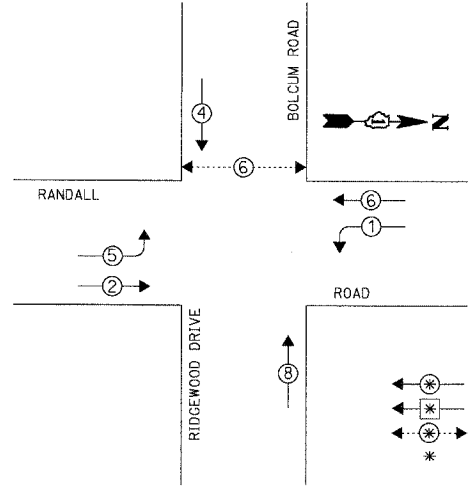
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 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

TEMPORARY CABLE DIAGRAM LEGEND

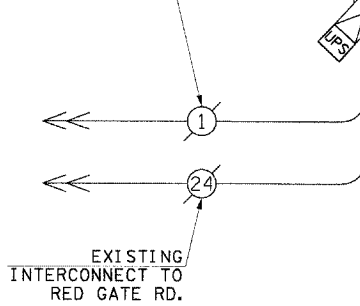
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|-----------------|-----------------|--|
| EXISTING | PROPOSED | |
| | | TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm) |
| | | TEMPORARY CONTROLLER CABINET |
| | | TEMPORARY SERVICE INSTALLATION |
| | | INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED. |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | PEDESTRIAN PUSHBUTTON DETECTOR |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | VEHICLE DETECTION CAMERA |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | VENDOR SPECIFIC CABLE |
| | | DOMED CAMERA (PAN/TILT/ZOOM) |



TEMPORARY CONTROLLER SEQUENCE



TRACER CABLE



LEGEND

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

PHASE DESIGNATION DIAGRAM



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL II | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

CONSTRUCTION NOTES:

- ① REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- ② INSTALL ETHERNET KIT.
- ③ INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
- ④ REMOVE MASTER CONTROLLER.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF KANE COUNTY, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH MASTER CONTROLLER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|---------|-----|------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE | | | |
| SIGNAL (RED) | 12 | INCAND. | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | | 15 | 0.25 | 45.00 |
| ARROW | 8 | | 12 | 0.10 | 9.60 |
| PED. SIGNAL | 2 | | 25 | 1.00 | 50.00 |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | | 150 | 1.00 | 150.00 |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 531.60

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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'± |
| E - M. ARM POLE | | SIGNAL POST | 2 (0.6) | | (6m±L-0.6m)± |
| 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" (900mm) | 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) |

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

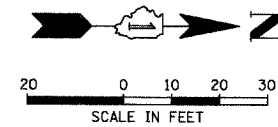
CABLE PLAN

RANDALL ROAD AT BOLCUM ROAD/RIDGEWOOD DRIVE

| | | | | |
|---|----------------|--------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 336 | 06-00346-00-TL | KANE | 69 | 9 |
| CONTRACT NO. 63011 | | | | |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | | | | |

| | | | |
|--|----------------------|------------|-----------|
| FILE NAME = N:\kanecounty\2006\1\traffsig\CP9_3a\cable.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | | CHECKED - | REVISED - |
| | | DATE - | REVISED - |

SCALE:

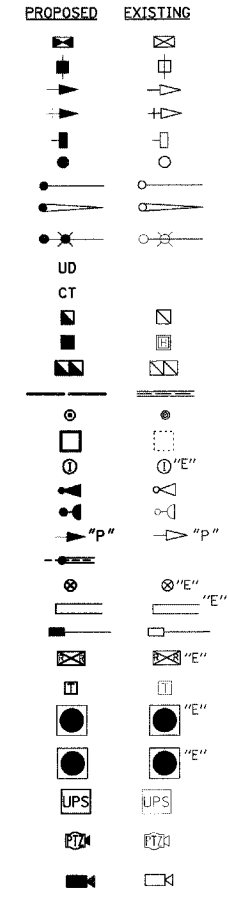


THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

TRAFFIC SIGNAL LEGEND

- CONTROLLER CABINET
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM ASSEMBLY AND POLE, STEEL
- MAST ARM ASSEMBLY AND POLE, ALUMINUM
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
- UNIT DUCT
- COMMON TRENCH
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- PEDESTRIAN PUSHBUTTON DETECTOR
- DETECTOR LOOP
- CAST IRON JUNCTION BOX
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
- VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
- RAILROAD CONTROL CABINET
- TELEPHONE CONNECTION
- ILLUMINATED SIGN "NO LEFT TURN"
- ILLUMINATED SIGN "NO RIGHT TURN"
- UNINTERRUPTIBLE POWER SUPPLY
- DOMI CAMERA (PAN/TILT/ZOOM)
- VEHICLE DETECTION CAMERA



MATCH LINE STA. 235 + 00

MATCH LINE STA. 235 + 00

| | | | |
|------|----|------|----|
| DATE | BY | DATE | BY |
| | | | |
| DATE | BY | DATE | BY |
| | | | |

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

PROF. FILE SURVEYED
 PLANNED
 DESIGNED
 DRAWN
 CHECKED
 IN CHARGE

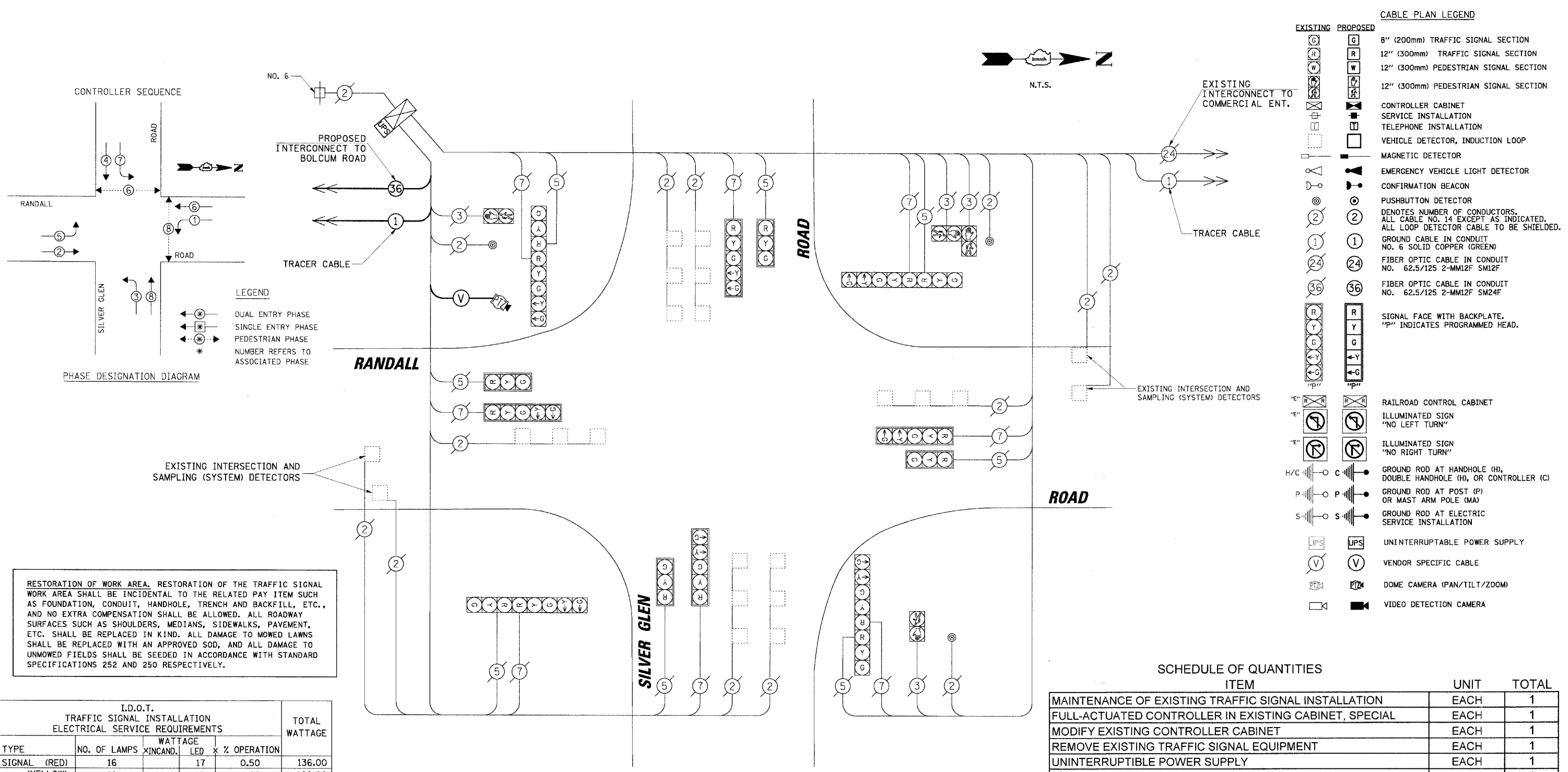
- CONSTRUCTION NOTES:
- ① REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - ② INSTALL ETHERNET HUB KIT.
 - ③ INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
 - ④ INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM POLE IN THE SOUTHWEST CORNER.

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

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

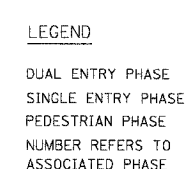
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| FILE NAME = | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT SILVER GLEN ROAD | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| | | DRAWN - | REVISED - | | | 336 | 06-00346-00-TL | KANE | 69 | 10 | |
| | | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| | | DATE - | REVISED - | | | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | | |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ R.T. OF MAY CHECKED: _____
 NOTE BOOK NO. _____ CAD FILE NAME: _____
 PLAN NO. _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ R.T. OF MAY CHECKED: _____
 NOTE BOOK NO. _____ CAD FILE NAME: _____
 PLAN NO. _____



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | PTZ DOME CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET HUB KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET HUB KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
 - INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM POLE IN THE SOUTHWEST CORNER.

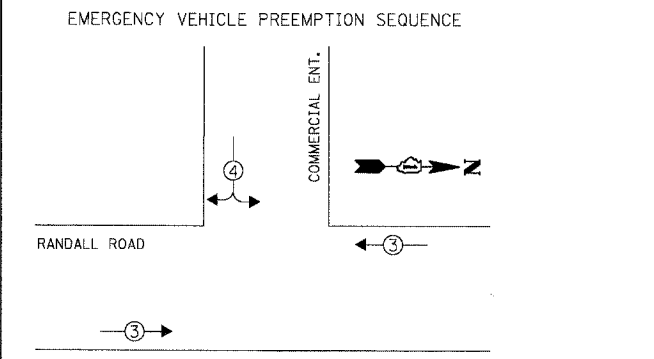
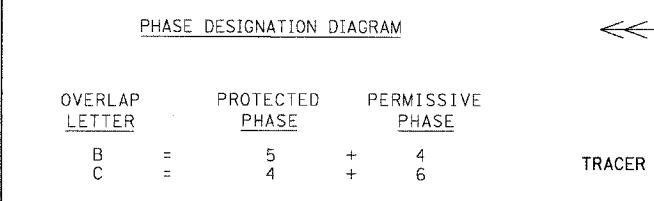
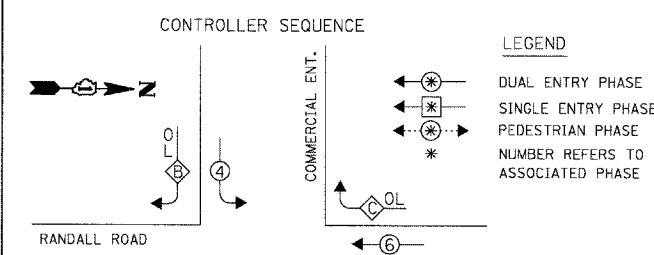
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

| TYPE | NO. OF LAMPS | WATTAGE | | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|-----|-------------|---------------|
| | | INCAND. | LED | | |
| SIGNAL (RED) | 16 | | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | | 15 | 0.25 | 60.00 |
| ARROW | 16 | | 12 | 0.10 | 19.20 |
| PED. SIGNAL | 4 | | 25 | 1.00 | 100.00 |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | | 150 | 1.00 | 150.00 |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 665.20
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. ARM POLE | | SIGNAL POST | 2 (0.6) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK NO.: _____ P.L. OF WAY CHECKED: _____
 NO.: _____ CAD FILE NAME: _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK NO.: _____ P.L. OF WAY CHECKED: _____
 NO.: _____ CAD FILE NAME: _____



EXISTING EMERGENCY VEHICLE PREEMPTORS

| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
|-----------------------------|---|---|
| MOVEMENT | ← | ← |

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

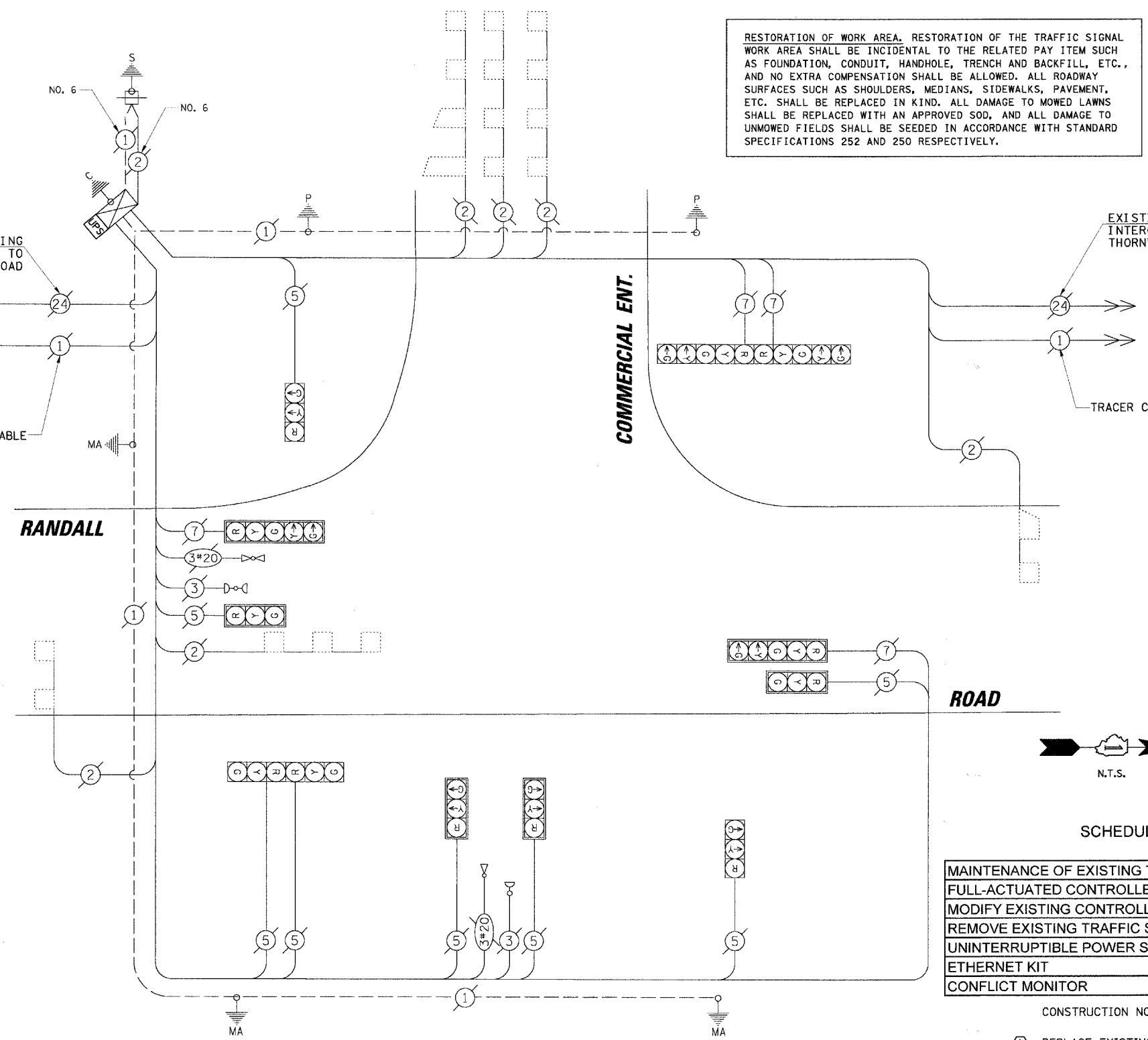
| TYPE | NO. OF LAMPS | WATTAGE | | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-----------|-----|-------------|---------------|
| | | X INCAND. | LED | | |
| SIGNAL (RED) | 12 | | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | | 15 | 0.25 | 45.00 |
| ARROW | 8 | | 12 | 0.10 | 9.60 |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | - | | 150 | 1.00 | - |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 331.60
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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' |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m+L-0.6m) | |
| 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" (900mm) | 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) |

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

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION | |
|----------|----------|---|---|
| ⊖ | ⊖ | 8" (200mm) TRAFFIC SIGNAL SECTION | |
| ⊖ | ⊖ | 12" (300mm) TRAFFIC SIGNAL SECTION | |
| ⊖ | ⊖ | 12" (300mm) PEDESTRIAN SIGNAL SECTION | |
| ⊖ | ⊖ | 12" (300mm) PEDESTRIAN SIGNAL SECTION | |
| ⊖ | ⊖ | CONTROLLER CABINET | |
| ⊖ | ⊖ | SERVICE INSTALLATION | |
| ⊖ | ⊖ | TELEPHONE INSTALLATION | |
| ⊖ | ⊖ | VEHICLE DETECTOR, INDUCTION LOOP | |
| ⊖ | ⊖ | MAGNETIC DETECTOR | |
| ⊖ | ⊖ | EMERGENCY VEHICLE LIGHT DETECTOR | |
| ⊖ | ⊖ | CONFIRMATION BEACON | |
| ⊖ | ⊖ | PUSHBUTTON DETECTOR | |
| ⊖ | ⊖ | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. | |
| ⊖ | ⊖ | ⊖ | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| ⊖ | ⊖ | ⊖ | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| ⊖ | ⊖ | ⊖ | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| ⊖ | ⊖ | ⊖ | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| ⊖ | ⊖ | ⊖ | RAILROAD CONTROL CABINET |
| ⊖ | ⊖ | ⊖ | ILLUMINATED SIGN "NO LEFT TURN" |
| ⊖ | ⊖ | ⊖ | ILLUMINATED SIGN "NO RIGHT TURN" |
| ⊖ | ⊖ | ⊖ | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HI), OR CONTROLLER (C) |
| ⊖ | ⊖ | ⊖ | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| ⊖ | ⊖ | ⊖ | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| ⊖ | ⊖ | ⊖ | UNINTERRUPTIBLE POWER SUPPLY |
| ⊖ | ⊖ | ⊖ | VENDOR SPECIFIC CABLE |
| ⊖ | ⊖ | ⊖ | DOME CAMERA (PAN/TILT/ZOOM) |
| ⊖ | ⊖ | ⊖ | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____
 DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____

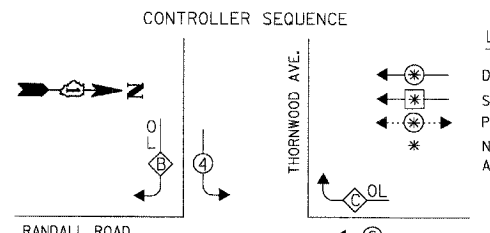
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____

CABLE PLAN LEGEND

- | | |
|--|---|
| | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | CONTROLLER CABINET |
| | SERVICE INSTALLATION |
| | TELEPHONE INSTALLATION |
| | VEHICLE DETECTOR, INDUCTION LOOP |
| | MAGNETIC DETECTOR |
| | EMERGENCY VEHICLE LIGHT DETECTOR |
| | CONFIRMATION BEACON |
| | PUSHBUTTON DETECTOR |
| | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| | RAILROAD CONTROL CABINET |
| | ILLUMINATED SIGN "NO LEFT TURN" |
| | ILLUMINATED SIGN "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 |
| | UNINTERRUPTIBLE POWER SUPPLY |
| | VENDOR SPECIFIC CABLE |
| | DOMED CAMERA (PAN/TILT/ZOOM) |
| | VIDEO DETECTION CAMERA |

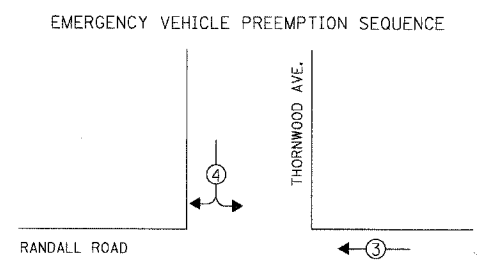
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.



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

PHASE DESIGNATION DIAGRAM

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



EXISTING EMERGENCY VEHICLE PREEMPTORS

| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
|-----------------------------|---|---|
| MOVEMENT | | |

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

| TYPE | NO. OF LAMPS | WATTAGE | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|------|-------------|---------------|
| SIGNAL (RED) | 12 | | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | | 15 | 0.25 | 45.00 |
| ARROW | 8 | | 12 | 0.10 | 9.60 |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | - | | 150 | 1.00 | - |
| FLASHER | - | | 0.50 | - | - |

ENERGY COSTS TO: TOTAL = 330.6
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: **MIKE WIDHALM**
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. 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" (900mm) | 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) |

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

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

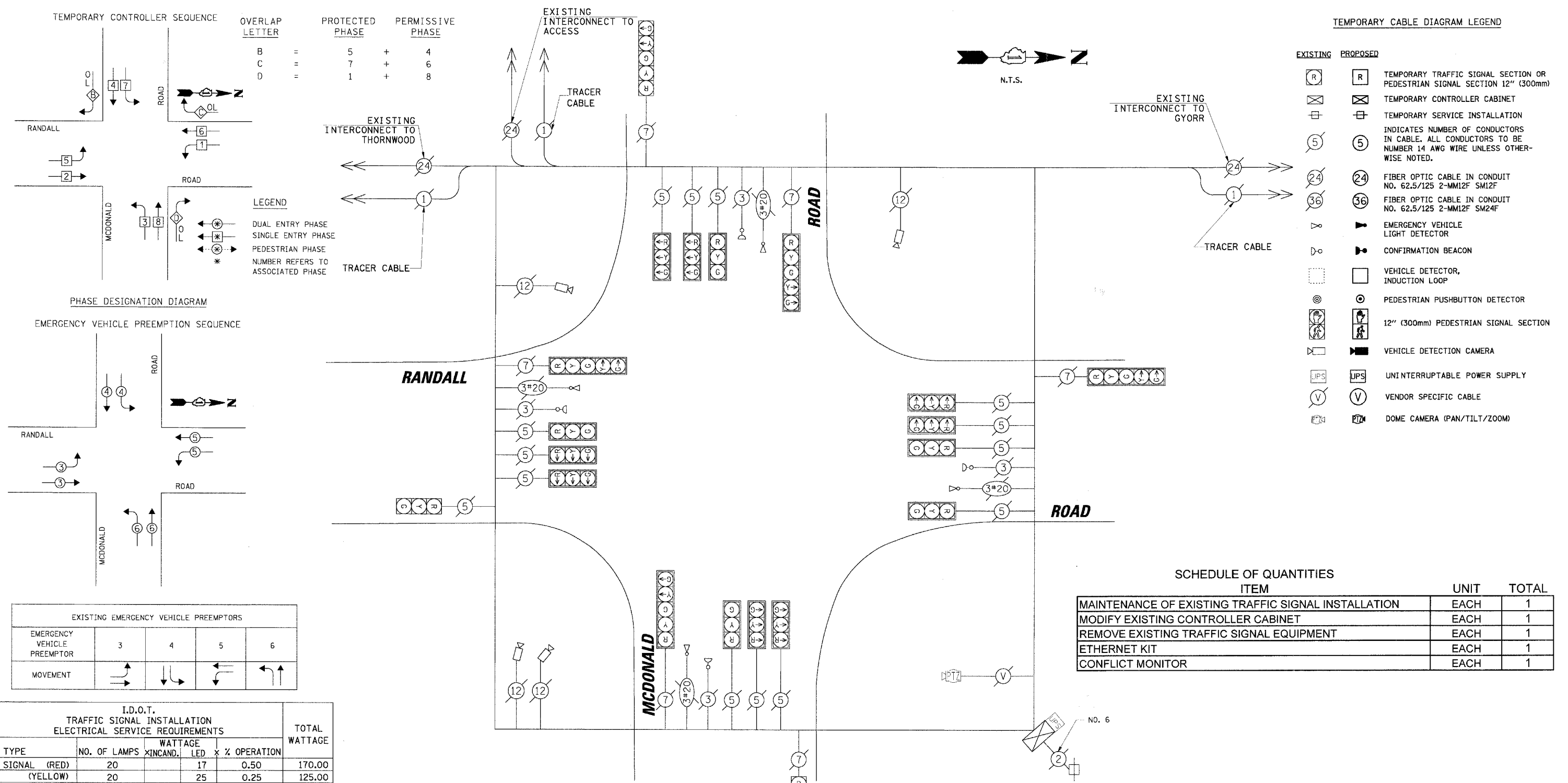
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ DATE: _____
 FILE NAME: _____

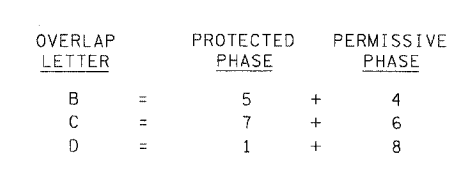
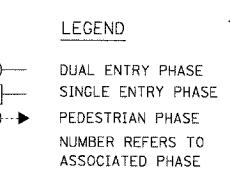
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ DATE: _____
 FILE NAME: _____

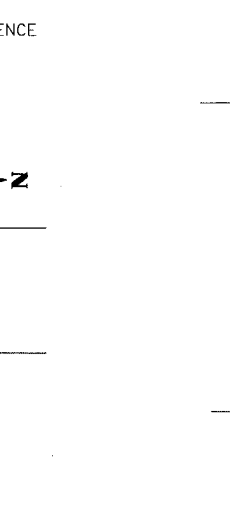


TEMPORARY CABLE DIAGRAM LEGEND

- | EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|--|
| | | TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm) |
| | | TEMPORARY CONTROLLER CABINET |
| | | TEMPORARY SERVICE INSTALLATION |
| | | INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED. |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | PEDESTRIAN PUSHBUTTON DETECTOR |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | VEHICLE DETECTION CAMERA |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | VENDOR SPECIFIC CABLE |
| | | DOMED CAMERA (PAN/TILT/ZOOM) |



PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS

| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 | 5 | 6 |
|-----------------------------|---|---|---|---|
| MOVEMENT | | | | |

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

| TYPE | NO. OF LAMPS | WATTAGE | | TOTAL WATTAGE |
|--------------|--------------|---------|-------------------|---------------|
| | | INCAND. | LED x % OPERATION | |
| SIGNAL (RED) | 20 | 17 | 0.50 | 170.00 |
| (YELLOW) | 20 | 25 | 0.25 | 125.00 |
| (GREEN) | 20 | 15 | 0.25 | 75.00 |
| ARROW | 12 | 12 | 0.10 | 14.40 |
| PED. SIGNAL | - | 25 | 1.00 | - |
| CONTROLLER | 1 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | 150 | 1.00 | 150.00 |
| FLASHER | - | - | 0.50 | - |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| 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'-H-2= |
| E - M. ARM POLE | - | SIGNAL POST | 2 (1.0) | (6m+L-0.6m)= | - |
| 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" (900mm) | 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) |

ENERGY COSTS TO: TOTAL = 634.40

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- INSTALL ETHERNET KIT.
 - REPLACE EXISTING CONFLICT MONITOR.

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

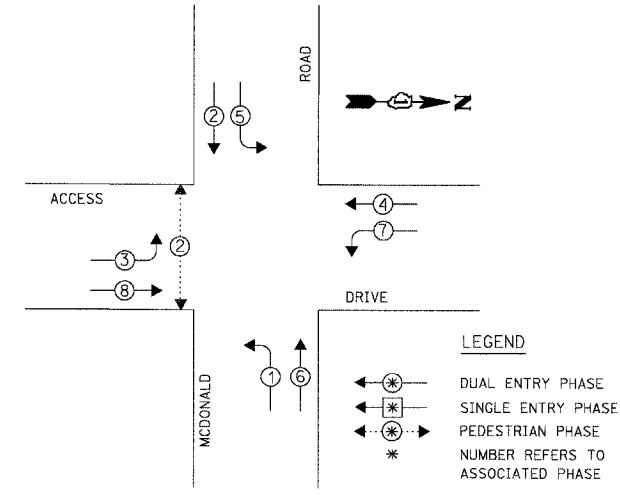
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONFLICT MONITOR

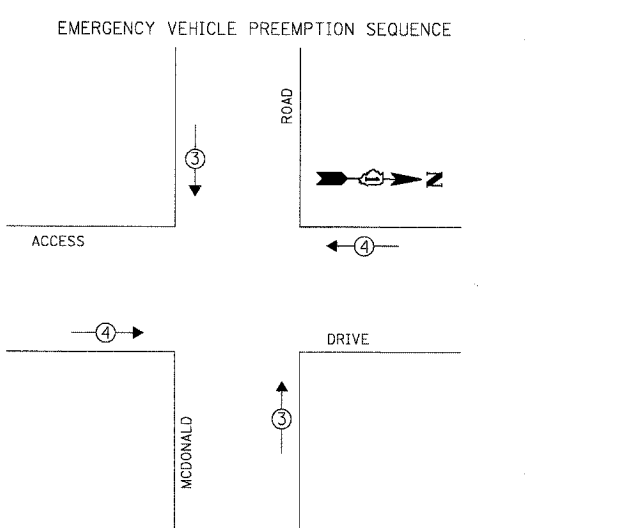
BY DATE
 SURVEYED PLOTTED CHECKED
 NOTE BOOK NO. OF WAYS CHECKED
 CAD FILE NAME
 PROFILE SURVEYED PLOTTED CHECKED
 NO. LE BOOK B.M. NOTED
 STRUCTURE NOTATIONS CIPKD

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM



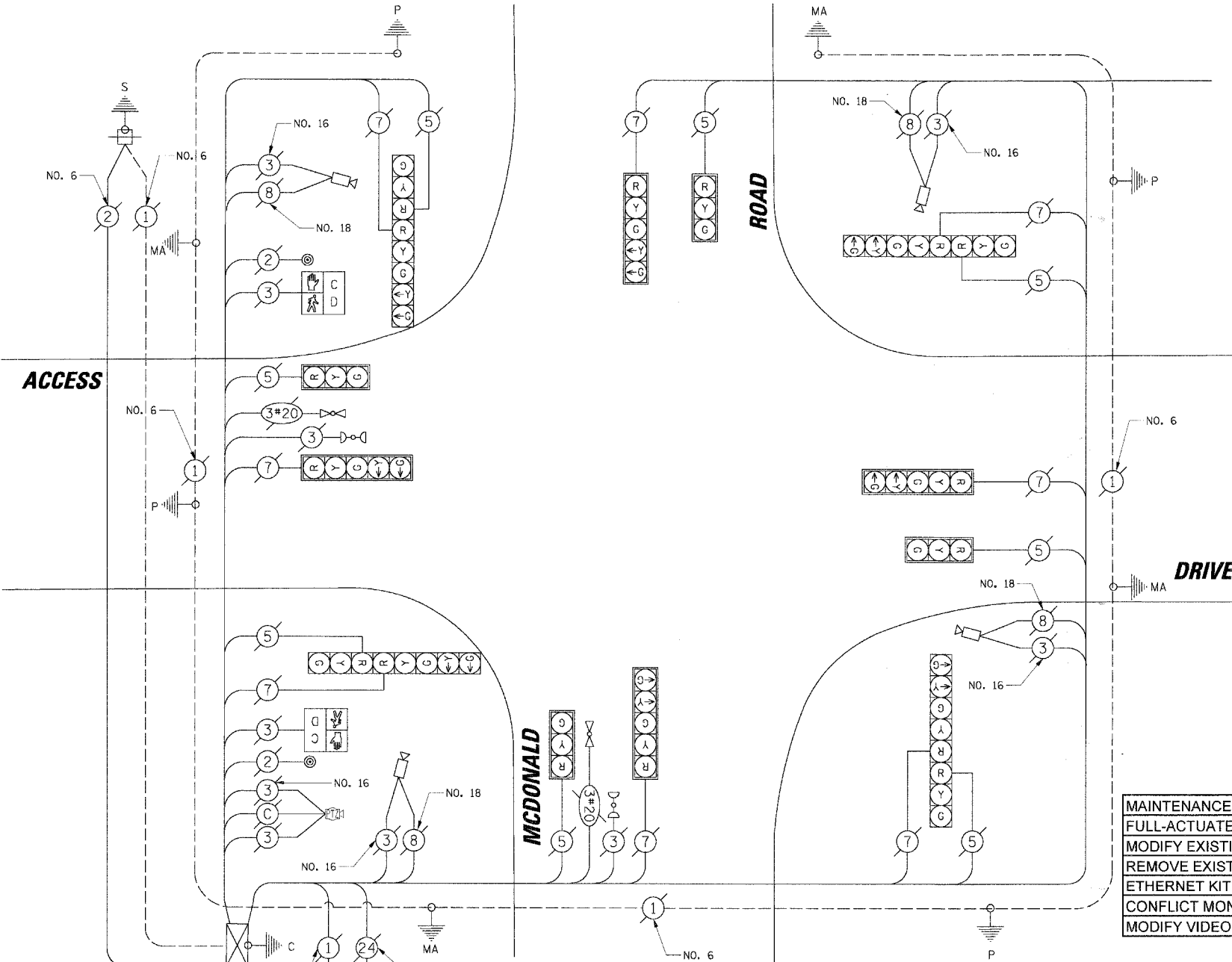
EXISTING EMERGENCY VEHICLE PREEMPTORS

| | | |
|-----------------------------|-----|-----|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
| MOVEMENT | ↓ ↑ | ← → |

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

| TYPE | NO. OF LAMPS | WATTAGE INCAND. LED | % OPERATION | TOTAL WATTAGE |
|----------------|--------------|------------------------|-------------|---------------|
| SIGNAL (RED) | 16 | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | 15 | 0.25 | 60.00 |
| ARROW | 16 | 12 | 0.10 | 19.20 |
| PED. SIGNAL | 2 | 25 | 1.00 | 50.00 |
| CONTROLLER | 1 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | - | 1.00 | 150.00 |
| FLASHER | - | - | 0.50 | - |
| TOTAL = | | | | 615.20 |

ENERGY COSTS TO:
CITY OF SOUTH ELGIN
 735 MARTIN DRIVE
 SOUTH ELGIN, IL 60177
ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| 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'± |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m±L-0.6m±) | |
| 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" (900mm) | 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) |

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

CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (Symbol) | (Symbol) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | CONTROLLER CABINET |
| (Symbol) | (Symbol) | SERVICE INSTALLATION |
| (Symbol) | (Symbol) | TELEPHONE INSTALLATION |
| (Symbol) | (Symbol) | VEHICLE DETECTOR, INDUCTION LOOP |
| (Symbol) | (Symbol) | MAGNETIC DETECTOR |
| (Symbol) | (Symbol) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (Symbol) | (Symbol) | CONFIRMATION BEACON |
| (Symbol) | (Symbol) | PUSHBUTTON DETECTOR |
| (Symbol) | (Symbol) | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| (Symbol) | (Symbol) | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM12F |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM24F |
| (Symbol) | (Symbol) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (Symbol) | (Symbol) | RAILROAD CONTROL CABINET |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO LEFT TURN" |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (Symbol) | (Symbol) | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| (Symbol) | (Symbol) | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| (Symbol) | (Symbol) | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (Symbol) | (Symbol) | UNINTERRUPTABLE POWER SUPPLY |
| (Symbol) | (Symbol) | VENDOR SPECIFIC CABLE |
| (Symbol) | (Symbol) | DOMED CAMERA (PAN/TILT/ZOOM) |
| (Symbol) | (Symbol) | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |
| MODIFY VIDEO PROCESSING UNIT | EACH | 1 |

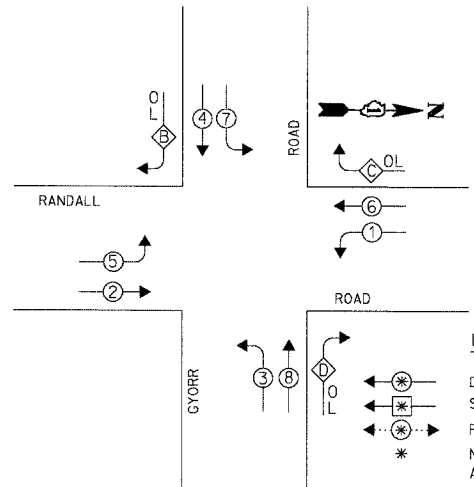
- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - MODIFY VIDEO PROCESSING UNIT TO COMMUNICATE OVER ETHERNET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 PLAN: _____ NOTE BOOK: _____ NO. _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 PROFILE: _____ NOTE BOOK: _____ NO. _____
 STRUCTURE NOTATIONS: CHPD

TEMPORARY CONTROLLER SEQUENCE

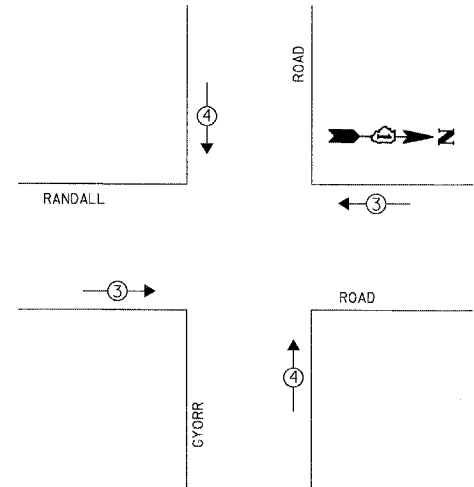


| OVERLAP LETTER | PROTECTED PHASE | PERMISSIVE PHASE |
|----------------|-----------------|------------------|
| B | 5 | 4 |
| C | 7 | 6 |
| D | 1 | 8 |

LEGEND
 * DUAL ENTRY PHASE
 ◀ SINGLE ENTRY PHASE
 ▶ PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



| EXISTING EMERGENCY VEHICLE PREEMPTORS | | | |
|---------------------------------------|---|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 | |
| MOVEMENT | ← | ↓ | ↑ |

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

| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|------------------|--------------|-------------------|------|-------------|-----------------|
| SIGNAL (RED) | 14 | 17 | 0.50 | | 119.00 |
| (YELLOW) | 14 | 25 | 0.25 | | 87.50 |
| (GREEN) | 14 | 15 | 0.25 | | 52.50 |
| ARROW | 24 | 12 | 0.10 | | 28.80 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | 1 | - | 150 | 1.00 | 150.00 |
| LUMINAIRE | 4 | 250 | 0.50 | | 500.00 |
| FLASHER | - | - | 0.50 | | - |
| ENERGY COSTS TO: | | | | | TOTAL = 1037.80 |

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: **MIKE WIDHALM**
 PHONE: (847) 608-2376
 COMPANY: **COMED**

| 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 | 15 (4.0) | MAST ARM (L) POLE | 20'+L-2' (6m+L-0.6m) |
| E - M. 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" (900mm) | 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) |

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

TEMPORARY CABLE DIAGRAM LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|--|
| | | TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm) |
| | | TEMPORARY CONTROLLER CABINET |
| | | TEMPORARY SERVICE INSTALLATION |
| | | INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED. |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | PEDESTRIAN PUSHBUTTON DETECTOR |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | VEHICLE DETECTION CAMERA |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | VENDOR SPECIFIC CABLE |
| | | DOMED CAMERA (PAN/TILT/ZOOM) |

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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

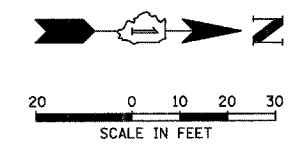
CONSTRUCTION NOTES:

- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- INSTALL ETHERNET KIT.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

| | | | | | | |
|---|---------------|------------|---------|-----------|----------|------|
| DATE | BY | SUPERVISED | PLOTTED | ALIGNED | CHECKED | DATE |
| | | | | | | |
| PLAN | NOTE BOOK NO. | NO. | | | | |
| CHRISTOPHER B. BURKE ENGINEERING LTD. 9875 West Higgins Road, Suite 600 Rosemont, Illinois 60018 (847) 823-0500 | | | | | | |
| DATE | BY | REVISION | PLOTTED | STRUCTURE | NOTATION | DATE |
| | | | | | | |
| PROFILE | NOTE BOOK NO. | | | | | |

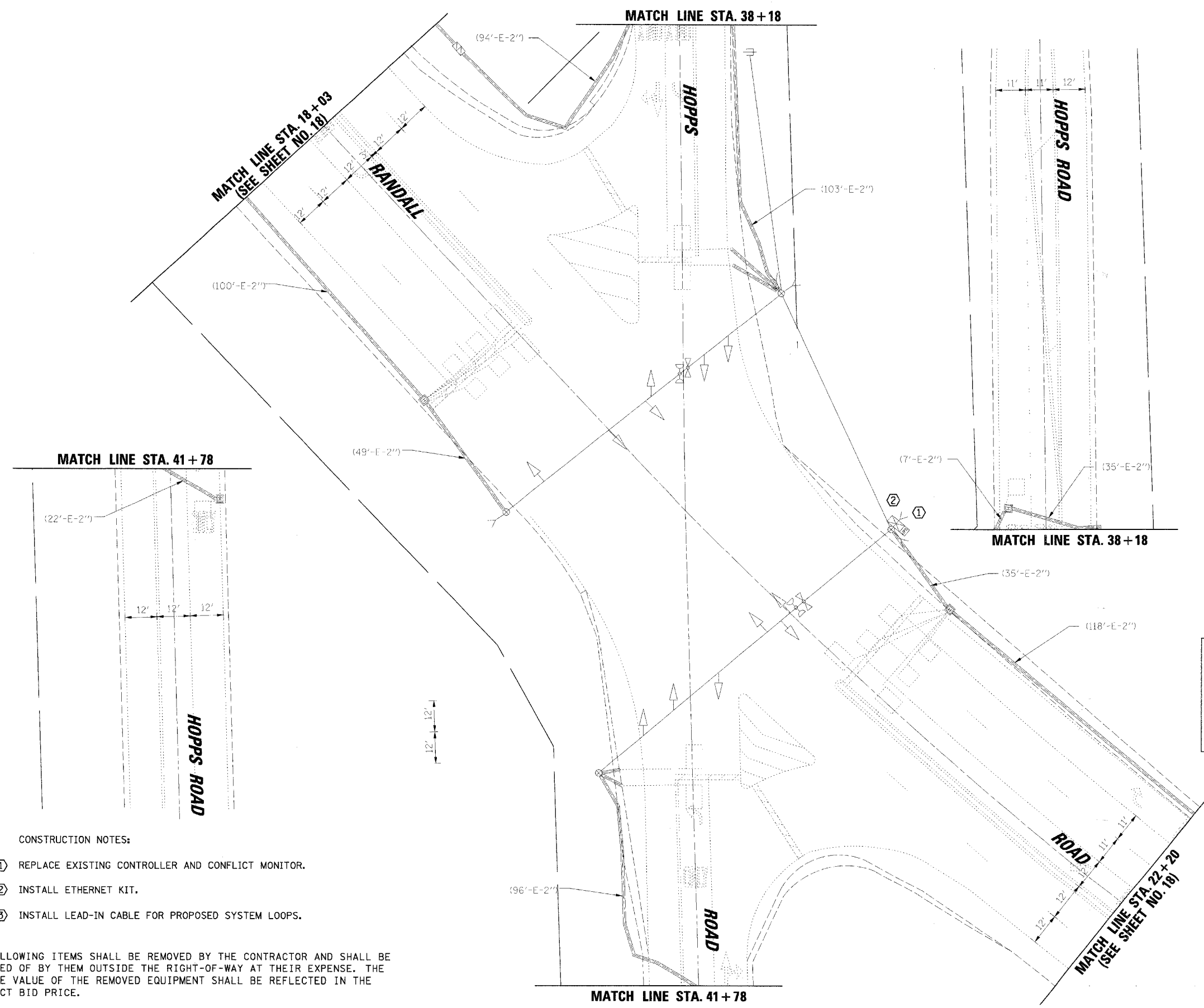


TRAFFIC SIGNAL LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER CABINET | [Symbol] | [Symbol] |
| SERVICE INSTALLATION | [Symbol] | [Symbol] |
| SIGNAL HEAD | [Symbol] | [Symbol] |
| SIGNAL HEAD WITH BACKPLATE | [Symbol] | [Symbol] |
| SIGNAL HEAD, PEDESTRIAN | [Symbol] | [Symbol] |
| SIGNAL POST | [Symbol] | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, STEEL | [Symbol] | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | [Symbol] | [Symbol] |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | [Symbol] | [Symbol] |
| UNIT DUCT | [Symbol] | [Symbol] |
| COMMON TRENCH | [Symbol] | [Symbol] |
| HANDHOLE | [Symbol] | [Symbol] |
| HEAVY DUTY HANDHOLE | [Symbol] | [Symbol] |
| DOUBLE HANDHOLE | [Symbol] | [Symbol] |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | [Symbol] | [Symbol] |
| PEDESTRIAN PUSHBUTTON DETECTOR | [Symbol] | [Symbol] |
| DETECTOR LOOP | [Symbol] | [Symbol] |
| CAST IRON JUNCTION BOX | [Symbol] | [Symbol] |
| EMERGENCY VEHICLE LIGHT DETECTOR | [Symbol] | [Symbol] |
| CONFIRMATION BEACON | [Symbol] | [Symbol] |
| SIGNAL HEAD OPTICALLY PROGRAMMED | [Symbol] | [Symbol] |
| CONDUIT SPLICE | [Symbol] | [Symbol] |
| WOOD POLE | [Symbol] | [Symbol] |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | [Symbol] | [Symbol] |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | [Symbol] | [Symbol] |
| RAILROAD CONTROL CABINET | [Symbol] | [Symbol] |
| TELEPHONE CONNECTION | [Symbol] | [Symbol] |
| ILLUMINATED SIGN "NO LEFT TURN" | [Symbol] | [Symbol] |
| ILLUMINATED SIGN "NO RIGHT TURN" | [Symbol] | [Symbol] |
| UNINTERRUPTIBLE POWER SUPPLY | [Symbol] | [Symbol] |
| DOME CAMERA (PAN/TILT/ZOOM) | [Symbol] | [Symbol] |
| VEHICLE DETECTION CAMERA | [Symbol] | [Symbol] |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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



- CONSTRUCTION NOTES:
- ① REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - ② INSTALL ETHERNET KIT.
 - ③ INSTALL LEAD-IN CABLE FOR PROPOSED SYSTEM LOOPS.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

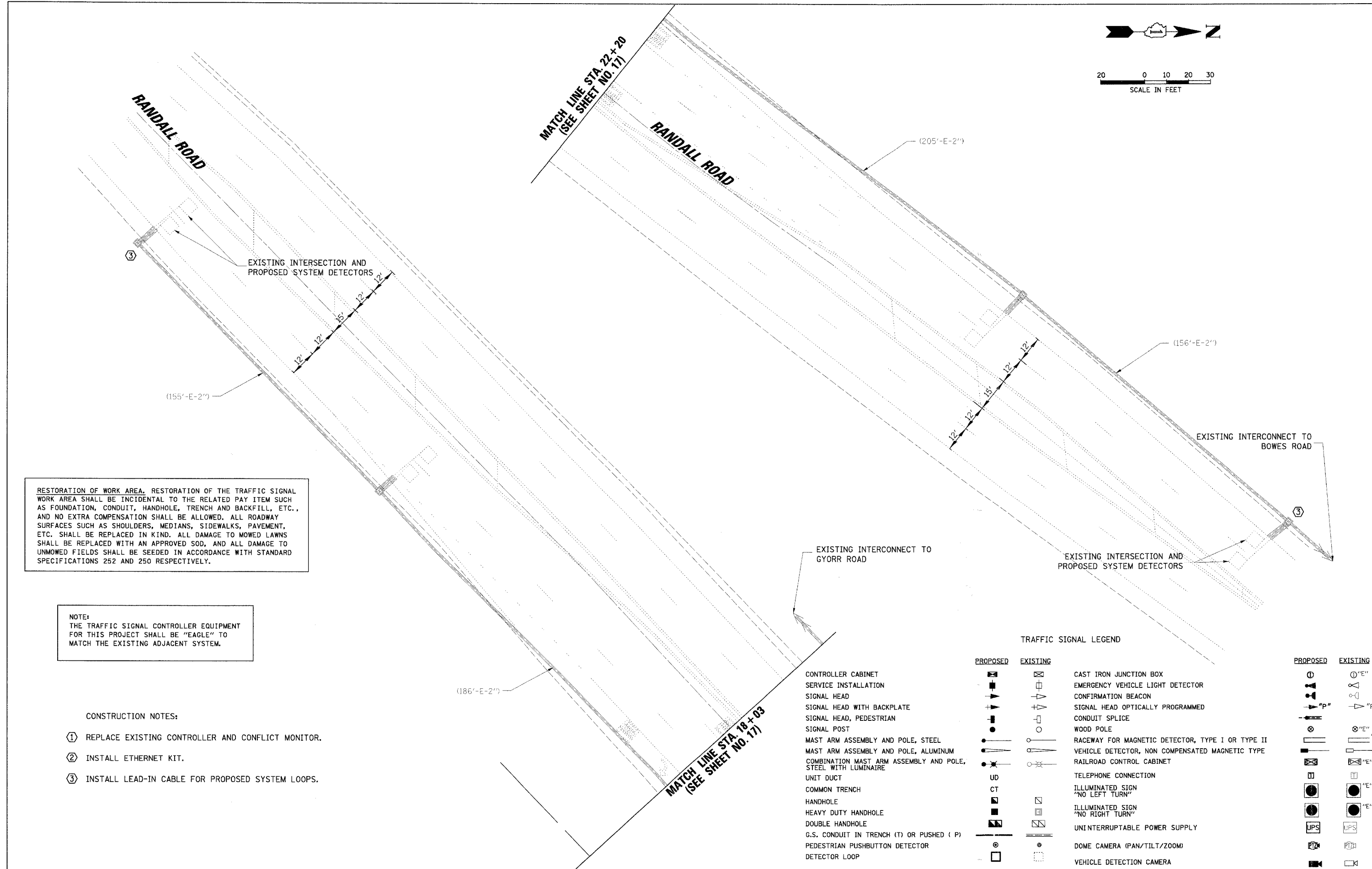
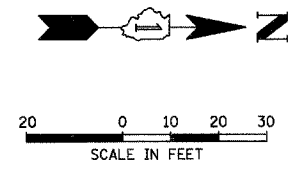
- 1 EACH CONTROLLER AND CONFLICT MONITOR

| | | | | | | | | | | | |
|--|----------------------|------------|-----------|---|---|---|----------------|--------|--------------|-----------|--|
| FILE NAME = | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT HOPPS ROAD | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| h:\kane\county\070616\Traf\01\MO01_Hopps\dgn | | DRAWN - | REVISED - | | | 336 | 06-00346-00-TL | KANE | 69 | 17 | |
| | | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| | | DATE - | REVISED - | | | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | | | | | |

DATE: _____ BY: _____
 SURVEYED _____ CHECKED _____
 PLOTTED _____ RT. OF WAY CHECKED _____
 PLAN _____ NO. _____
 NOTE BOOK _____
 NO. _____
 CAD FILE NAME _____

DATE: _____ BY: _____
 SURVEYED _____ CHECKED _____
 PLOTTED _____ RT. OF WAY CHECKED _____
 PROFILE _____ NO. _____
 NOTE BOOK _____
 NO. _____
 STRUCTURE NOTATION: CRKD

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

- CONSTRUCTION NOTES:
- ① REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - ② INSTALL ETHERNET KIT.
 - ③ INSTALL LEAD-IN CABLE FOR PROPOSED SYSTEM LOOPS.

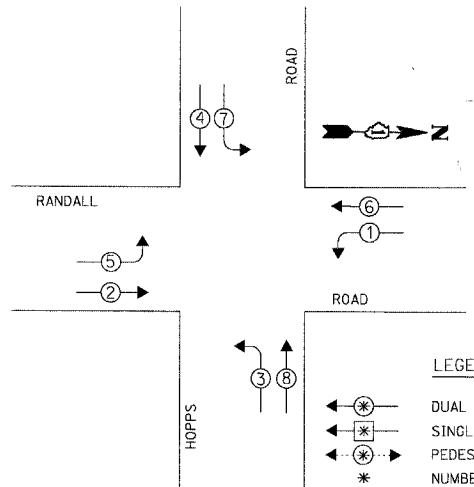
| TRAFFIC SIGNAL LEGEND | |
|-----------------------|----------|
| PROPOSED | EXISTING |
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DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ DATE: _____
 NOTE BOOK NO. _____
 FILE NAME: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9515 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

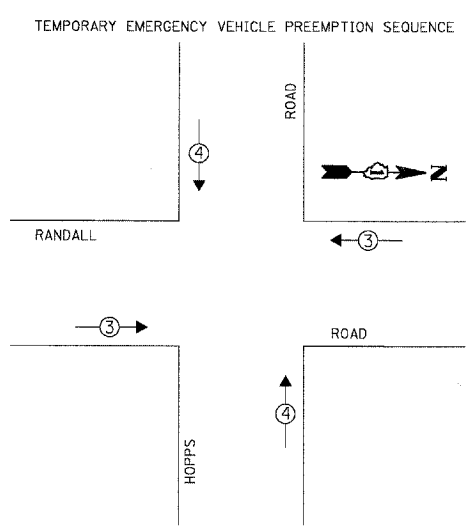
DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ DATE: _____
 NOTE BOOK NO. _____
 FILE NAME: _____

TEMPORARY CONTROLLER SEQUENCE



LEGEND
 * DUAL ENTRY PHASE
 ◀ SINGLE ENTRY PHASE
 ▶ PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM



| EXISTING EMERGENCY VEHICLE PREEMPTORS | | |
|---------------------------------------|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
| MOVEMENT | ← | ↑ |

TEMPORARY CABLE DIAGRAM LEGEND

- | EXISTING | PROPOSED |
|----------|----------|
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SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR | FOOT | 1375 |
| INDUCTIVE LOOP DETECTOR | EACH | 2 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

CONSTRUCTION NOTES:

- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- INSTALL ETHERNET KIT.
- INSTALL LEAD-IN CABLE FOR PROPOSED SYSTEM LOOPS.

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-------------------|------|-------------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | |
| SIGNAL (RED) | 12 | 17 | 0.50 | | 102.00 |
| (YELLOW) | 12 | 25 | 0.25 | | 75.00 |
| (GREEN) | 12 | 15 | 0.25 | | 45.00 |
| ARROW | 16 | 12 | 0.10 | | 19.20 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | - | 150 | 1.00 | | - |
| FLASHER | - | - | 0.50 | | - |

ENERGY COSTS TO: TOTAL = 341.20
 KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. ARM POLE | 10 (3.0) | SIGNAL POST | 2 (1.0) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

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

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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN
 RANDALL ROAD AT HOPPS ROAD

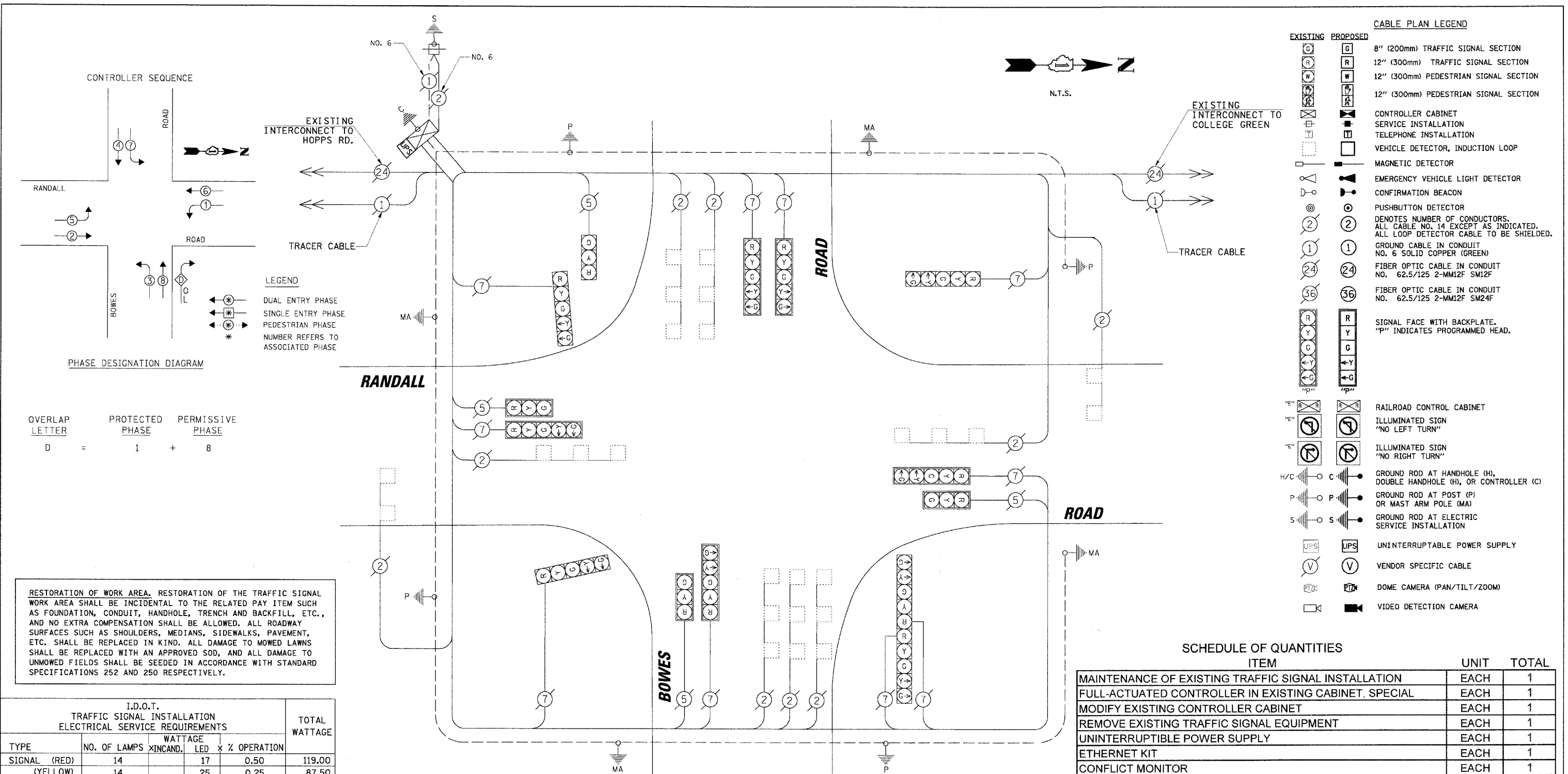
| | | | | |
|---------------------|----------------|--------|---------------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 336 | 06-00346-00-TL | KANE | 69 | 19 |
| FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | |
| | | | CONTRACT NO. 63011 | |

SCALE:

SURVEYED BY: DATE: _____
 PLOTTED BY: DATE: _____
 CHECKED BY: DATE: _____
 NOTED BY: DATE: _____
 FILE NO.: _____
 FILE NAME: _____
 PROFILE SURVEYED BY: DATE: _____
 PLOTTED BY: DATE: _____
 CHECKED BY: DATE: _____
 NOTED BY: DATE: _____
 FILE NO.: _____
 FILE NAME: _____

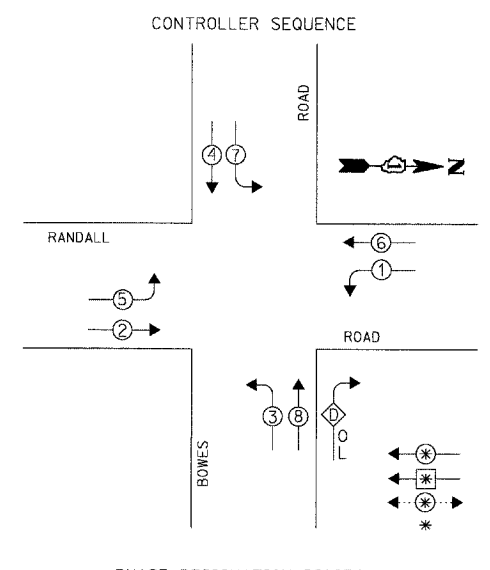
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____
 BY: _____
 CHECKED BY: _____
 NOTED BY: _____
 FILE NO.: _____
 FILE NAME: _____



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 2-SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | DOMED CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |



OVERLAP LETTER **PROTECTED PHASE** **PERMISSIVE PHASE**
 D = 1 + 8

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|----------------|--------------|-------------------|------|-------------|---------------|
| SIGNAL (RED) | 14 | 17 | 0.50 | | 119.00 |
| (YELLOW) | 14 | 25 | 0.25 | | 87.50 |
| (GREEN) | 14 | 15 | 0.25 | | 52.50 |
| ARROW | 20 | 12 | 0.10 | | 24.00 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | - | - | 150 | 1.00 | - |
| FLASHER | - | - | 0.50 | | - |
| TOTAL = | | | | | 383.00 |

ENERGY COSTS TO: TOTAL = 383.00
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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' | |
| E - M. ARM POLE | 2 | (1.0) | SIGNAL POST | 2 | (1.0) | (6m+L-0.6m) | | |
| 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" (900mm) | 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) |

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

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

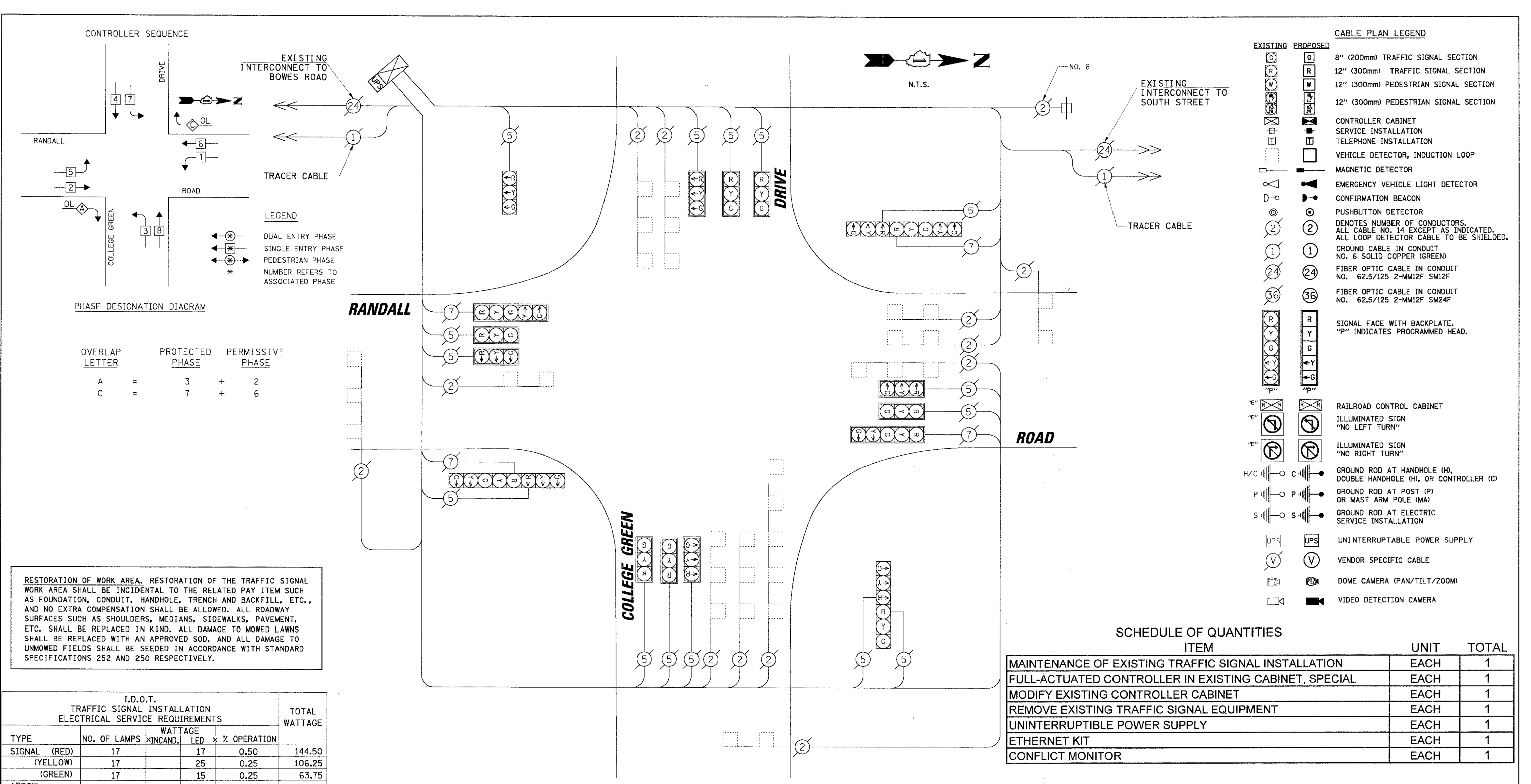
DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 PROFILE: _____ CHECKED: _____
 NOTE BOOK: _____ NO. _____
 STRUCTURE: _____ NOTATIONS: CHFD

DATE: _____ BY: _____



CABLE PLAN LEGEND

- | | |
|--|---|
| | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | CONTROLLER CABINET |
| | SERVICE INSTALLATION |
| | TELEPHONE INSTALLATION |
| | VEHICLE DETECTOR, INDUCTION LOOP |
| | MAGNETIC DETECTOR |
| | EMERGENCY VEHICLE LIGHT DETECTOR |
| | CONFIRMATION BEACON |
| | PUSHBUTTON DETECTOR |
| | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | GROUND CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| | RAILROAD CONTROL CABINET |
| | ILLUMINATED SIGN "NO LEFT TURN" |
| | ILLUMINATED SIGN "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 |
| | UNINTERRUPTIBLE POWER SUPPLY |
| | VENDOR SPECIFIC CABLE |
| | DOMED CAMERA (PAN/TILT/ZOOM) |
| | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-----------------|------|-------------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE INCAND. | LED | % OPERATION | |
| SIGNAL (RED) | 17 | 17 | 0.50 | | 144.50 |
| (YELLOW) | 17 | 25 | 0.25 | | 106.25 |
| (GREEN) | 17 | 15 | 0.25 | | 63.75 |
| ARROW | 18 | 12 | 0.10 | | 21.60 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | - | 150 | 1.00 | | - |
| FLASHER | - | - | 0.50 | | - |

ENERGY COSTS TO: TOTAL = 436.10
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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= |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | | (6m+L-0.6m)= |
| 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" (900mm) | 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) |

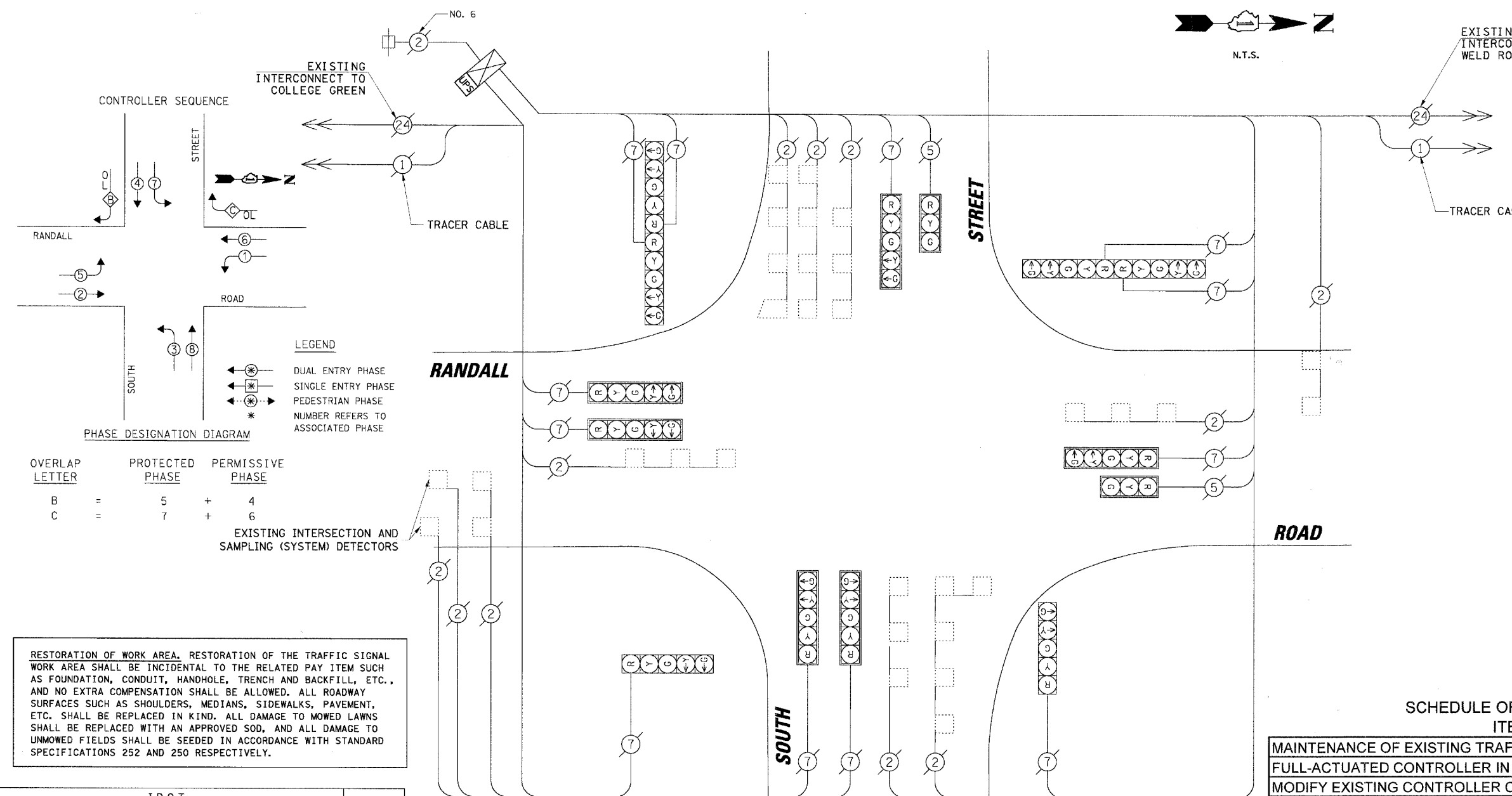
DATE: _____ BY: _____
 PROFILE SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 DATE: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 PROFILE SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 DATE: _____

CABLE PLAN LEGEND

- | EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | DOMED CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |



PHASE DESIGNATION DIAGRAM

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

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

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

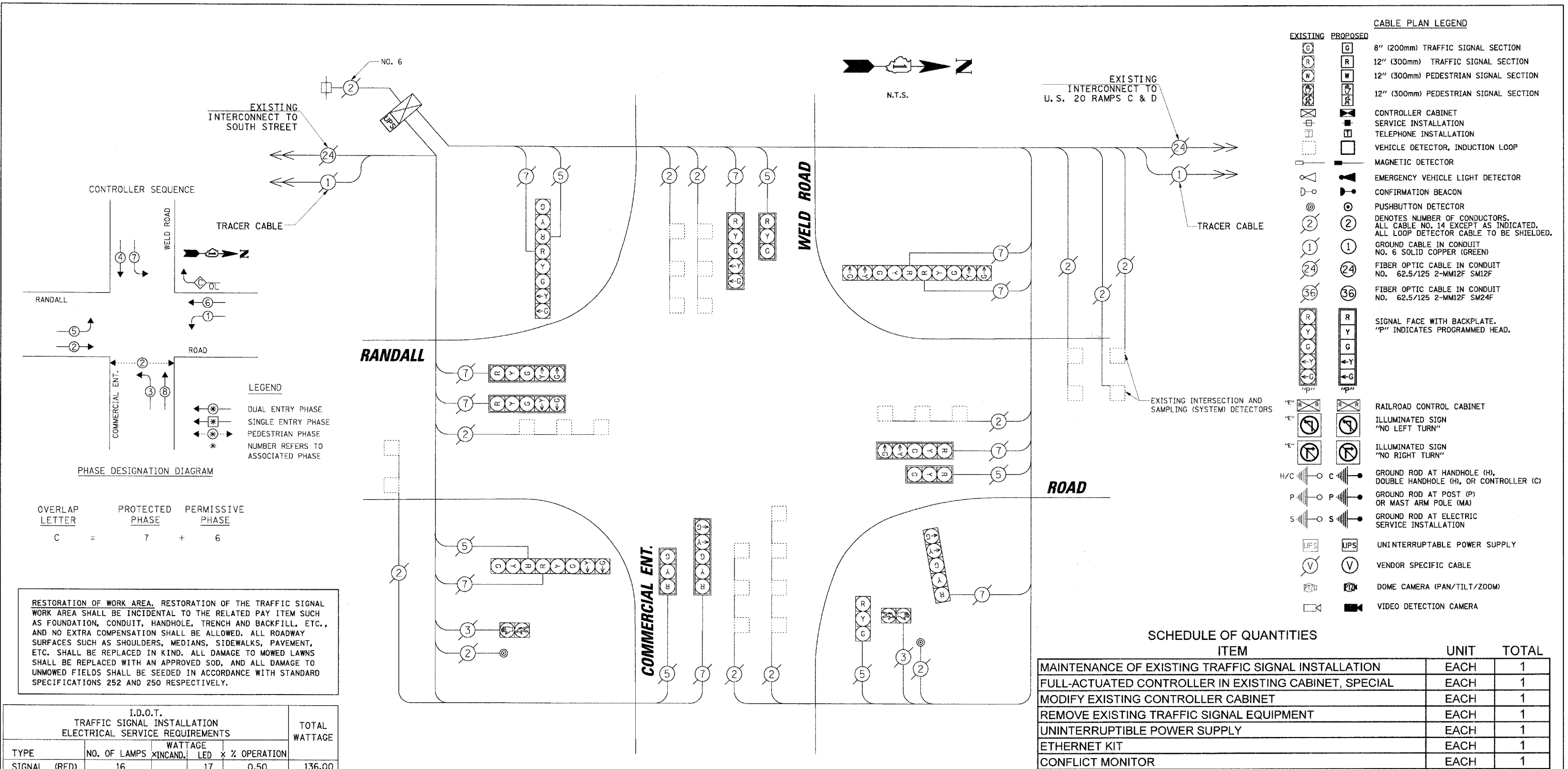
| TYPE | NO. OF LAMPS | WATTAGE | INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|---------|-----|-------------|---------------|
| SIGNAL (RED) | 14 | 17 | | | 0.50 | 119.00 |
| (YELLOW) | 14 | 25 | | | 0.25 | 87.50 |
| (GREEN) | 14 | 15 | | | 0.25 | 52.50 |
| ARROW | 24 | 12 | | | 0.10 | 28.80 |
| PED. SIGNAL | - | 25 | | | 1.00 | - |
| CONTROLLER | 1 | 100 | | | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | | | 0.05 | - |
| VIDEO SYSTEM | - | - | | | 1.00 | - |
| FLASHER | - | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 387.80
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. ARM POLE | | | SIGNAL POST | 2 | (1.0) | BRACKET MOUNTED | 13 | (4.0) |
| | | | CONTROLLER CAB. | 1 | (0.5) | PED. PUSHBUTTON | 4 | (1.2) |
| | | | 30" (750mm) | 15 | (4.6) | ELECTRIC SERVICE | 13.5 | (4.1) |
| | | | 36" (900mm) | 15 | (4.6) | ELECTRIC SERVICE | 13.5 | (4.1) |
| | | | GROUND CABLE | 1 | (0.5) | SERVICE TO GROUND | 13.5 | (4.1) |
| | | | | | | POST MOUNTED | 6 | (1.8) |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK: _____ P.L. OF WAY CHECKED: _____
 INC. _____ CADD FILE NAME: _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK: _____ P.L. OF WAY CHECKED: _____
 INC. _____ STRUCTURE NOTATIONS: CHFD

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (G) | (G) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (R) | (R) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (W) | (W) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (P) | (P) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (S) | (S) | CONTROLLER CABINET SERVICE INSTALLATION |
| (T) | (T) | TELEPHONE INSTALLATION |
| (V) | (V) | VEHICLE DETECTOR, INDUCTION LOOP |
| (M) | (M) | MAGNETIC DETECTOR |
| (E) | (E) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (C) | (C) | CONFIRMATION BEACON |
| (P) | (P) | PUSHBUTTON DETECTOR |
| (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 |
| (36) | (36) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| (R) | (R) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (E) | (E) | RAILROAD CONTROL CABINET |
| (L) | (L) | ILLUMINATED SIGN "NO LEFT TURN" |
| (R) | (R) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (H) | (H) | 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 |
| (UPS) | (UPS) | UNINTERRUPTIBLE POWER SUPPLY |
| (V) | (V) | VENDOR SPECIFIC CABLE |
| (D) | (D) | DOME CAMERA (PAN/TILT/ZOOM) |
| (V) | (V) | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| TYPE | NO. OF LAMPS | WATTAGE INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-----------------|-----|-------------|---------------|
| SIGNAL (RED) | 16 | | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | | 15 | 0.25 | 60.00 |
| ARROW | 20 | | 12 | 0.10 | 24.00 |
| PED. SIGNAL | 2 | | 25 | 1.00 | 50.00 |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | - | | 150 | - | - |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 470.00
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

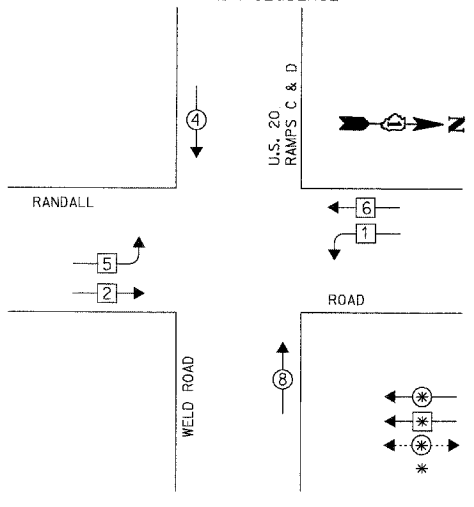
| FOUNDATION (DEPTH) | FT. (m) | CABLE SLACK | FT. (m) | VERTICAL | FT. (m) |
|--------------------|----------|------------------|-----------|-------------------|-----------------------|
| TYPE A - POST | 4 (1.2) | HANDHOLE | 6.5 (2.0) | ALL FOUNDATIONS | 3.5 (1.0) |
| D - CONTROLLER | 4 (1.2) | DOUBLE HANDHOLE | 13 (4.0) | MAST ARM (L) POLE | 20'-H-2'-(6m+L-0.6m)= |
| E - M. ARM POLE | | SIGNAL POST | 2 (0.6) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

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

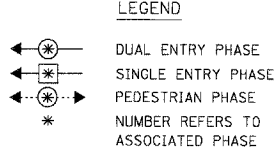
- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
- THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.
- 1 EACH CONTROLLER AND CONFLICT MONITOR

SURVIVED _____ BY _____ DATE _____
 PLOTTED _____ CHECKED _____
 RT. OR MAY CHECKED _____
 CAD FILE NAME _____
 NO. _____
 PLAN NO. _____
 NO. _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9515 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 DATE _____ BY _____
 SURVIVED _____ CHECKED _____
 PLOTTED _____ RT. OR MAY CHECKED _____
 CAD FILE NAME _____
 NO. _____
 PROFILE NO. _____
 NO. _____
 STRUCTURE NOTATION: CHRD

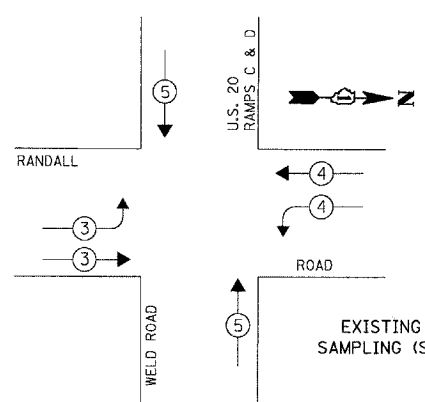
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

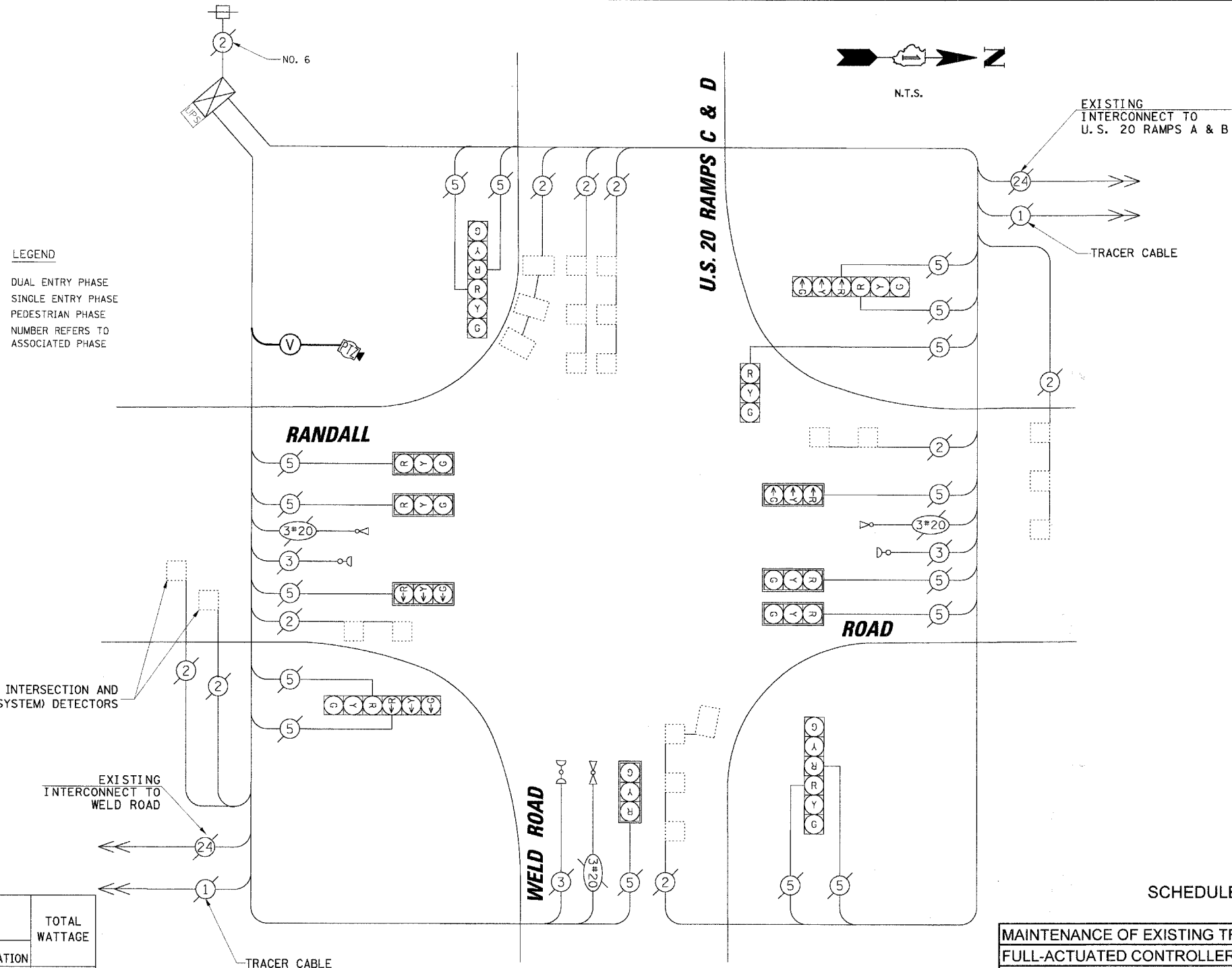


EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

| EXISTING EMERGENCY VEHICLE PREEMPTORS | | | |
|---------------------------------------|---|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 | 5 |
| MOVEMENT | ← | ← | ← |



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | PTZ DOME CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET HUB KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

CONSTRUCTION NOTES:

- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- INSTALL ETHERNET HUB KIT.
- INSTALL PTZ CAMERA ON MAST ARM POLE IN SOUTHWEST CORNER ON EXTENSION POLE.

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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

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

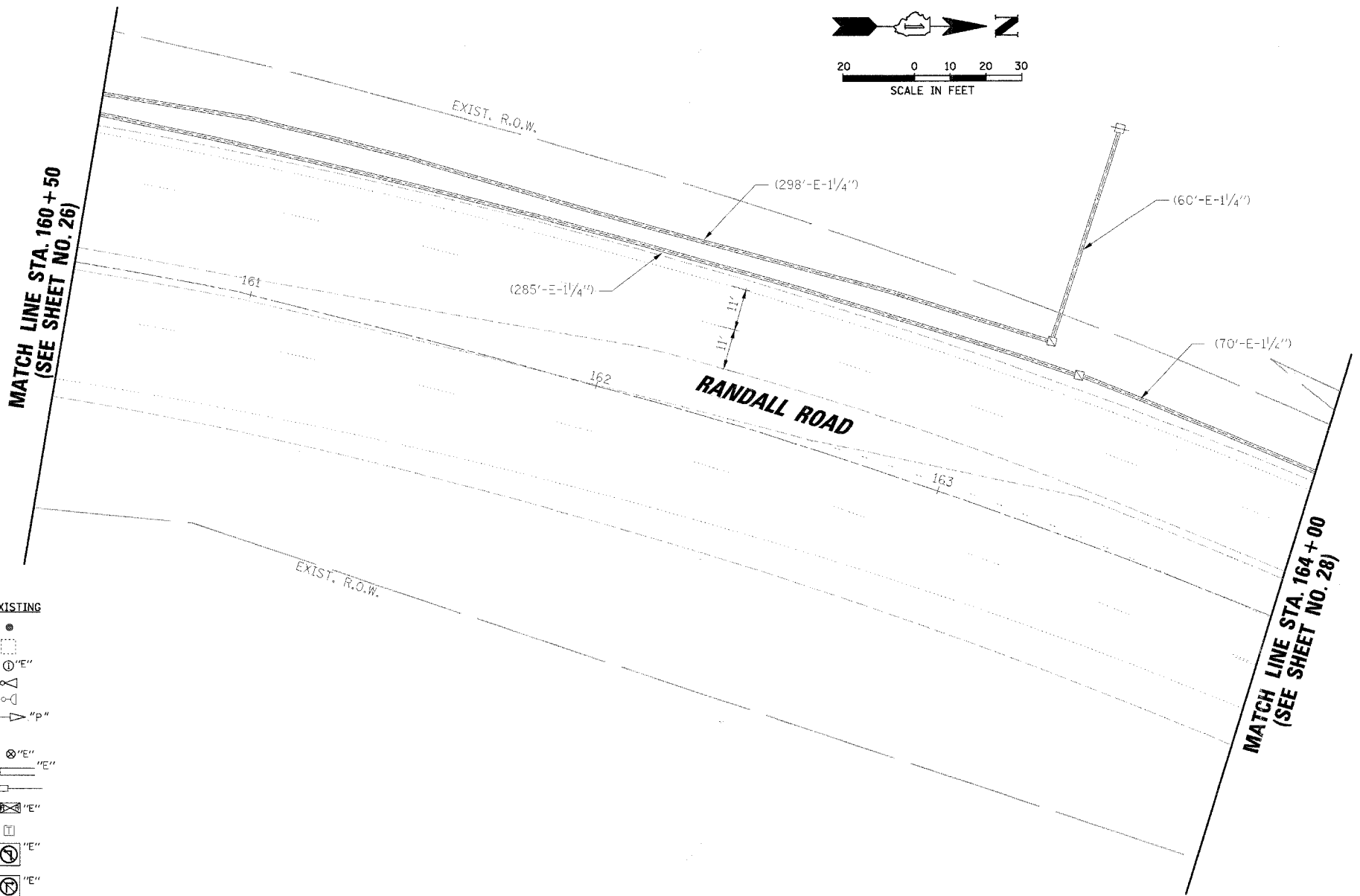
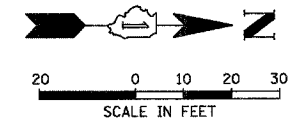
| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-------------------|-----|-------------|---------------|
| SIGNAL (RED) | 12 | 17 | | 0.50 | 102.00 |
| (YELLOW) | 12 | 25 | | 0.25 | 75.00 |
| (GREEN) | 12 | 15 | | 0.25 | 45.00 |
| ARROW | 12 | 12 | | 0.10 | 14.40 |
| PED. SIGNAL | - | 25 | | 1.00 | - |
| CONTROLLER | 1 | 100 | | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | | 0.05 | - |
| VIDEO SYSTEM | 1 | - | 150 | 1.00 | 150.00 |
| FLASHER | - | - | - | 0.50 | - |

ENERGY COSTS TO: TOTAL = 486.40

| 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= |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m±L-0.6m)= | |
| 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" (900mm) | 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) |

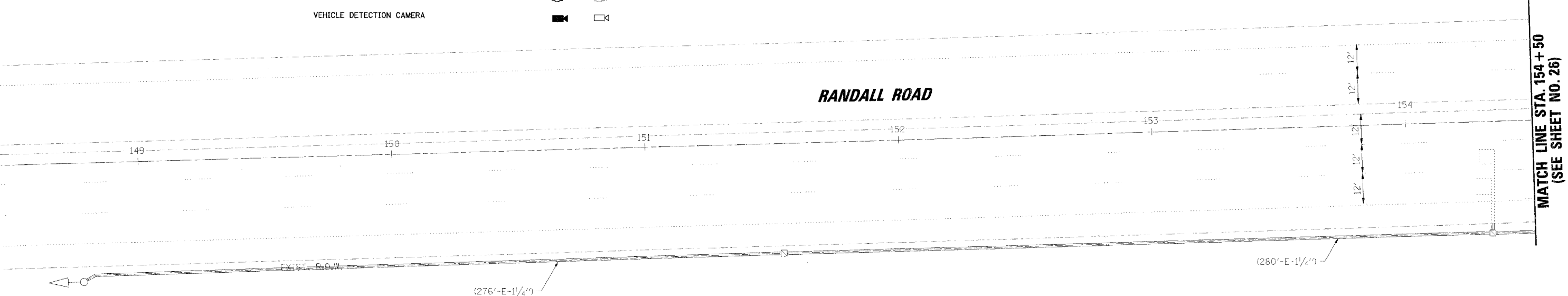
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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



TRAFFIC SIGNAL LEGEND

| PROPOSED | EXISTING | PROPOSED | EXISTING |
|--|----------|--|----------|
| CONTROLLER CABINET | | PEDESTRIAN PUSHBUTTON DETECTOR | |
| SERVICE INSTALLATION | | DETECTOR LOOP | |
| SIGNAL HEAD | | CAST IRON JUNCTION BOX | |
| SIGNAL HEAD WITH BACKPLATE | | EMERGENCY VEHICLE LIGHT DETECTOR | |
| SIGNAL HEAD, PEDESTRIAN | | CONFIRMATION BEACON | |
| SIGNAL POST | | SIGNAL HEAD OPTICALLY PROGRAMMED | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | CONDUIT SPLICE | |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | | WOOD POLE | |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | |
| UNIT DUCT | UD | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | |
| COMMON TRENCH | CT | RAILROAD CONTROL CABINET | |
| HANDHOLE | | TELEPHONE CONNECTION | |
| HEAVY DUTY HANDHOLE | | ILLUMINATED SIGN "NO LEFT TURN" | |
| DOUBLE HANDHOLE | | ILLUMINATED SIGN "NO RIGHT TURN" | |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | | UNINTERRUPTABLE POWER SUPPLY | |
| | | DOMI CAMERA (PAN/TILT/ZOOM) | |
| | | VEHICLE DETECTION CAMERA | |



| | | | |
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| DATE | BY | DATE | BY |
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| DATE | BY | DATE | BY |
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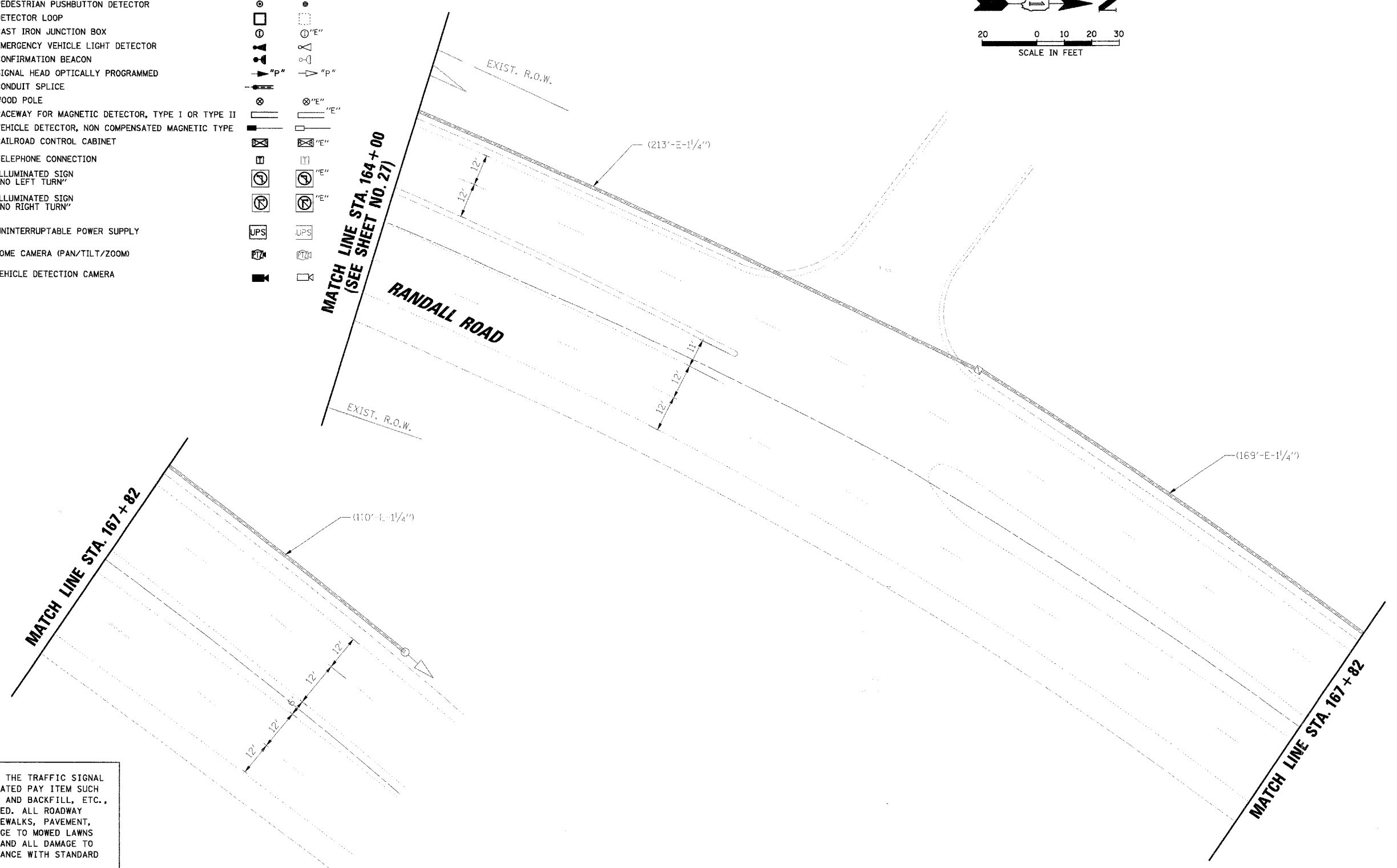
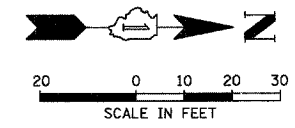
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| FILE NAME = N:\kane\count\070616\Traffic\4002_284b.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT U.S. 20 RAMPS A & B (FOOTHILL RD.) | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 27 |
| PLOT SCALE = 20' | CHECKED - | REVISED - | SCALE: | | | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |
| PLOT DATE = 1/29/2008 | DATE - | REVISED - | CONTRACT NO. 63011 | | | | | | | |

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9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

TRAFFIC SIGNAL LEGEND

| PROPOSED | EXISTING | PROPOSED | EXISTING |
|----------|----------|----------|----------|
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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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| | | | |
|------|----|------|----|
| DATE | BY | DATE | BY |
| DATE | BY | DATE | BY |
| DATE | BY | DATE | BY |
| DATE | BY | DATE | BY |

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9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

| | | | | | | | | | | |
|--|----------------------|------------|---------------------|---|---|---------------------------|------------------------|-------------|-----------------|--------------|
| FILE NAME = N:\kanecounty\378616\Traffic\003.28\bdgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT U.S. 20 RAMPS A & B (FOOTHILL RD.) | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 28 |
| PLOT SCALE = 20' | CHECKED - | REVISED - | FED. ROAD DIST. NO. | | | ILLINOIS FED. AID PROJECT | CONTRACT NO. 63011 | | | |
| PLOT DATE = 1/28/2008 | DATE - | REVISED - | | | | | | | | |
| | | | | | | | | | | |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK NO. _____ FILE NAME: _____
 PROFILE: _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTE BOOK NO. _____ FILE NAME: _____

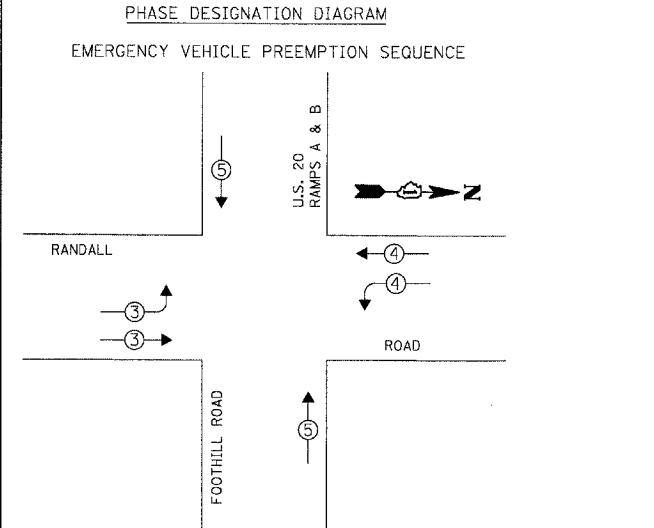
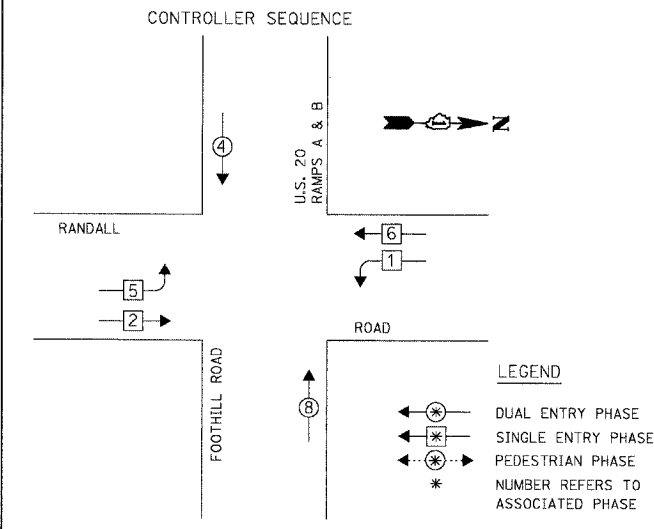
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

FILE NAME = USER NAME = MWILLIAM
 N:\kane\countys\870616\Traffic\10\1049_20\4-b.dgn
 DESIGNED - REVISED -
 DRAWN - REVISED -
 CHECKED - REVISED -
 DATE - REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN
 RANDALL ROAD AT U.S. 20 RAMPS A & B**

| | | | | |
|---|------------------------|-------------|--------------------|--------------|
| F.A.P. RTE. NO. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 29 |
| FED. ROAD DIST. NO. ILLINOIS/FED. AID PROJECT | | | CONTRACT NO. 63011 | |

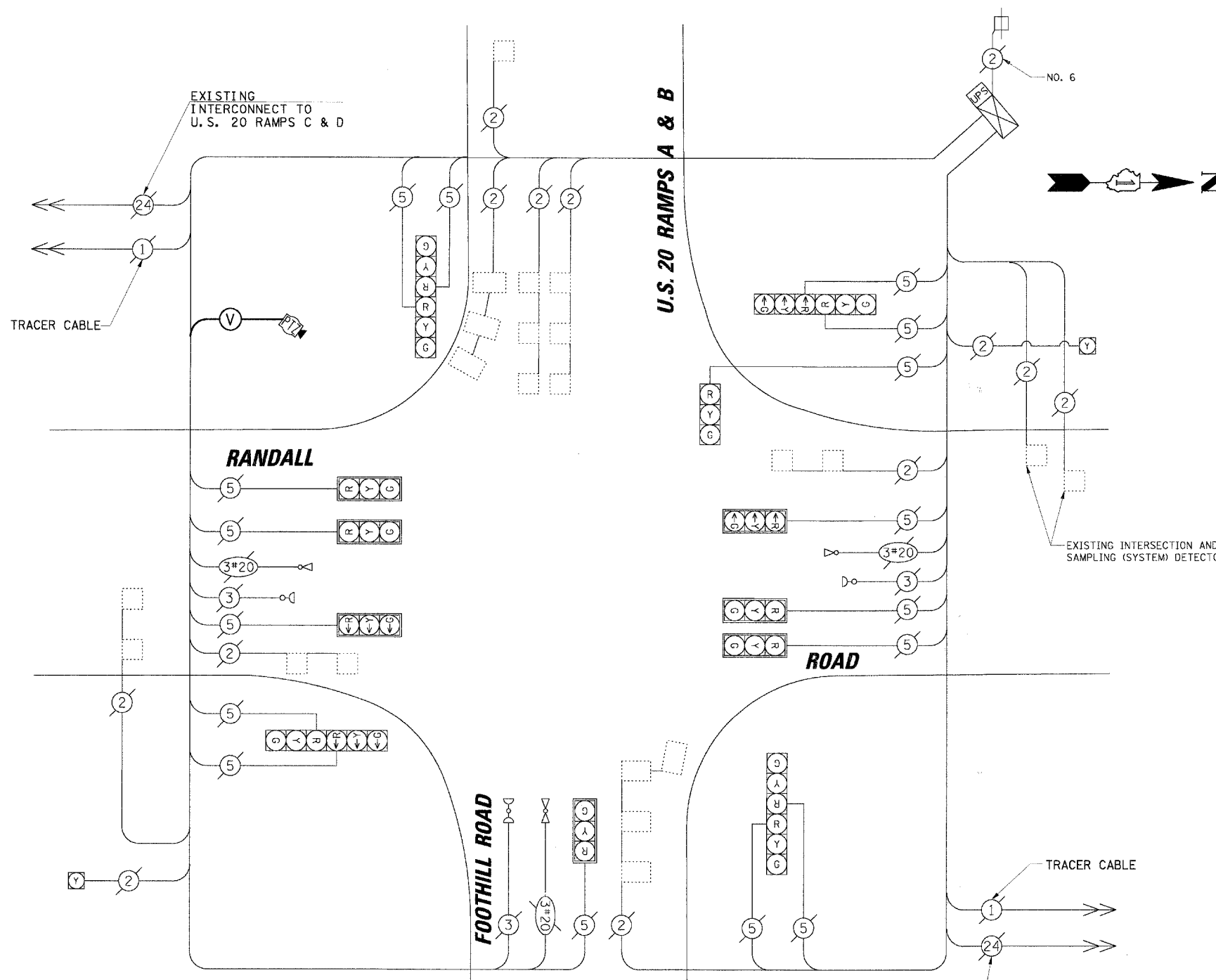


| EXISTING EMERGENCY VEHICLE PREEMPTORS | | | |
|---------------------------------------|---|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 | 5 |
| MOVEMENT | → | ← | ↕ |

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-------------------|-----|-------------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | |
| SIGNAL (RED) | 12 | | 17 | 0.50 | 102.00 |
| (YELLOW) | 12 | | 25 | 0.25 | 75.00 |
| (GREEN) | 12 | | 15 | 0.25 | 45.00 |
| ARROW | 12 | | 12 | 0.10 | 14.40 |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | | 150 | 1.00 | 150.00 |
| FLASHER | 2 | | 25 | 0.50 | 25.00 |
| ENERGY COSTS TO: TOTAL = | | | | | 511.40 |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| 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'+HL-2= |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m+L-0.6m)= | |
| 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" (900mm) | 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 | DESCRIPTION |
|----------|----------|---|
| (G) | (G) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (R) | (R) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (W) | (W) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (P) | (P) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (C) | (C) | CONTROLLER CABINET SERVICE INSTALLATION |
| (T) | (T) | TELEPHONE INSTALLATION |
| (V) | (V) | VEHICLE DETECTOR, INDUCTION LOOP |
| (M) | (M) | MAGNETIC DETECTOR |
| (E) | (E) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (B) | (B) | CONFIRMATION BEACON |
| (P) | (P) | PUSHBUTTON DETECTOR |
| (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. 62.5/125 2-MMI2F SM12F |
| (24) | (24) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM12F |
| (36) | (36) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM24F |
| (R) | (R) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (R) | (R) | RAILROAD CONTROL CABINET |
| (E) | (E) | ILLUMINATED SIGN "NO LEFT TURN" |
| (E) | (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 |
| (UPS) | (UPS) | UNINTERRUPTIBLE POWER SUPPLY |
| (V) | (V) | VENDOR SPECIFIC CABLE |
| (PTZ) | (PTZ) | PTZ CAMERA (PAN/TILT/ZOOM) |
| (VDC) | (VDC) | VIDEO DETECTION CAMERA |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL PTZ CAMERA ON MAST ARM POLE IN SOUTHWEST CORNER ON EXTENSION POLE.

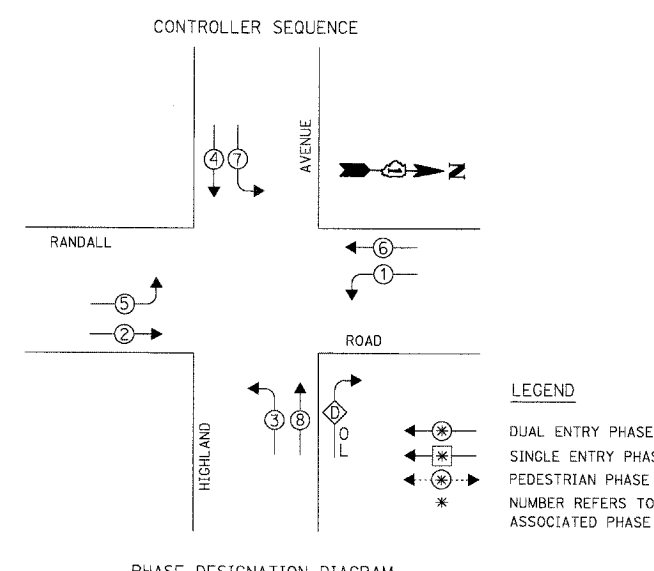
NOTE:
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ AT: _____
 FILE NAME: _____

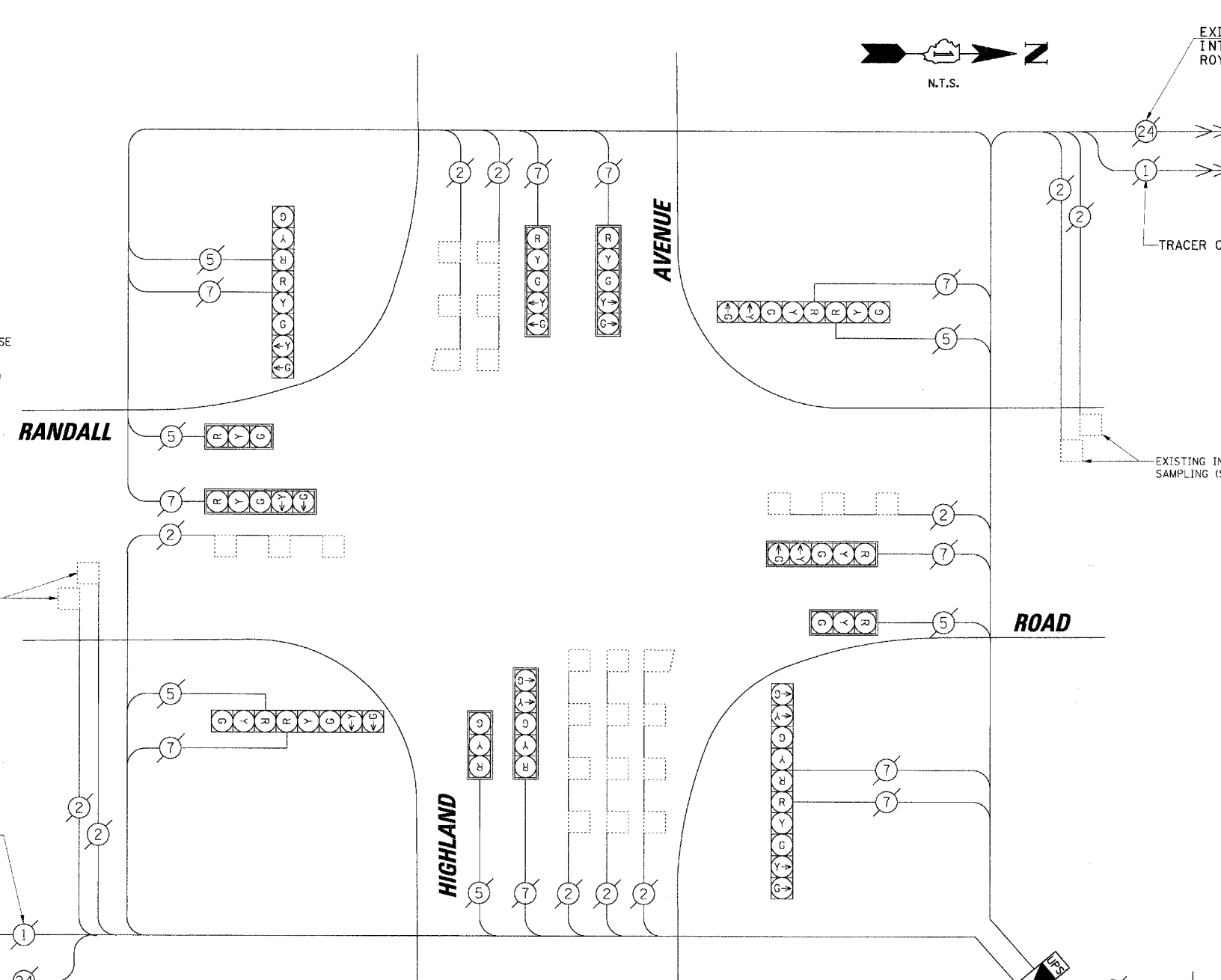
DATE: _____ BY: _____
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 CHECKED: _____
 STRUCTURE: _____

DATE: _____ BY: _____
 PROFILE: _____
 CHECKED: _____
 STRUCTURE: _____

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 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (Symbol) | (Symbol) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | CONTROLLER CABINET |
| (Symbol) | (Symbol) | SERVICE INSTALLATION |
| (Symbol) | (Symbol) | TELEPHONE INSTALLATION |
| (Symbol) | (Symbol) | VEHICLE DETECTOR, INDUCTION LOOP |
| (Symbol) | (Symbol) | MAGNETIC DETECTOR |
| (Symbol) | (Symbol) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (Symbol) | (Symbol) | CONFIRMATION BEACON |
| (Symbol) | (Symbol) | PUSHBUTTON DETECTOR |
| (Symbol) | (Symbol) | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| (Symbol) | (Symbol) | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F 5M12F |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F 5M24F |
| (Symbol) | (Symbol) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (Symbol) | (Symbol) | RAILROAD CONTROL CABINET |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO LEFT TURN" |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (Symbol) | (Symbol) | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C) |
| (Symbol) | (Symbol) | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| (Symbol) | (Symbol) | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (Symbol) | (Symbol) | UNINTERRUPTIBLE POWER SUPPLY |
| (Symbol) | (Symbol) | VENDOR SPECIFIC CABLE |
| (Symbol) | (Symbol) | DOME CAMERA (PAN/TILT/ZOOM) |
| (Symbol) | (Symbol) | VIDEO DETECTION CAMERA |

- CONSTRUCTION NOTES:**
- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE V CABINET ON EXISTING FOUNDATION.
 - REMOVE EXISTING MASTER CONTROLLER.
 - INSTALL ETHERNET HUB KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO TRAFFIC SIGNAL CABINET.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF KANE COUNTY, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY YARD AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH MASTER CONTROLLER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

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

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

| TYPE | NO. OF LAMPS | WATTAGE | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|-------------|---------------|
| SIGNAL (RED) | 16 | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | 15 | 0.25 | 60.00 |
| ARROW | 20 | 12 | 0.10 | 24.00 |
| PED. SIGNAL | - | 25 | 1.00 | - |
| CONTROLLER | 1 | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | - |
| VIDEO SYSTEM | - | 150 | 1.00 | - |
| FLASHER | - | - | 0.50 | - |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|--|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 11 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET HUB KIT | EACH | 1 |

| 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 - M. 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" (900mm) | 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) |

ENERGY COSTS TO: TOTAL = 420.00

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

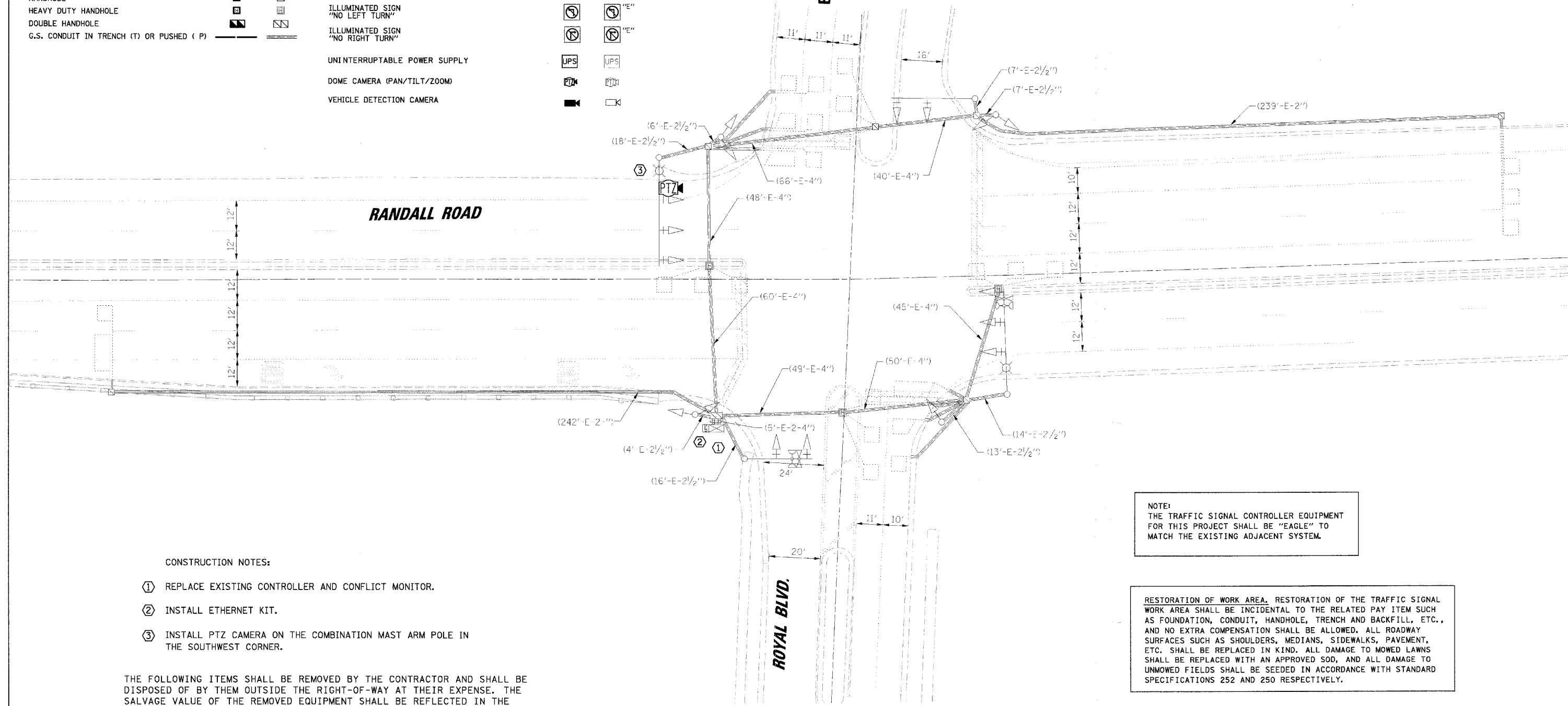
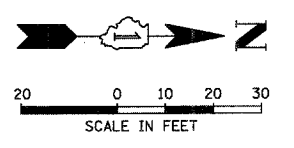
ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

FILE NAME = N:\kanecounty\1870616\Traffic\MOO_Royal.dgn
 USER NAME = MWILLIAM
 DESIGNED -
 DRAWN -
 CHECKED -
 DATE -
 REVISIONS:
 REVISED -
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 REVISED -
 REVISED -
 PLOT SCALE = 20"
 PLOT DATE = 1/28/2008

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

TRAFFIC SIGNAL LEGEND

| PROPOSED | EXISTING | PROPOSED | EXISTING |
|--|----------|--|----------|
| CONTROLLER CABINET | | PEDESTRIAN PUSHBUTTON DETECTOR | |
| SERVICE INSTALLATION | | DETECTOR LOOP | |
| SIGNAL HEAD | | CAST IRON JUNCTION BOX | |
| SIGNAL HEAD WITH BACKPLATE | | EMERGENCY VEHICLE LIGHT DETECTOR | |
| SIGNAL HEAD, PEDESTRIAN | | CONFIRMATION BEACON | |
| SIGNAL POST | | SIGNAL HEAD OPTICALLY PROGRAMMED | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | CONDUIT SPLICE | |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | | WOOD POLE | |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | |
| UNIT DUCT | | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | |
| COMMON TRENCH | | RAILROAD CONTROL CABINET | |
| HANDHOLE | | TELEPHONE CONNECTION | |
| HEAVY DUTY HANDHOLE | | ILLUMINATED SIGN "NO LEFT TURN" | |
| DOUBLE HANDHOLE | | ILLUMINATED SIGN "NO RIGHT TURN" | |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | | UNINTERRUPTABLE POWER SUPPLY | |
| | | DOMA CAMERA (PAN/TILT/ZOOM) | |
| | | VEHICLE DETECTION CAMERA | |



CONSTRUCTION NOTES:

- ① REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
- ② INSTALL ETHERNET KIT.
- ③ INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM POLE IN THE SOUTHWEST CORNER.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CONFLICT MONITOR

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

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

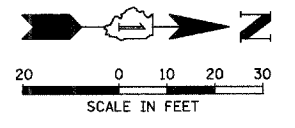
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 PLOTTED: _____ CHECKED: _____
 REVISIONS: _____
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 PLAN: _____ NO. _____
 CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ CHECKED: _____
 REVISIONS: _____
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 PROFILE: _____ NO. _____

MATCH LINE STA. 142+64
 (SEE SHEET NO. 34)

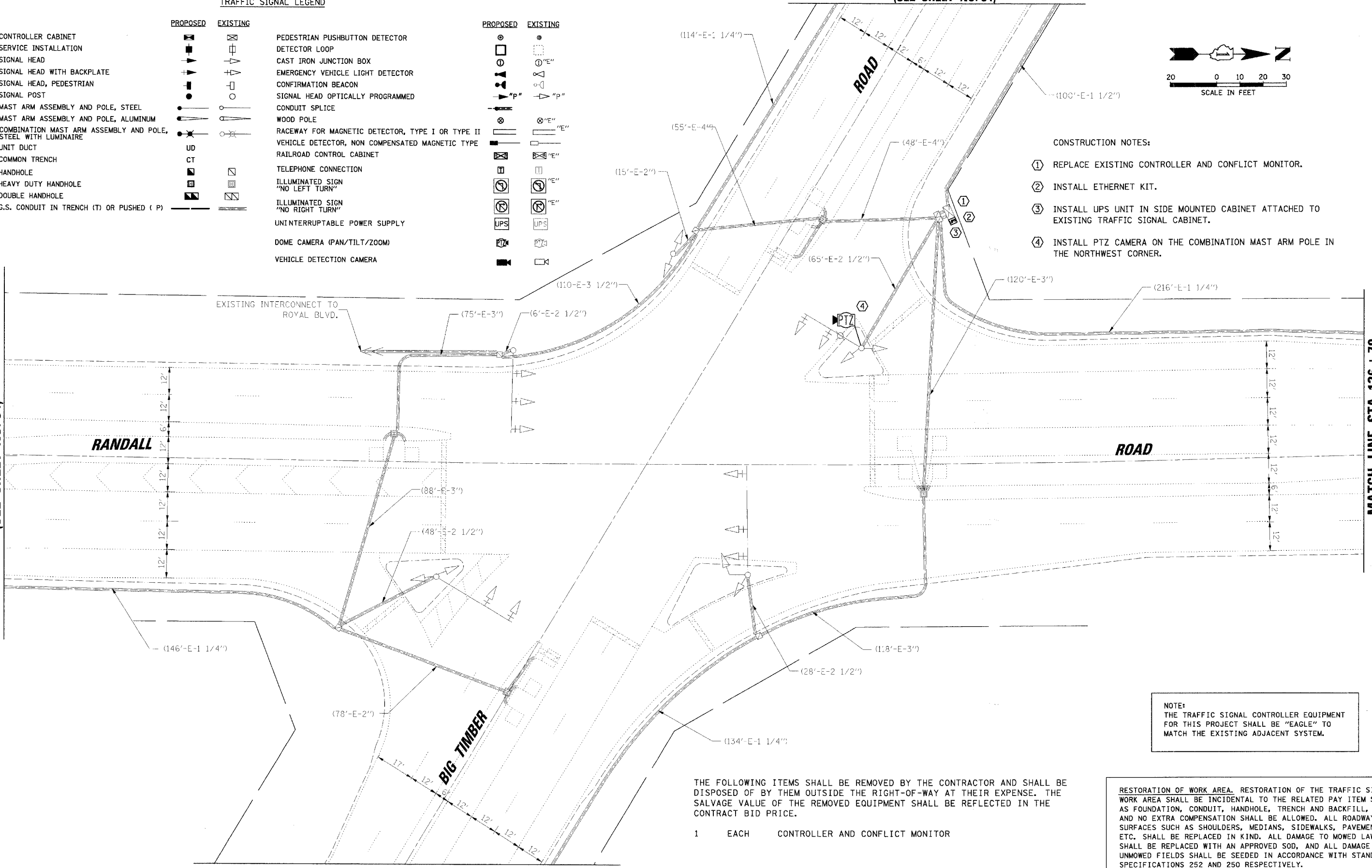
MATCH LINE STA. 136+79
 (SEE SHEET NO. 34)

TRAFFIC SIGNAL LEGEND

| PROPOSED | EXISTING | PROPOSED | EXISTING |
|--|----------|--|----------|
| CONTROLLER CABINET | [Symbol] | PEDESTRIAN PUSHBUTTON DETECTOR | [Symbol] |
| SERVICE INSTALLATION | [Symbol] | DETECTOR LOOP | [Symbol] |
| SIGNAL HEAD | [Symbol] | CAST IRON JUNCTION BOX | [Symbol] |
| SIGNAL HEAD WITH BACKPLATE | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR | [Symbol] |
| SIGNAL HEAD, PEDESTRIAN | [Symbol] | CONFIRMATION BEACON | [Symbol] |
| SIGNAL POST | [Symbol] | SIGNAL HEAD OPTICALLY PROGRAMMED | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, STEEL | [Symbol] | CONDUIT SPLICE | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | [Symbol] | WOOD POLE | [Symbol] |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | [Symbol] | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | [Symbol] |
| UNIT DUCT | [Symbol] | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | [Symbol] |
| COMMON TRENCH | [Symbol] | RAILROAD CONTROL CABINET | [Symbol] |
| HANDHOLE | [Symbol] | TELEPHONE CONNECTION | [Symbol] |
| HEAVY DUTY HANDHOLE | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" | [Symbol] |
| DOUBLE HANDHOLE | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" | [Symbol] |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY | [Symbol] |
| | | DOME CAMERA (PAN/TILT/ZOOM) | [Symbol] |
| | | VEHICLE DETECTION CAMERA | [Symbol] |



- CONSTRUCTION NOTES:
- 1 REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - 2 INSTALL ETHERNET KIT.
 - 3 INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
 - 4 INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM POLE IN THE NORTHWEST CORNER.



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

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CONFLICT MONITOR

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

MATCH LINE STA. 206+91
 (SEE SHEET NO. 34)

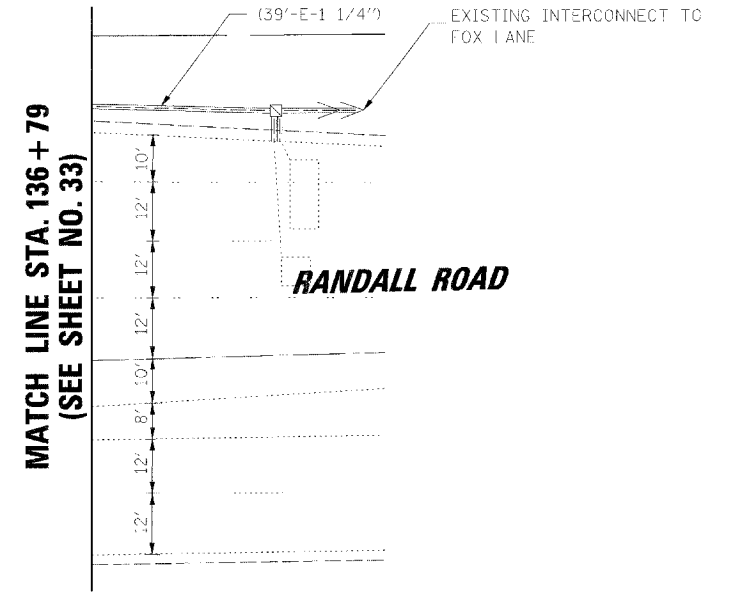
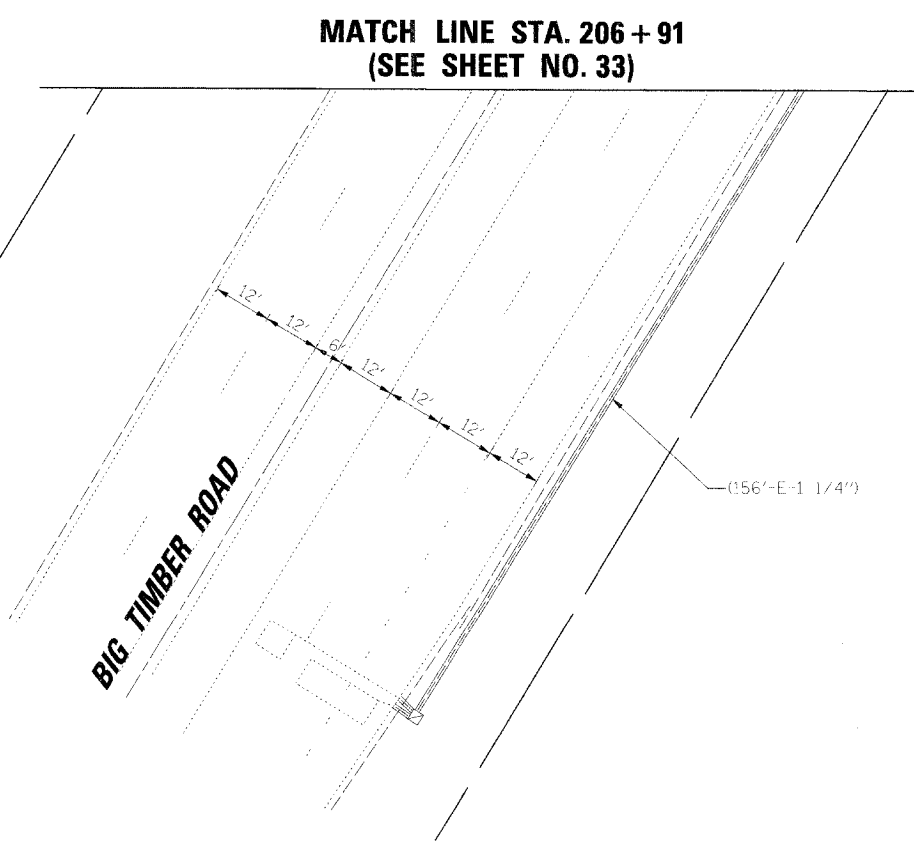
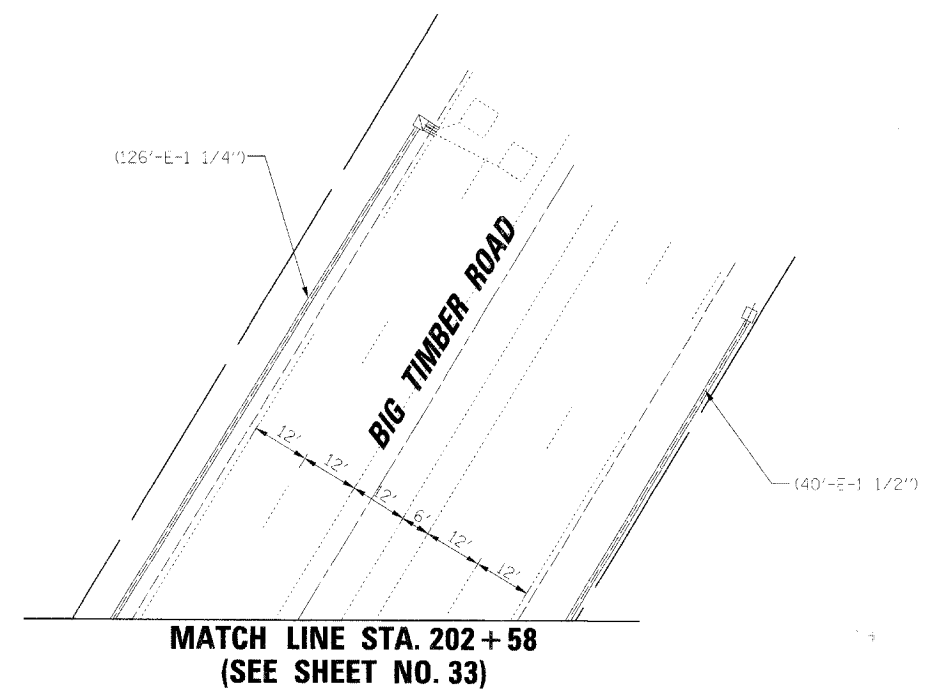
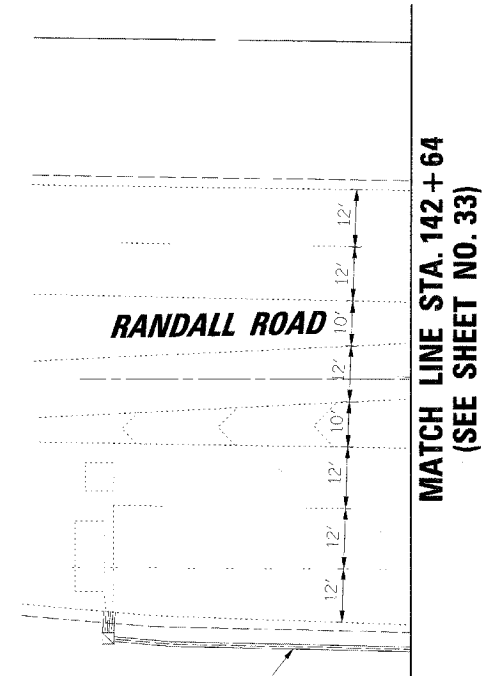
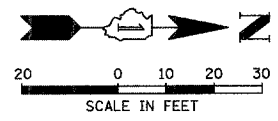
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|---|----------------------|------------|---|---|--|-----------------|------------------------|-------------|-------------------------------|
| FILE NAME = N:\kane\county\873616\Traffic\MO301_BigTimber.dwg | USER NAME = MWJ.LIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT BIG TIMBER ROAD | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEET SHEETS: NO. 69 33 |
| PLOT SCALE = 20' | CHECKED - | REVISED - | CONTRACT NO. 63011 | | | | | | |
| PLOT DATE = 1/28/2020 | DATE - | REVISED - | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | | |
| SCALE: | | | | | | | | | |

SURVEYED BY DATE
 PLANNED BY DATE
 CHECKED BY DATE
 REVISIONS
 NO. DATE DESCRIPTION
 PROFILE
 SURVEYED BY DATE
 CHECKED BY DATE
 STRUCTURE NOTATION CHKD

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

TRAFFIC SIGNAL LEGEND

| | PROPOSED | EXISTING | | PROPOSED | EXISTING |
|--|----------|----------|--|----------|----------|
| CONTROLLER CABINET | | | PEDESTRIAN PUSHBUTTON DETECTOR | | |
| SERVICE INSTALLATION | | | DETECTOR LOOP | | |
| SIGNAL HEAD | | | CAST IRON JUNCTION BOX | | |
| SIGNAL HEAD WITH BACKPLATE | | | EMERGENCY VEHICLE LIGHT DETECTOR | | |
| SIGNAL HEAD, PEDESTRIAN | | | CONFIRMATION BEACON | | |
| SIGNAL POST | | | SIGNAL HEAD OPTICALLY PROGRAMMED | | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | | CONDUIT SPLICE | | |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | | | WOOD POLE | | |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | | | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | | |
| UNIT DUCT | | | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | | |
| COMMON TRENCH | | | RAILROAD CONTROL CABINET | | |
| HANDHOLE | | | TELEPHONE CONNECTION | | |
| HEAVY DUTY HANDHOLE | | | ILLUMINATED SIGN "NO LEFT TURN" | | |
| DOUBLE HANDHOLE | | | ILLUMINATED SIGN "NO RIGHT TURN" | | |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | | | UNINTERRUPTABLE POWER SUPPLY | | |
| | | | DOMA CAMERA (PAN/TILT/ZOOM) | | |
| | | | VEHICLE DETECTION CAMERA | | |



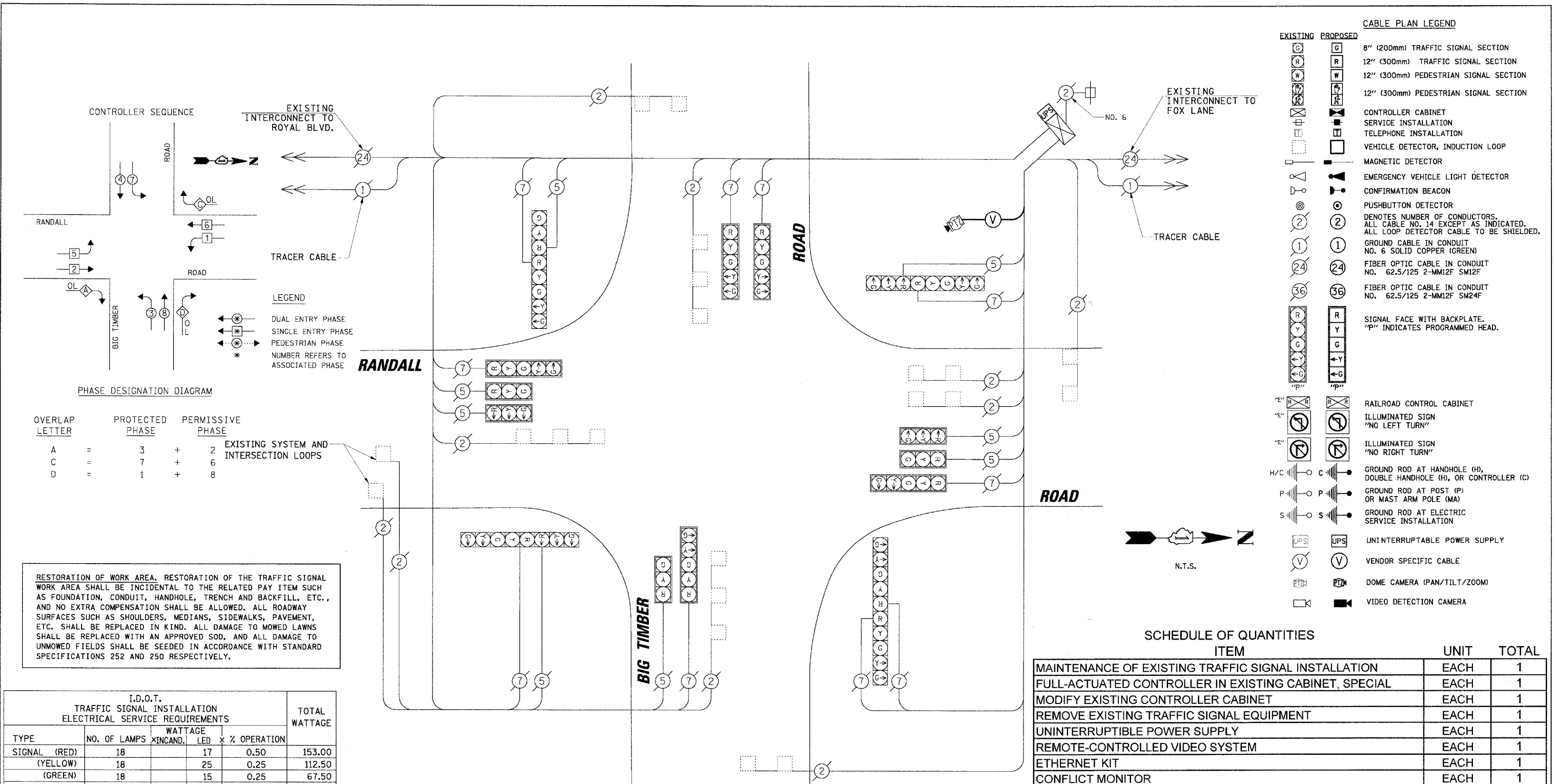
NOTE:
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| | | | | | | | | | | |
|--|----------------------|------------|---|---|--|--------------------|------------------------|-------------|-----------------|--------------|
| FILE NAME = N:\kanecounty\070616\Traffic\002_BigTimber.dwg | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT BIG TIMBER ROAD | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 34 |
| PLT SCALE = 20' | CHECKED - | REVISED - | SCALE: | | | CONTRACT NO. 63011 | | | | |
| PLT DATE = 1/28/2008 | DATE - | REVISED - | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | | | |
| | | | | | | | | | | |

SURVEYED BY: DATE:
 PLAN NO.:
 CHECKED BY: DATE:
 NO. OF SHEETS:
 SHEET NO.:
 DATE:
 BY:
 NO. OF SHEETS:
 SHEET NO.:
 DATE:
 BY:
 NO. OF SHEETS:
 SHEET NO.:

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Highline Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (G) | (G) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (R) | (R) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (W) | (W) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (P) | (P) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (C) | (C) | CONTROLLER CABINET |
| (S) | (S) | SERVICE INSTALLATION |
| (T) | (T) | TELEPHONE INSTALLATION |
| (V) | (V) | VEHICLE DETECTOR, INDUCTION LOOP |
| (M) | (M) | MAGNETIC DETECTOR |
| (E) | (E) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (B) | (B) | CONFIRMATION BEACON |
| (D) | (D) | PUSHBUTTON DETECTOR |
| (N) | (N) | 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-MMI2F SM12F |
| (36) | (36) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F SM24F |
| (R) | (R) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (R) | (R) | RAILROAD CONTROL CABINET |
| (N) | (N) | ILLUMINATED SIGN "NO LEFT TURN" |
| (N) | (N) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (H) | (H) | 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 |
| (UPS) | (UPS) | UNINTERRUPTIBLE POWER SUPPLY |
| (V) | (V) | VENDOR SPECIFIC CABLE |
| (D) | (D) | DOME CAMERA (PAN/TILT/ZOOM) |
| (V) | (V) | VIDEO DETECTION CAMERA |

PHASE DESIGNATION DIAGRAM

| OVERLAP LETTER | PROTECTED PHASE | PERMISSIVE PHASE | EXISTING SYSTEM AND INTERSECTION LOOPS |
|----------------|-----------------|------------------|--|
| A | 3 | 2 | |
| C | 7 | 6 | |
| D | 1 | 8 | |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.
 - INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM POLE IN THE NORTHWEST CORNER.

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

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

| TYPE | NO. OF LAMPS | WATTAGE | INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|---------|-----|-------------|---------------|
| SIGNAL (RED) | 18 | 17 | 0.50 | | | 153.00 |
| (YELLOW) | 18 | 25 | 0.25 | | | 112.50 |
| (GREEN) | 18 | 15 | 0.25 | | | 67.50 |
| ARROW | 20 | 12 | 0.10 | | | 24.00 |
| PED. SIGNAL | - | 25 | 1.00 | | | - |
| CONTROLLER | 1 | 100 | 1.00 | | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | | - |
| VIDEO SYSTEM | 1 | 150 | 1.00 | | | 150.00 |
| FLASHER | - | 0.50 | | | | - |

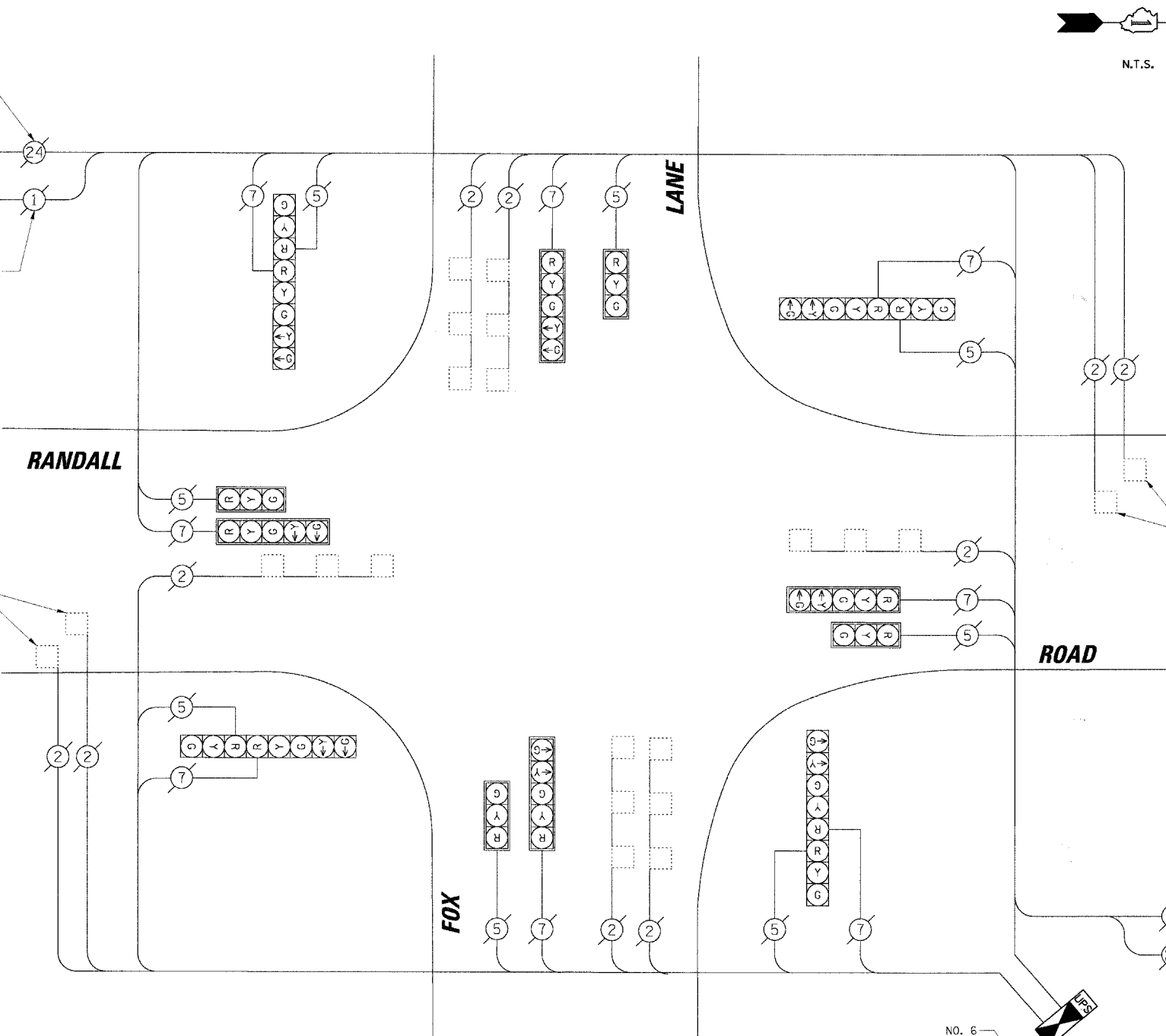
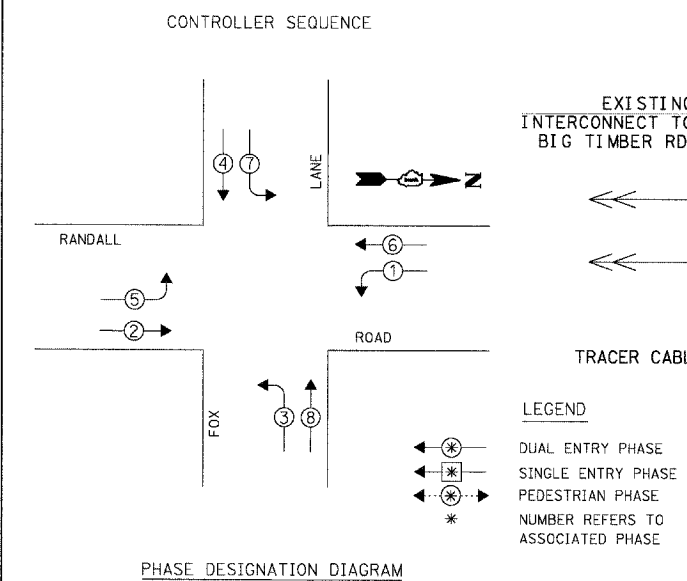
ENERGY COSTS TO: TOTAL = 607.00
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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'± |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | | (6m±L-0.6m)± |
| 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" (900mm) | 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) |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTED: _____ P.T. OF WAY CHECKED: _____
 NO. _____ CAD FILE NAME: _____
 PI. AN: _____
 NOTED: _____
 NO. _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTED: _____ P.T. OF WAY CHECKED: _____
 NO. _____ CAD FILE NAME: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 NOTED: _____ P.T. OF WAY CHECKED: _____
 NO. _____ CAD FILE NAME: _____



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (Symbol) | (Symbol) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | CONTROLLER CABINET SERVICE INSTALLATION |
| (Symbol) | (Symbol) | TELEPHONE INSTALLATION |
| (Symbol) | (Symbol) | VEHICLE DETECTOR, INDUCTION LOOP |
| (Symbol) | (Symbol) | MAGNETIC DETECTOR |
| (Symbol) | (Symbol) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (Symbol) | (Symbol) | CONFIRMATION BEACON |
| (Symbol) | (Symbol) | PUSHBUTTON DETECTOR |
| (Symbol) | (Symbol) | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| (Symbol) | (Symbol) | GROUND CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| (Symbol) | (Symbol) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (Symbol) | (Symbol) | RAILROAD CONTROL CABINET |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO LEFT TURN" |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (Symbol) | (Symbol) | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| (Symbol) | (Symbol) | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| (Symbol) | (Symbol) | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (Symbol) | (Symbol) | UNINTERRUPTIBLE POWER SUPPLY |
| (Symbol) | (Symbol) | VENDOR SPECIFIC CABLE |
| (Symbol) | (Symbol) | DOMI CAMERA (PAN/TILT/ZOOM) |
| (Symbol) | (Symbol) | VIDEO DETECTION CAMERA |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-------------------|-----|-------------|---------------|
| SIGNAL (RED) | 16 | | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | | 15 | 0.25 | 60.00 |
| ARROW | 16 | | 12 | 0.10 | 19.20 |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | - | | 150 | 1.00 | - |
| FLASHER | - | | | 0.50 | - |

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 10 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |

| 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= |
| E - M. ARM POLE | 2 (1.0) | SIGNAL POST | 2 (1.0) | | (6m+L-0.6m)= |
| 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" (900mm) | 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) |

ENERGY COSTS TO: TOTAL = 415.20

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

CONSTRUCTION NOTES:

- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
- INSTALL ETHERNET KIT.
- INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO TRAFFIC SIGNAL CABINET.

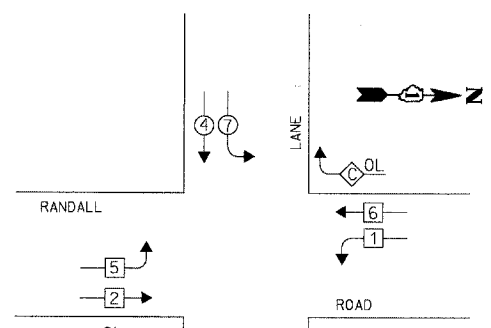
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CABINET (COMPLETE)

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____ DATE: _____
 FILE NO.: _____
 PROJECT: _____
 DRAWING NO.: _____
 SHEET NO.: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CONTROLLER SEQUENCE



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

PHASE DESIGNATION DIAGRAM

| OVERLAP LETTER | PROTECTED PHASE | PERMISSIVE PHASE |
|----------------|-----------------|------------------|
| A = | 3 + | 2 |
| C = | 7 + | 6 |
| D = | 1 + | 8 |

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, 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 SPECIFICATIONS 252 AND 250 RESPECTIVELY.

TRACER CABLE

EXISTING INTERCONNECT TO FOX LANE

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 11 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |

| 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= |
| E - M. ARM POLE | 2 (1.0) | SIGNAL POST | 2 (1.0) | (6m+L-0.6m)= | |
| 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" (900mm) | 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) |

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

CONSTRUCTION NOTES:

- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
- INSTALL ETHERNET KIT.
- INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTIVE LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | DOME CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |

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

| TYPE | NO. OF LAMPS | WATTAGE | TOTAL WATTAGE |
|--------------|--------------|---------|---------------|
| SIGNAL (RED) | 18 | 17 | 153.00 |
| (YELLOW) | 18 | 25 | 112.50 |
| (GREEN) | 18 | 15 | 67.50 |
| ARROW | 20 | 12 | 24.00 |
| PED. SIGNAL | - | 25 | - |
| CONTROLLER | 1 | 100 | 100.00 |
| ILLUM. SIGN | - | 25 | - |
| VIDEO SYSTEM | - | 150 | - |
| FLASHER | - | - | 0.50 |

ENERGY COSTS TO: TOTAL = 457.00

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN
 RANDALL ROAD AT ALFT LANE

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|----------------|--------|--------------|-----------|
| 336 | 06-00346-00-TL | KANE | 69 | 37 |

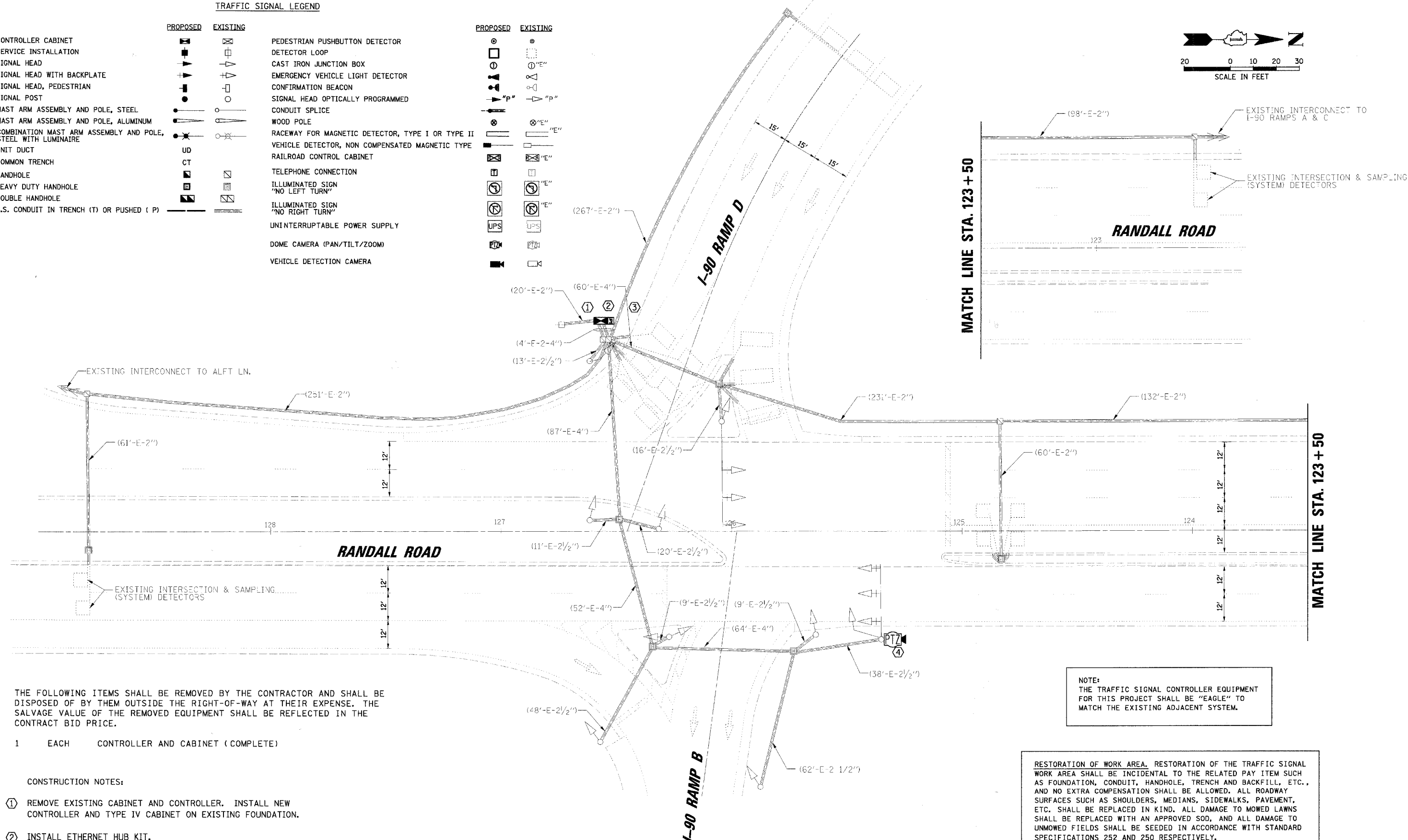
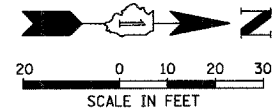
CONTRACT NO. 63011
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SURVEYED BY: DATE: _____
 CHECKED BY: DATE: _____
 PLANNED BY: DATE: _____
 DRAWN BY: DATE: _____
 CHECKED BY: DATE: _____
 DATE: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

TRAFFIC SIGNAL LEGEND

| PROPOSED | EXISTING | PROPOSED | EXISTING |
|--|----------|--|----------|
| CONTROLLER CABINET | [Symbol] | PEDESTRIAN PUSHBUTTON DETECTOR | [Symbol] |
| SERVICE INSTALLATION | [Symbol] | DETECTOR LOOP | [Symbol] |
| SIGNAL HEAD | [Symbol] | CAST IRON JUNCTION BOX | [Symbol] |
| SIGNAL HEAD WITH BACKPLATE | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR | [Symbol] |
| SIGNAL HEAD, PEDESTRIAN | [Symbol] | CONFIRMATION BEACON | [Symbol] |
| SIGNAL POST | [Symbol] | SIGNAL HEAD OPTICALLY PROGRAMMED | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, STEEL | [Symbol] | CONDUIT SPLICE | [Symbol] |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | [Symbol] | WOOD POLE | [Symbol] |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | [Symbol] | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | [Symbol] |
| UNIT DUCT | [Symbol] | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | [Symbol] |
| COMMON TRENCH | [Symbol] | RAILROAD CONTROL CABINET | [Symbol] |
| HANDHOLE | [Symbol] | TELEPHONE CONNECTION | [Symbol] |
| HEAVY DUTY HANDHOLE | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" | [Symbol] |
| DOUBLE HANDHOLE | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" | [Symbol] |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY | [Symbol] |
| | | DOMI CAMERA (PAN/TILT/ZOOM) | [Symbol] |
| | | VEHICLE DETECTION CAMERA | [Symbol] |



THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

CONSTRUCTION NOTES:

- ① REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
- ② INSTALL ETHERNET HUB KIT.
- ③ INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO TRAFFIC SIGNAL CABINET.
- ④ INSTALL PTZ CAMERA ON MAST ARM POLE IN NORTHEAST CORNER ON EXTENSION POLE.

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

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

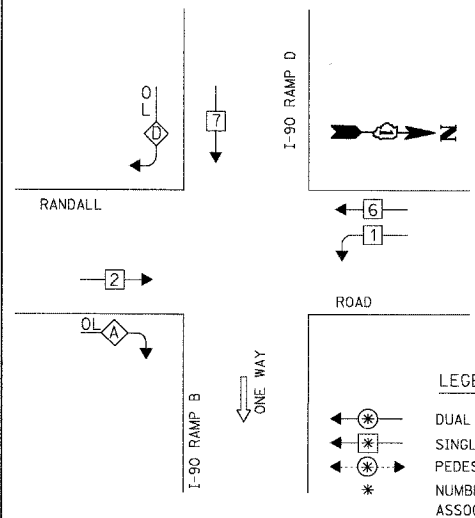
| | | | | | | | | | |
|--|-------------------------|--|--|---|---|--------------------|---------------------------|---------------------------|----------------------------------|
| FILE NAME = N:\kansas\unit4\070616\Traffic\MCD_98eb.dgn | USER NAME = MWDLLTAM | DESIGNED - DRAWN - CHECKED - DATE - | REVISED - REVISED - REVISED - REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT I-90 RAMPS B & D | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEET SHEETS: NO. 69 38 |
| PLCT SCALE = 20' | PLCT DATE = 1/29/2008 | DATE - | REVISED - | | | SCALE: | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | CONTRACT NO. 63011 |

BY DATE
 SURVEYED BY DATE
 PLOTTED BY DATE
 CHECKED BY DATE
 NOTE BOOK NO. DATE
 FILE NAME

BY DATE
 SURVEYED BY DATE
 PLOTTED BY DATE
 CHECKED BY DATE
 NOTE BOOK NO. DATE
 FILE NAME

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CONTROLLER SEQUENCE

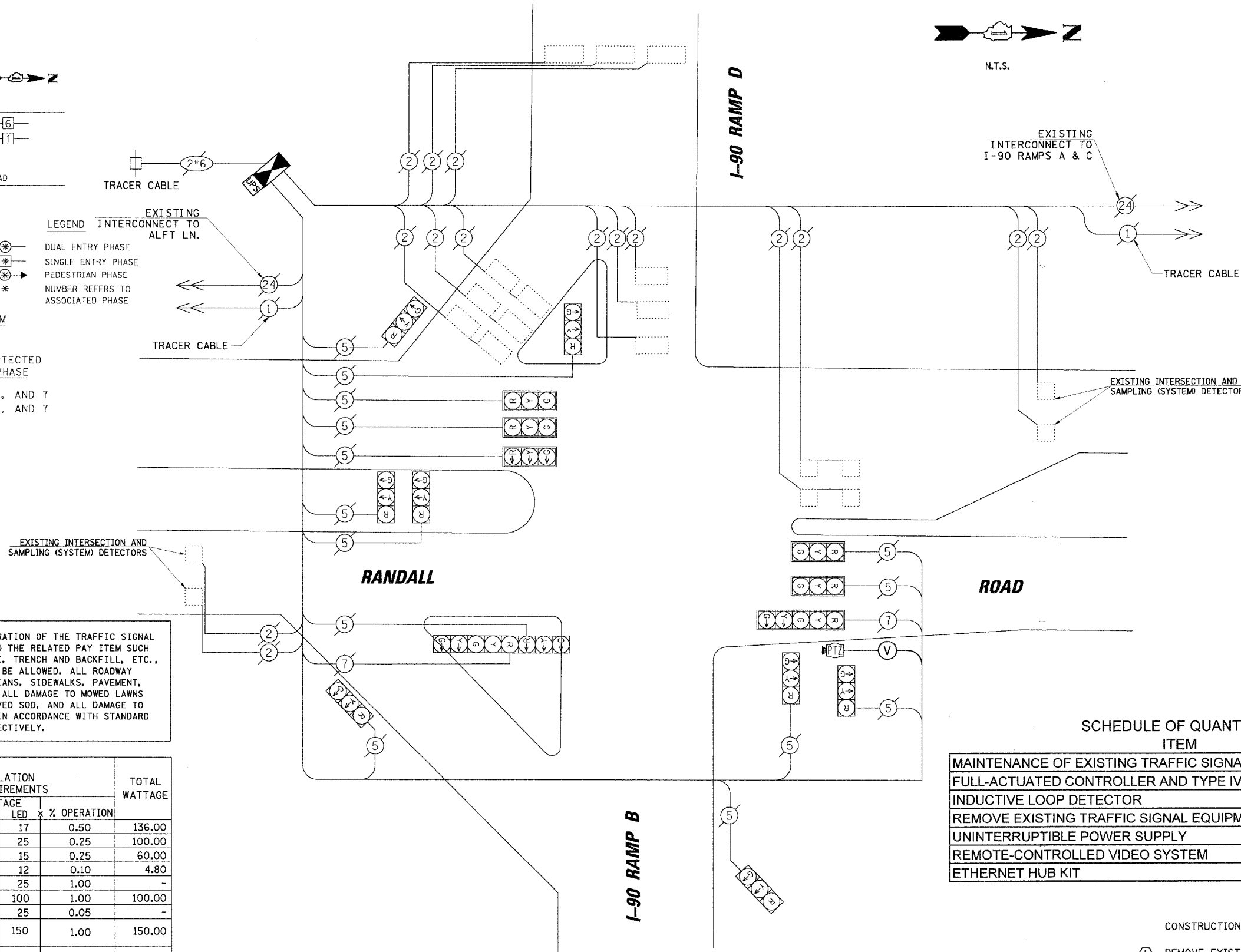


PHASE DESIGNATION DIAGRAM

| OVERLAP LETTER | PROTECTED PHASE |
|----------------|-----------------|
| A | = 2, 6, AND 7 |
| D | = 1, 2, AND 7 |

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
- SERVICE INSTALLATION
- TELEPHONE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
- FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F
- FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F
- SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
- RAILROAD CONTROL CABINET
- ILLUMINATED SIGN "NO LEFT TURN"
- ILLUMINATED SIGN "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
- UNINTERRUPTIBLE POWER SUPPLY
- VENDOR SPECIFIC CABLE
- DOME CAMERA (PAN/TILT/ZOOM)
- VIDEO DETECTION CAMERA



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 15 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET HUB KIT | EACH | 1 |

CONSTRUCTION NOTES:

- 1 REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
- 2 INSTALL ETHERNET HUB KIT.
- 3 INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO TRAFFIC SIGNAL CABINET.
- 4 INSTALL PTZ CAMERA ON MAST ARM POLE IN NORTHEAST CORNER ON EXTENSION POLE.

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

| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-----------------|-----|-------------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE INCAND. | LED | % OPERATION | |
| SIGNAL (RED) | 16 | | 17 | 0.50 | 136.00 |
| (YELLOW) | 16 | | 25 | 0.25 | 100.00 |
| (GREEN) | 16 | | 15 | 0.25 | 60.00 |
| ARROW | 4 | | 12 | 0.10 | 4.80 |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | 1 | | 150 | 1.00 | 150.00 |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 550.80
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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'-H-2" = (6m-H-0.6m) |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | BRACKET MOUNTED | 13 (4.0) |
| | | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| | | 30" (750mm) | 15 (4.6) | ELECTRIC SERVICE | 13.5 (4.1) |
| | | 36" (900mm) | 15 (4.6) | SERVICE TO GROUND | 13.5 (4.1) |
| | | FIBER OPTIC | 13 (4.0) | POST MOUNTED | 6 (1.8) |
| | | ELECTRIC SERVICE | 1 (0.5) | | |
| | | GROUND CABLE | 1 (0.5) | | |

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 FILE NAME: _____
 PLAN: _____ NO. _____
 PROFILE: _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____ CHECKED: _____
 FILE NAME: _____
 PLAN: _____ NO. _____
 PROFILE: _____

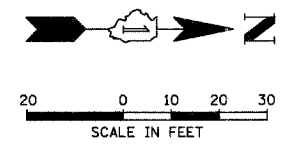
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

TRAFFIC SIGNAL LEGEND

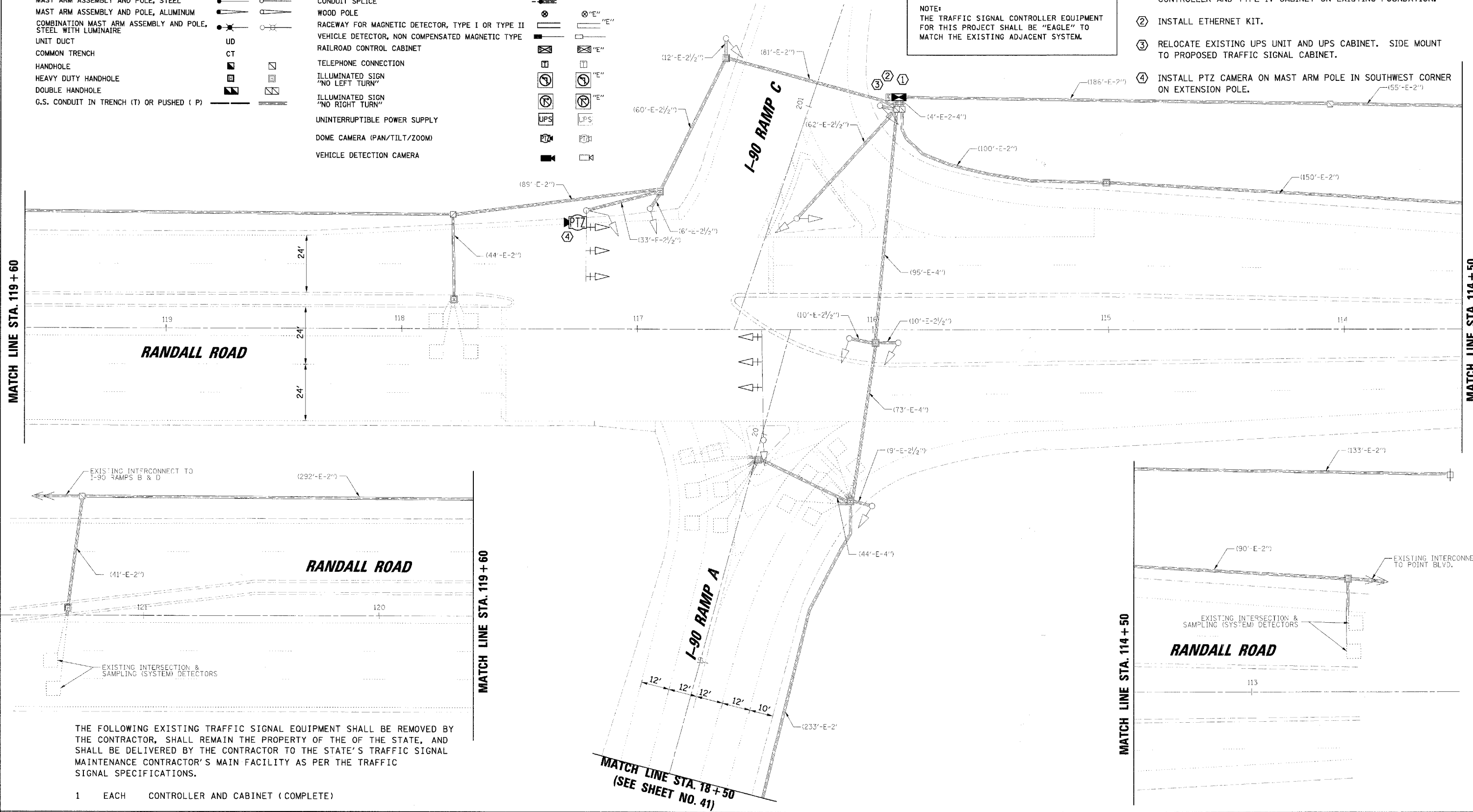
| PROPOSED | EXISTING | PROPOSED | EXISTING |
|--|----------|--|----------|
| CONTROLLER CABINET | | PEDESTRIAN PUSHBUTTON DETECTOR | |
| SERVICE INSTALLATION | | DETECTOR LOOP | |
| SIGNAL HEAD | | CAST IRON JUNCTION BOX | |
| SIGNAL HEAD WITH BACKPLATE | | EMERGENCY VEHICLE LIGHT DETECTOR | |
| SIGNAL HEAD, PEDESTRIAN | | CONFIRMATION BEACON | |
| SIGNAL POST | | SIGNAL HEAD OPTICALLY PROGRAMMED | |
| MAST ARM ASSEMBLY AND POLE, STEEL | | CONDUIT SPLICE | |
| MAST ARM ASSEMBLY AND POLE, ALUMINUM | | WOOD POLE | |
| COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | |
| UNIT DUCT | | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | |
| COMMON TRENCH | | RAILROAD CONTROL CABINET | |
| HANDHOLE | | TELEPHONE CONNECTION | |
| HEAVY DUTY HANDHOLE | | ILLUMINATED SIGN "NO LEFT TURN" | |
| DOUBLE HANDHOLE | | ILLUMINATED SIGN "NO RIGHT TURN" | |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | | UNINTERRUPTIBLE POWER SUPPLY | |
| | | DOMI CAMERA (PAN/TILT/ZOOM) | |
| | | VEHICLE DETECTION CAMERA | |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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



- CONSTRUCTION NOTES:**
- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - INSTALL ETHERNET KIT.
 - RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
 - INSTALL PTZ CAMERA ON MAST ARM POLE IN SOUTHWEST CORNER ON EXTENSION POLE.



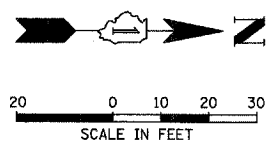
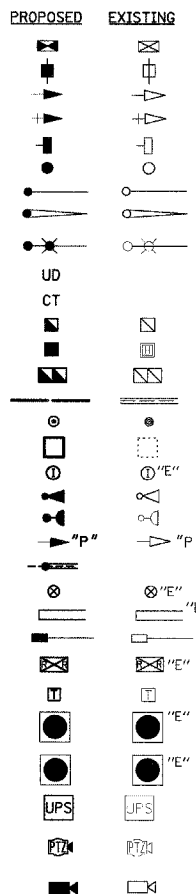
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE OF THE STATE, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

| | | | | | | | | | | |
|----------------------|----------------------|------------|--------------------|---|---|---|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT I-90 RAMPS A & C | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| PLT SCALE = 20' | CHECKED - | REVISED - | 336 | | | 06-00346-00-TL | KANE | 69 | 40 | |
| PLT DATE = 1/28/2008 | DATE - | REVISED - | CONTRACT NO. 63011 | | | | | | | |
| | | | | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

TRAFFIC SIGNAL LEGEND

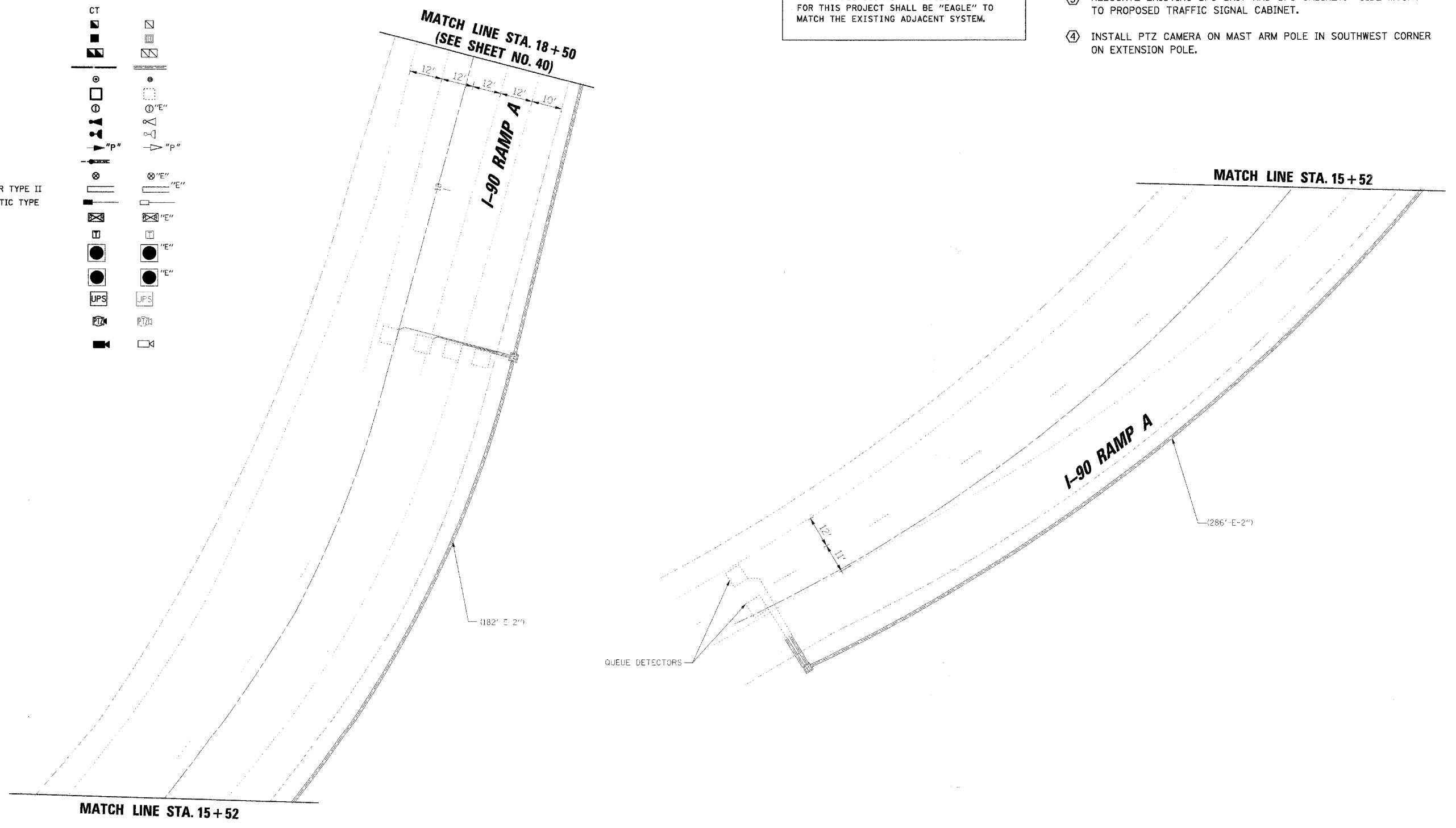
- CONTROLLER CABINET
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM ASSEMBLY AND POLE, STEEL
- MAST ARM ASSEMBLY AND POLE, ALUMINUM
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
- UNIT DUCT
- COMMON TRENCH
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
- PEDESTRIAN PUSHBUTTON DETECTOR
- DETECTOR LOOP
- CAST IRON JUNCTION BOX
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
- VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
- RAILROAD CONTROL CABINET
- TELEPHONE CONNECTION
- ILLUMINATED SIGN "NO LEFT TURN"
- ILLUMINATED SIGN "NO RIGHT TURN"
- UNINTERRUPTABLE POWER SUPPLY
- DOME CAMERA (PAN/TILT/ZOOM)
- VEHICLE DETECTION CAMERA



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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

- CONSTRUCTION NOTES:
- ① REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - ② INSTALL ETHERNET KIT.
 - ③ RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
 - ④ INSTALL PTZ CAMERA ON MAST ARM POLE IN SOUTHWEST CORNER ON EXTENSION POLE.



PROFILE
 SURVEYED BY: DATE: _____
 DRAWN BY: DATE: _____
 CHECKED BY: DATE: _____
 IN CHARGE BY: DATE: _____
 PROJECT NO.: _____
 DATE: _____
 PROJECT NAME: _____
 DRAWING NO.: _____
 SHEET NO.: _____

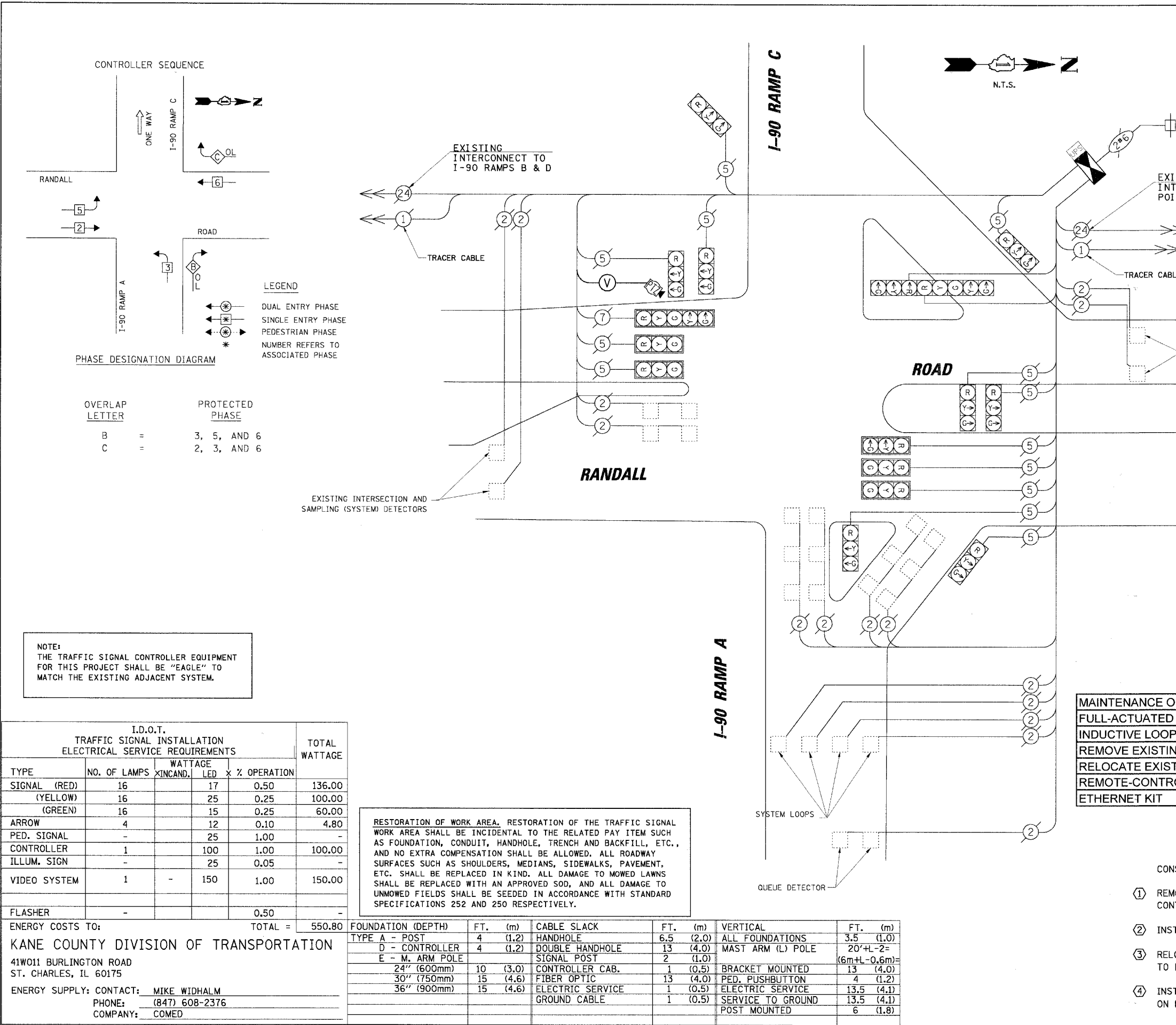
PLAN
 SURVEYED BY: DATE: _____
 DRAWN BY: DATE: _____
 CHECKED BY: DATE: _____
 IN CHARGE BY: DATE: _____
 PROJECT NO.: _____
 DATE: _____
 PROJECT NAME: _____
 DRAWING NO.: _____
 SHEET NO.: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

| | | | | | | | | | | | |
|--|----------------------|------------|-----------|---|---|---|---------------------------|----------------|--------------------|-----------------|--|
| FILE NAME = M:\enocounty\8706\Traffic\M002_90w5.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TRAFFIC SIGNAL MODIFICATION PLAN RANDALL ROAD AT I-90 RAMPS A & C | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 41 | |
| PLOT SCALE = 20' | CHECKED - | REVISED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| PLOT DATE = 1/28/2008 | DATE - | REVISED - | REVISED - | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

DATE: _____ BY: _____
 SURVIVED _____
 CHECKED _____
 DATE: _____ BY: _____
 SURVIVED _____
 CHECKED _____
 DATE: _____ BY: _____
 SURVIVED _____
 CHECKED _____

CHRISTOPHER B. BURKE
 ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|-----------|-----------|---|
| (G) | (G) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (R) | (R) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (W) | (W) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (P) | (P) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Cabinet] | [Cabinet] | CONTROLLER CABINET |
| [Service] | [Service] | SERVICE INSTALLATION |
| [Phone] | [Phone] | TELEPHONE INSTALLATION |
| [Loop] | [Loop] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Mag] | [Mag] | MAGNETIC DETECTOR |
| [EVL] | [EVL] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Beacon] | [Beacon] | CONFIRMATION BEACON |
| [Push] | [Push] | PUSHBUTTON DETECTOR |
| (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. 62.5/125 2-MM12F SM12F |
| (24) | (24) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| (36) | (36) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [R] | [R] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [R] | [R] | RAILROAD CONTROL CABINET |
| [L] | [L] | ILLUMINATED SIGN "NO LEFT TURN" |
| [R] | [R] | 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 |
| [UPS] | [UPS] | UNINTERRUPTIBLE POWER SUPPLY |
| [V] | [V] | VENDOR SPECIFIC CABLE |
| [D] | [D] | DOMED CAMERA (PAN/TILT/ZOOM) |
| [V] | [V] | VIDEO DETECTION CAMERA |

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

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

| TYPE | NO. OF LAMPS | WATTAGE INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-----------------|------|-------------|---------------|
| SIGNAL (RED) | 16 | 17 | 0.50 | | 136.00 |
| (YELLOW) | 16 | 25 | 0.25 | | 100.00 |
| (GREEN) | 16 | 15 | 0.25 | | 60.00 |
| ARROW | 4 | 12 | 0.10 | | 4.80 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | 1 | - | 150 | 1.00 | 150.00 |
| FLASHER | - | - | 0.50 | | - |
| TOTAL = | | | | | 550.80 |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| 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= |
| E - M. ARM POLE | | SIGNAL POST | 2 (1.0) | (6m±L-0.6m)= | |
| 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" (900mm) | 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) |

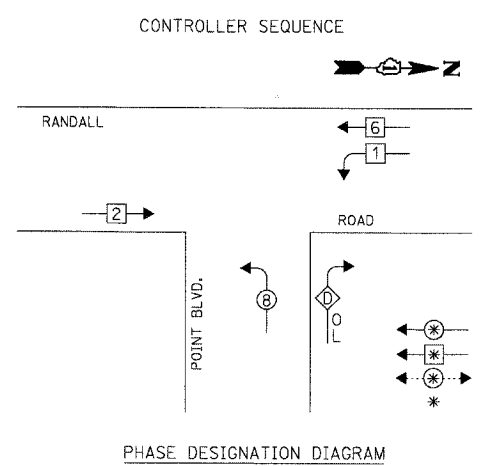
ENERGY COSTS TO: TOTAL = 550.80
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 15 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM | EACH | 1 |
| REMOTE-CONTROLLED VIDEO SYSTEM | EACH | 1 |
| ETHERNET KIT | EACH | 1 |

- CONSTRUCTION NOTES:
- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - INSTALL ETHERNET KIT.
 - RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
 - INSTALL PTZ CAMERA ON MAST ARM POLE IN SOUTHWEST CORNER ON EXTENSION POLE.

SURVEYED BY: DATE:
 PROFILE PLOTTED BY: DATE:
 CHECKED BY: DATE:
 NOTE BOOK NO.:
 STRUCTURE NOTATIONS CHKD:
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

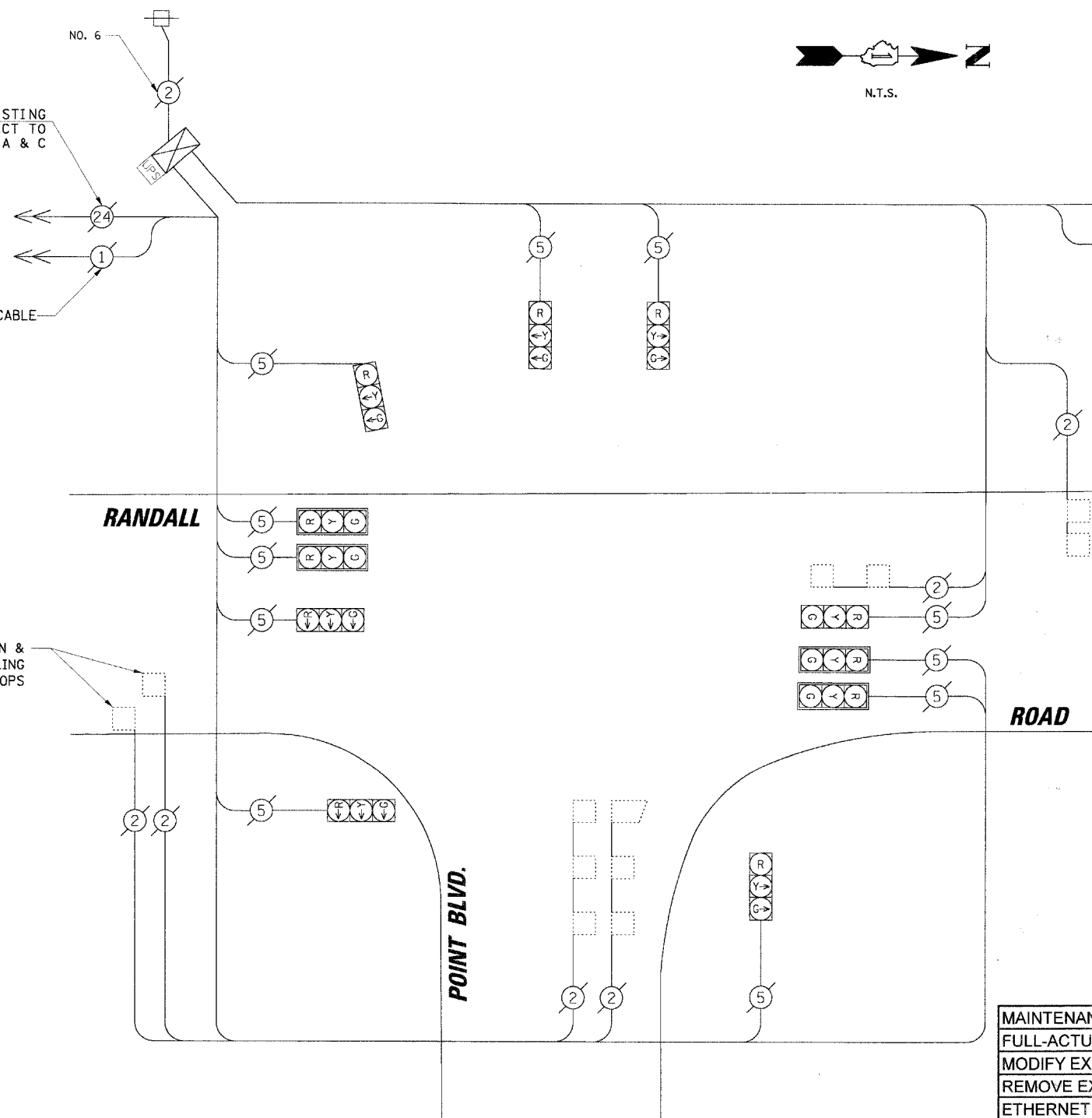


LEGEND
 DUAL ENTRY PHASE
 SINGLE ENTRY PHASE
 PEDESTRIAN PHASE
 NUMBER REFERS TO ASSOCIATED PHASE

OVERLAP LETTER D = **PROTECTED PHASE** 1 + **PERMISSIVE PHASE** 8



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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| (Symbol) | (Symbol) | 8" (200mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) TRAFFIC SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| (Symbol) | (Symbol) | CONTROLLER CABINET |
| (Symbol) | (Symbol) | SERVICE INSTALLATION |
| (Symbol) | (Symbol) | TELEPHONE INSTALLATION |
| (Symbol) | (Symbol) | VEHICLE DETECTOR, INDUCTION LOOP |
| (Symbol) | (Symbol) | MAGNETIC DETECTOR |
| (Symbol) | (Symbol) | EMERGENCY VEHICLE LIGHT DETECTOR |
| (Symbol) | (Symbol) | CONFIRMATION BEACON |
| (Symbol) | (Symbol) | PUSHBUTTON DETECTOR |
| (Symbol) | (Symbol) | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| (Symbol) | (Symbol) | GROUND CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| (Symbol) | (Symbol) | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| (Symbol) | (Symbol) | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| (Symbol) | (Symbol) | RAILROAD CONTROL CABINET |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO LEFT TURN" |
| (Symbol) | (Symbol) | ILLUMINATED SIGN "NO RIGHT TURN" |
| (Symbol) | (Symbol) | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| (Symbol) | (Symbol) | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| (Symbol) | (Symbol) | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| (Symbol) | (Symbol) | UNINTERRUPTIBLE POWER SUPPLY |
| (Symbol) | (Symbol) | VENDOR SPECIFIC CABLE |
| (Symbol) | (Symbol) | DOME CAMERA (PAN/TILT/ZOOM) |
| (Symbol) | (Symbol) | VIDEO DETECTION CAMERA |

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

| TYPE | NO. OF LAMPS | WATTAGE | | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|---------|-----|-------------|---------------|
| | | INCAND. | LED | | |
| SIGNAL (RED) | 11 | | 17 | 0.50 | 93.50 |
| (YELLOW) | 11 | | 25 | 0.25 | 68.75 |
| (GREEN) | 11 | | 15 | 0.25 | 41.25 |
| ARROW | - | | 12 | 0.10 | - |
| PED. SIGNAL | - | | 25 | 1.00 | - |
| CONTROLLER | 1 | | 100 | 1.00 | 100.00 |
| ILLUM. SIGN | - | | 25 | 0.05 | - |
| VIDEO SYSTEM | - | | 150 | 1.00 | - |
| FLASHER | - | | | 0.50 | - |

ENERGY COSTS TO: TOTAL = 303.50
KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175
 ENERGY SUPPLY CONTACT: **MIKE WIDHALM**
 PHONE: (847) 608-2376
 COMPANY: **COMED**

| 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= |
| E - M. ARM POLE | | SIGNAL POST | 2 (0.6) | (6m+L-0.6m) | |
| 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" (900mm) | 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) |

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

SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:**
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.

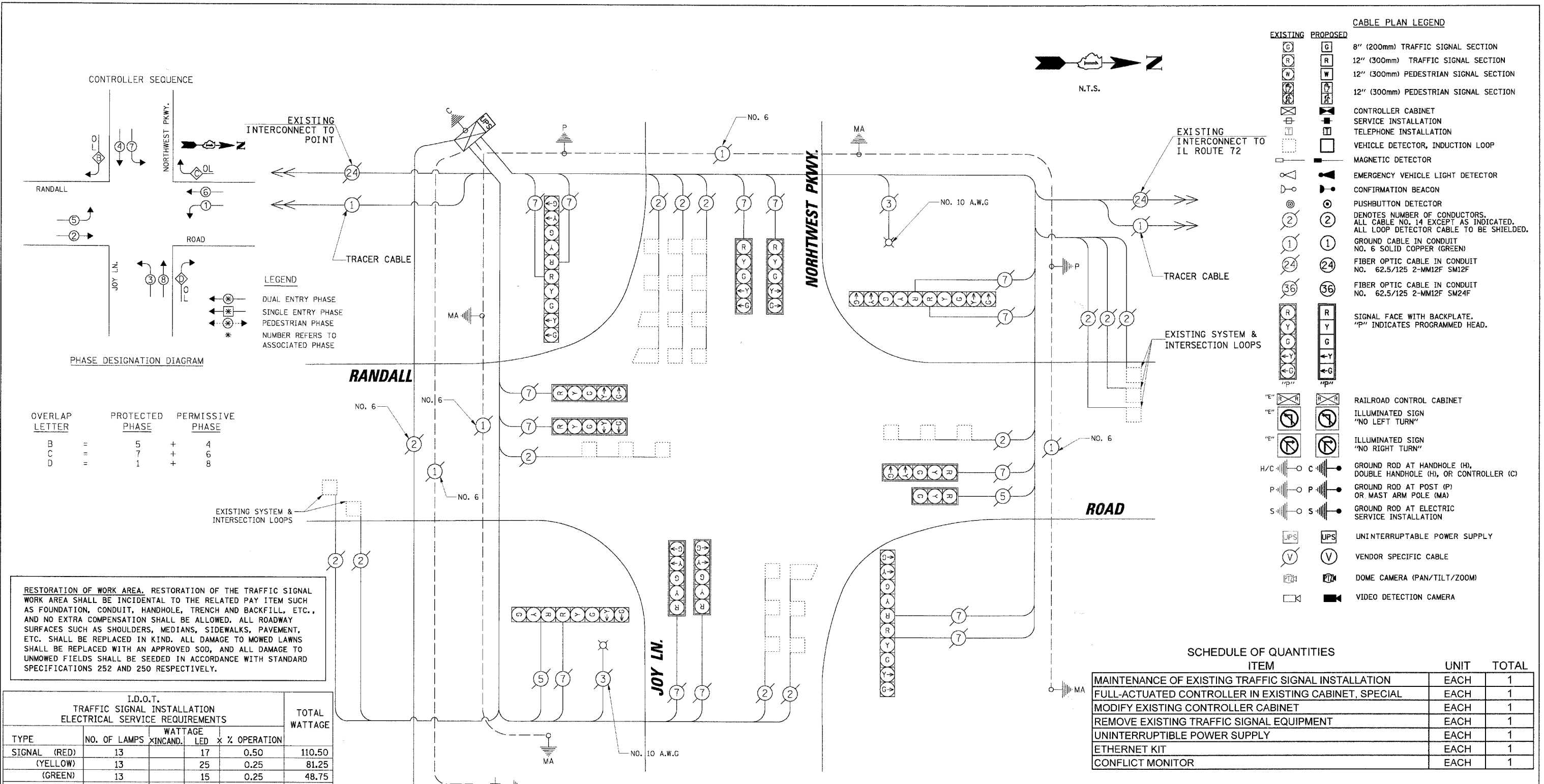
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 FILE NAME: _____

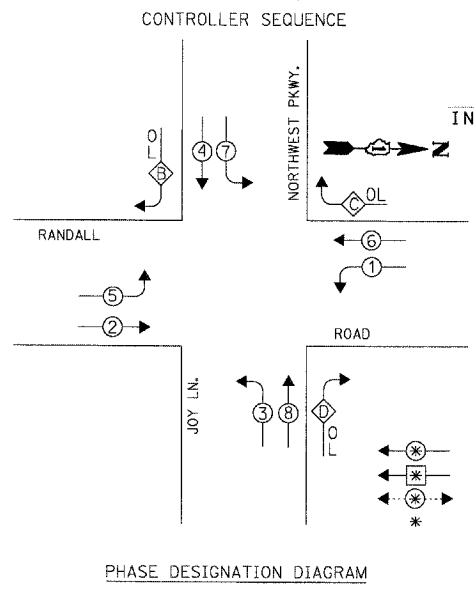
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 FILE NAME: _____



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" (200mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE INSTALLATION |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | MAGNETIC DETECTOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| [Symbol] | [Symbol] | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" |
| [Symbol] | [Symbol] | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C) |
| [Symbol] | [Symbol] | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY |
| [Symbol] | [Symbol] | VENDOR SPECIFIC CABLE |
| [Symbol] | [Symbol] | DOME CAMERA (PAN/TILT/ZOOM) |
| [Symbol] | [Symbol] | VIDEO DETECTION CAMERA |



| OVERLAP LETTER | PROTECTED PHASE | PERMISSIVE PHASE |
|----------------|-----------------|------------------|
| B | 5 | 4 |
| C | 7 | 6 |
| D | 1 | 8 |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

| TYPE | NO. OF LAMPS | WATTAGE X INCAND. | LED | % OPERATION | TOTAL WATTAGE |
|--------------|--------------|-------------------|------|-------------|---------------|
| SIGNAL (RED) | 13 | 17 | 0.50 | | 110.50 |
| (YELLOW) | 13 | 25 | 0.25 | | 81.25 |
| (GREEN) | 13 | 15 | 0.25 | | 48.75 |
| ARROW | 20 | 12 | 0.10 | | 24.00 |
| PED. SIGNAL | - | 25 | 1.00 | | - |
| CONTROLLER | 1 | 100 | 1.00 | | 100.00 |
| ILLUM. SIGN | - | 25 | 0.05 | | - |
| VIDEO SYSTEM | - | - | 150 | 1.00 | - |
| LUMINAIRE | 2 | 310 | 0.50 | | 310.00 |
| FLASHER | - | - | 0.50 | | - |

ENERGY COSTS TO: TOTAL = 674.50

KANE COUNTY DIVISION OF TRANSPORTATION
 41W011 BURLINGTON ROAD
 ST. CHARLES, IL 60175

ENERGY SUPPLY CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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 - M. ARM POLE | 10 (3.0) | SIGNAL POST | 2 (0.5) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

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

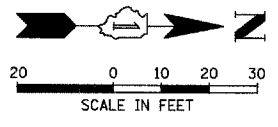
SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL | EACH | 1 |
| MODIFY EXISTING CONTROLLER CABINET | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| UNINTERRUPTIBLE POWER SUPPLY | EACH | 1 |
| ETHERNET KIT | EACH | 1 |
| CONFLICT MONITOR | EACH | 1 |

- CONSTRUCTION NOTES:
- REPLACE EXISTING CONTROLLER AND CONFLICT MONITOR.
 - INSTALL ETHERNET KIT.
 - INSTALL UPS UNIT IN SIDE MOUNTED CABINET ATTACHED TO EXISTING TRAFFIC SIGNAL CABINET.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1 EACH CONTROLLER AND CONFLICT MONITOR



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

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**MATCH LINE STA. 312+18
(SEE SHEET NO. 46)**

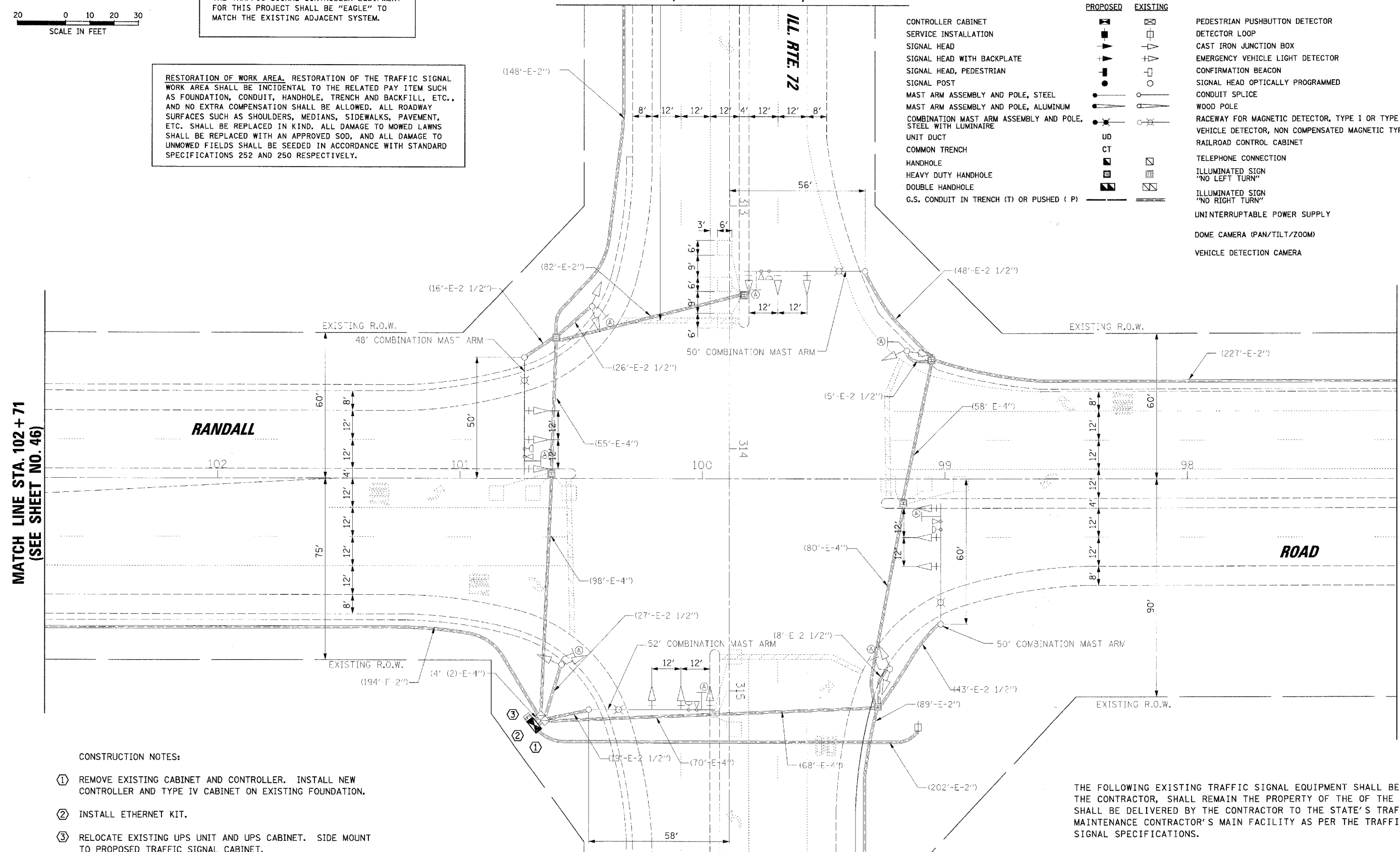
TRAFFIC SIGNAL LEGEND

- | | | | | |
|-----------------|-----------------|--|-----------------|-----------------|
| PROPOSED | EXISTING | PEDESTRIAN PUSHBUTTON DETECTOR | PROPOSED | EXISTING |
| [Symbol] | [Symbol] | DETECTOR LOOP | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | CAST IRON JUNCTION BOX | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE LIGHT DETECTOR | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | CONFIRMATION BEACON | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | SIGNAL HEAD OPTICALLY PROGRAMMED | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | CONDUIT SPLICE | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | WOOD POLE | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | RAILROAD CONTROL CABINET | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | TELEPHONE CONNECTION | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO LEFT TURN" | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | ILLUMINATED SIGN "NO RIGHT TURN" | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | UNINTERRUPTABLE POWER SUPPLY | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | DOME CAMERA (PAN/TILT/ZOOM) | [Symbol] | [Symbol] |
| [Symbol] | [Symbol] | VEHICLE DETECTION CAMERA | [Symbol] | [Symbol] |

- CONTROLLER CABINET
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM ASSEMBLY AND POLE, STEEL
- MAST ARM ASSEMBLY AND POLE, ALUMINUM
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
- UNIT DUCT
- COMMON TRENCH
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)

**MATCH LINE STA. 102+71
(SEE SHEET NO. 46)**

**MATCH LINE STA. 97+14
(SEE SHEET NO. 46)**



- CONSTRUCTION NOTES:**
- ① REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - ② INSTALL ETHERNET KIT.
 - ③ RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE, AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)

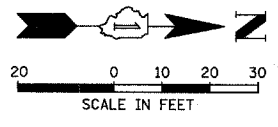
**MATCH LINE STA. 315+67
(SEE SHEET NO. 46)**

| | | | |
|------|----|------|----|
| DATE | BY | DATE | BY |
| | | | |
| DATE | BY | DATE | BY |
| | | | |

CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

SURVEYED: DATE: _____
 PLOTTED: BY: _____
 PLANNED: NO. _____
 CHECKED:
 REVISION: DATE: _____
 REVISION: DATE: _____
 REVISION: DATE: _____
 REVISION: DATE: _____
 REVISION: DATE: _____

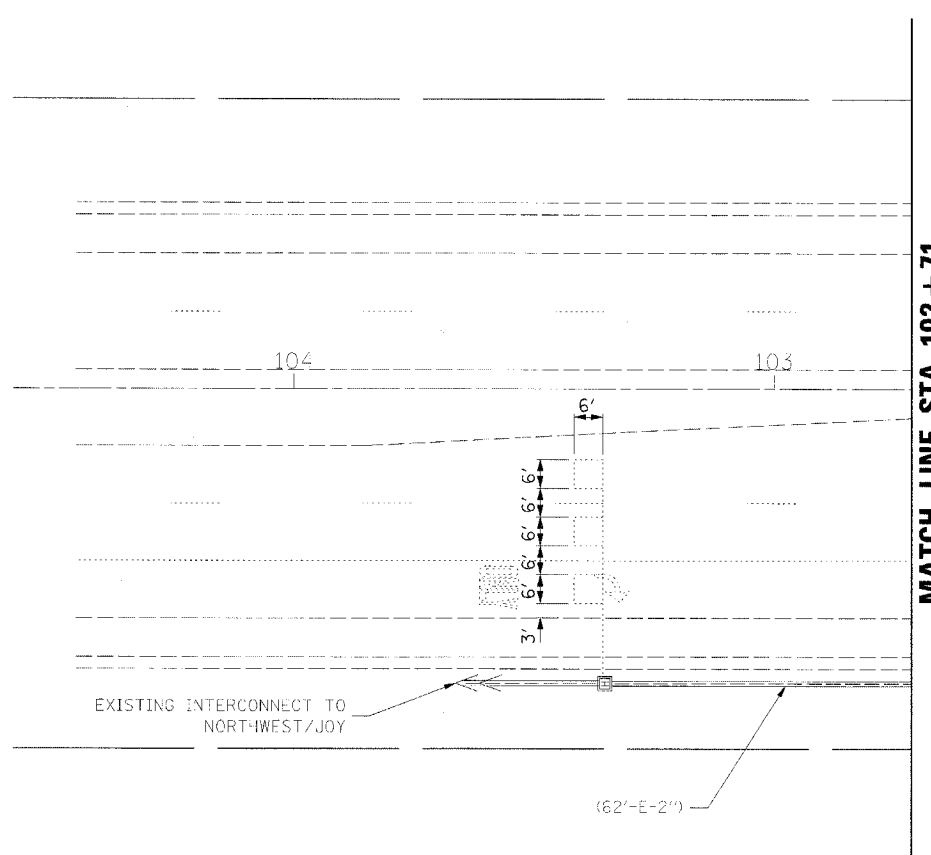
CHRISTOPHER B. BURKE
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
CB
B



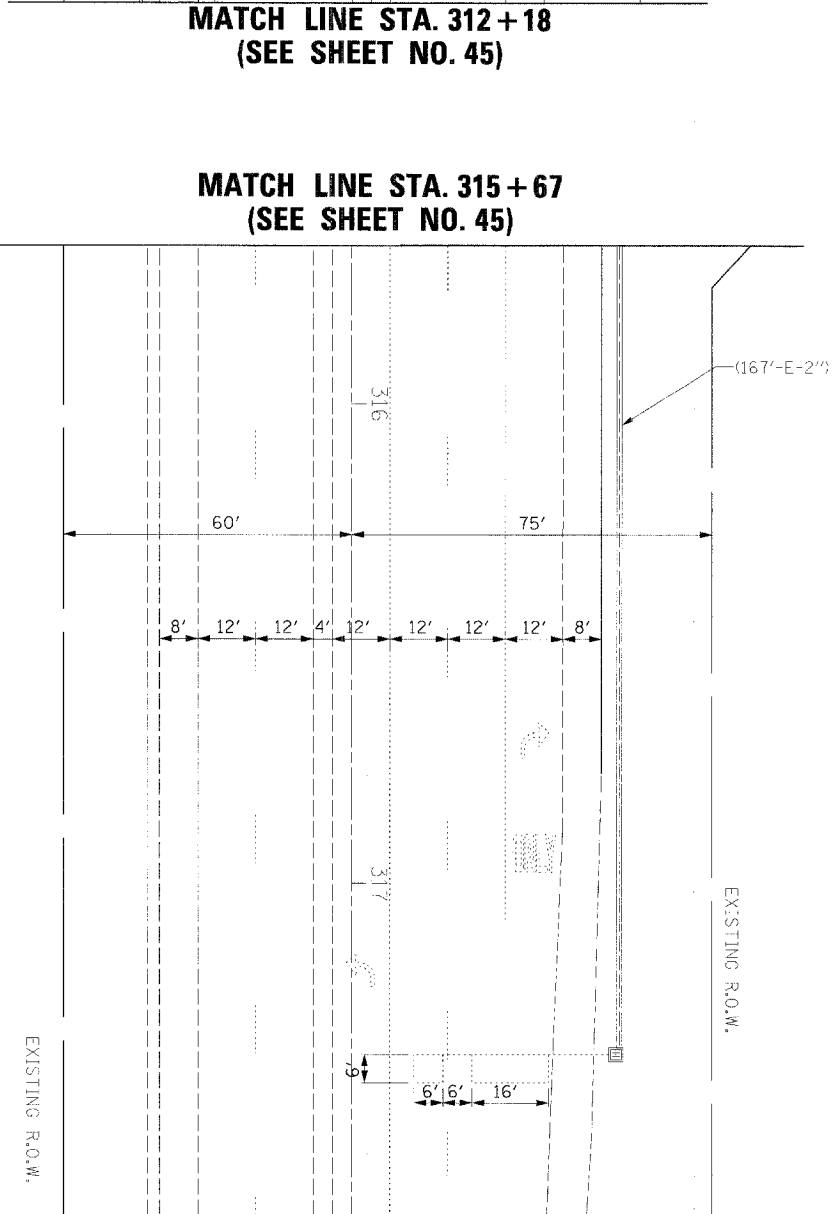
NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| TRAFFIC SIGNAL LEGEND | | PROPOSED | EXISTING | PROPOSED | EXISTING |
|---|--------------------------------------|--|---------------------------------|----------------------------------|--|
| CONTROLLER CABINET | SERVICE INSTALLATION | SIGNAL HEAD | SIGNAL HEAD WITH BACKPLATE | SIGNAL HEAD, PEDESTRIAN | SIGNAL POST |
| MAST ARM ASSEMBLY AND POLE, STEEL | MAST ARM ASSEMBLY AND POLE, ALUMINUM | COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE | UNIT DUCT | COMMON TRENCH | HANDHOLE |
| HEAVY DUTY HANDHOLE | DOUBLE HANDHOLE | G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | PEDESTRIAN PUSHBUTTON DETECTOR | DETECTOR LOOP | CAST IRON JUNCTION BOX |
| EMERGENCY VEHICLE LIGHT DETECTOR | CONFIRMATION BEACON | SIGNAL HEAD OPTICALLY PROGRAMMED | CONDUIT SPLICE | WOOD POLE | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | RAILROAD CONTROL CABINET | TELEPHONE CONNECTION | ILLUMINATED SIGN "NO LEFT TURN" | ILLUMINATED SIGN "NO RIGHT TURN" | UNINTERRUPTIBLE POWER SUPPLY |
| DOME CAMERA (PAN/TILT/ZOOM) | VEHICLE DETECTION CAMERA | | | | |

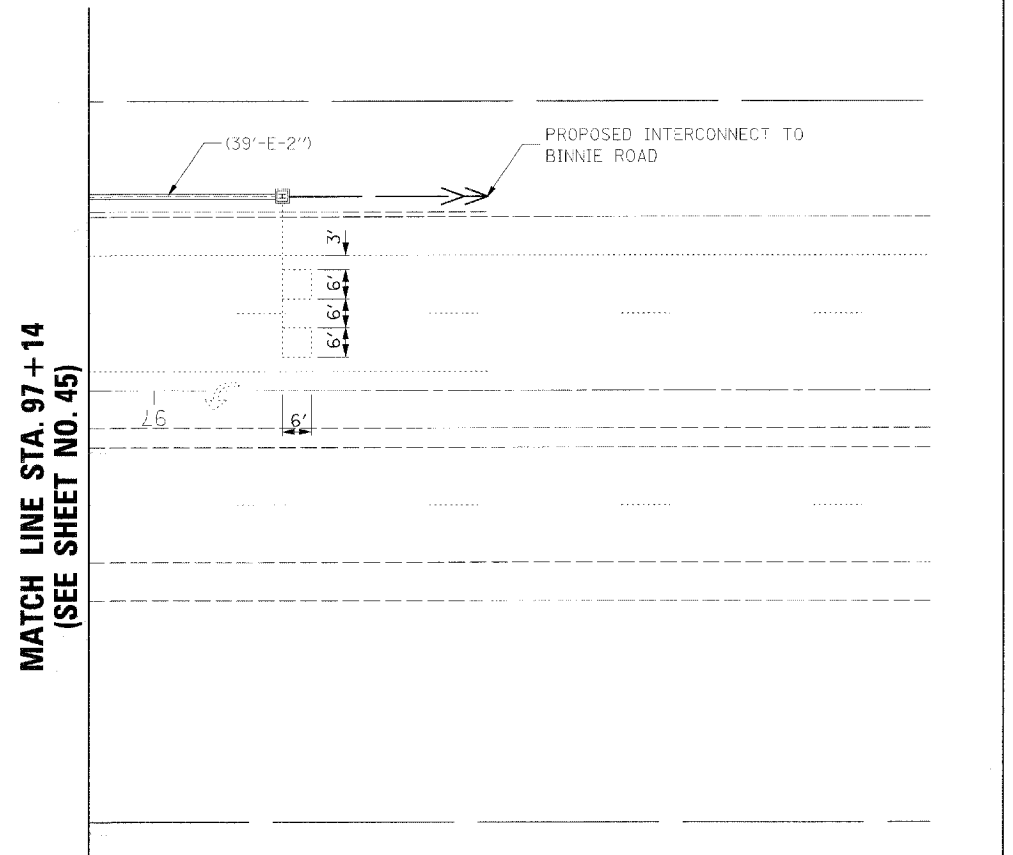


**MATCH LINE STA. 102 + 71
(SEE SHEET NO. 45)**



**MATCH LINE STA. 312 + 18
(SEE SHEET NO. 45)**

**MATCH LINE STA. 315 + 67
(SEE SHEET NO. 45)**



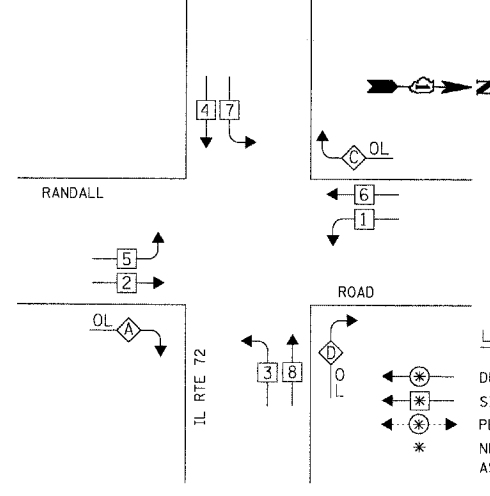
**MATCH LINE STA. 97 + 14
(SEE SHEET NO. 45)**

- CONSTRUCTION NOTES:**
- ① REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - ② INSTALL ETHERNET KIT.
 - ③ RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 STRUCTURE NOTATION: _____
 DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 STRUCTURE NOTATION: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

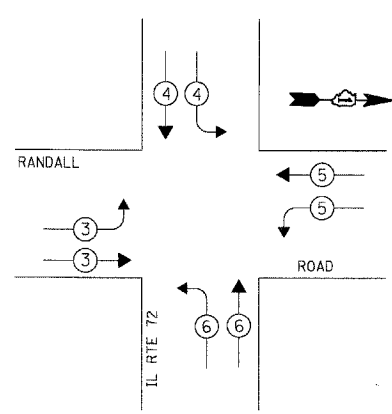
CONTROLLER SEQUENCE



| OVERLAP LETTER | PROTECTED PHASE | PERMISSIVE PHASE |
|----------------|-----------------|------------------|
| A = | 3 + | 2 |
| C = | 7 + | 6 |
| D = | 1 + | 8 |

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



| EXISTING EMERGENCY VEHICLE PREEMPTORS | | | | |
|---------------------------------------|---|---|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 | 5 | 6 |
| MOVEMENT | | | | |

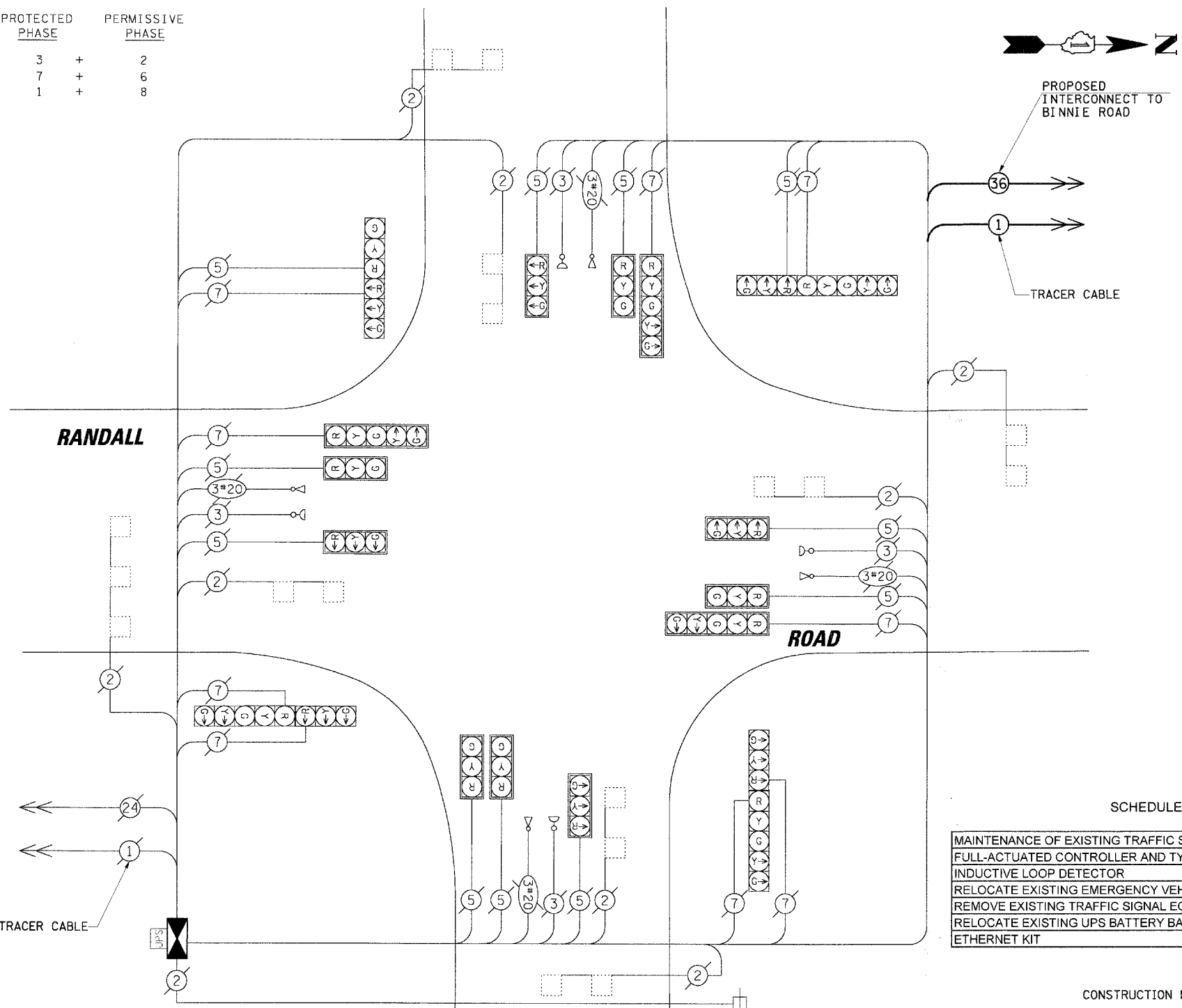
| I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|--|--------------|-----------------------|-------------|---------|---------------|
| TYPE | NO. OF LAMPS | WATTAGE X INCAND. LED | % OPERATION | | |
| SIGNAL (RED) | 20 | 17 | 0.50 | 170.00 | |
| (YELLOW) | 20 | 25 | 0.25 | 125.00 | |
| (GREEN) | 20 | 15 | 0.25 | 75.00 | |
| ARROW | 12 | 12 | 0.10 | 14.40 | |
| PED. SIGNAL | - | 25 | 1.00 | - | |
| CONTROLLER | 1 | 100 | 1.00 | 100.00 | |
| ILLUM. SIGN | - | 25 | 0.05 | - | |
| VIDEO SYSTEM | - | 150 | 1.00 | - | |
| FLASHER | - | 25 | 0.50 | - | |
| ENERGY COSTS TO: | | | | TOTAL = | 484.40 |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER COURT
 SCHAUMBURG, IL 60196-1096
 ENERGY SUPPLY: CONTACT: MIKE WIDHALM
 PHONE: (847) 608-2376
 COMPANY: COMED

| 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'HL-2' (6mHL-0.6m) |
| E - M. ARM POLE | 2 (1.0) | SIGNAL POST | 2 (1.0) | BRACKET MOUNTED | 13 (4.0) |
| 24" (600mm) | 10 (3.0) | CONTROLLER CAB. | 1 (0.5) | PED. PUSHBUTTON | 4 (1.2) |
| 30" (750mm) | 15 (4.6) | FIBER OPTIC | 13 (4.0) | ELECTRIC SERVICE | 13.5 (4.1) |
| 36" (900mm) | 15 (4.6) | ELECTRIC SERVICE | 1 (0.5) | SERVICE TO GROUND | 13.5 (4.1) |
| | | GROUND CABLE | 1 (0.5) | POST MOUNTED | 6 (1.8) |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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



CABLE PLAN LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| | | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | CONTROLLER CABINET SERVICE INSTALLATION |
| | | TELEPHONE INSTALLATION |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | MAGNETIC DETECTOR |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | PUSHBUTTON DETECTOR |
| | | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F |
| | | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM24F |
| | | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. |
| | | RAILROAD CONTROL CABINET |
| | | ILLUMINATED SIGN "NO LEFT TURN" |
| | | ILLUMINATED SIGN "NO RIGHT TURN" |
| | | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C) |
| | | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| | | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | | UNINTERRUPTIBLE POWER SUPPLY |
| | | VENDOR SPECIFIC CABLE |
| | | DOME CAMERA (PAN/TILT/ZOOM) |
| | | VIDEO DETECTION CAMERA |

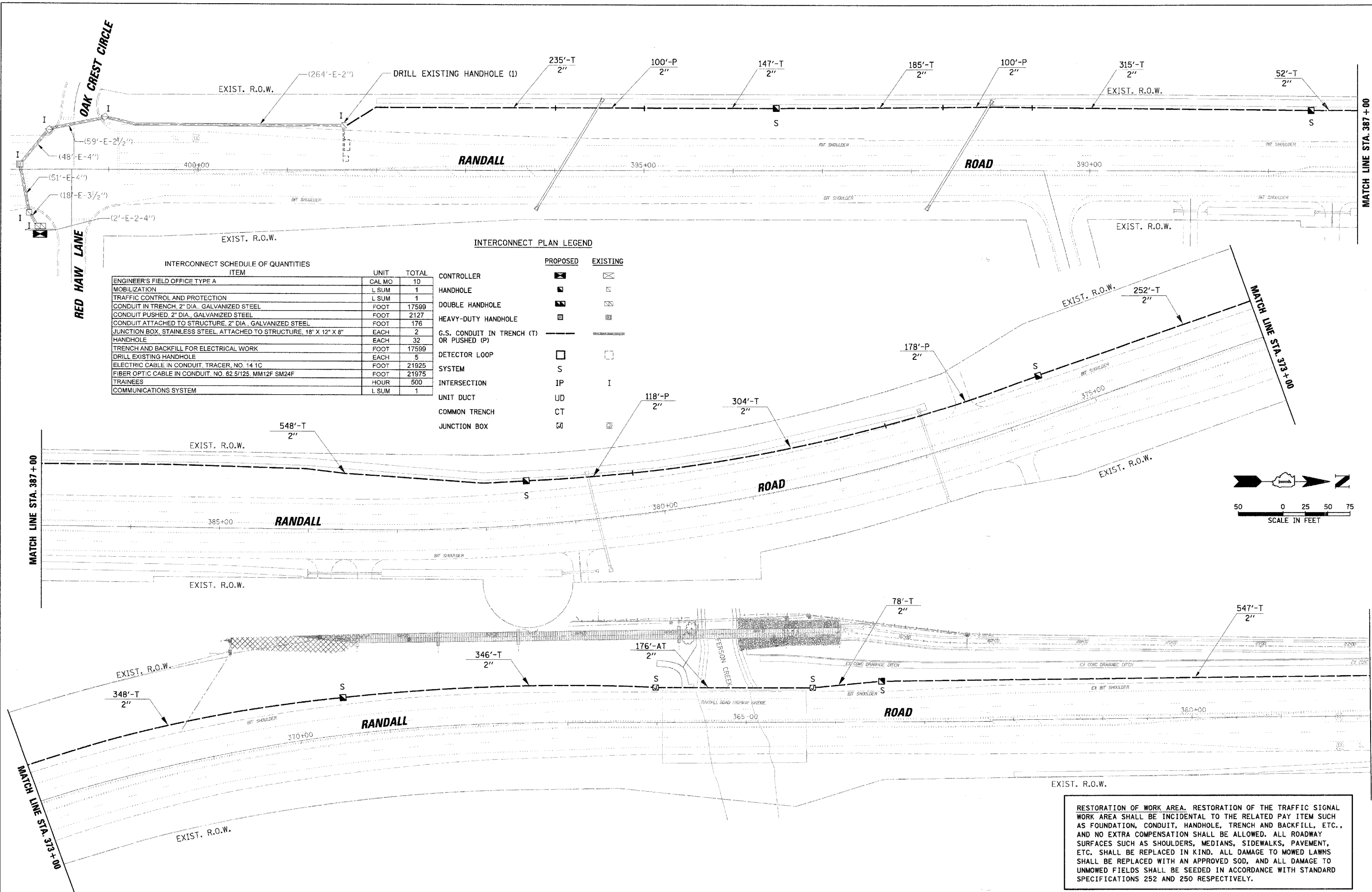
SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|---|------|-------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL | EACH | 1 |
| INDUCTIVE LOOP DETECTOR | EACH | 8 |
| RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT | EACH | 1 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| RELOCATE EXISTING UPS BATTERY BACK-UP SYSTEM | EACH | 1 |
| ETHERNET KIT | EACH | 1 |

- CONSTRUCTION NOTES:**
- REMOVE EXISTING CABINET AND CONTROLLER. INSTALL NEW CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION.
 - INSTALL ETHERNET KIT.
 - RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.

DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLAN: _____ NO. _____
 PROFILE: _____
 DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLAN: _____ NO. _____
 PROFILE: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 923-0500

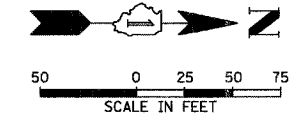


INTERCONNECT SCHEDULE OF QUANTITIES

| ITEM | UNIT | TOTAL |
|--|--------|-------|
| ENGINEER'S FIELD OFFICE TYPE A | CAL MO | 10 |
| MOBILIZATION | L SUM | 1 |
| TRAFFIC CONTROL AND PROTECTION | L SUM | 1 |
| CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL | FOOT | 17599 |
| CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL | FOOT | 2127 |
| CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL | FOOT | 176 |
| JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 18" X 12" X 8" | EACH | 2 |
| HANDHOLE | EACH | 32 |
| TRENCH AND BACKFILL FOR ELECTRICAL WORK | FOOT | 17599 |
| DRILL EXISTING HANDHOLE | EACH | 5 |
| ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C | FOOT | 21925 |
| FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F | FOOT | 21975 |
| TRAINEES | HOUR | 500 |
| COMMUNICATIONS SYSTEM | L SUM | 1 |

INTERCONNECT PLAN LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER | ☒ | ☒ |
| HANDHOLE | ◻ | ◻ |
| DOUBLE HANDHOLE | ◻ | ◻ |
| HEAVY-DUTY HANDHOLE | ◻ | ◻ |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | — | — |
| DETECTOR LOOP | ◻ | ◻ |
| SYSTEM | S | S |
| INTERSECTION | IP | I |
| UNIT DUCT | UD | UD |
| COMMON TRENCH | CT | CT |
| JUNCTION BOX | ◻ | ◻ |

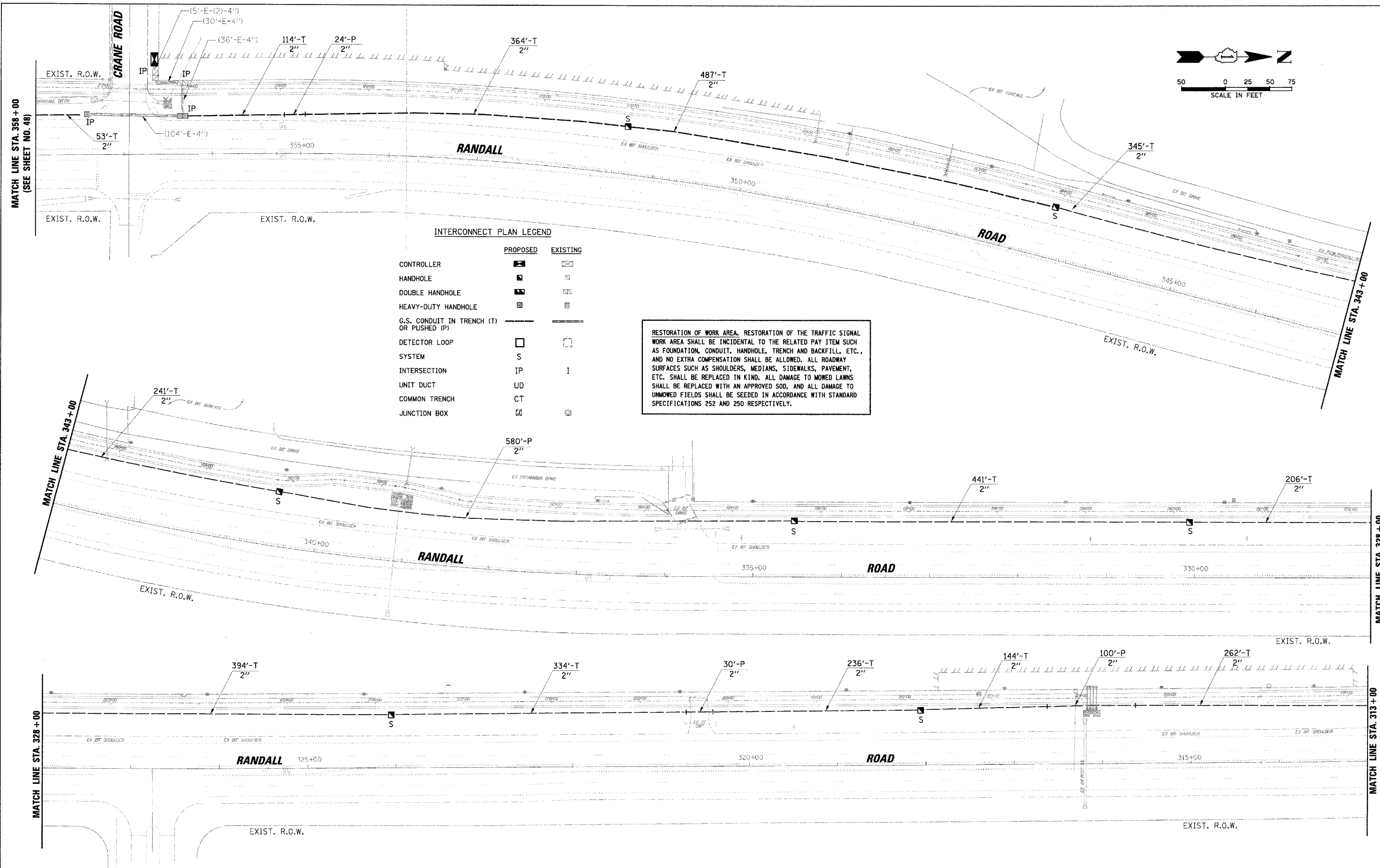
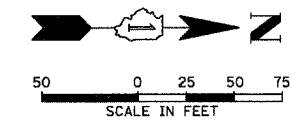


RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ RT. OF WAY CHECKED: _____
 NOTE BOOK NO. _____
 CAD FILE NAME: _____

DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ RT. OF WAY CHECKED: _____
 NOTE BOOK NO. _____
 CAD FILE NAME: _____

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 Rosemont, Illinois 60018
 (847) 823-0500



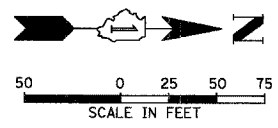
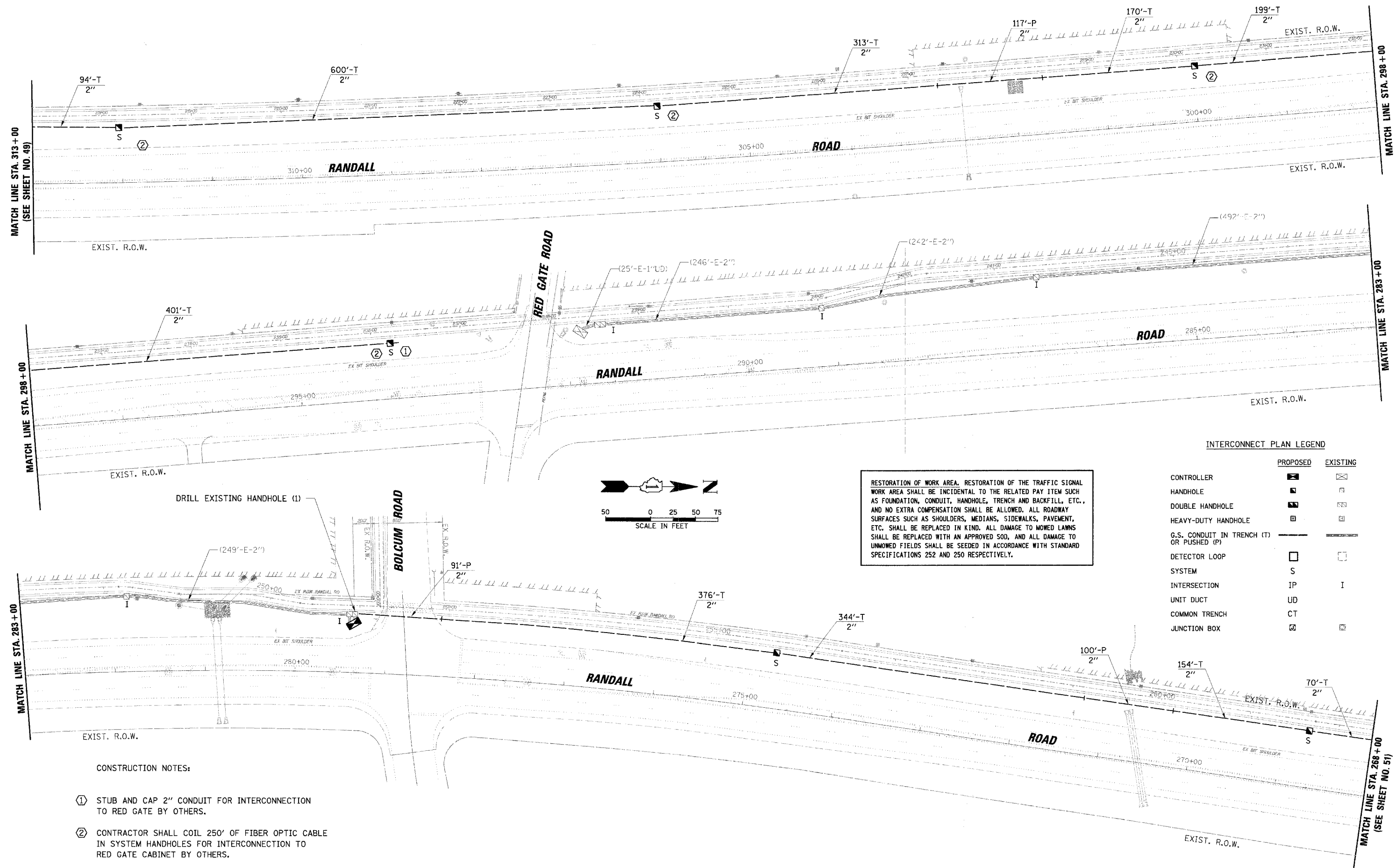
INTERCONNECT PLAN LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER | ☒ | ☒ |
| HANDHOLE | ⬛ | ⬛ |
| DOUBLE HANDHOLE | ⬛⬛ | ⬛⬛ |
| HEAVY-DUTY HANDHOLE | ⊠ | ⊠ |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | — | — |
| DETECTOR LOOP | □ | □ |
| SYSTEM | S | S |
| INTERSECTION | IP | I |
| UNIT DUCT | UD | UD |
| COMMON TRENCH | CT | CT |
| JUNCTION BOX | ⊞ | ⊞ |

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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ P.L. OF MAY CHECKED: _____
 NOTE BOOK NO. _____ CADD FILE NAME: _____
 DATE: _____ BY: _____
 SURVEYED: _____ CHECKED: _____
 PLOTTED: _____ B.M. NOTED: _____
 STRUCTURE NOTATIONS: CHFD

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 Rosemont, Illinois 60018
 (847) 823-0500



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, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

INTERCONNECT PLAN LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER | ☒ | ☒ |
| HANDHOLE | ⊠ | ⊠ |
| DOUBLE HANDHOLE | ⊞ | ⊞ |
| HEAVY-DUTY HANDHOLE | ⊠ | ⊠ |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | — | — |
| DETECTOR LOOP | □ | □ |
| SYSTEM | S | S |
| INTERSECTION | IP | I |
| UNIT DUCT | UD | UD |
| COMMON TRENCH | CT | CT |
| JUNCTION BOX | ⊞ | ⊞ |

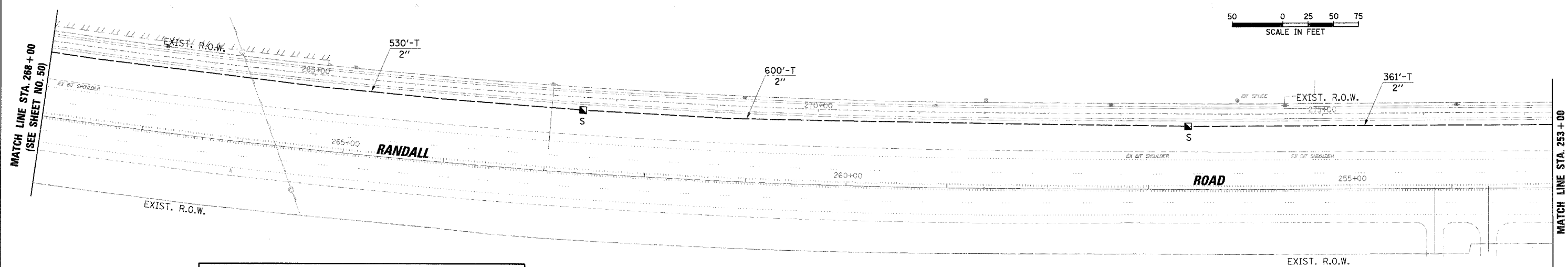
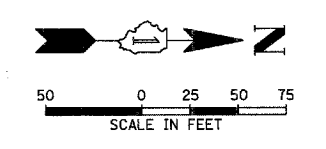
CONSTRUCTION NOTES:

- ① STUB AND CAP 2" CONDUIT FOR INTERCONNECTION TO RED GATE BY OTHERS.
- ② CONTRACTOR SHALL COIL 250' OF FIBER OPTIC CABLE IN SYSTEM HANDHOLES FOR INTERCONNECTION TO RED GATE CABINET BY OTHERS.

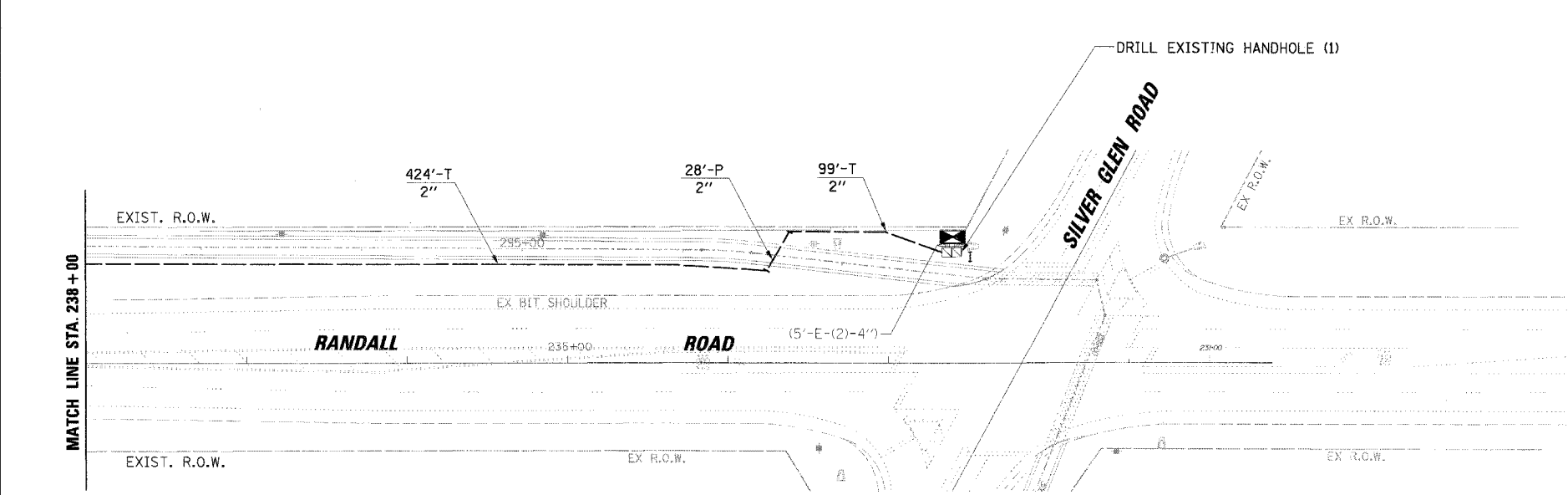
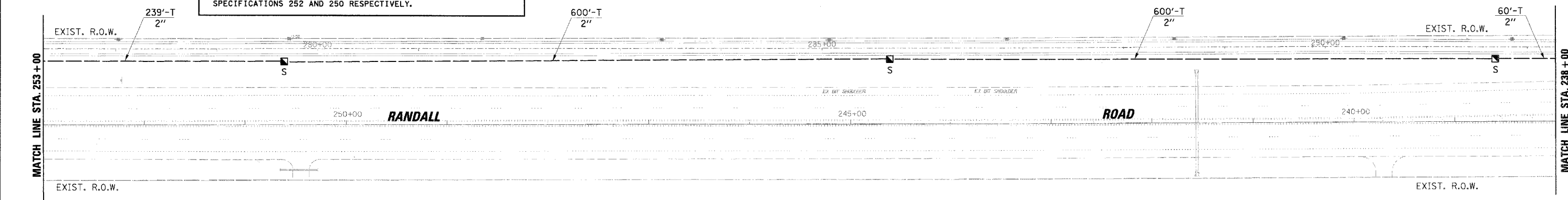
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 DATE: []



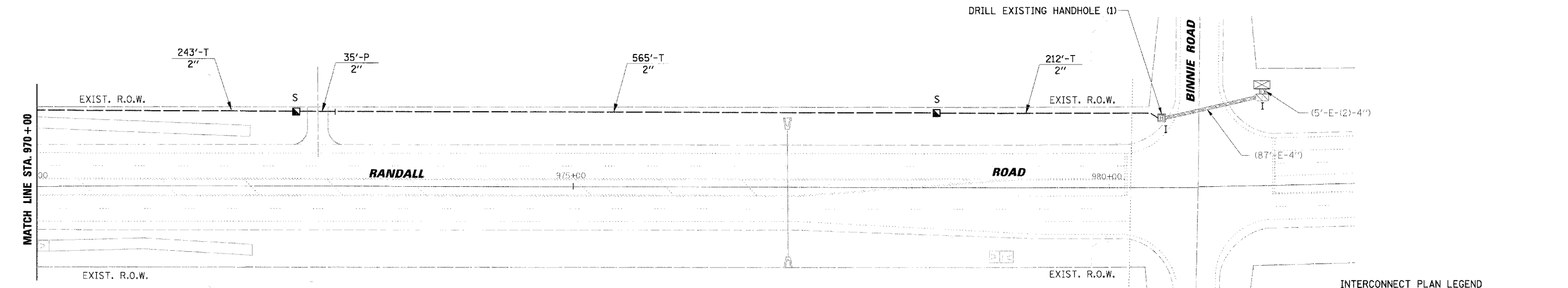
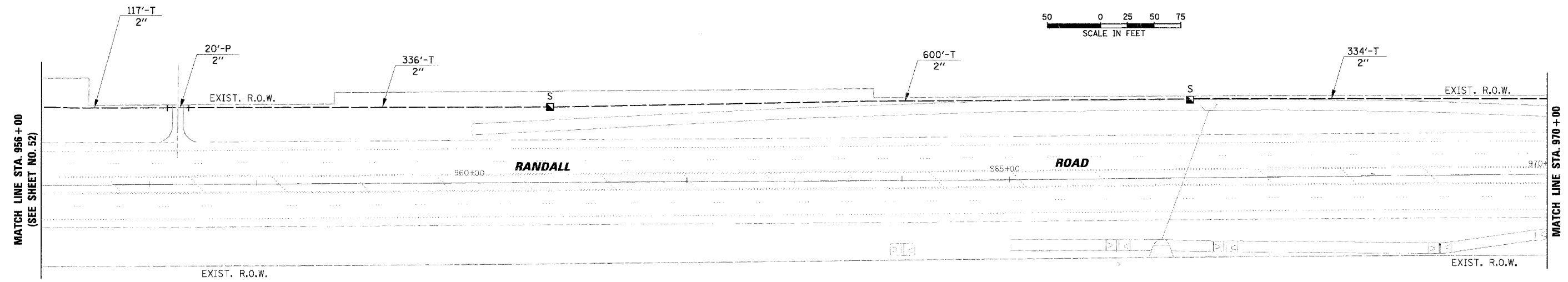
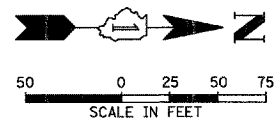
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



INTERCONNECT PLAN LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER | [Symbol] | [Symbol] |
| HANDHOLE | [Symbol] | [Symbol] |
| DOUBLE HANDHOLE | [Symbol] | [Symbol] |
| HEAVY-DUTY HANDHOLE | [Symbol] | [Symbol] |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | [Symbol] | [Symbol] |
| DETECTOR LOOP | [Symbol] | [Symbol] |
| SYSTEM | S | |
| INTERSECTION | IP | I |
| UNIT DUCT | UD | |
| COMMON TRENCH | CT | |
| JUNCTION BOX | [Symbol] | [Symbol] |

SURVEYED BY: DATE: _____
 PLOTTED BY: DATE: _____
 CHECKED BY: DATE: _____
 ART. OF WAY CHECKED BY: DATE: _____
 CADD FILE NAME: _____
 PLAN NO. _____
 SURVEYED BY: DATE: _____
 PLOTTED BY: DATE: _____
 CHECKED BY: DATE: _____
 STRUCTURE NOTATIONS CHKD BY: DATE: _____
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 Rosemont, Illinois 60018
 (847) 823-0500
CB
 ENGINEERING



INTERCONNECT PLAN LEGEND

| | PROPOSED | EXISTING |
|--|----------|----------|
| CONTROLLER | | |
| HANDHOLE | | |
| DOUBLE HANDHOLE | | |
| HEAVY-DUTY HANDHOLE | | |
| G.S. CONDUIT IN TRENCH (T) OR PUSHED (P) | | |
| DETECTOR LOOP | | |
| SYSTEM | S | |
| INTERSECTION | IP | I |
| UNIT DUCT | UD | |
| COMMON TRENCH | CT | |
| JUNCTION BOX | | |

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, 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 SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

| | | | | | | | | | | |
|---|-----------------------|------------|-----------|---|--|---|--------------------------|---------------|-------------------|----------------|
| FILE NAME = N:\kane\county\870616\Traffic\INT6_070616.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INTERCONNECT PLAN RANDALL ROAD IL RTE 72 TO BINNIE ROAD | F.A.P. RTE. = 336 | SECTION = 06-00346-00-TL | COUNTY = KANE | TOTAL SHEETS = 69 | SHEET NO. = 53 |
| | PLOT SCALE = 5/8" | DRAWN - | REVISED - | | | CONTRACT NO. 63011 | | | | |
| | PLOT DATE = 1/28/2008 | CHECKED - | REVISED - | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |
| | | DATE - | REVISED - | | | SCALE: | | | | |

PROFILE SURVEYED BY DATE
 CHECKED BY DATE
 STRUCTURE NOTATION CHRD
 NO. _____
 PLAN SURVEYED BY DATE
 CHECKED BY DATE
 NOTE BOOK NO. _____
 RT. OF WAY CHECKED BY DATE
 CADD FILE NAME _____

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MATCHLINE A-A
(SEE SHEET NO. 56)

MATCHLINE B-B

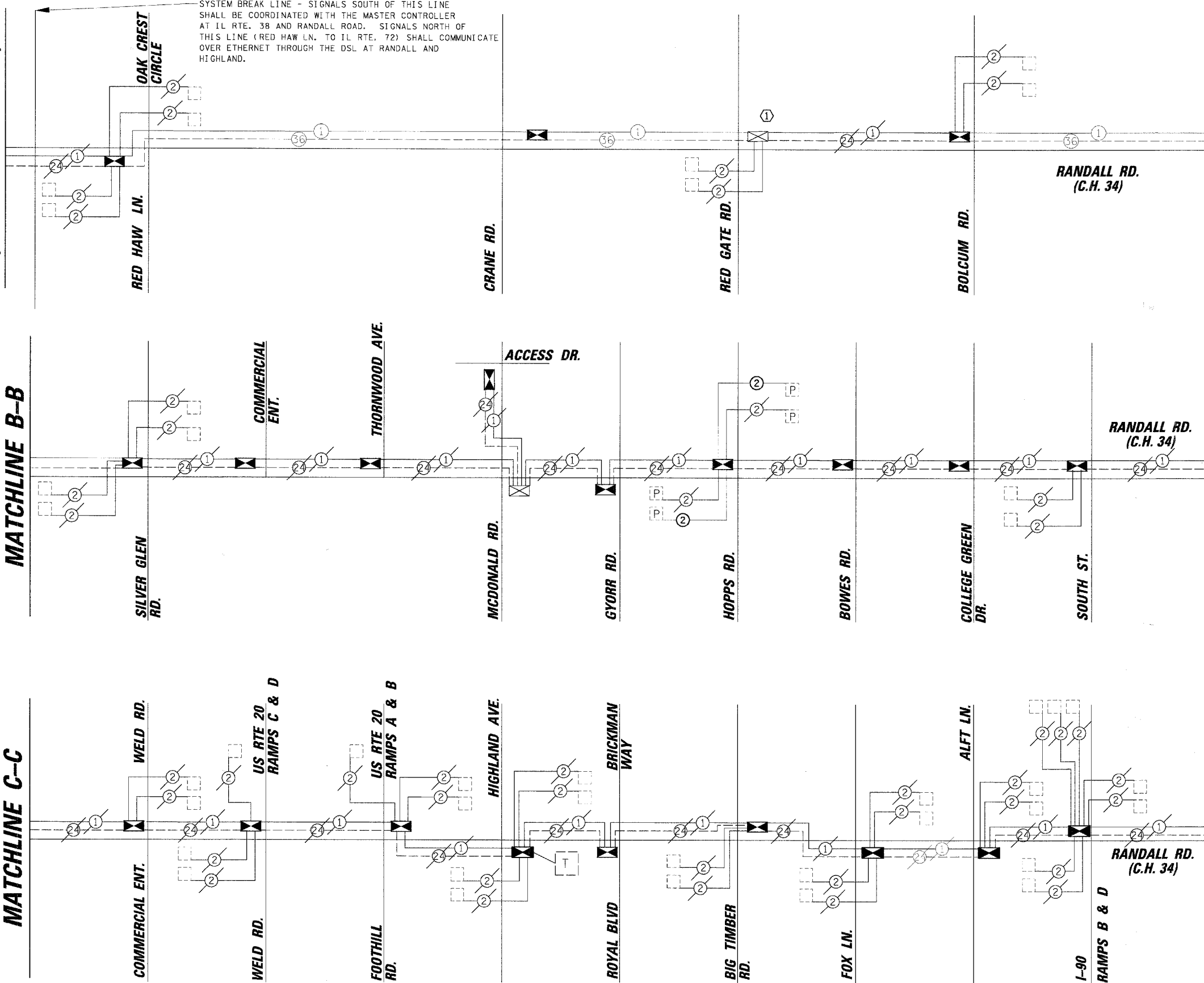
MATCHLINE C-C

MATCHLINE B-B

MATCHLINE C-C

MATCHLINE D-D
(SEE SHEET NO. 55)

SYSTEM BREAK LINE - SIGNALS SOUTH OF THIS LINE
 SHALL BE COORDINATED WITH THE MASTER CONTROLLER
 AT IL RTE. 38 AND RANDALL ROAD. SIGNALS NORTH OF
 THIS LINE (RED HAW LN. TO IL RTE. 72) SHALL COMMUNICATE
 OVER ETHERNET THROUGH THE DSL AT RANDALL AND
 HIGHLAND.



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EXISTING MASTER CONTROLLER
- PROPOSED MASTER CONTROLLER
- MASTER MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION LOOP DETECTORS
- PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS
- PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.
- EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS
- PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED
- PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED
- EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)
- PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- EXISTING TELEPHONE CONNECTION
- PROPOSED TELEPHONE CONNECTION



CONSTRUCTION NOTES:

- INTERCONNECTION AND INSTALLATION OF FIBER OPTIC CABLE TO RED GATE CABINET BY OTHERS.

FILE NAME = M:\anecounty\870616\Traffic\SCH1.dgn

USER NAME = MWILLIAM
 PLOT SCALE = 20'
 PLOT DATE = 1/30/2008

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INTERCONNECT SCHEMATIC
RANDALL ROAD FROM RED HAW LN. TO IL ROUTE 72

SCALE:

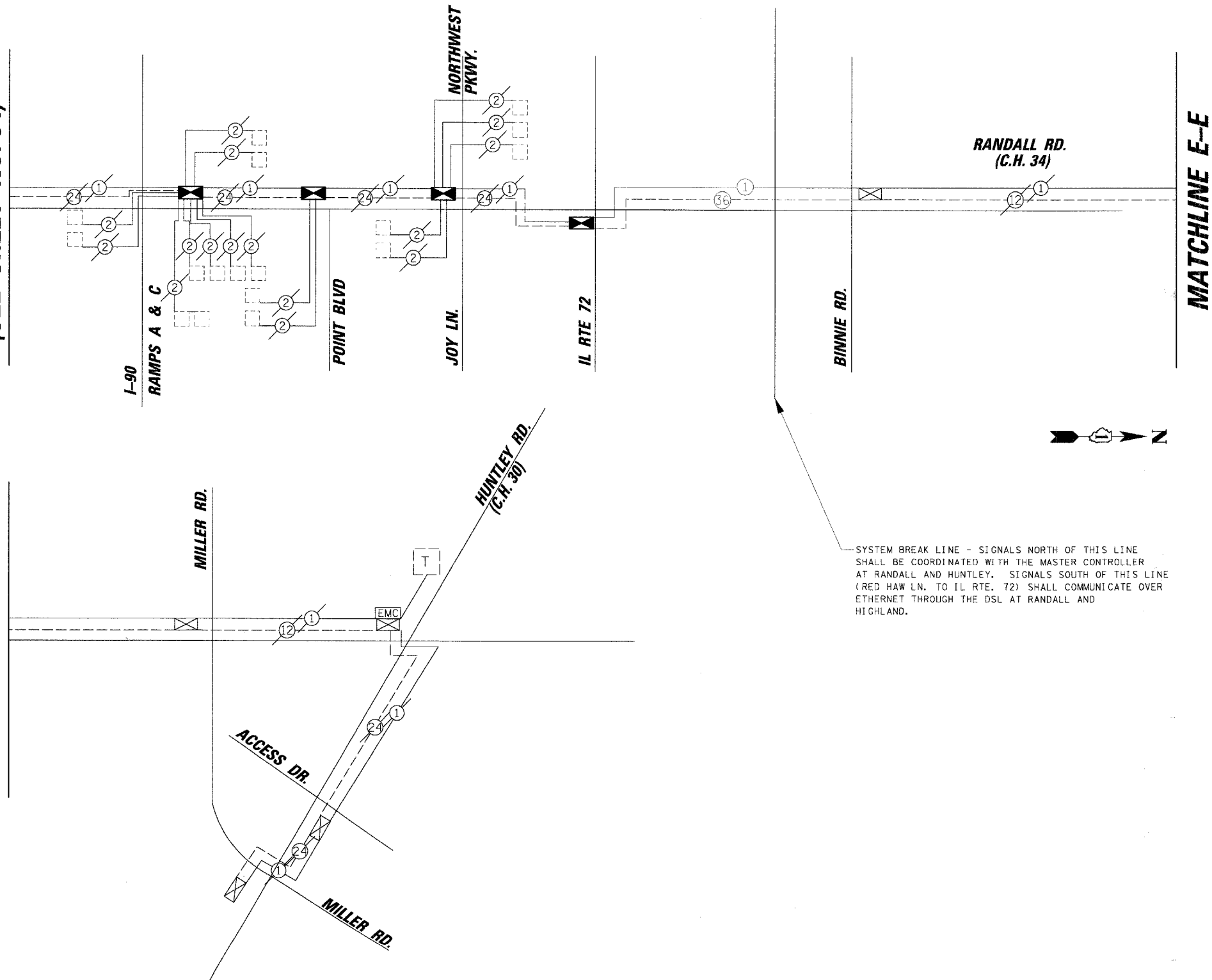
| | | | | |
|---|------------------------|-------------|--------------------|--------------|
| F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 54 |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 63011 | |

PROFILE SURVEYED BY DATE
 CHECKED BY DATE
 B.M. NOTED STRUCTURE NOTATIONS CHK'D
 NOTE BOOK NO.
 PLAN SURVEYED BY DATE
 CHECKED BY DATE
 NOTE BOOK NO.
 CAD FILE NAME

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**MATCHLINE D-D
(SEE SHEET NO. 54)**

MATCHLINE E-E



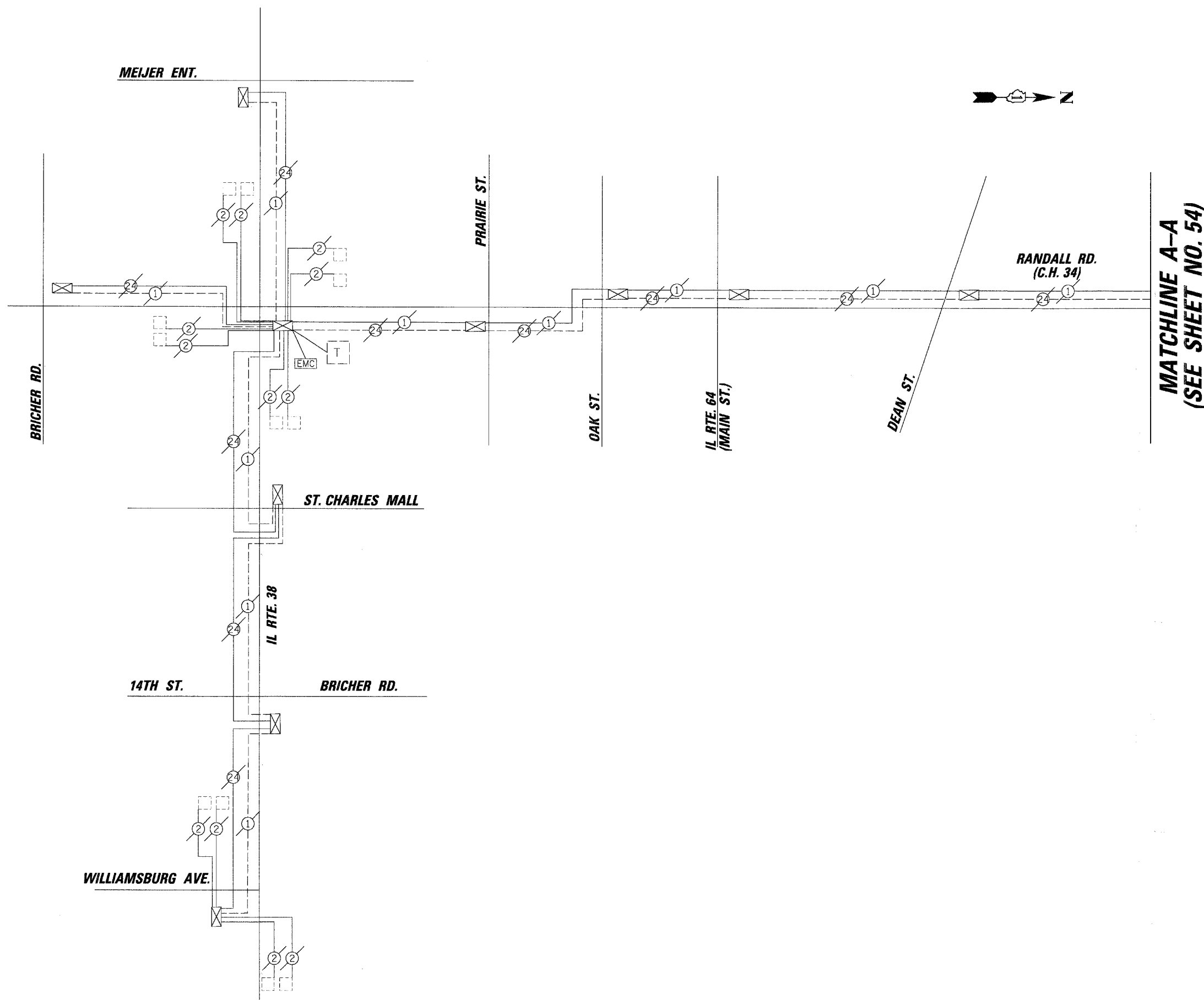
SYSTEM BREAK LINE - SIGNALS NORTH OF THIS LINE SHALL BE COORDINATED WITH THE MASTER CONTROLLER AT RANDALL AND HUNTLEY. SIGNALS SOUTH OF THIS LINE (RED HAW LN. TO IL RTE. 72) SHALL COMMUNICATE OVER ETHERNET THROUGH THE DSL AT RANDALL AND HIGHLAND.



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER [Symbol]
- PROPOSED INTERSECTION CONTROLLER [Symbol]
- EXISTING MASTER CONTROLLER [Symbol]
- PROPOSED MASTER CONTROLLER [Symbol]
- MASTER MASTER CONTROLLER [Symbol]
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS [Symbol]
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS [Symbol]
- EXISTING INTERSECTION LOOP DETECTORS [Symbol]
- PROPOSED SAMPLING (SYSTEM) DETECTORS [Symbol]
- EXISTING SAMPLING (SYSTEM) DETECTORS [Symbol]
- PROPOSED SAMPLING (SYSTEM) DETECTORS [Symbol]
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS. [Symbol]
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS. [Symbol]
- EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS [Symbol]
- PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS [Symbol]
- EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS [Symbol]
- PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS [Symbol]
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F [Symbol]
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F [Symbol]
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F [Symbol]
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F [Symbol]
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE [Symbol]
- PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE [Symbol]
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED [Symbol]
- PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED [Symbol]
- EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED [Symbol]
- PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED [Symbol]
- EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED) [Symbol]
- PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED) [Symbol]
- EXISTING TELEPHONE CONNECTION [Symbol]
- PROPOSED TELEPHONE CONNECTION [Symbol]

PROFILE SURVEYED BY DATE
 NOTE BOOK NO. STRUCTURE NOTATION CP/RD
 PLAN SURVEYED BY DATE
 NOTIFY BOOK NO.
 CHRISTOPHER B. BURKE ENGINEERING LTD.
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 Rosemont, Illinois 60018
 (847) 823-0500



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER ☒
- PROPOSED INTERSECTION CONTROLLER ☒
- EXISTING MASTER CONTROLLER EMC
- PROPOSED MASTER CONTROLLER EMC
- MASTER MASTER CONTROLLER MMC
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS ☐
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS ☐
- EXISTING INTERSECTION LOOP DETECTORS P
- PROPOSED SAMPLING (SYSTEM) DETECTORS P
- EXISTING SAMPLING (SYSTEM) DETECTORS ES
- PROPOSED SAMPLING (SYSTEM) DETECTORS PS
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS. ESP
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS. ESPS
- EXISTING PERFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS PD
- PROPOSED PERFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS PD
- EXISTING SAMPLING (SYSTEM) PERFORMED DETECTORS ESPD
- PROPOSED SAMPLING (SYSTEM) PERFORMED DETECTORS PSPD
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F 36
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F 36
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F 24
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F 24
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE 12
- PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE 12
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED 6
- PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED 6
- EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED 2
- PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED 2
- EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED) 1
- PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED) 1
- EXISTING TELEPHONE CONNECTION T
- PROPOSED TELEPHONE CONNECTION T

MATCHLINE A-A
 (SEE SHEET NO. 54)

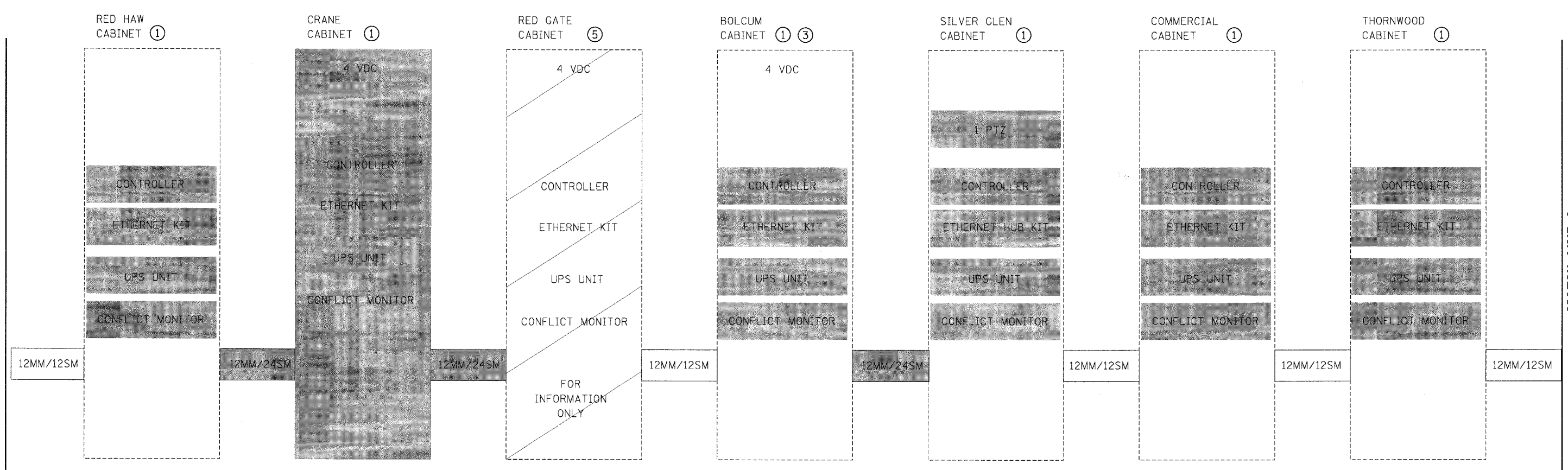
FOR INFORMATION ONLY

| | | | | | | | | | | | |
|-------------|-----------------------|------------|-----------|---|--|---|------------------------|-------------|-----------------|--------------|--|
| FILE NAME = | LSFR NAME = MWTL174W | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INTERCONNECT SCHEMATIC IL RTE. 38 AT RANDALL ROAD SYSTEM | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 56 | |
| | PLOT SCALE = 20' | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| | PLOT DATE = 1/29/2008 | DATE - | REVISED - | | | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | | | | | |
| SCALE: | | | | | | | | | | | |

PROFILE STRIPPED PLOTTED GRADES CHECKED STRUCTURE NOTATION CHK'D
 NOTE BOOK NO. _____
 DATE _____
 BY _____
 CHECKED _____
 DATE _____
 BY _____
 PLAN NO. _____
 DATE _____
 BY _____
 CHECKED _____
 DATE _____
 BY _____
 SERVICED PLOTTED ALIGNMENT CHECKED CADD FILE NAME
 NOTE BOOK NO. _____
 DATE _____
 BY _____

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SYSTEM BREAK LINE



MATCH LINE A (SEE SHEET NO. 58)

NOTES:

- ① INSTALL ITEMS SHOWN TO CREATE ETHERNET SYSTEM FOR TRANSMISSION OF CONTROLLER AND VIDEO DATA.
- ② RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
- ③ RETURN MASTER CONTROLLER, MODEM AND ASSOCIATED HARDWARE TO KANE COUNTY.
- ④ REPLACE VIDEO PROCESSING UNIT TO COMMUNICATE OVER ETHERNET.
- ⑤ ALL ITEMS SHOWN TO BE INSTALLED BY OTHERS.

LEGEND

- VDC VIDEO DETECTION CAMERA
- PTZ PAN/TILT/ZOOM CAMERA
- MM MULTI MODE FIBER
- SM SINGLE MODE FIBER
- SHADED ITEMS ARE PROPOSED

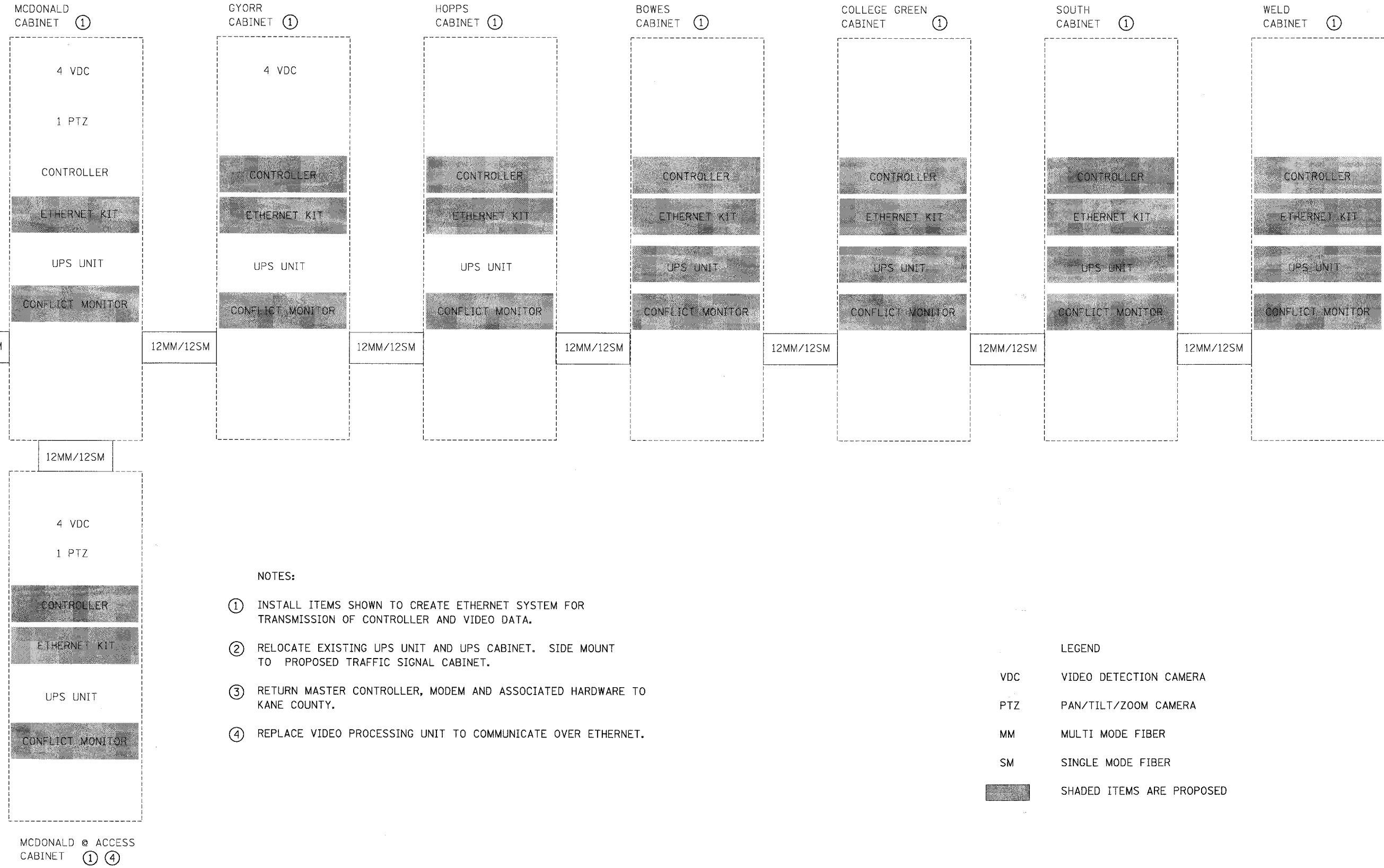
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|--|-----------------------|------------|-----------|---|----------------------------------|---|------------------------|-------------|-----------------|--------------|
| FILE NAME = N:\kanecounty\078516\Tref\to\del1.dgn | USER NAME = MWELLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | ETHERNET SYSTEM SCHEMATIC | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 57 |
| | PLOT SCALE = 20' | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | |
| | PLOT DATE = 1/30/2009 | DATE - | REVISED - | | | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | | | | |
| | | | | | | SCALE: | | | | |

SURVEYED _____ BY _____ DATE _____
 PLOTTED _____ CHECKED _____
 PLAN _____ NO. _____
 NOTE BOOK _____
 STRUCTURE NOTATION: CIRKD

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 ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

MATCH LINE A
 (SEE SHEET NO. 57)

MATCH LINE B
 (SEE SHEET NO. 59)



- NOTES:
- ① INSTALL ITEMS SHOWN TO CREATE ETHERNET SYSTEM FOR TRANSMISSION OF CONTROLLER AND VIDEO DATA.
 - ② RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
 - ③ RETURN MASTER CONTROLLER, MODEM AND ASSOCIATED HARDWARE TO KANE COUNTY.
 - ④ REPLACE VIDEO PROCESSING UNIT TO COMMUNICATE OVER ETHERNET.

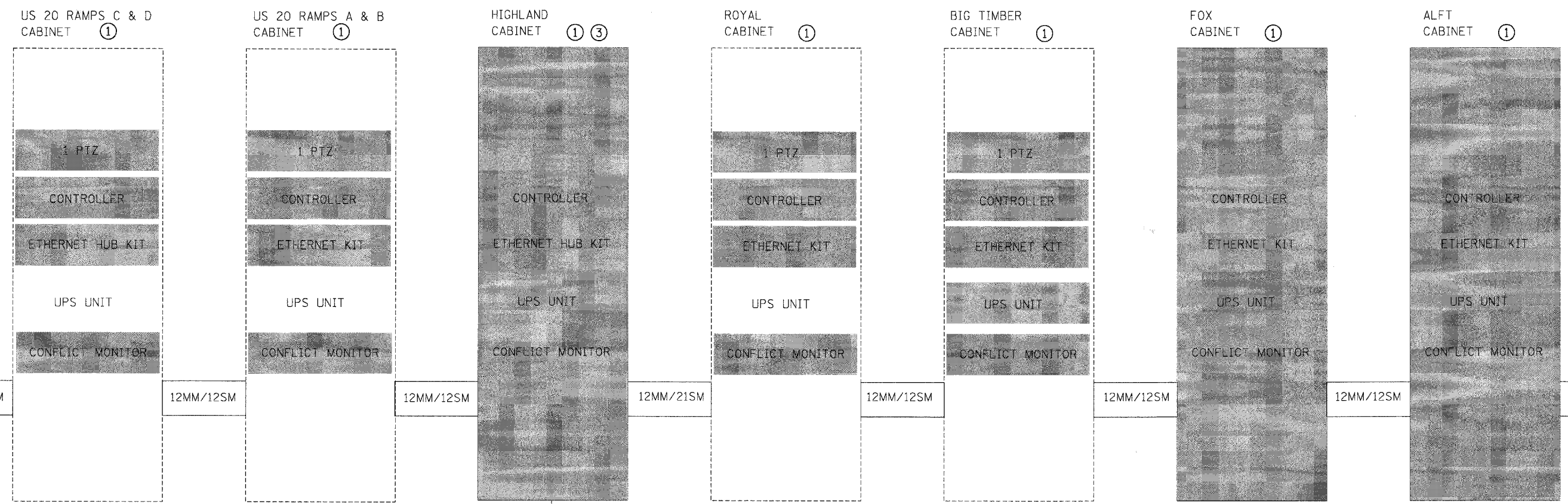
LEGEND

| | |
|-----|---------------------------|
| VDC | VIDEO DETECTION CAMERA |
| PTZ | PAN/TILT/ZOOM CAMERA |
| MM | MULTI MODE FIBER |
| SM | SINGLE MODE FIBER |
| | SHADED ITEMS ARE PROPOSED |

SURVEYED BY DATE
 PLANNED BY DATE
 NOTE BOOK NO. OF MAY CHECKED
 FADD FILE NAME
 SURVEYED BY DATE
 CHECKED BY DATE
 STRUCTURE NOTATIONS CHECKED

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 Rosemont, Illinois 60018
 (847) 823-0500

MATCH LINE B
 (SEE SHEET NO. 58)



MATCH LINE C
 (SEE SHEET NO. 60)

NOTES:

- ① INSTALL ITEMS SHOWN TO CREATE ETHERNET SYSTEM FOR TRANSMISSION OF CONTROLLER AND VIDEO DATA.
- ② RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
- ③ RETURN MASTER CONTROLLER, MODEM AND ASSOCIATED HARDWARE TO KANE COUNTY.
- ④ REPLACE VIDEO PROCESSING UNIT TO COMMUNICATE OVER ETHERNET.

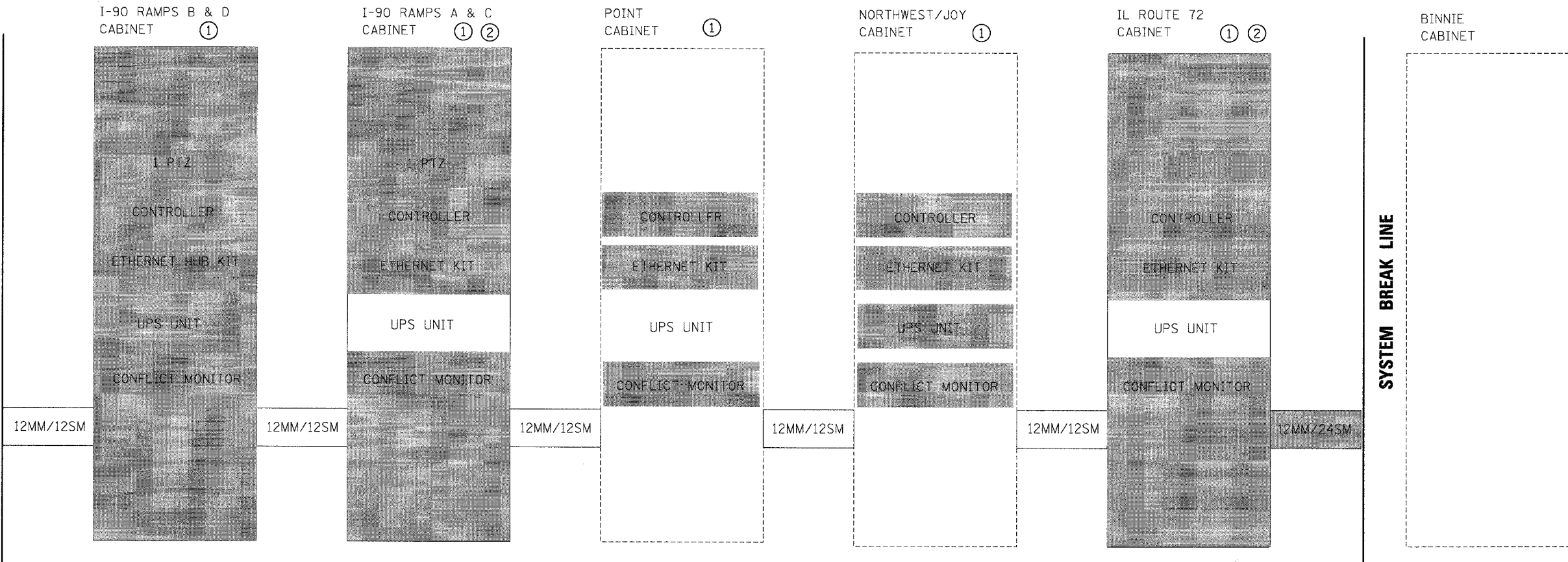
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DSL

LEGEND

- VDC VIDEO DETECTION CAMERA
- PTZ PAN/TILT/ZOOM CAMERA
- MM MULTI MODE FIBER
- SM SINGLE MODE FIBER
- SHADED ITEMS ARE PROPOSED

PROFILE SURVEYED BY DATE
 NO. DATE
 CHECKED BY DATE
 B.M. NOTED
 STRUCTURE NOTATION CHKD
 PLAN SURVEYED BY DATE
 NO. DATE
 CHECKED BY DATE
 CADD FILE NAME
 CHROSTOPHER B. BURKE ENGINEERING LTD.
 9515 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

MATCH LINE C
(SEE SHEET NO. 59)



SYSTEM BREAK LINE

NOTES:

- ① INSTALL ITEMS SHOWN TO CREATE ETHERNET SYSTEM FOR TRANSMISSION OF CONTROLLER AND VIDEO DATA.
- ② RELOCATE EXISTING UPS UNIT AND UPS CABINET. SIDE MOUNT TO PROPOSED TRAFFIC SIGNAL CABINET.
- ③ RETURN MASTER CONTROLLER, MODEM AND ASSOCIATED HARDWARE TO KANE COUNTY.
- ④ REPLACE VIDEO PROCESSING UNIT TO COMMUNICATE OVER ETHERNET.

LEGEND

- VDC VIDEO DETECTION CAMERA
- PTZ PAN/TILT/ZOOM CAMERA
- MM MULTI MODE FIBER
- SM SINGLE MODE FIBER
- SHADED ITEMS ARE PROPOSED

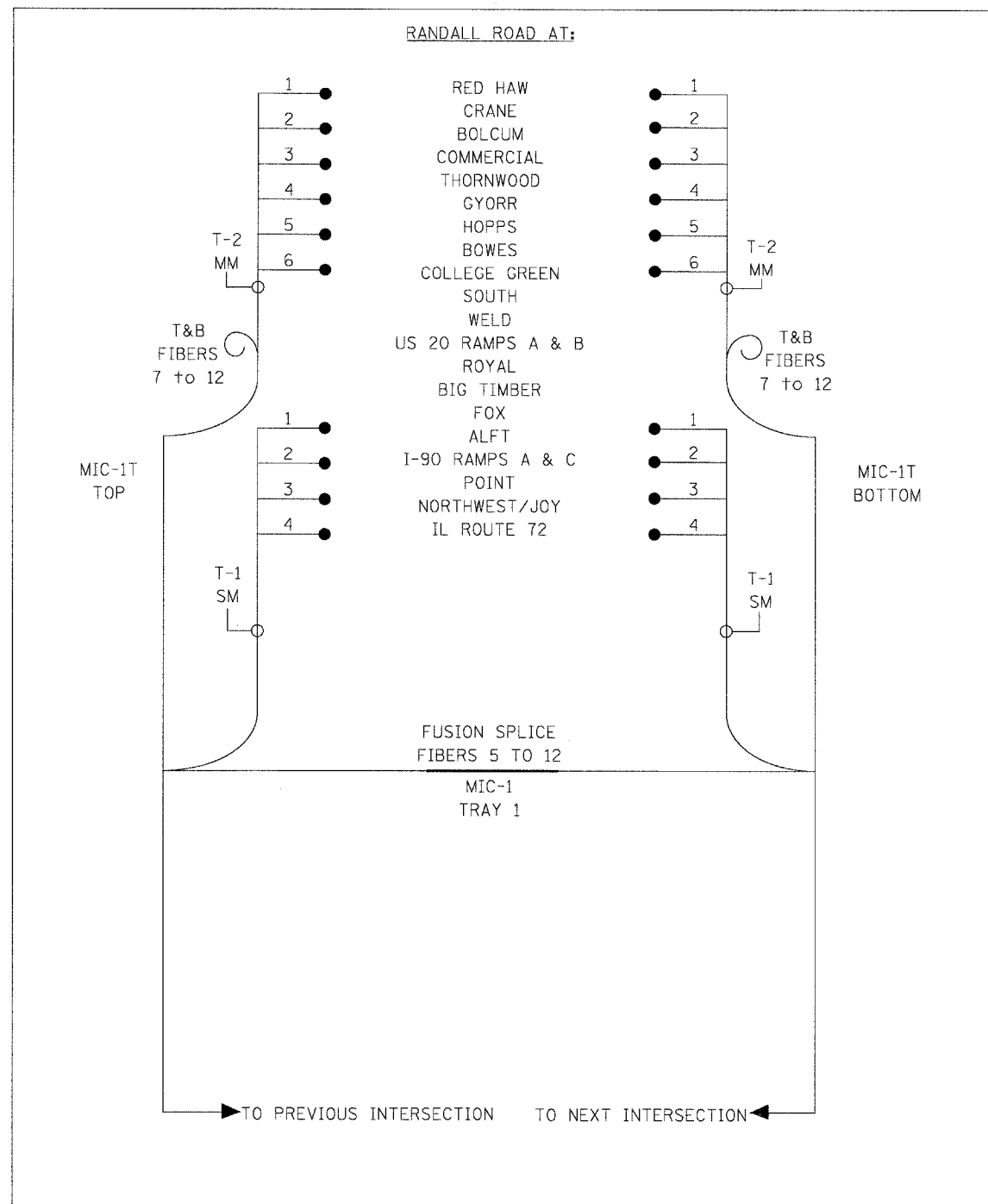
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ETHERNET SYSTEM SCHEMATIC

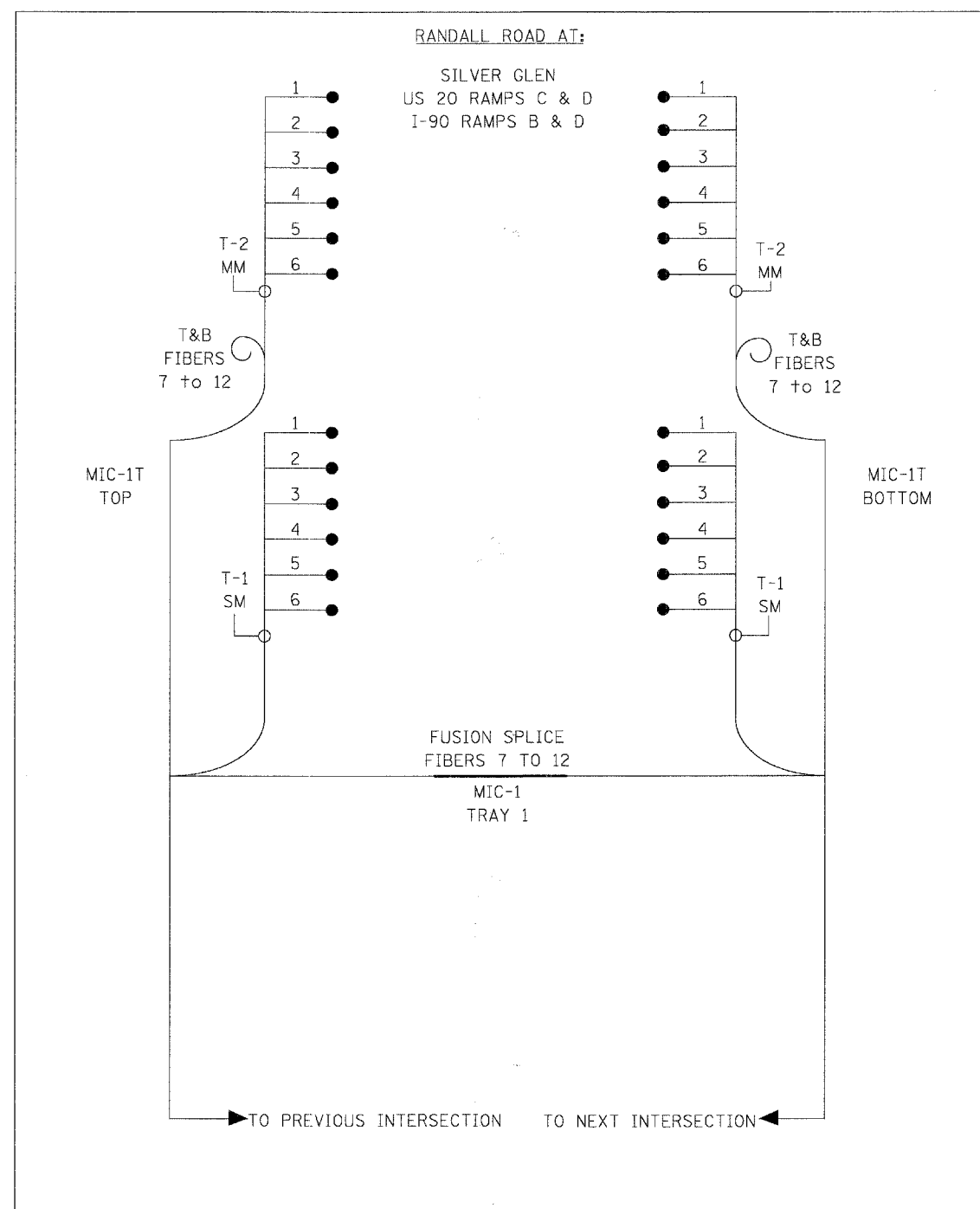
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| FILE NAME = N:\kancounty\070616\T-e\F10\d0t4.dgn | USER NAME = MWILLIAM | DESIGNED - | REVISED - | SCALE: | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 60 |
| PLOT SCALE = 20" | CHECKED - | REVISED - | REVISED - | | CONTRACT NO. 63011 | | | | |
| PLOT DATE = 7/26/2008 | DATE - | REVISED - | REVISED - | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

CONSTRUCTION NOTES:

- ① THE REPLACEMENT OF THE FIBER OPTIC TERMINATION PANEL SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ② EACH FIBER OPTIC TERMINATION PLAN APPLIES TO THE INTERSECTIONS LISTED.



TERMINATION PLAN 1



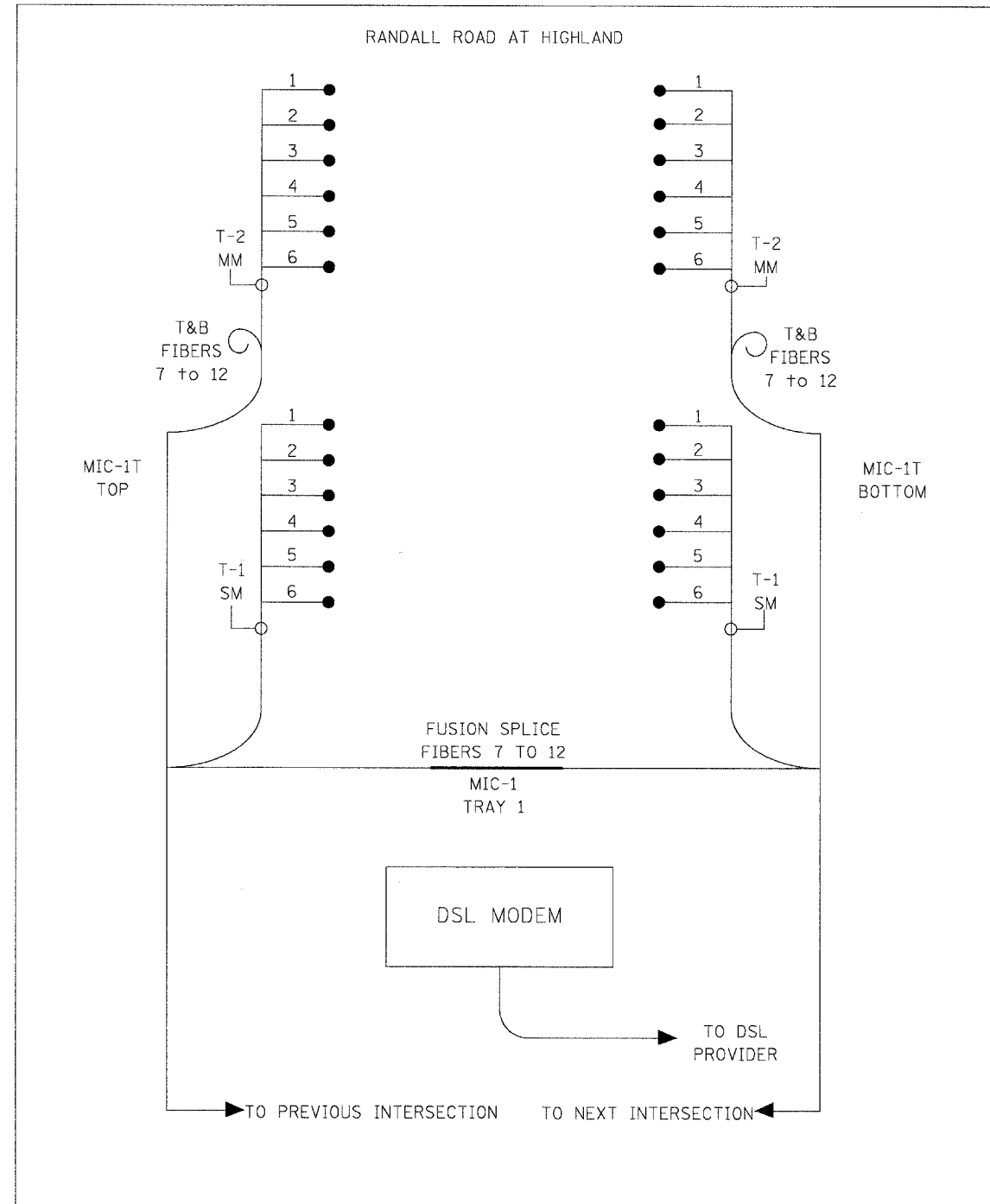
TERMINATION PLAN 2

PROFILE SURVEYED BY DATE
 NOTE BOOK NO.
 FIBER OPTIC CHECKED BY DATE
 STRUCTURE NOTATION: CTRD
 PLAN NOTED BY DATE
 SURVEYED BY DATE
 PLOTTED BY DATE
 RT. OF WAY CHECKED BY DATE
 CADD FILE NAME

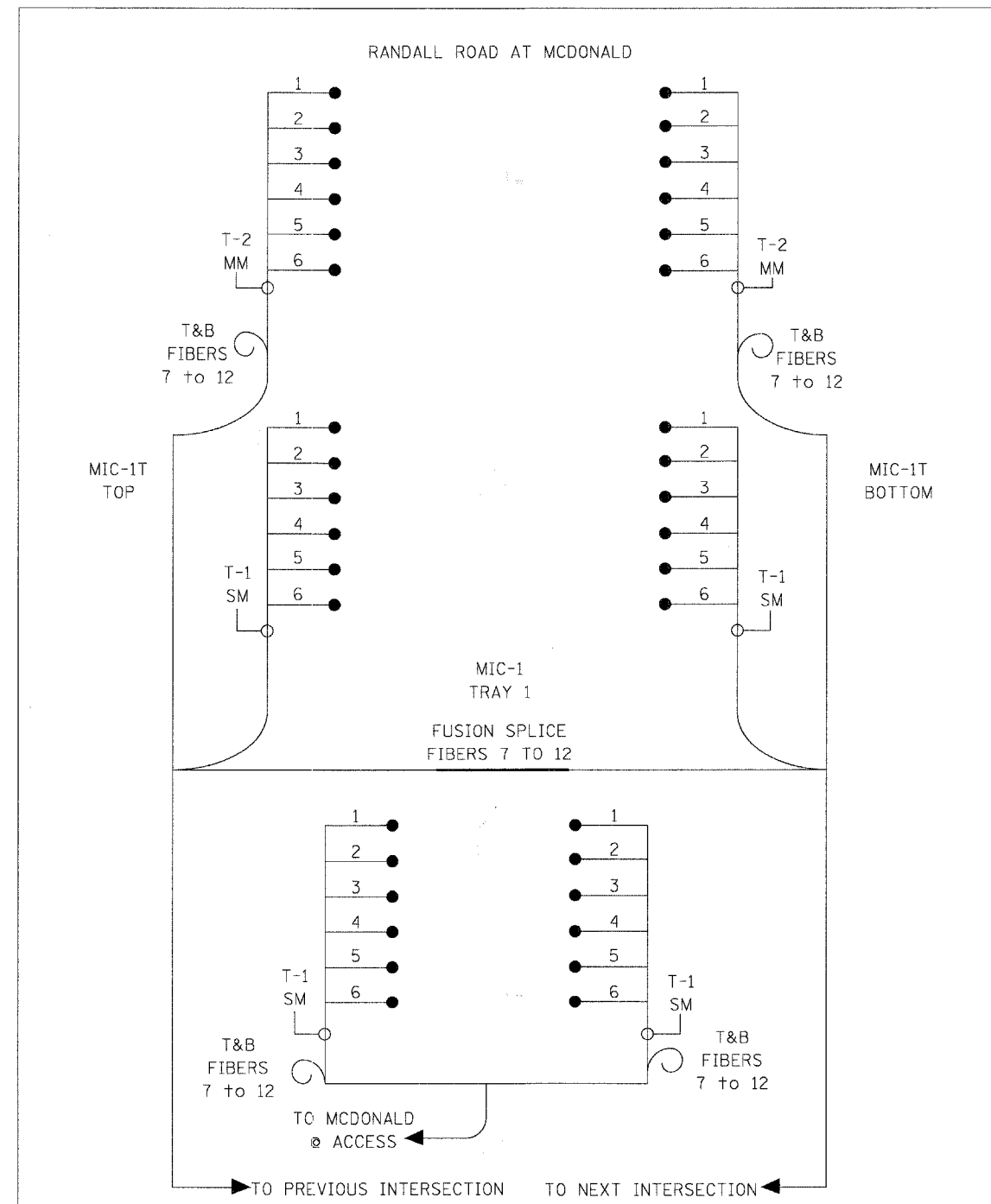
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

CONSTRUCTION NOTES:

- ① THE REPLACEMENT OF THE FIBER OPTIC TERMINATION PANEL SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ② EACH FIBER OPTIC TERMINATION PLAN APPLIES TO THE INTERSECTIONS LISTED.



TERMINATION PLAN 3



TERMINATION PLAN 4

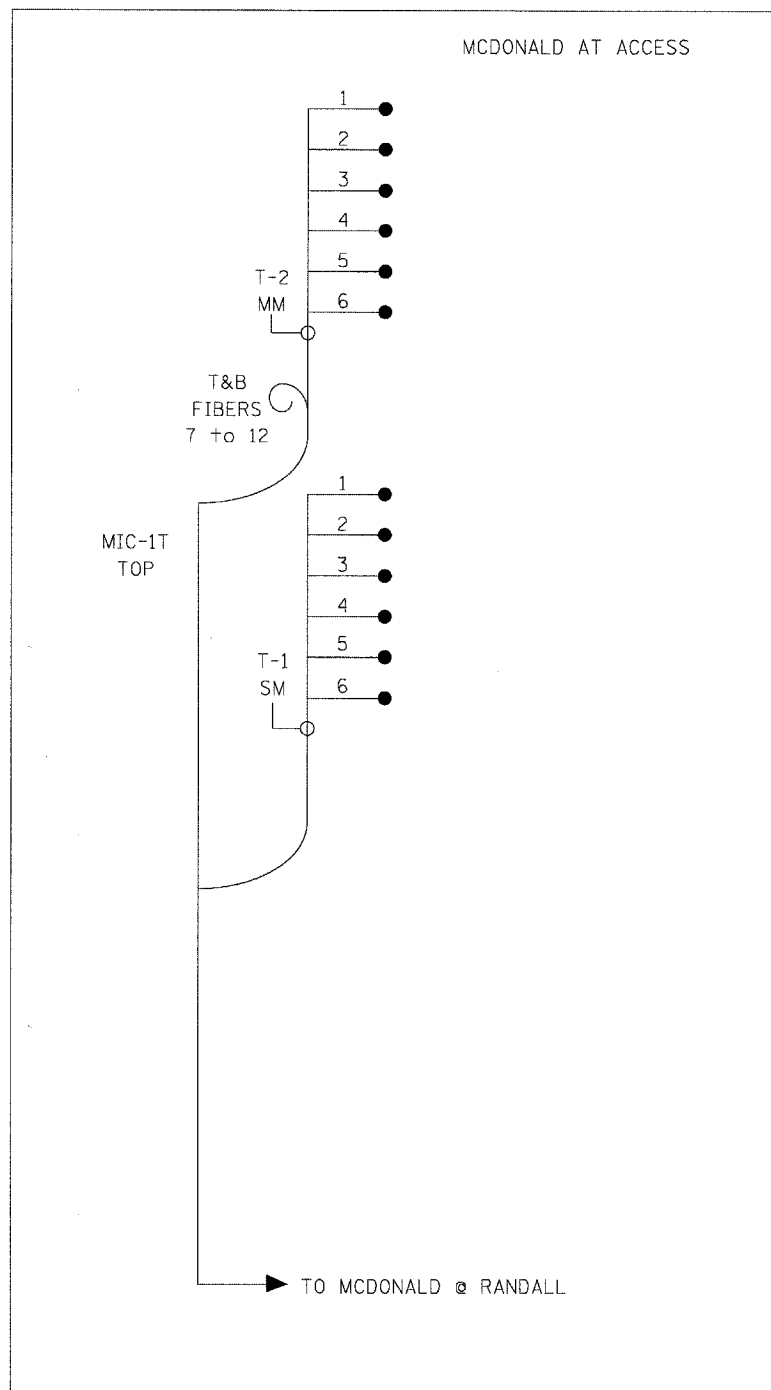
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 PLANNED: _____
 CHECKED: _____
 BY: _____
 DATE: _____
 CADD FILE NAME: _____
 SURVEYED: _____ DATE: _____
 PLANNED: _____
 CHECKED: _____
 BY: _____
 DATE: _____
 CADD FILE NAME: _____
 SURVEYED: _____ DATE: _____
 PLANNED: _____
 CHECKED: _____
 BY: _____
 DATE: _____
 CADD FILE NAME: _____

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 (847) 823-0500

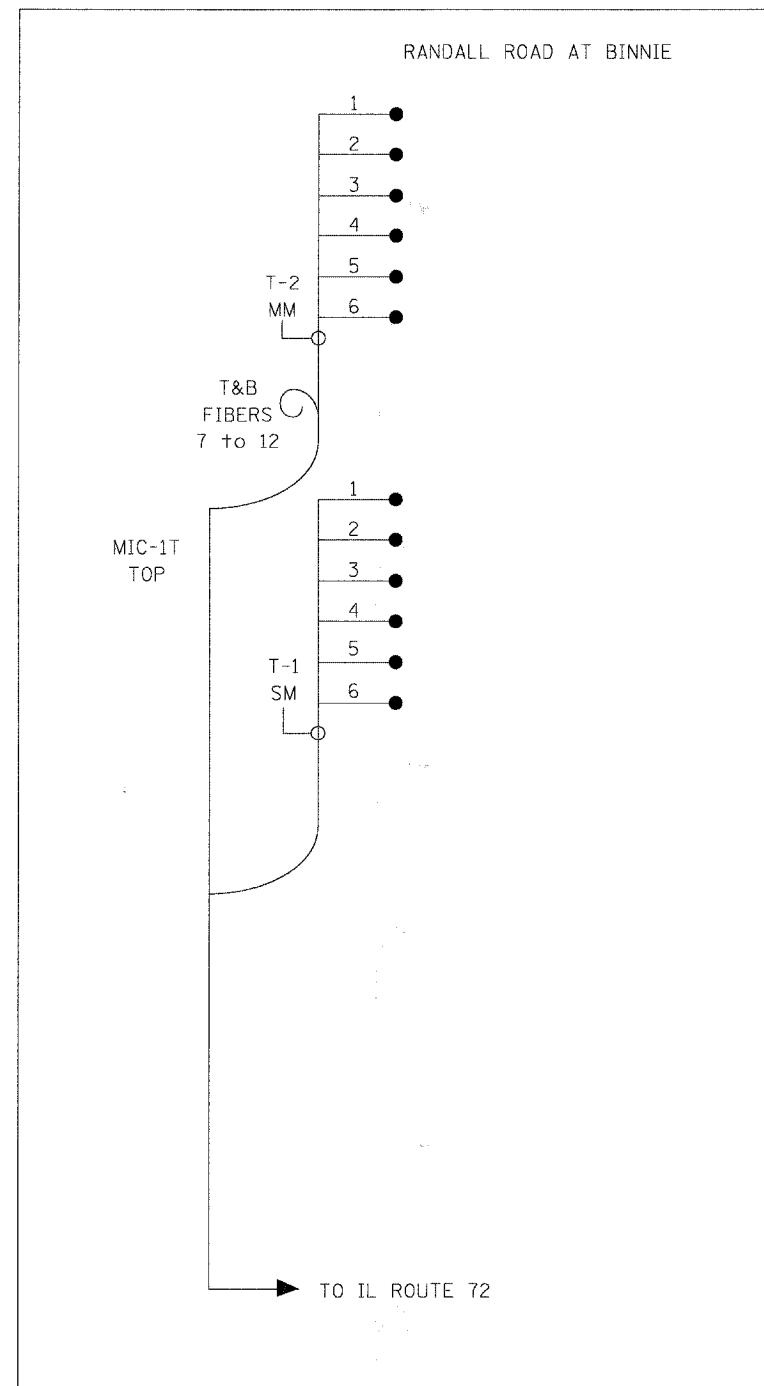
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|---|-----------------------|------------|-----------|---|--|---|----------------|--------|--------------|-----------|--|
| FILE NAME = | USER NAME = MWILL:AM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | FIBER OPTIC TERMINATION SCHEMATIC | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| h:\kansascounty\070616\Tr-af\ad\del2\FibOpt.sgn | PLOT SCALE = 28' | DRAWN - | REVISED - | | | 336 | 06-00346-00-TL | KANE | 69 | 62 | |
| | PLOT DATE = 1/28/2006 | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| | | DATE - | REVISED - | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

CONSTRUCTION NOTES:

- ① THE REPLACEMENT OF THE FIBER OPTIC TERMINATION PANEL SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ② EACH FIBER OPTIC TERMINATION PLAN APPLIES TO THE INTERSECTIONS LISTED.



TERMINATION PLAN 5



TERMINATION PLAN 6

| | | | |
|------|----|------|----|
| DATE | BY | DATE | BY |
| | | | |
| DATE | BY | DATE | BY |
| | | | |
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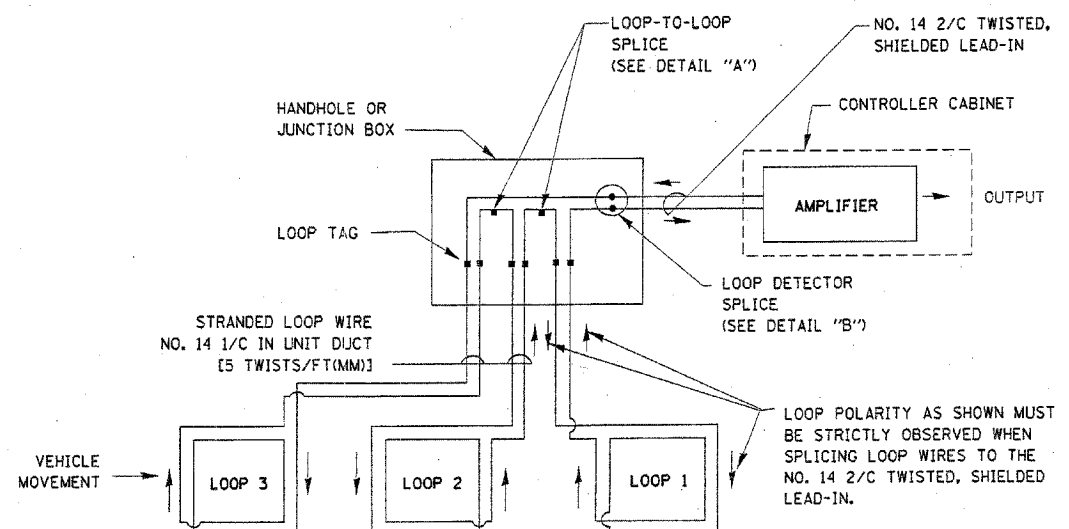
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|---|----------------------|-----------------------|-----------|---|--|---|----------------|--------|--------------|-----------|--|
| FILE NAME = | USER NAME = MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | FIBER OPTIC TERMINATION SCHEMATIC | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| h:\kane\county\W78616\Traffic\det3\FibOpt.dgn | | DRAWN - | REVISED - | | | 336 | 06-00346-00-TL | KANE | 69 | 63 | |
| | | CHECKED - | REVISED - | | | CONTRACT NO. 63011 | | | | | |
| | | DATE - | REVISED - | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |
| | | PLOT SCALE = 20' | | | SCALE: | | | | | | |
| | | PLOT DATE = 1/28/2208 | | | | | | | | | |

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|---|---------|---------|--------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | KANE | 69 | 65 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT | | | | |

LOOP DETECTOR NOTES

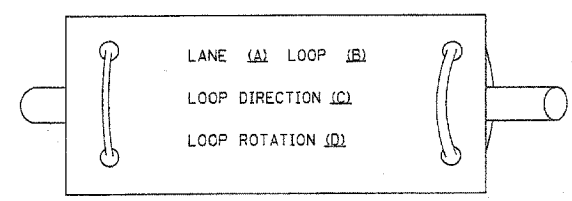
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PERFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PERFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



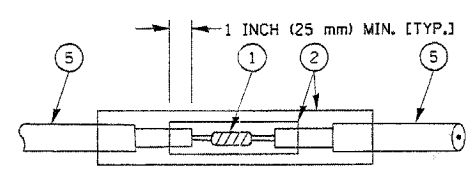
DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

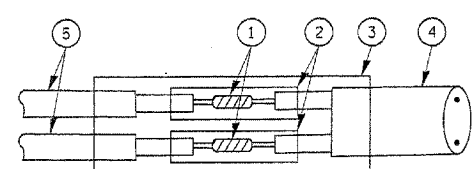
LOOP LEAD-IN CABLE TAG



- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



**DETAIL "A"
LOOP-TO-LOOP SPLICE**



**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

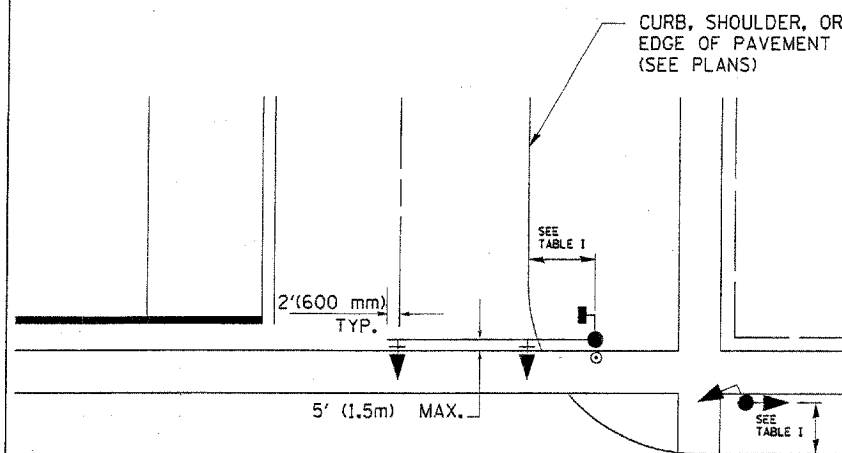
| REVISIONS | |
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| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**

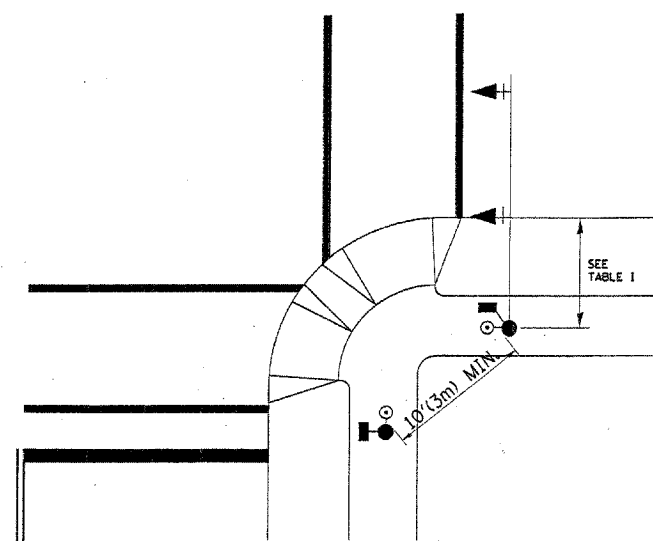
VERT. NONE
SCALE: HORIZ.
DATE 1-01-02
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.
 AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.
 PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK.
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

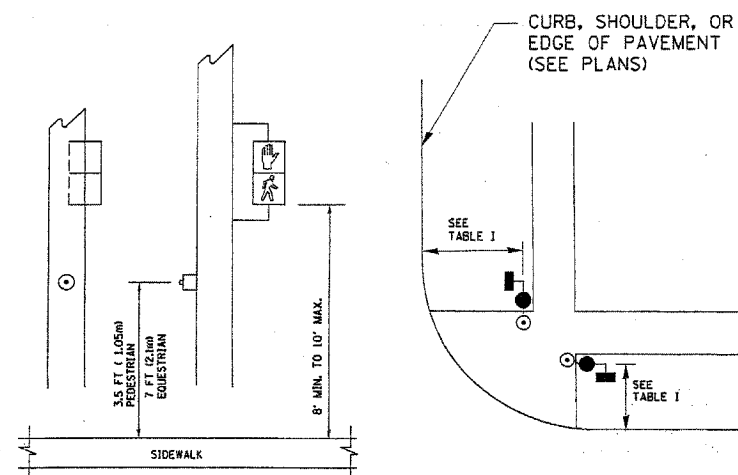


TABLE I

| TRAFFIC SIGNAL EQUIPMENT | COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB) | SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT) |
|------------------------------|---|---|
| TRAFFIC SIGNAL MAST ARM POLE | 6 FT (1.8m) | SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m) |
| TRAFFIC SIGNAL POST | 4 FT (1.2m) | SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m) |
| PEDESTRIAN SIGNAL POST | 4 FT (1.2m) | SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m) |
| PEDESTRIAN PUSHBUTTON | SEE NOTE 1 | SEE NOTE 1 |

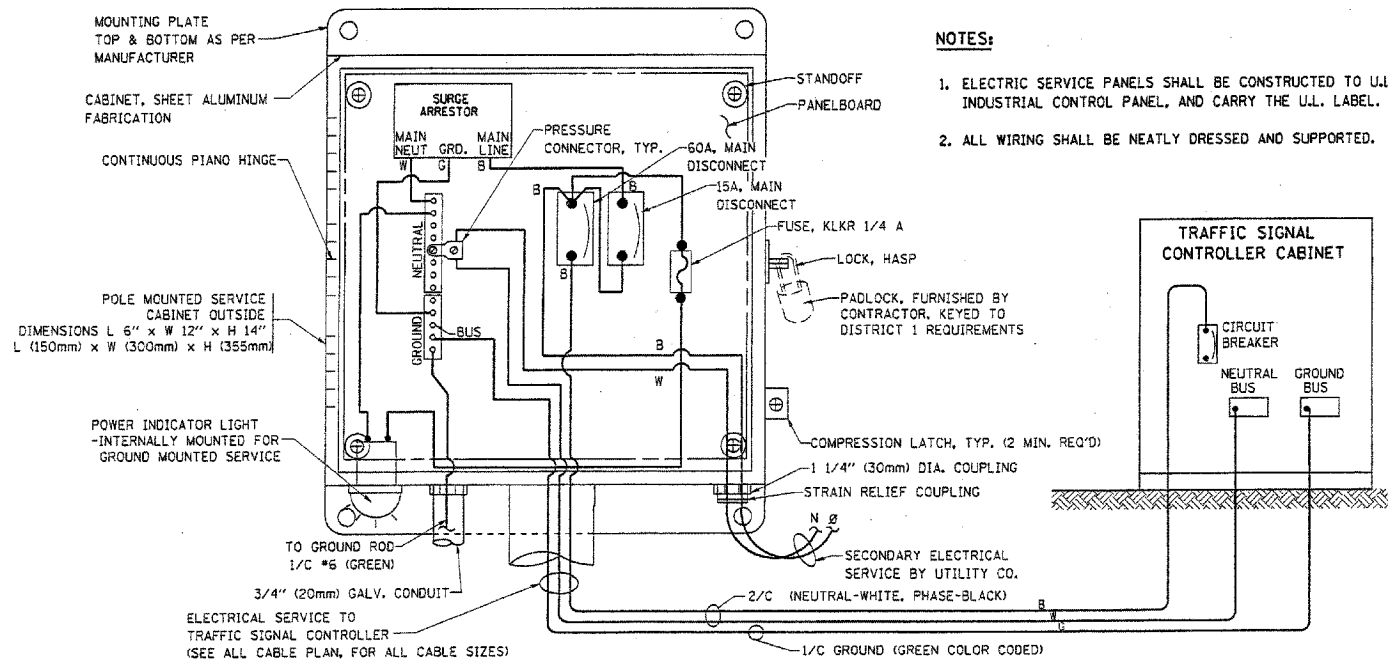
| REVISIONS | |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ. NONE
 DATE 1-01-02

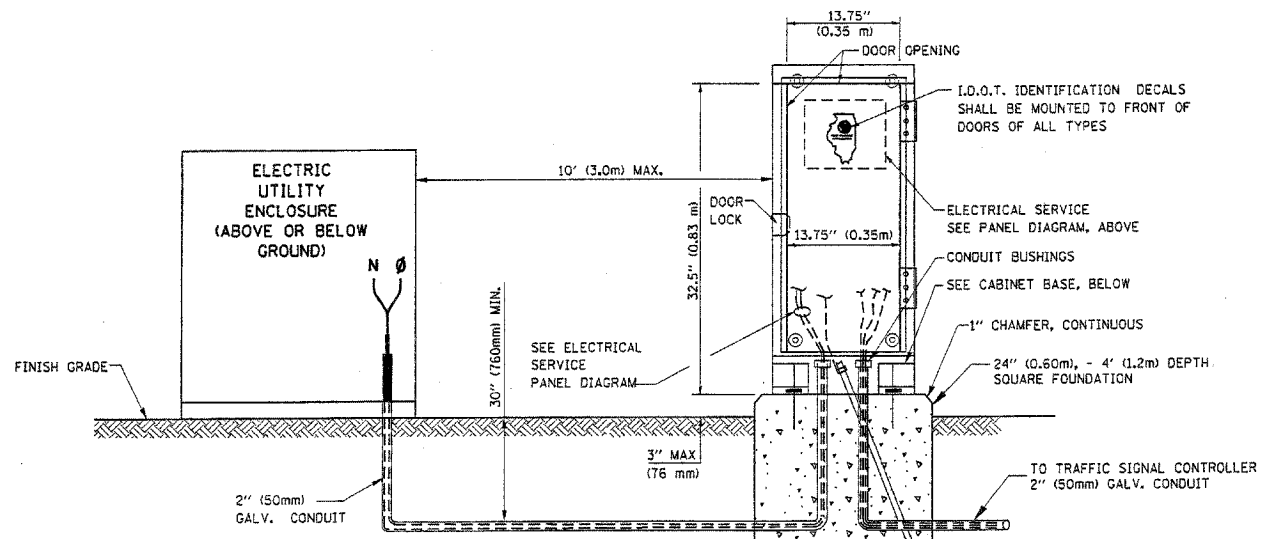
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 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

| | | | | |
|---------------------|---------------------------|--------|--------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | KANE | 69 | 67 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

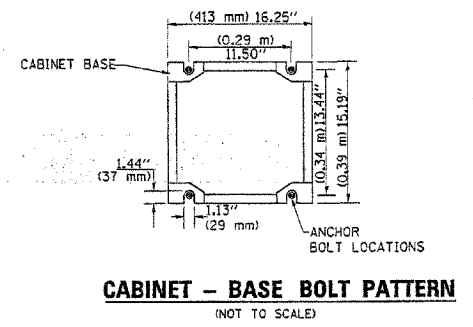


- NOTES:**
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
 2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

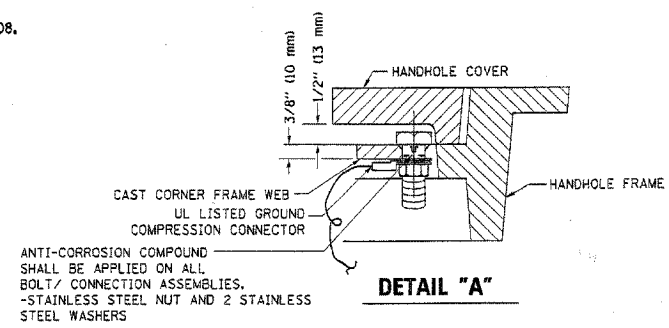
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



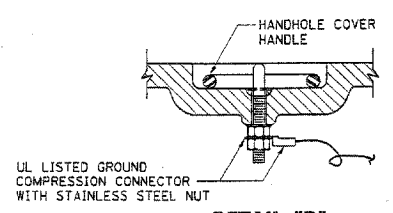
SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)



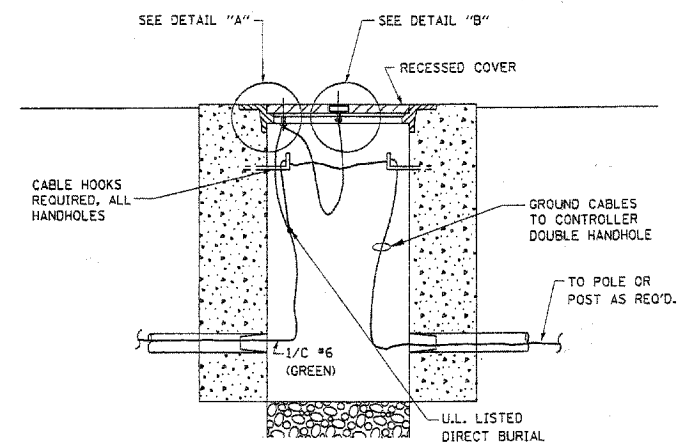
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



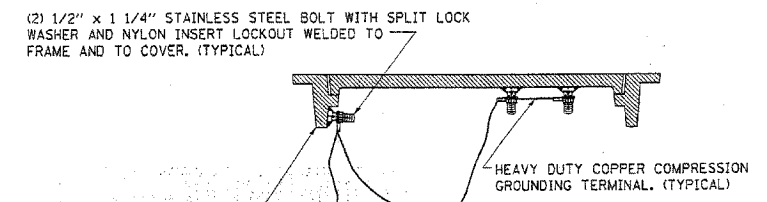
DETAIL "A"



DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

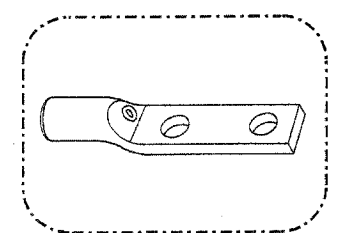


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

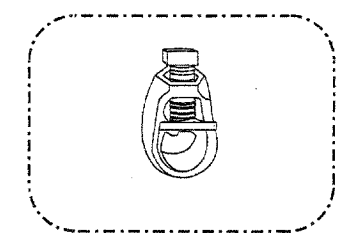
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



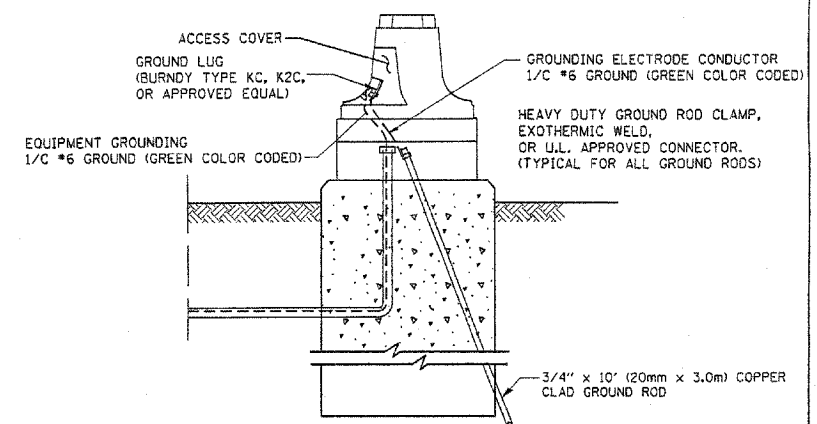
HEAVY-DUTY COMPRESSION TERMINAL
 (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP
 (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

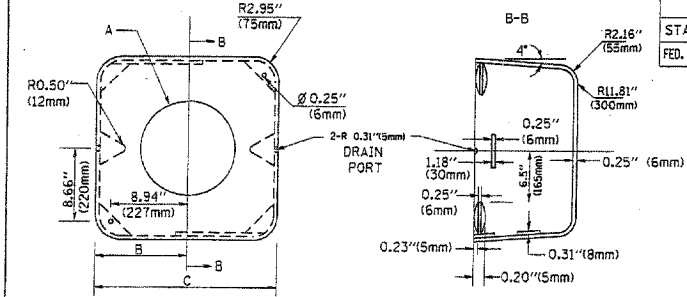
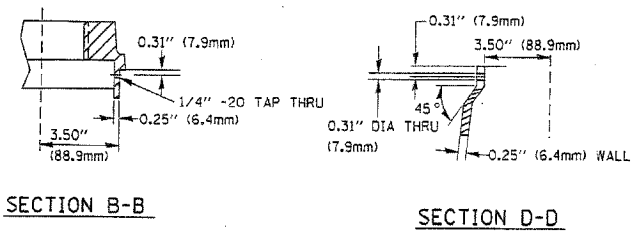
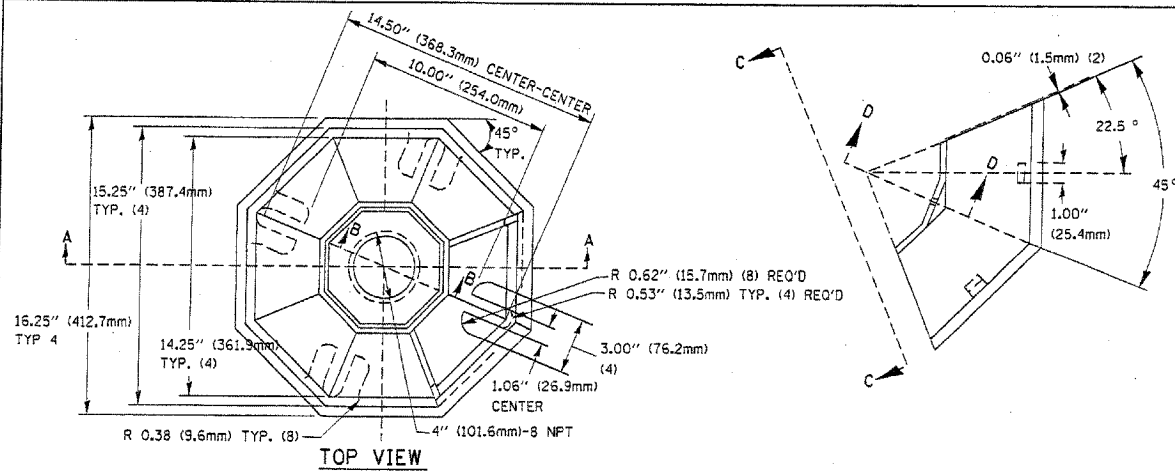
| REVISIONS | NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ.
 DATE: 1-01-92

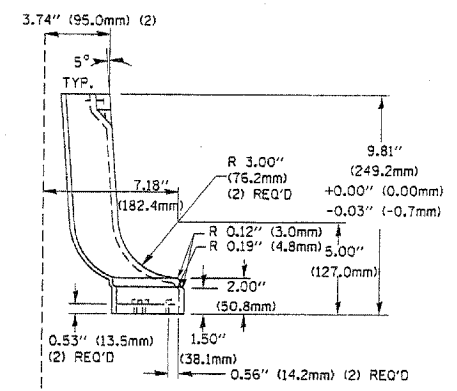
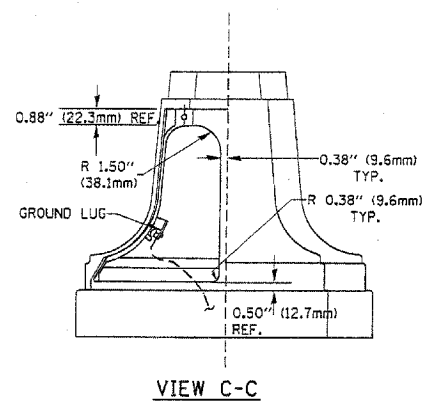
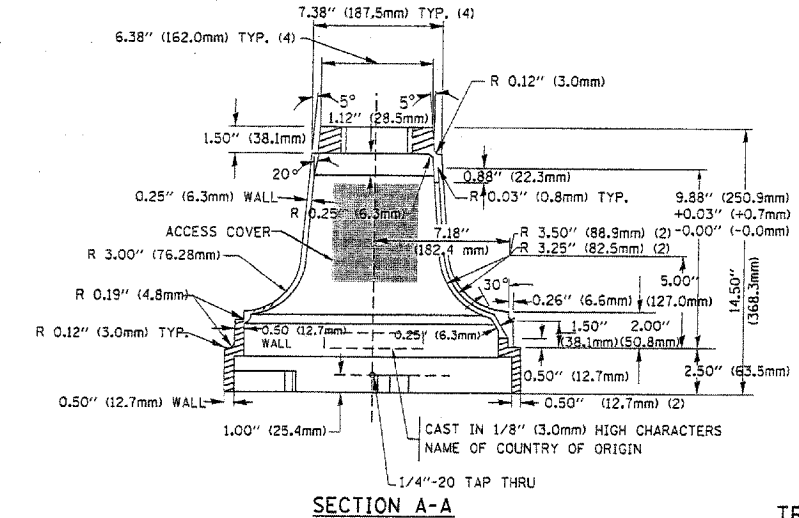
DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 3 OF 4

| | | | | |
|---------------------|---------------------------|--------|--------------|-----------|
| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | KANE | 69 | 68 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

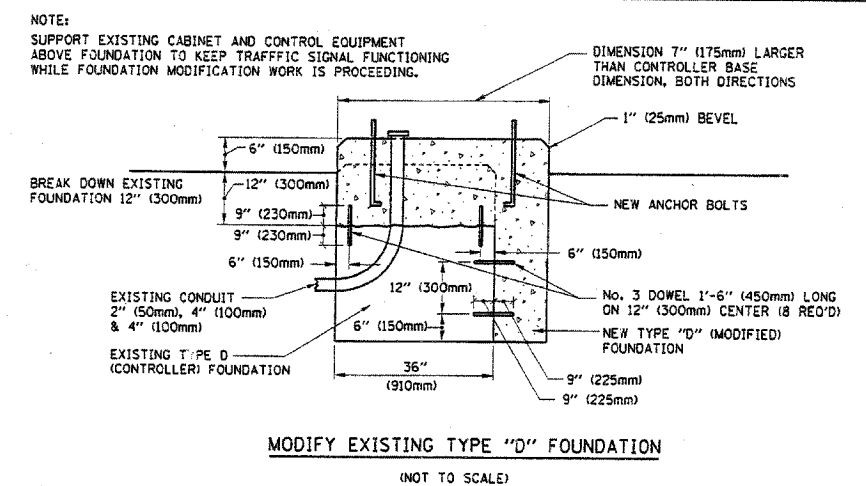


| TYPE | A | B | C | HEIGHT | WEIGHT |
|------|-------------------|----------------|---------------|-------------|--------|
| I | ∅ 10.125" (257mm) | 9.5" (241mm) | 19" (483mm) | 12" (300mm) | 24kg |
| II | ∅ 11.125" (283mm) | 10.75" (273mm) | 21.5" (546mm) | 12" (300mm) | 26kg |

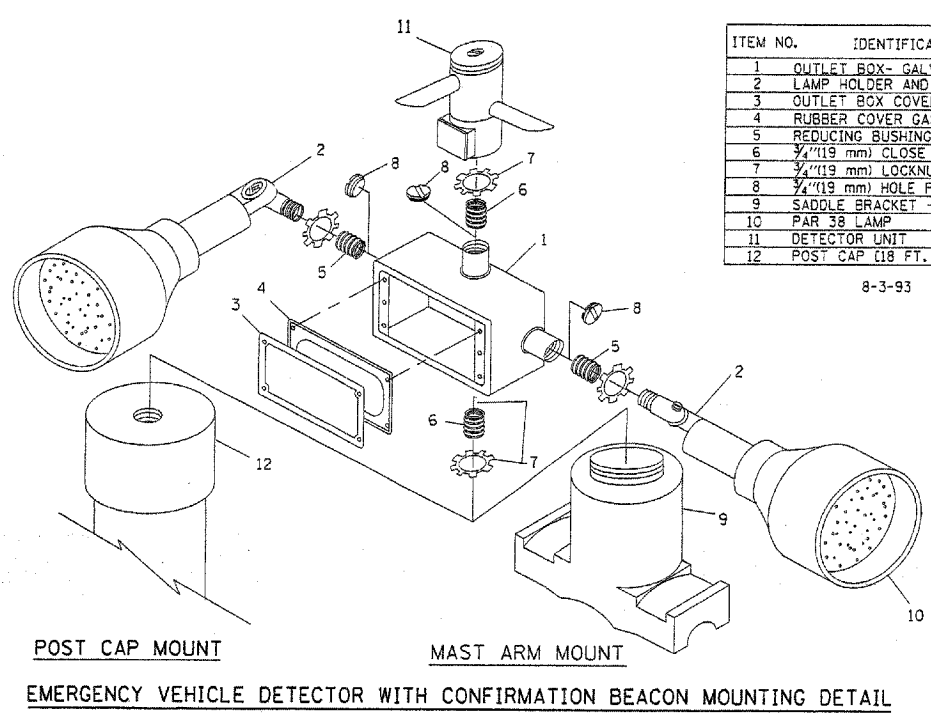
MATERIAL:
 - ASTM A48 CLASS 30 GREY IRON
 - ASTM A123 HOT DIPPED GALVANIZED



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

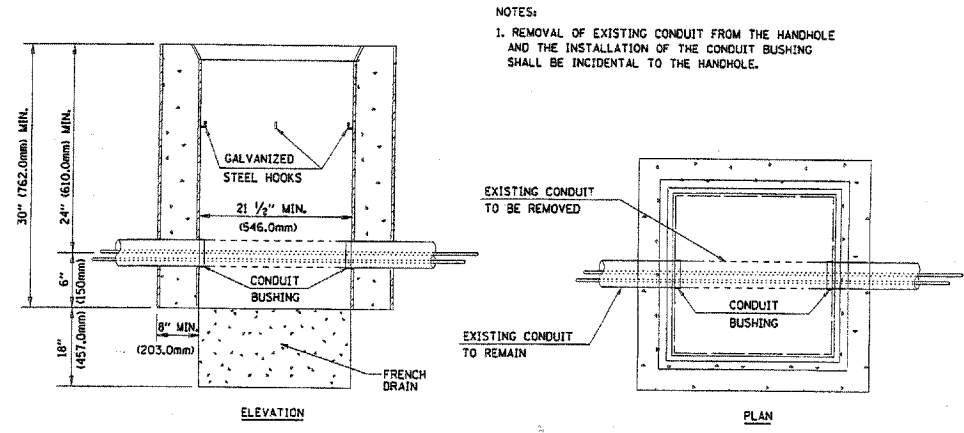
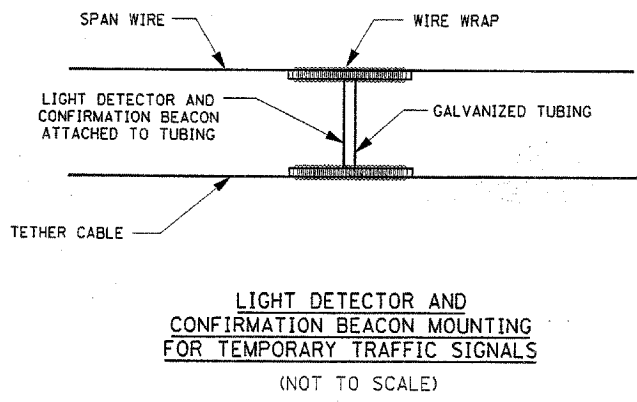


NOTE:
 SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



| ITEM NO. | IDENTIFICATION |
|----------|--|
| 1 | OUTLET BOX - GALV. 21 CU.IN. (0.000344 CU-M) |
| 2 | LAMP HOLDER AND COVER |
| 3 | OUTLET BOX COVER |
| 4 | RUBBER COVER GASKET |
| 5 | REDUCING BUSHING |
| 6 | 3/4" (19 mm) CLOSE NIPPLE |
| 7 | 3/4" (19 mm) LOCKNUT |
| 8 | 3/4" (19 mm) HOLE PLUG |
| 9 | SADDLE BRACKET - GALV. |
| 10 | PAR 38 LAMP |
| 11 | DETECTOR UNIT |
| 12 | POST CAP (18 FT. (5.4 m) POST MIN.) |

- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
 - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

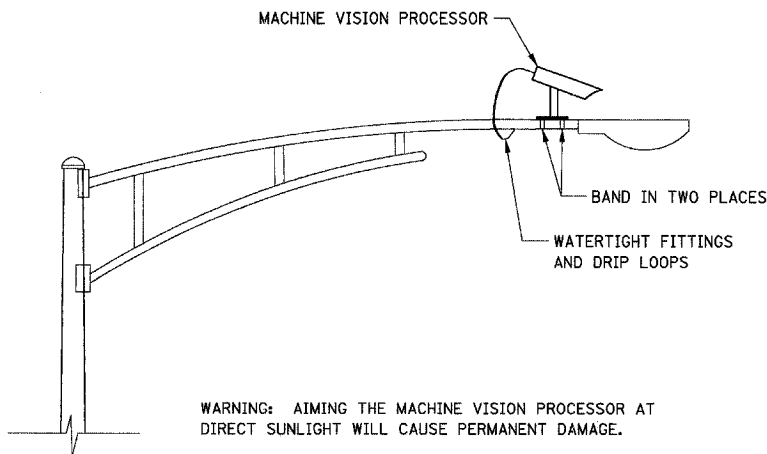


| REVISIONS | |
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| NAME | DATE |
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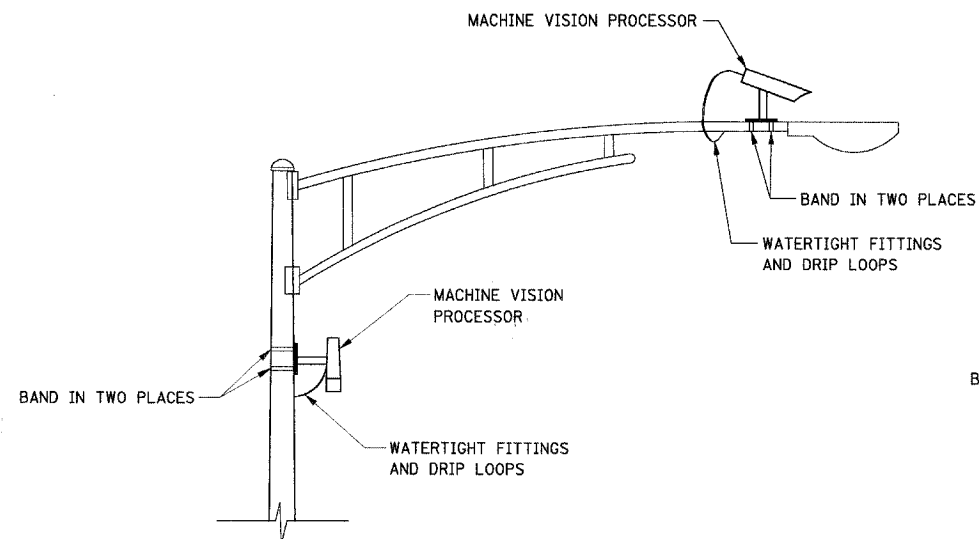
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS
 SCALE: VERT. NONE
 HORIZ. 1-01-02
 DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

SURVEYED BY DATE
 PLANNED BY DATE
 CHECKED BY DATE
 RT. OF WAY CHECKED BY DATE
 CADD FILE NAME
 PLAN NO.
 NOTE BOOK NO.
 SURVEYED BY DATE
 PLANNED BY DATE
 CHECKED BY DATE
 RT. OF WAY CHECKED BY DATE
 CADD FILE NAME
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 NOTE BOOK NO.
 SURVEYED BY DATE
 PLANNED BY DATE
 CHECKED BY DATE
 RT. OF WAY CHECKED BY DATE
 CADD FILE NAME

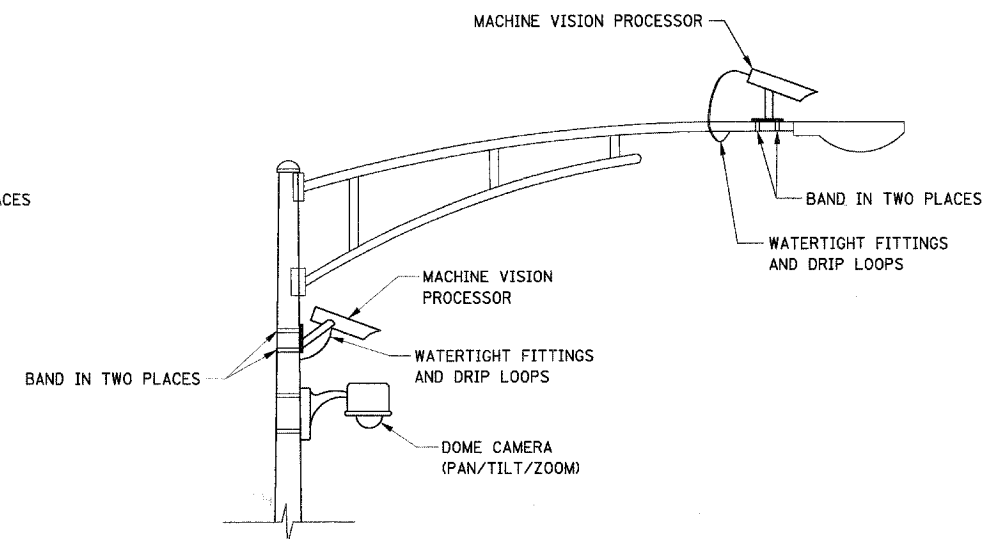
CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



MACHINE VISION PROCESSOR MOUNTING DETAIL
 (NOT TO SCALE)

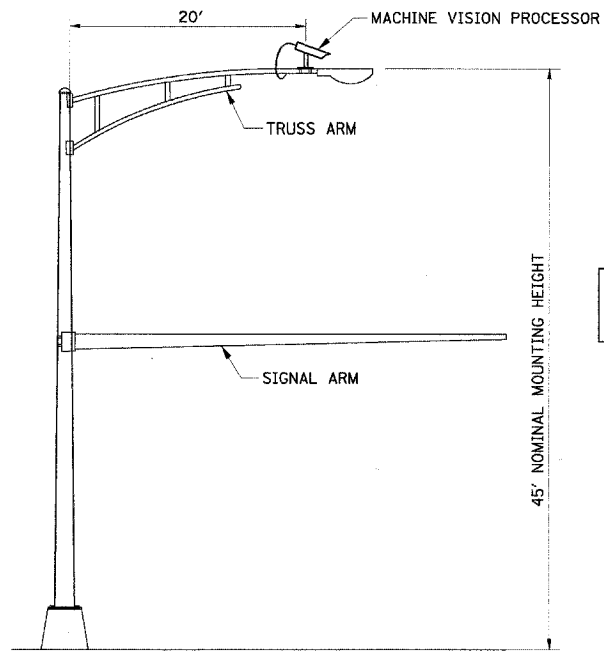


DUAL MACHINE VISION PROCESSORS MOUNTING DETAIL
 (NOT TO SCALE)



DUAL MACHINE VISION PROCESSORS AND DOME (PTZ) CAMERA MOUNTING DETAIL
 (NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
 - MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
 - AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
 - MOUNT MACHINE VISION PROCESSOR AIMING DOWN AT 30 DEGREE ANGLE.



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS
 (NOT TO SCALE)

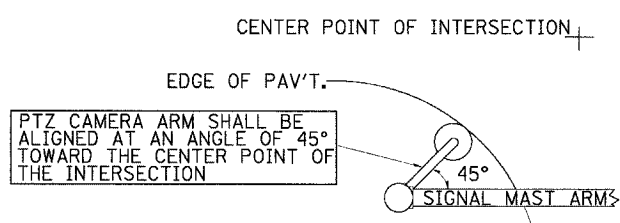
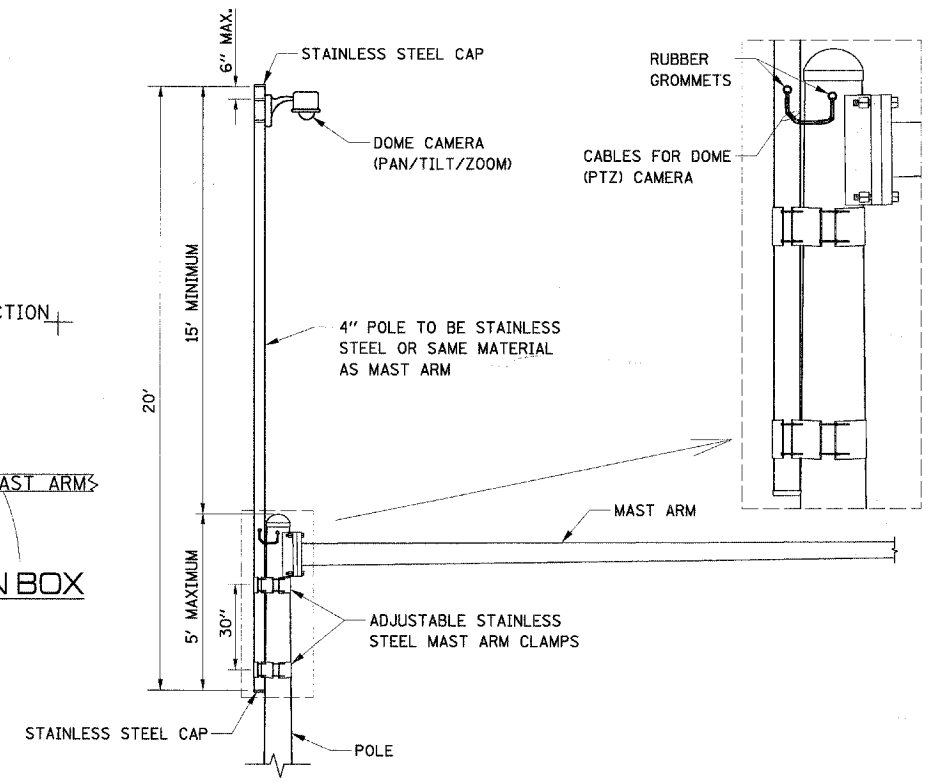


IMAGE SENSOR AND JUNCTION BOX MOUNTING DETAILS
 (NO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL
 (NOT TO SCALE)

| | | | | | | | | | | | |
|---|------------------------|------------|-----------|---|--------------------------------|--------------------|------------------------|---|-----------------|--------------|--|
| FILE NAME : h:\kane\county\878616\Traffic\det_videodgn | USER NAME : MWILLIAM | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | VIDEO DETECTION DETAILS | F.A.P. RTE. 336 | SECTION 06-00346-00-TL | COUNTY KANE | TOTAL SHEETS 69 | SHEET NO. 69 | |
| | PILOT SCALE = 22' | DRAWN - | REVISED - | | | CONTRACT NO. 63011 | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | |
| | PILOT DATE = 1/28/2008 | CHECKED - | REVISED - | | | SCALE: | | | | | |
| | | DATE - | REVISED - | | | | | | | | |