TRAFFIC DATA

POSTED SPEED

 $\circ$ 

CONTRACT NO. 63622

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS** 

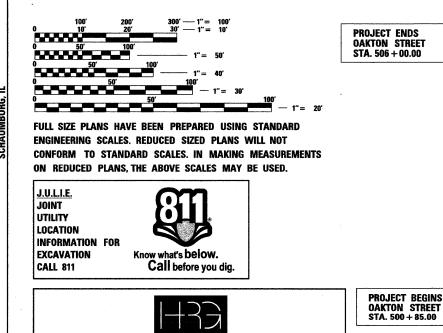
# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

**FAP 374 (ILLINOIS ROUTE 21 – MILWAUKEE AVENUE) NEVA AVENUE TO MONROE STREET** 

> STREETSCAPE IMPROVEMENTS **SECTION NO.: 10-00111-00-LS VILLAGE OF NILES COOK COUNTY**

> > **RANGE 12 EAST**

PROJECT NO.: TCSP-TE-00D1(827) C-91-550-10



420 NORTH FRONT STREET, SUITE 100 | McHENRY, ILLINOIS 60050 Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGr ILLINOIS PROFESSIONAL DESIGN FIRM #184-001322

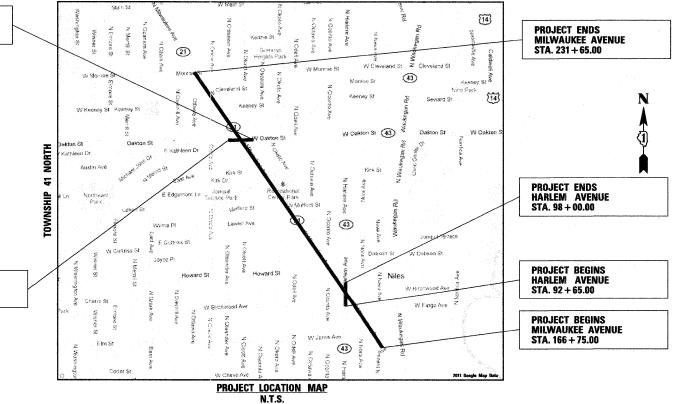
PROJECT ENGINEER: CHRISTOPHER HARTKE, P.E. PROJECT MANAGER: AKRAM CHAUDHRY, P.E.

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT: MILWAUKEE AVE.. 36,400 VPD (2007) 38,000 VPD (2030)

DESIGN SPEED

40 MPH (PROPOSED)

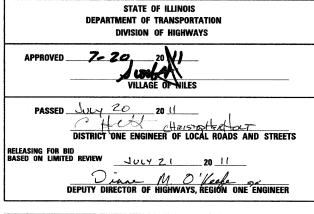


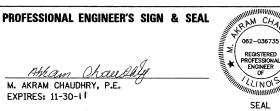
**PROJECT LENGTH** NET LENGTH OF PROJECT = 7,537 FT (1.43 MI) GROSS LENGTH OF PROJECT = 7,537 FT (1.43 MI)



10-00111-00-LS

COOK ILLINOIS CONTRACT NO. 63622





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#### LIST OF STATE STANDARDS

| STANDARD NO.<br>000001-06 | <b>DESCRIPTION</b> STANDARD SYMBOLS, ABBREVIATIONS AND PATTERS          |
|---------------------------|---|
| 280001-05                 | TEMPORARY EROSION CONTROL SYSTEMS                                       |
| 424001-05                 | CURB RAMPS FOR SIDEWALK   |
| 606001-04                 | CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER                    |
| 701301-04                 | LANE CLOSURE, 2L, 2W, SHORT TIME  |
| 701311-03                 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS OPERATIONS                      |
| 701601-07                 | LANE CLOSURE, URBAN, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN     |
| 701602-05                 | LANE CLOSURE, URBAN, MULTILANE, 2W WITH<br>BIDIRECTIONAL LEFT TURN LANE |
| 701701-07                 | LANE CLOSURE, URBAN, MULTILANE<br>INTERSECTION                          |
| 701901-01                 | TRAFFIC CONTROL DEVICES   |
| 814001-02                 | HANDHOLES   |
| 814006-02                 | DOUBLE HANDHOLES  |
| 862001-01                 | UNINTERRUPTABLE POWER SUPPLY (UPS)                                      |
| 873001-02                 | TRAFFIC SIGNAL GROUNDING & BONDING                                      |
| 877001-04                 | STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'                        |
| 878001-08                 | CONCRETE FOUNDATION DETAILS   |
| 880001-01                 | SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION              |
| 880006-01                 | TRAFFIC SIGNAL MOUNTING DETAILS   |
| 886001-01                 | DETECTOR LOOP INSTALLATIONS   |
| 886006-01                 | TYPICAL LAYOUT FOR DETECTION LOOPS                                      |

#### LIST OF DISTRICT DETAILS

| STANDARD NO. | DESCRIPTION  |
|--------------|--|
| BD-01        | DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5m) |
| BD-02        | DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB <= 15' $(4.5  \text{m})$         |
| BD-22        | PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT  |
| TC-10        | TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS                  |
| TC-13        | DISTRICT ONE TYPICAL PAVEMENT MARKINGS   |
| TC-22        | ARTERIAL ROAD INFORMATION SIGN   |
| TS-07        | DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING                      |

#### **GENERAL NOTES**

- 1. ALL REFERENCES TO "STANDARD SPECIFICATIONS" IN THESE GENERAL NOTES SHALL BE INTERPRETED TO MEAN "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, JANUARY 1, 2007.
- 2. ALL REFERENCES TO "ENGINEER" SHALL BE INTERPRETED TO MEAN THE RESIDENT ENGINEER.
- 3. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION. THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO THE ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS PRIOR TO BIDDING ON THE PROJECT.
- 5. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION) AT (800) 892-0123 AND THE VILLAGE OF NILES AT (847) 588-7926 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION IS REQUIRED).
- 6. AT LOCATIONS WHERE PROPOSED SIDEWALK IS TO BE PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT, THE LIMIT OF REMOVAL SHALL BE SAW CUT TO PRODUCE A SMOOTH EDGE FOR AN EXPANSION JOINT AND PROPOSED CONCRETE TO BE PLACED ADJACENT TO. AT LOCATIONS WHERE PROPOSED SIDEWALK IS TO BE PLACED ADJACENT TO EXISTING HMA DRIVEWAYS OR PARKING LOTS, THE LIMIT OF REMOVAL SHALL BE EXTENDED 1 FOOT BEYOND THE PROPOSED SIDEWALK TO ALLOW FOR FORMS TO BE USED IN THE SIDEWALK CONSTRUCTION.
- 7. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE OR VILLAGE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- 8. ALL ELEVATIONS SHOWN ON THE PLANS ARE ON THE USGS DATUM.
- 9. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS. PROPERTY CORNERS, AND REFERENCE MARKERS UNTIL THE ENGINEER, HIS AGENT, OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.
- 10.ALL RADII FOR PROPOSED CURB AND GUTTER ARE TO THE EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. CURB AND GUTTER ELEVATIONS SHOWN ALONG RETURNS AND AT POINTS OF CURVATURE, ETC. ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- 11. OFFSET LOCATIONS GIVEN IN THE PLANS FOR STRUCTURES, EDGE OF PAVEMENT, ETC. ARE FROM THE ROADWAY CENTERLINE.
- 12. SAW CUTTING OF PAVEMENTS, SIDEWALK, ETC. SHALL BE TO FULL DEPTH AND SHALL RESULT IN A CLEAN STRAIGHT EDGE ON THE PORTION REMAINING. ALL SAWCUTTING SHALL BE CONSIDERED INCLUDED IN THE
- 13. DRIVEWAY OFFSETS ARE TO BE CONSTRUCTED TO WITHIN ONE (1) FOOT OF THE R.O.W. OR UNLESS
- 14.ALL DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION DRIVEWAY DETAILS INCLUDED IN DETAIL SHEETS.
- 15. REMOVAL OF EXISTING COMBINATION CURB AND GUTTER, REGARDLESS OF CURB AND GUTTER TYPE, SHALL BE PAID FOR AS "COMBINATION CURB AND GUTTER REMOVAL".
- 16. THE ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES OF PROPOSED PAVEMENT, UNLESS OTHERWISE NOTED.
- 17. USE OF NO. 20 (#6) EPOXY COATED TIE BARS CONFORMING TO ARTICLE 1006.10 (b) (2) OF THE STANDARD SPECIFICATIONS FOR LONGITUDINAL CONSTRUCTION JOINTS AS SHOWN ON STATE STANDARD 420001-01 WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF PAVEMENT ITEMS BEING CONSTRUCTED.

- 18. THE BITUMINOUS MATERIAL PRIME COAT QUANTITIES HAVE BEEN DETERMINED USING A RATE OF 0.10 GAL/SQ-YD.
- 19. SIDEWALK PLACED ADJACENT TO BRICK PAVER ACCENT STRIP SHALL INCLUDE A 3" WIDE SMOOTH TROWEL SURFACE, 3/16" DEEP ON THE ADJACENT EDGE. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. SEE BRICK PAVER ACCENT STRIP DETAIL FOR ADDITIONAL INFORMATION.
- 20,PROPOSED TREES SHALL BE SPACED AT APPROXIMATELY 45 FEET APART AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

#### UTILITIES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.
- 2. THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE AND THEIR EXACT\_LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MIGHT NOT BE SHOWN ON THE PLANS. ANY UTILITY PROPERTY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- 4. ALL UTILITY COMPANIES AND THE VILLAGE OF NILES SHALL BE NOTIFIED AT LEAST 3 DAYS PRIOR TO THE START OF CONSTRUCTION.
- 5. THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTION MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS, AND APPURTENANCES THAT MUST BE KEPT IN OPERATION.
- 6. ANY LOOSE MATERIAL DEPOSITED IN THE FLOWLINE OF DRAINAGE STRUCTURES, WHICH OBSTRUCTS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY, PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.
- 7. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN. IN AN OPERATING CONDITION, TEMPORARY OUTLETS AND CONNECTIONS FOR ALL DRAINS,
- 8. ANY ITEMS DAMAGED DURING REMOVAL OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. THE COST OF SALVAGING EXISTING FRAMES, GRATES, LIDS, OR BOXES AND/OR STOCKPILING THEM ON THE JOB SITE FOR DELIVERY TO THE STATE OR VILLAGE MAINTENANCE YARD SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 9. THE CONTRACTOR SHALL TAKE PRECAUTION EXCAVATING AND REMOVING MATERIALS IN THE VICINITY OF TRAFFIC SIGNAL EQUIPMENT AND CONDUIT. ANY DAMAGED ITEMS WILL BE REPLACED AT NO ADDITIONAL COST BY THE CONTRACTOR.

#### SIGNING AND STRIPING

- 1. ALL EXISTING SIGNS LOCATED ON UTILITY/LIGHT POLES TO REMAIN THAT DO NOT CONFLICT WITH THE IMPROVEMENTS SHALL REMAIN IN PLACE UNLESS DIRECTED BY THE ENGINEER.
- 2. SIGNS SHALL NOT BE MOVED OR COVERED UNTIL PROGRESS OF WORK NECESSITATES IT.
- 3. THE CONTRACTOR WILL BE REQUIRED TO TEMPORARILY RESET ALL SUCH SIGNS THAT INTERFERE WITH HIS CONSTRUCTION OPERATIONS. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING AND MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO THE TRAFFIC FOR WHICH IT IS INTENDED. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT.
- 4. THE RESIDENT ENGINEER SHALL CONTACT WALTER CZARNY, AREA TRAFFIC FIELD ENGINEER AT (847) 715-8419 AT LEAST TWO (2) WEEKS PRIOR TO PLACING PERMANENT PAVEMENT MARKINGS.
- 5. PROPOSED PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH DISTRICT ONE TYPICAL PAVEMENT MARKINGS UNLESS OTHERWISE NOTED.



|                       | USER NAME = CHartke   | DESIGNED | - | CMH   | REVISED | -            |
|-----------------------|-----------------------|----------|---|-------|---------|--------------|
| OM<br>al Design Firm  |                       | DRAWN    | - | СМН   | REVISED | <del>-</del> |
| ar ar one general and | PLOT SCALE = N.T.S.   | CHECKED  | - | JLP . | REVISED | -            |
|                       | PLOT DATE = 7/20/2011 | DATE     | - |       | REVISED | -            |

| INDEX OF S    | SHEETS, LIST OF STATE STA | NDARD  | S AND GENERAL NOTES | F.A.P.<br>RTÉ. | SECTION                    | COUNTY    | TOTAL<br>SHEETS | SHE |
|---------------|---------------------------|--------|---------------------|----------------|----------------------------|-----------|-----------------|-----|
|               | ILLINOIS ROUTE 21 (MILV   | VAUKEI | AVENUE)             | 374            | 10-00111-00-LS             | COOK      | 62              | 2   |
|               |                           | т      |                     |                | •                          | CONTRACT  | NO.             | 636 |
| SCALE: N.T.S. | SHEET NO. I OF 1 SHEETS   | I STA. | TO STA.             | FFD BO         | AD DIST NO THEINOIS FED AT | D PROJECT |                 |     |

## SUMMARY OF QUANTITIES

| MATT STEEL             |   |               |                 | TCSP  | ITEP        |
|------------------------|---|---------------|-----------------|-------|-------------|
| NUMBER                 | ITEMS<br>TREE REMOVAL (6 TO 15 UNITS DIAMETER)                  | TINU          | QUANTITY<br>174 | 0021  | 0031<br>174 |
|                        | TREE REMOVAL (OVER 15 UNITS DIAMETER)                           | UNIT          | 224             |       | 224         |
|                        | TREE TRUNK PROTECTION   | EACH          | 3               |       | 3           |
|                        | TREE ROOT PRUNING   | EACH          | 3               |       | 3           |
|                        | TREE PRUNING (OVER 10 INCH DIAMETER)                            | EACH          | 3               |       | 3           |
|                        | TOPSOIL FURNISH AND PLACE, 4"                                   | SQ YD         | 6710            |       | 6710        |
|                        | NITROGEN FERTILIZER NUTRIENT                                    | POUND         | 125             |       | 125         |
|                        | PHOSPHORUS FERTILIZER NUTRIENT                                  | POUND         | 125             | ***** | 125         |
|                        | POTASSIUM FERTILIZER NUTRIENT                                   | POUND         | 125             |       | 125         |
|                        | SODDING, SALT TOLERANT  | SQ YD         | 6710            |       | 6710        |
|                        | SUPPLEMENTAL WATERING   | UNIT          | 340             |       | 340         |
|                        | INLET FILTERS   | EACH          | 20              |       | 20          |
|                        | SUBBASE GRANULAR MATERIAL, TYPE B 4"                            | SQ YD         | 7265            |       | 7265        |
|                        | SUBBASE GRANULAR MATERIAL, TYPE B 6"                            | SQ YD         | 8307            |       | 8307        |
|                        | AGGREGATE FOR TEMPORARY ACCESS                                  | TON           | 142             |       | 142         |
|                        | PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH              | SQ YD         | 1470            |       | 1470        |
|                        | PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH                        | SQ FT         | 42130           |       | 42130       |
|                        | DETECTABLE WARNINGS   | SQ FT         | 690             |       | 690         |
| 44000100               | PAVEMENT REMOVAL  | SQ YD         | 860             |       | 860         |
| 44000200               | DRIVEWAY PAVEMENT REMOVAL                                       | SQ YD         | 1880            |       | 1880        |
| 44000500               | COMBINATION CURB AND GUTTER REMOVAL                             | FOOT          | 540             |       | 540         |
|                        | SIDEWALK REMOVAL  | SQ FT         | 50435           |       | 50435       |
| 44003100               | MEDIAN REMOVAL  | SQ FT         | 118             |       | 118         |
| 44201329               | CLASS C PATCHES, TYPE II, 8 INCH                                | SQ YD         | 105             |       | 105         |
| 44201335               | CLASS C PATCHES, TYPE IV, 8 INCH                                | SQ YD         | 160             |       | 160         |
| 44201692               | CLASS D PATCHES, TYPE II, 4 INCH                                | SQ YD         | 105             |       | 105         |
| 44201696               | CLASS D PATCHES, TYPE IV, 4 INCH                                | SQ YD         | 160             |       | 160         |
| 56500600               | DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED                     | EACH          | 2               |       | 2           |
| 60300305               | FRAMES AND LIDS TO BE ADJUSTED                                  | EACH          | 4               |       | 4           |
| X60100505              | CONCRETE CURB (SPECIAL)   | FOOT          | 1900            |       | 1900        |
| 60600605               | CONCRETE CURB, TYPE B   | FOOT          | 670             |       | 670         |
| 60603800               | COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12               | FOOT          | 417             |       | 417         |
| 60618300               | CONCRETE MEDIAN SURFACE, 4 INCH                                 | SQ FT         | 118             |       | 118         |
| 67000400               | ENGINEER'S FIELD OFFICE, TYPE A                                 | CAL MO        | 6               |       | 6           |
| 67100100               | MOBILIZATION  | L SUM         | 1               |       | 1           |
| 70102630               | TRAFFIC CONTROL AND PROTECTION, STANDARD 701601                 | L SUM         | 1               |       | 1           |
| 70102632               | TRAFFIC CONTROL AND PROTECTION, STANDARD 701602                 | L SUM         | 1               |       | 1           |
| 70102635               | TRAFFIC CONTROL AND PROTECTION, STANDARD 701701                 | L SUM         | 1               |       | 1           |
| 70106800               | CHANGEABLE MESSAGE SIGN   | CAL MO        | 16              |       | 16          |
| 70300100               | SHORT TERM PAVEMENT MARKING                                     | FOOT          | 470             |       | 470         |
|                        | WORK ZONE PAVEMENT MARKING REMOVAL                              | SQ FT         | 470             |       | 470         |
| 70301000               | 1   | 1             | <del> </del>    |       | 32.5        |
|                        | SIGN PANEL - TYPE 2   | SQ FT         | 32.5            |       | 32.5        |
| 72000200               | SIGN PANEL - TYPE 2<br>THERMOPLASTIC PAVEMENT MARKING - LINE 4" | SQ FT<br>FOOT | 65              |       | 65          |
| 72000200<br>+ 78000200 |   |               |                 |       |             |

| SPECIALITY |                         |   |       |          | TCSP   | ITEP |
|------------|-------------------------|---|-------|----------|--------|------|
| PECI       |                         |   |       |          |        |      |
| ,          |                         | ITEMS   |       | QUANTITY | 0021   | 0031 |
| Н          |                         | PAVEMENT MARKING REMOVAL  | SQ FT | 1750     |        | 1750 |
| F          | 80400100                | ELECTRIC SERVICE INSTALLATION   | EACH  | 2        | 22     |      |
| F          | 80400200                | ELECTRIC UTILITY SERVICE CONNECTION   | L SUM | 1        | 1      |      |
|            | 80500020                | SERVICE INSTALLATION - POLE MOUNTED   | EACH  | 1        | 1      |      |
|            | 81000600                | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL  | FOOT  | 286      | 286    |      |
|            | 81000700                | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL  | FOOT  | 51       | 51     |      |
|            | 81000800                | CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL  | FOOT  | 61       | 61     |      |
|            | 81001000                | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL  | FOOT  | 22       | 22     |      |
| F          | 81018500                | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL   | FOOT  | 100      | 100    |      |
|            | 81018900                | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL   | FOOT  | 560      | 560    |      |
|            | 81400100                | HANDHOLE  | EACH  | 2        | 2      |      |
|            | 81400200                | HEAVY-DUTY HANDHOLE   | EACH  | 4        | 4      |      |
| E          | 81400300                | DOUBLE HANDHOLE   | EACH  | 2        | 2      |      |
|            | 81603050                | UNIT DUCT, 600V, 3-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA.<br>POLYETHYLENE      | FOOT  | 3745     | 3745   |      |
| E          | 81702160                | ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 1/0                                | FOOT  | 336      | 336    |      |
|            | 81900200                | TRENCH AND BACKFILL FOR ELECTRICAL WORK   | FOOT  | 474      | 474    |      |
|            | 82102250                | LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT                                       | EACH  | 9        | 9      |      |
|            | 82500350                | LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100AMP  | EACH  | 2        | 2      |      |
| E          | 83007500                | LIGHT POLE, ALUMINUM, 35 FT. M.H., 12 FT. MAST ARM  | EACH  | 9        | 9      |      |
| Е          | 83600200                | LIGHT POLE FOUNDATION, 24" DIAMETER   | FOOT  | 288      | 288    |      |
| E          | 84200500                | REMOVAL OF LIGHTING UNIT, SALVAGE   | EACH  | 2        | 2      |      |
| E          | 85000200                | MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION                                       | EACH  | 2        | 2      |      |
| F          | 85100500                | PAINT NEW TRAFFIC SIGNAL POST   | EACH  | 4        | 4      |      |
| F          | 85100600                | PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT  | EACH  | 4        | 4      |      |
| F          |                         | FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL                                     | EACH  | 1        | 1      |      |
|            |                         | UNINTERRUPTIBLE POWER SUPPLY  | EACH  | 1        | 1      |      |
| _          |                         | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F                                   | FOOT  | 578.5    | 578.5  |      |
| _          |                         | ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C  | FOOT  | 552.5    | 552.5  |      |
|            |                         | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C   | FOOT  | 2592     | 2592   |      |
| F          |                         | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C   | FOOT  | 1610     | 1610   |      |
| F          |                         | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C   | FOOT  | 2191.5   | 2191.5 |      |
| F          |                         | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C   |       |          |        |      |
| F          |                         | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 /C ELECTRIC CABLE IN CONDUIT. SERVICE, NO. 6 2 C | FOOT  | 783      | 783    |      |
|            |                         |   | FOOT  | 674.5    | 674.5  |      |
| ·          |                         | ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C                        | FOOT  | 1726.5   | 1726.5 |      |
|            |                         |   | EACH  | 2        | 2      |      |
|            |                         | TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.  | EACH  | 2        | 2      |      |
|            |                         | STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.  | EACH  | 1        | 1      |      |
|            |                         | STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.  | EACH  | 11       | 1      |      |
| $\vdash$   |                         | STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.  | EACH  | 1        | 1 .    |      |
| F          |                         | STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.  | EACH  | 1        | 11     |      |
| F          | 87800100                | CONCRETE FOUNDATION, TYPE A   | FOOT  | 16       | 16     |      |
|            | 87800150<br>SPECIALTY I | CONCRETE FOUNDATION, TYPE C   | FOOT  | 4        | 4      |      |

| USER NAME = CHortke   | DESIGNED | - | CMH   | REVISED |   |
|-----------------------|----------|---|-------|---------|---|
|                       | DRAWN    | - | СМН   | REVISED | - |
| PLOT SCALE = N.T.S.   | CHECKED  | - | JLP . | REVISED | - |
| PLOT DATE = 7/20/2011 | DATE     |   | 1.5   | REVISED | - |
|                       |          |   |       |         |   |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

|               | SUMMA          | RY OF QU | ANTITIES |         | F.A.P.<br>RTE. | SEC       | TION            | COUNTY     | TOTAL | SHEET<br>NO. |
|---------------|----------------|----------|----------|---------|----------------|-----------|-----------------|------------|-------|--------------|
|               | MILWAUKEE AVE  | NUE STRE | ETSCAPE  | PROJECT | 374            | 10-0011   | 1-00-LS         | соок       | 62    | 3            |
|               |                |          | ,        |         |                |           |                 | CONTRACT   | NO.   | 63622        |
| SCALE: N.T.S. | SHEET NO. 1 OF | 2 SHEETS | STA.     | TO STA. | FED. ROAD      | DIST. NO. | ILLINOIS FED. A | ID PROJECT |       | *            |

<sup>†</sup> SPECIALTY ITEM

CONSTRUCTION TYPE CODE 0042

# SUMMARY OF QUANTITIES

| Ł          |                |  |       |          | TCSP   | ITEP  |
|------------|----------------|--|-------|----------|--------|-------|
| SPECIALITY |                |  |       |          |        |       |
| SPE        | ITEM<br>NUMBER | ITEMS  | UNIT  | QUANTITY | 0021   | 0031  |
| Н          | 87800400       | CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER   | FOOT  | 10       | 10     |       |
| Н          | 87800415       | CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER   | FOOT  | 33       | 33     |       |
| Н          | 87900200       | DRILL EXISTING HANDHOLE  | EACH  | 3        | 3      |       |
| Н          | 88030020       | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED  | EACH  | 8        | 8      |       |
| Н          | 88030050       | SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED   | EACH  | 2        | 2      |       |
| Н          | 88030100       | SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED   | EACH  | 1        | 1      |       |
| Н          | 88030110       | SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED  | EACH  | 2        | 2      |       |
|            | 88030240       | SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED  | EACH  | 1        | 1      |       |
|            | 88102717       | PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER  | EACH  | 8        | 8      |       |
|            | 88200110       | TRAFFIC SIGNAL BACKPLATE, LOUVERED   | EACH  | 10       | 10     |       |
|            | 88600100       | DETECTOR LOOP, TYPE I  | FOOT  | 1194     | 1194   |       |
| Н          | 88700200       | LIGHT DETECTOR   | EACH  | 2        | 2      |       |
|            | 88800100       | PEDESTRIAN PUSH-BUTTON   | EACH  | 8        | 8      |       |
|            | 89000100       | TEMPORARY TRAFFIC SIGNAL INSTALLATION  | EACH  | 1        | 1      |       |
| Н          | 89502300       | REMOVE ELECTRIC CABLE FROM CONDUIT   | FOOT  | 6803.5   | 6803.5 |       |
| Н          | 89502375       | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT   | EACH  | 1        | 1      |       |
|            | 89502380       | REMOVE EXISTING HANDHOLE   | EACH  | 7        | 7      |       |
|            | 89502382       | REMOVE EXISTING DOUBLE HANDHOLE  | EACH  | 1        | 1      |       |
| H          | 89502385       | REMOVE EXISTING CONCRETE FOUNDATION  | EACH  | 9        | 9      |       |
| +          | A2004824       | TREE, GLEDITSIA TRIACANTHOS INERMIS SKYLINE (SKYLINE THORNLESS COMMON HONEYLOCUST), 3" CALIPER, BALLED AND BURLAPPED | EACH  | 38       |        | 38    |
| +          | B2005524       | TREE, PYRUS CALLERYANA ARISTOCRAT (ARISTOCRAT CALLERY PEAR), 3" CALIPER, TREE FORM, BALLED AND BURLAPPED             | EACH  | 42       |        | 42    |
| +          | X0300635       | PLANTER  | EACH  | 5        |        | 5     |
|            | X0325425       | REMOVE AND RESET POWER POLE  | EACH  | 2        |        | 2     |
|            | X0350810       | BOLLARD REMOVAL  | EACH  | 1        |        | 1     |
| I          | X0945500       | PAINT EXISTING POLE COMPLETE   | EACH  | 72       |        | 72    |
|            | X2130010       | EXPLORATION TRENCH, SPECIAL  | FOOT  | 217      |        | 217   |
|            | X8140115       | HANDHOLE TO BE ADJUSTED  | EACH  | 3        | 3      |       |
| E          | X8250500       | LIGHTING UNIT COMPLETE, SPECIAL  | EACH  | 48       |        | 48    |
|            | X8360215       | LIGHT POLE FOUNDATION, 24" DIAMETER, OFFSET  | FOOT  | 18       |        | 18    |
| E          | X8730250       | ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED  | FOOT  | 124.5    | 124.5  |       |
| +          | XX000959       | TRASH RECEPTACLE   | EACH  | 5        |        | 5     |
|            | XX005283       | BRICK PAVER CROSSWALK  | SQ FT | 840      |        | 840   |
| E          |                | BRICK PAVER ACCENT STRIP   | SQ FT | 12407    |        | 12407 |
| L          | XX007924       | Banners  | EACH  | 288      | 885    |       |

| 21.010 | SPECIALIT  |          |  |        |          | TCSP | ITEP |
|--------|------------|----------|--|--------|----------|------|------|
| L      |            |          | ITEMS  |        | QUANTITY | 0021 | 0031 |
| Ŀ      | <u>t  </u> | Z0003850 | BENCHES  | EACH   | 5        |      | 5    |
| -      | $\pm$      | Z0004538 | HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 10"                     | SQ YD  | 707      |      | 707  |
| -      | $^{+}$     | Z000456  | COMBINATION CONCRETE CURB & GUTTER REMOVAL AND REPLACEMENT | FOOT   | 4761     | 4761 |      |
|        | +          | Z0013798 | CONSTRUCTION LAYOUT  | L SUM  | 1        |      | 1    |
| E      | ‡          | Z0030850 | TEMPORARY INFORMATION SIGNING                              | SQ FT  | 51       |      | 51   |
| þ      | $\pm$      | z0033028 | MAINTENANCE OF LIGHTING SYSTEM                             | CAL MO | 6        |      | 6    |
| ŀ      | $\pm$      | Z0033056 | OPTIMIZE TRAFFIC SIGNAL SYSTEM                             | EACH   | 1        | 1    |      |
| Ŀ      | $\pm$      | Z0073510 | TEMPORARY TRAFFIC SIGNAL TIMING                            | ÉACH   | 1        | 1    |      |
|        | $\pm$      | Z0076600 | TRAINEES   | HOUR   | 500      | 250  | 250  |
| -      | t          | XX001249 | ORNAMENTAL FENCE   | FOOT   | 1315     |      | 1315 |
| E      | $\pm$      |          |  |        |          |      |      |

| USER NAME = CHartke   | DESIGNED | - | СМН | REVISED | - |
|-----------------------|----------|---|-----|---------|---|
|                       | DRAWN    | _ | СМН | REVISED | - |
| PLOT SCALE = N.T.S.   | CHECKED  | - | JLP | REVISED | - |
| PLOT DATE = 7/20/2011 | DATE     | - |     | REVISED | - |

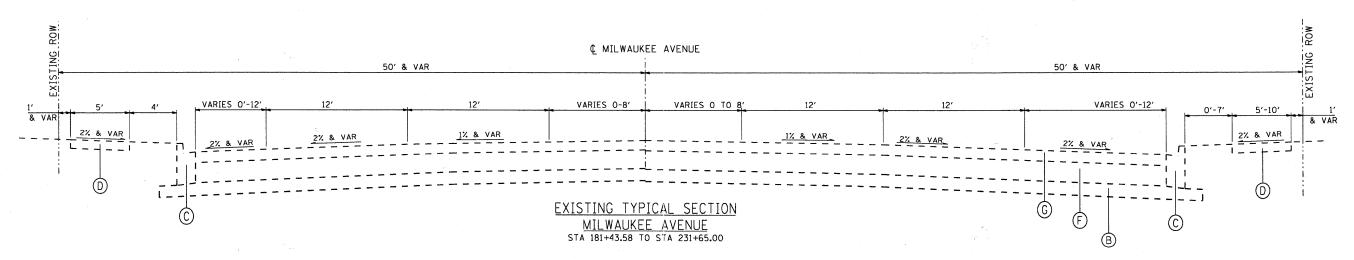
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| ı | VILWA |       |      |       | QUANTIT<br>STREETSC | TES<br>Ape project |      |
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|   | SHEET | NO. : | 2 OF | 2 SHE | ETS STA.            | TO                 | STA. |

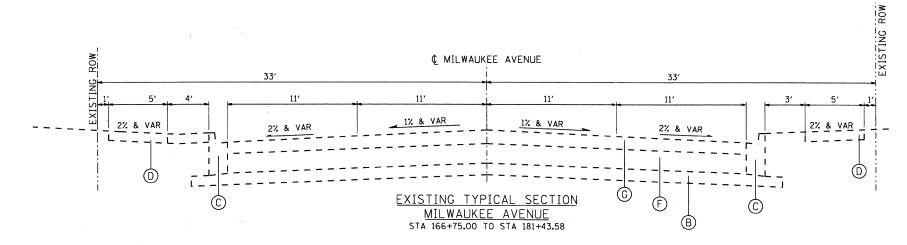
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<sup>+</sup> SPECIALTY ITEM

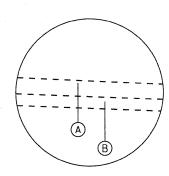
CONSTRUCTION TYPE CODE 0042



CONCRETE PAVEMENT FROM STA 181+43.58 TO STA 190+82.78 SEE DETAIL "A"



CONCRETE PAVEMENT FROM STA 176+15.78 TO STA 181+43.58 SEE DETAIL "A"



DETAIL "A" CONCRETE PAVEMENT STA 176+15.78 TO STA 190+82.78

#### EXISTING LEGEND

- PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- (B) SUB-BASE GRANULAR MATERIAL
- COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12 (MOD) (VARIABLE HEIGHT)
- PORTLAND CEMENT CONCRETE SIDEWALK
- (E) CONCRETE MEDIAN (VARIABLE HEIGHT)
- PORTLAND CEMENT CONCRETE BASE COURSE, 6" TO 8"
- ASPHALT OVERLAYS, VARIES 3" TO 6"

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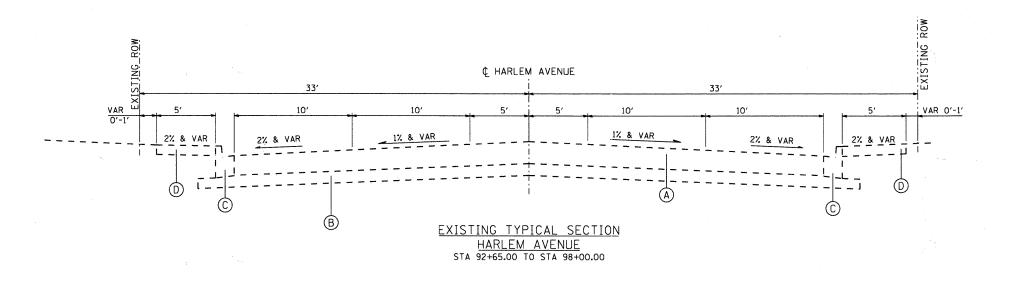
REVISED DESIGNED - CMH USER NAME = CHartke DRAWN - CMH REVISED CHECKED - JLP REVISED PLOT DATE = 7/20/2011 DATE REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  EXISTING TYPICAL SECTIONS
MILWAUKEE AVENUE STREETSCAPE PROJECT SECTION 374

COUNTY SHEET NO.

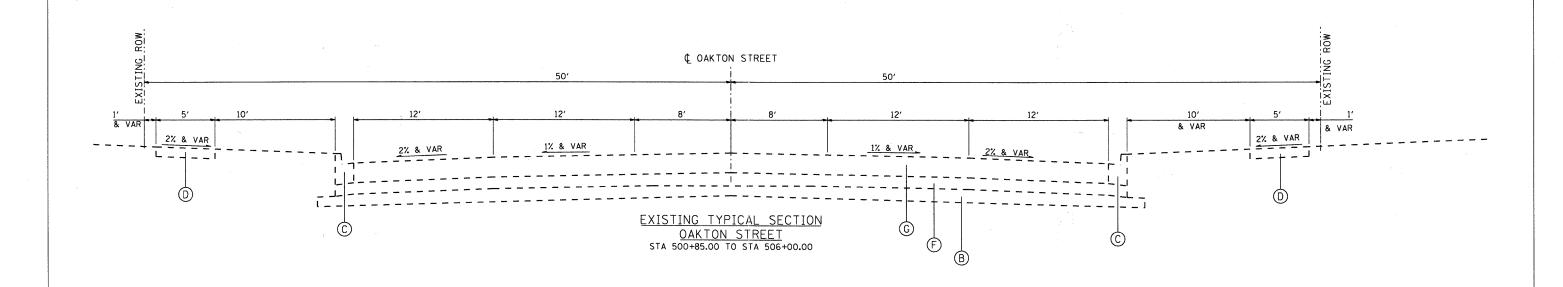
COOK 62 5

CONTRACT NO. 63622 10-00111-00-LS SHEET NO. 1 OF 4 SHEETS STA.



#### EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- B) SUB-BASE GRANULAR MATERIAL
- C COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12 (MOD) (VARIABLE HEIGHT)
- (D) PORTLAND CEMENT CONCRETE SIDEWALK
- E) CONCRETE MEDIAN (VARIABLE HEIGHT)
- (F) PORTLAND CEMENT CONCRETE BASE COURSE, 6" TO 8"
- (G) ASPHALT OVERLAYS, VARIES 3" TO 6"



#COMPANY\_NAME)

\$1: \$4PROJECT\_CONTACT)

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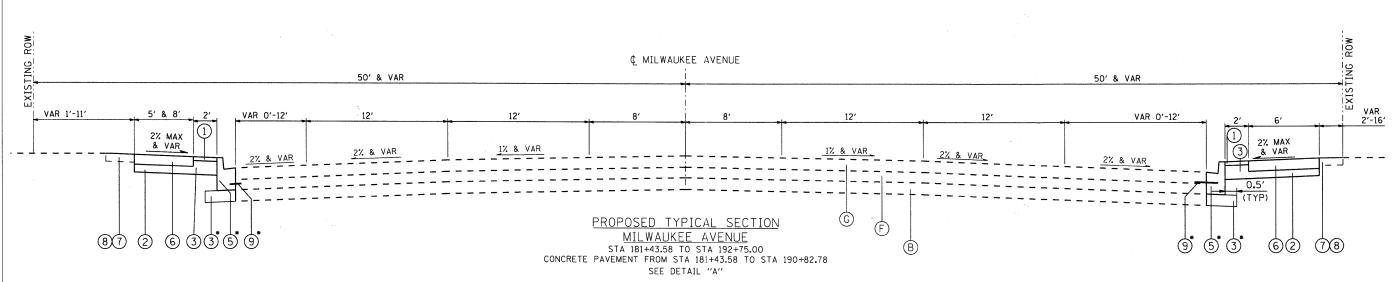
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS
MILWAUKEE AVENUE STREETSCAPE PROJECT

SHEET NO. 2 OF 4 SHEETS STA. TO STA.

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#### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

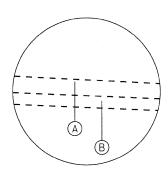
| MIXTURE TYPE   | AIR VOIDS           |
|--|---------------------|
| PATCHING   |                     |
| CLASS D PATCHES (HMA BINDER, IL-19mm)                | 4% @ 70 GYR.        |
| HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19mm)    | 4% @ 70 GYR.        |
| DRIVEWAYS  |                     |
| HMA SURFACE COURSE, MIX "C", N 50 (IL 9.5 mm); 2"    | 4% @ 50 GYR.        |
| HMA BASE COURSE (HMA BINDER IL-19mm); PE -6", CE -8" | 4% <b>©</b> 50 GYR. |

THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUATITIES IS 112 LBS/SQ YD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

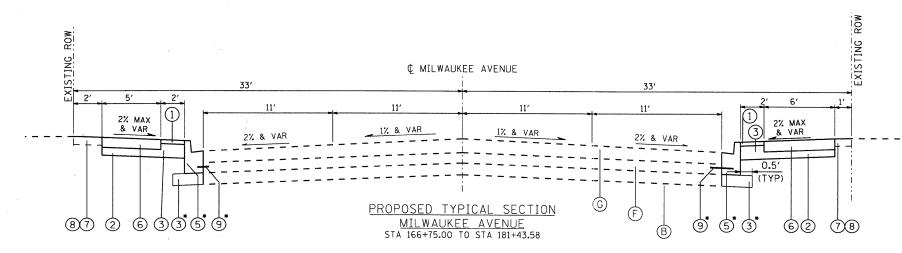
FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

\* SPOT CURB AND GUTTER REPLACEMENT. SEE PLANS FOR LOCATIONS



DETAIL "A"

CONCRETE PAVEMENT
STA 176+15.78 TO STA 190+82.78



CONCRETE PAVEMENT FROM STA 176+15.78 TO STA 181+43.58 SEE DETAIL "A"

\* SPOT CURB AND GUTTER REPLACEMENT. SEE PLANS FOR LOCATIONS

#### PROPOSED LEGEND

- 1) BRICK PAVER ACCENT STRIP (SEE LANDSCAPE PLANS FOR DETAILS)
- 2 SUBBASE GRANULAR MATERIAL, TYPE B, 4"
- 3 SUBBASE GRANULAR MATERIAL, TYPE B, 6"
- 4) NOT USED
- (5) COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 OR COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24 (SEE PLANS FOR LOCATIONS)
- 6 PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- 7 TOPSOIL FURNISH AND PLACE, 4"
- 8 SODDING
- TIE BAR PER STATE STANDARDS (INCLUDED IN THE COST OF PAVEMENT ITEM BEING CONSTRUCTED)
- (O) CONCRETE PAVER BED. 4" (PAID FOR AS CONCRETE CURB (SPECIAL), (SEE LANDSCAPE PLANS FOR DETAILS)

#### EXISTING LEGEND

- (A) PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- (B) SUB-BASE GRANULAR MATERIAL
- C COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12 (MOD) (VARIABLE HEIGHT)
- (D) PORTLAND CEMENT CONCRETE SIDEWALK
- (E) CONCRETE MEDIAN (VARIABLE HEIGHT)
- (F) PORTLAND CEMENT CONCRETE BASE COURSE, 6" TO 8"
- (G) ASPHALT OVERLAYS, VARIES 3" TO 6"

NOTE:
SEE BRICK PAVER ACCENT STRIP FOR DETAILS. WHEN PLACED ADJACENT TO TOPSOIL AND SODDING. THE BRICK PAVER ACCENT STRIP SHALL BE SUPPORTED BY A CONCRETE BASE. PAID FOR AS CONCRETE CURB (SPECIAL).

TOTAL SHEE'SHEETS NO.

COOK 62 7

CONTRACT NO. 63622

COUNTY

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

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Illinois Professional Design Firm
# 184-001322

| USER NAME = CHortke   | DESIGNED - CMH | REVISED - |
|-----------------------|----------------|-----------|
|                       | DRAWN - CMH    | REVISED - |
| PLOT SCALE = N.T.S.   | CHECKED - JLP  | REVISED - |
| PLOT DATE = 7/20/2011 | DATE -         | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

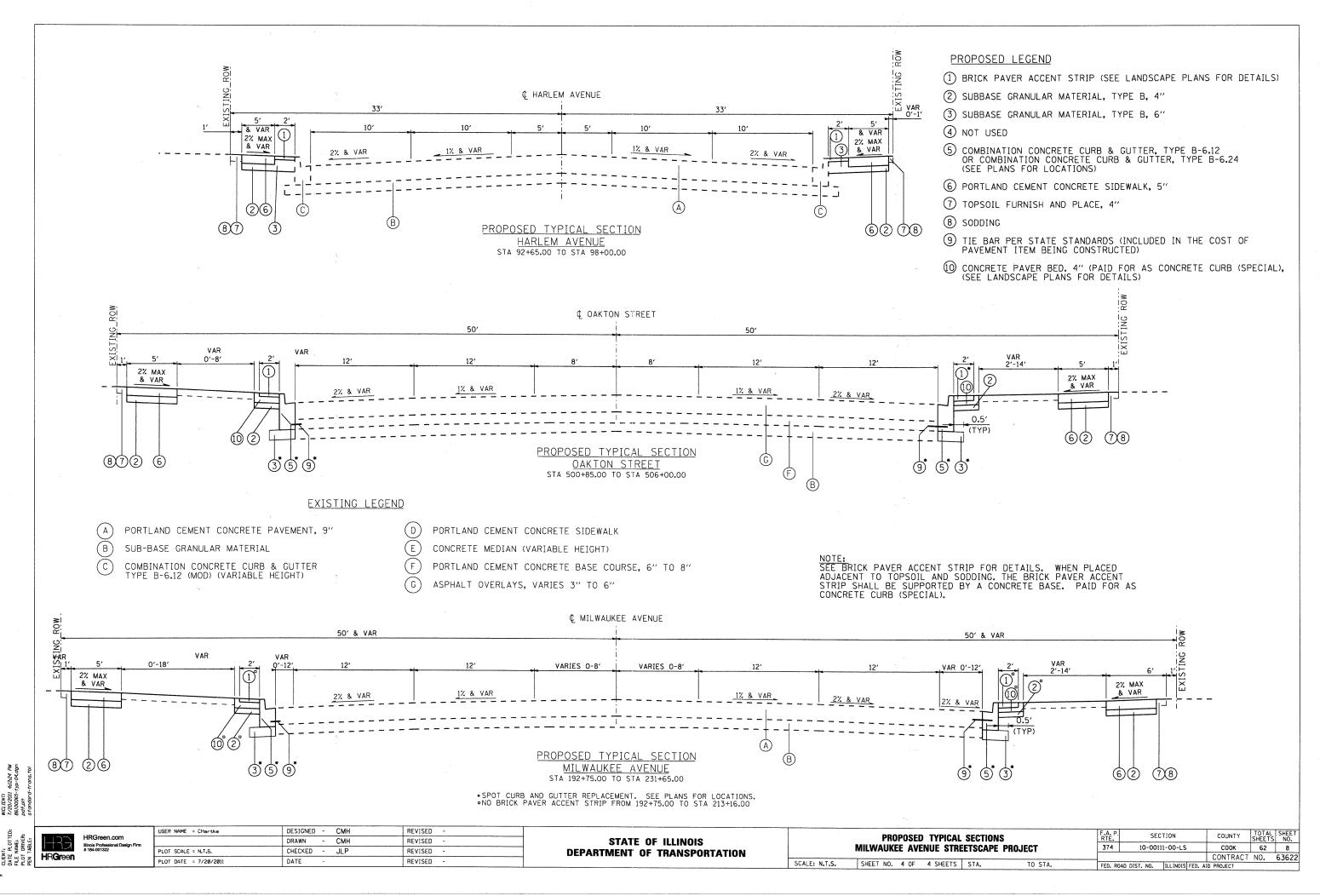
SCALE: N.T.S.

SHEET NO. 3 OF 4 SHEETS STA.

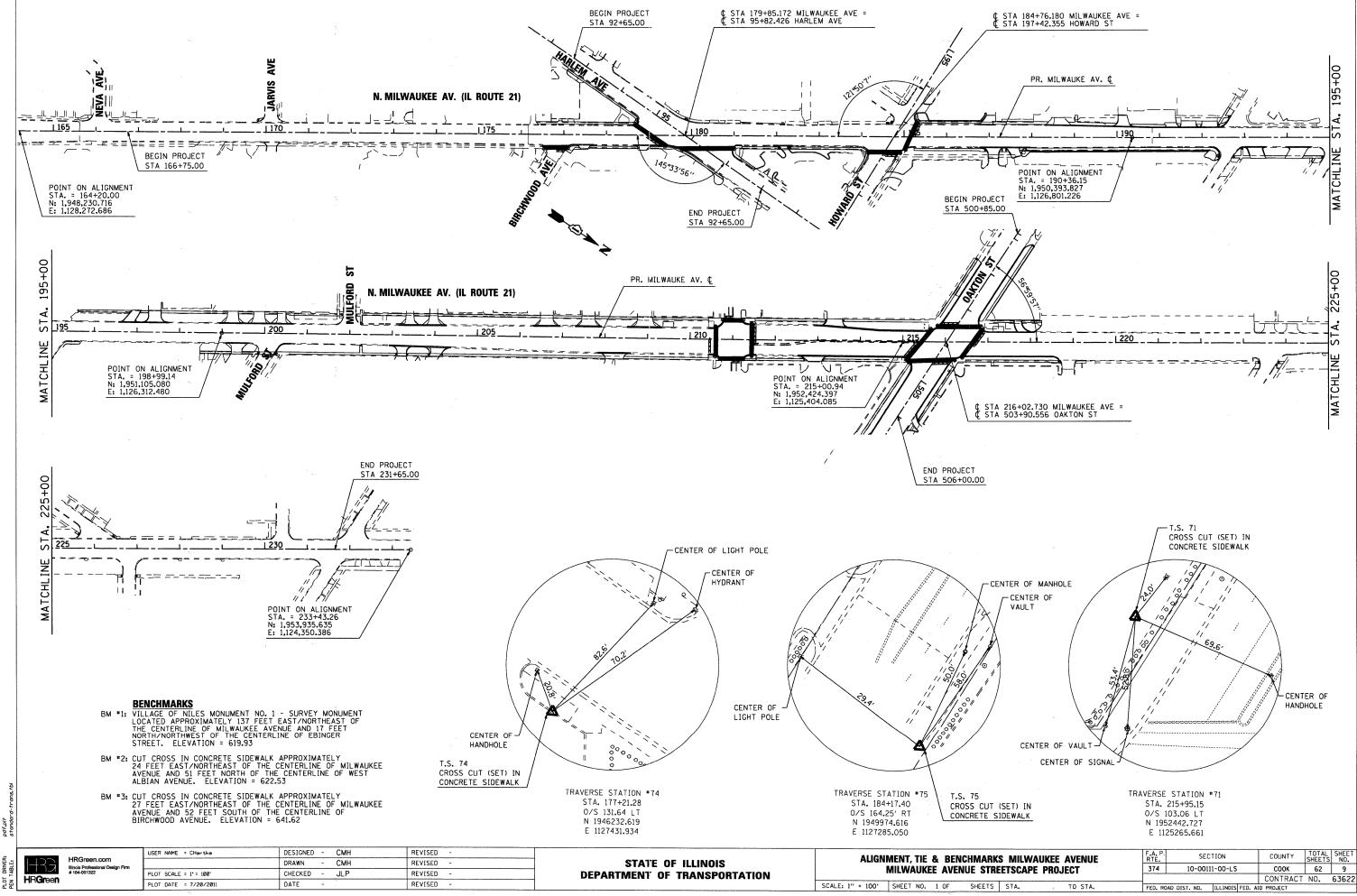
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|                                      |                |                |

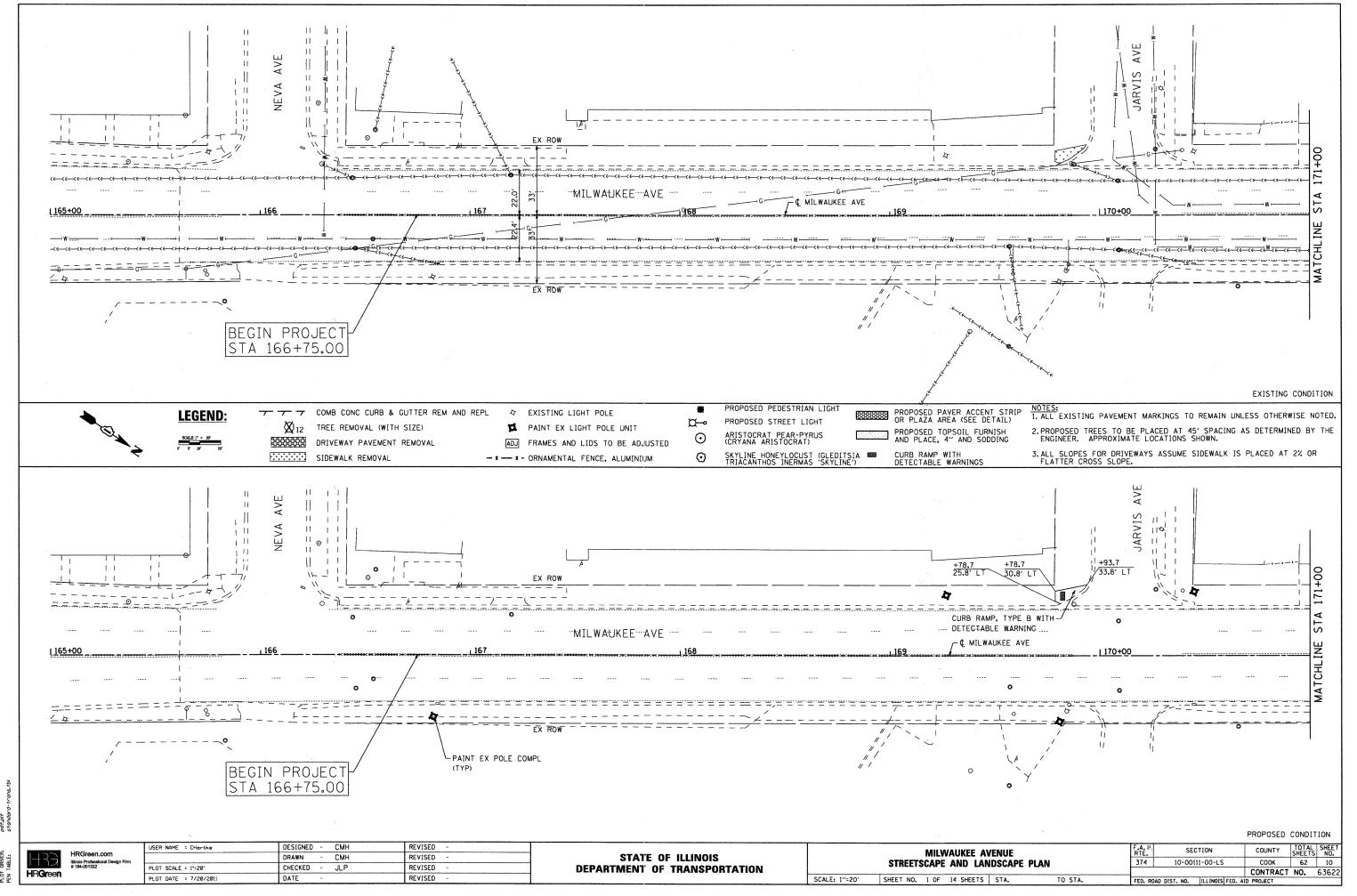
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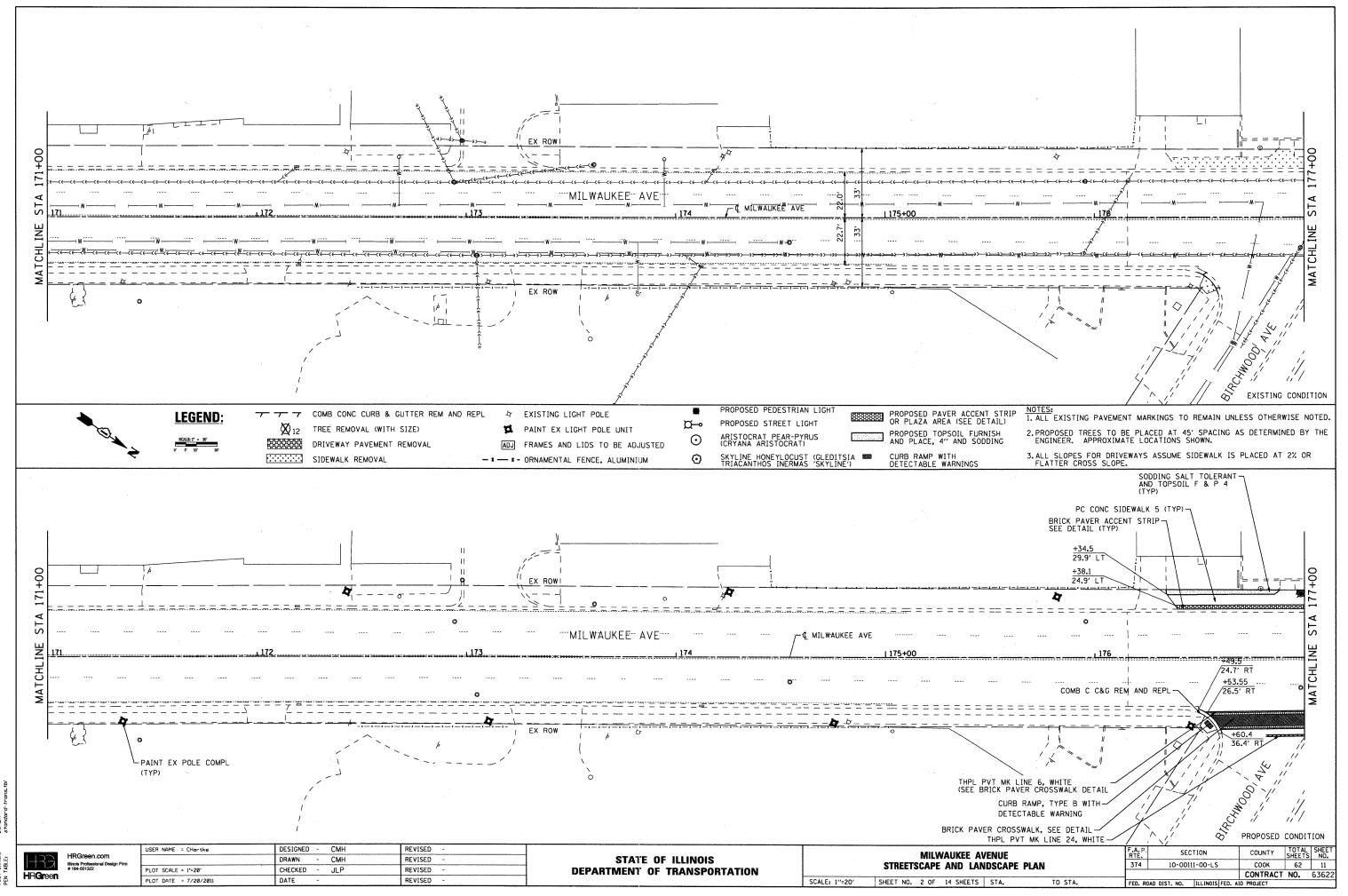
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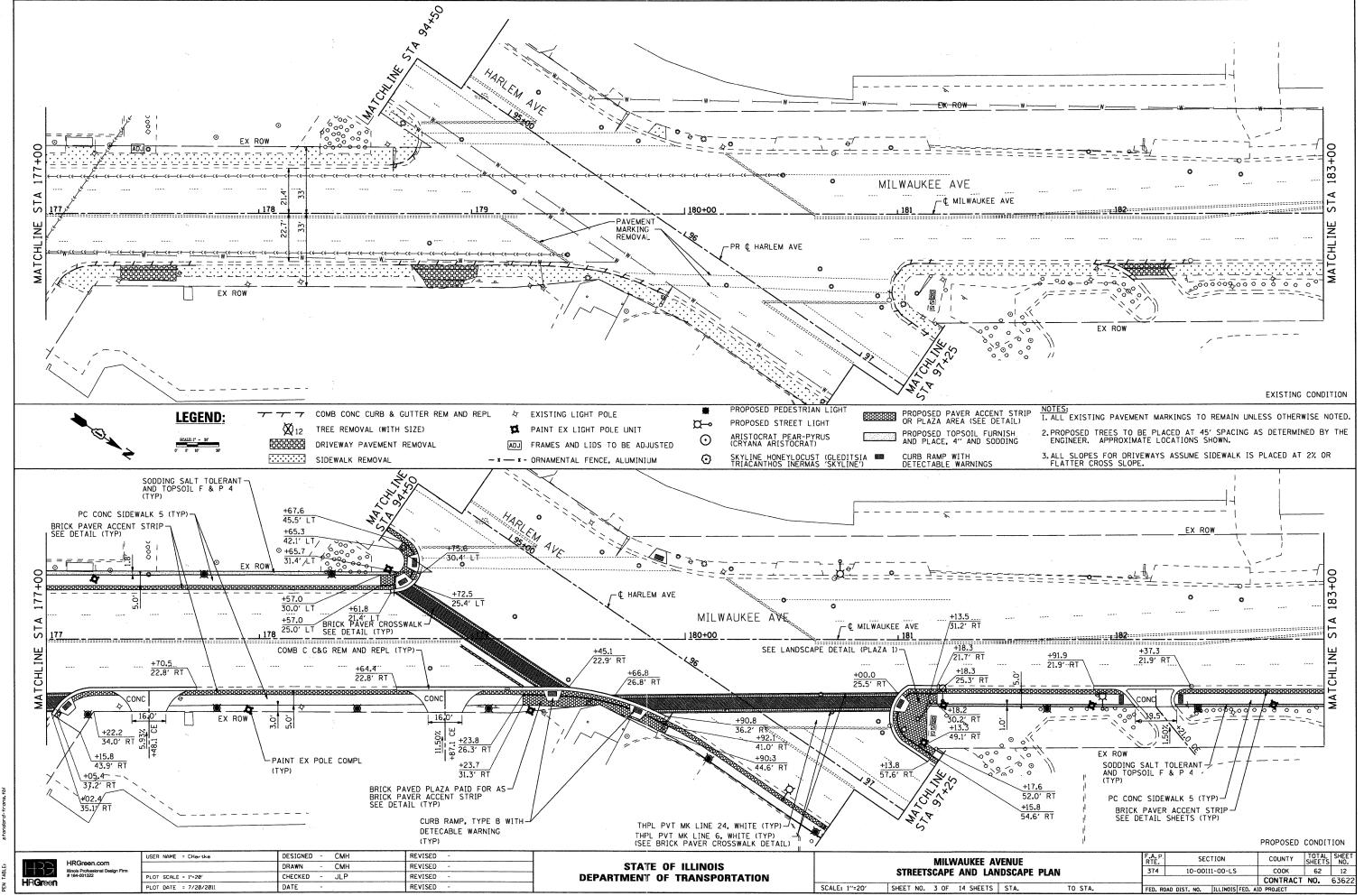
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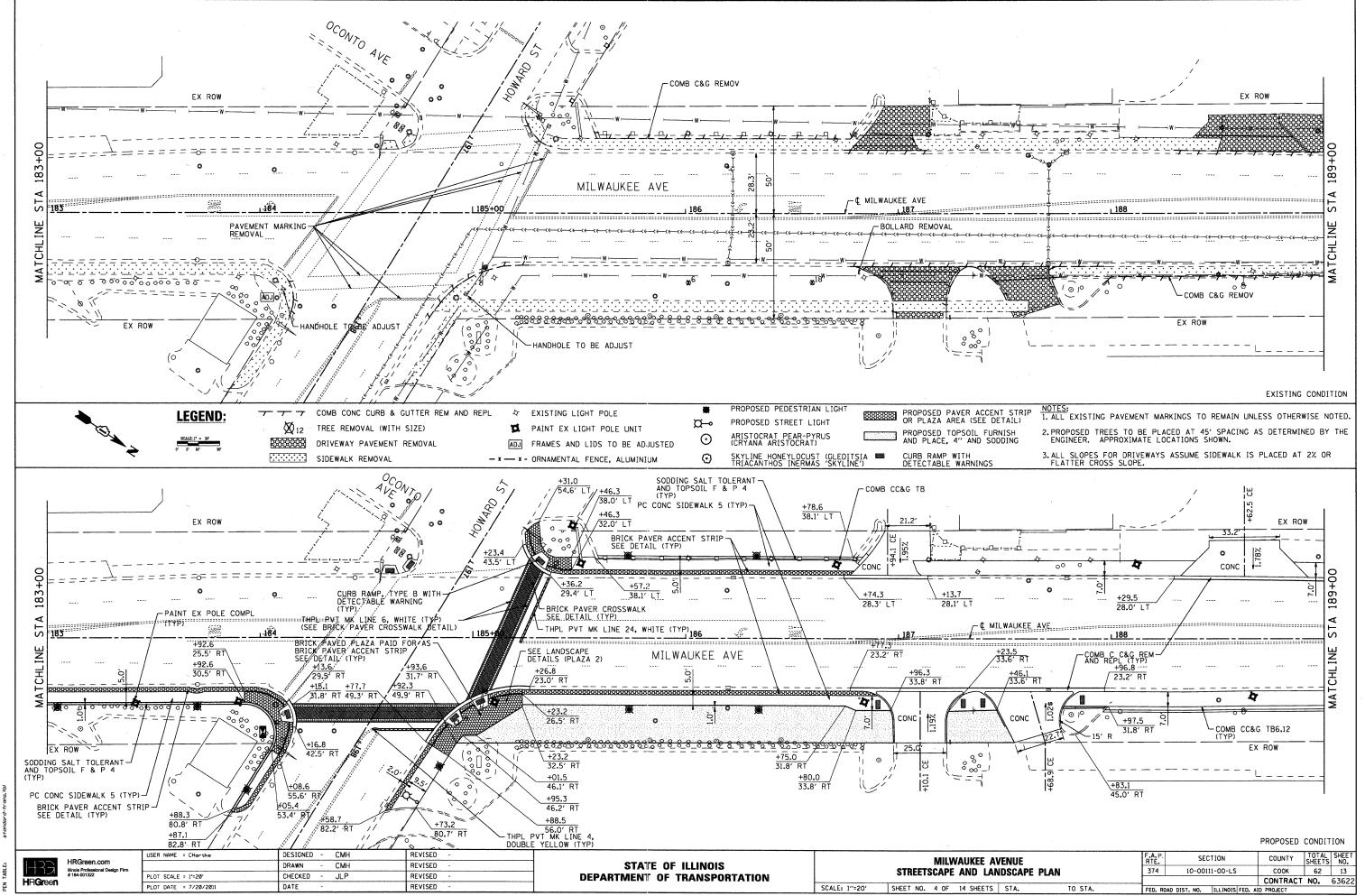
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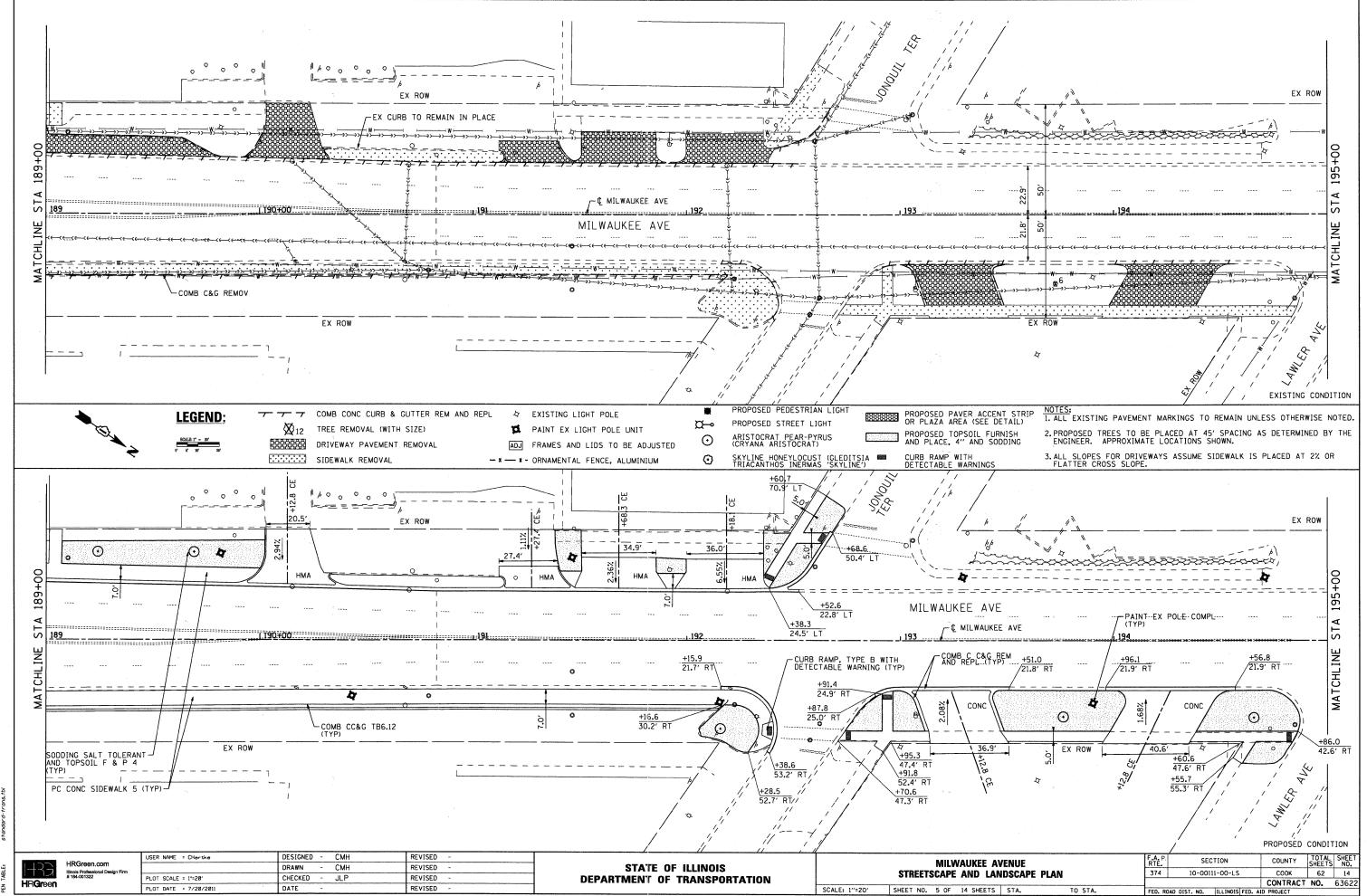
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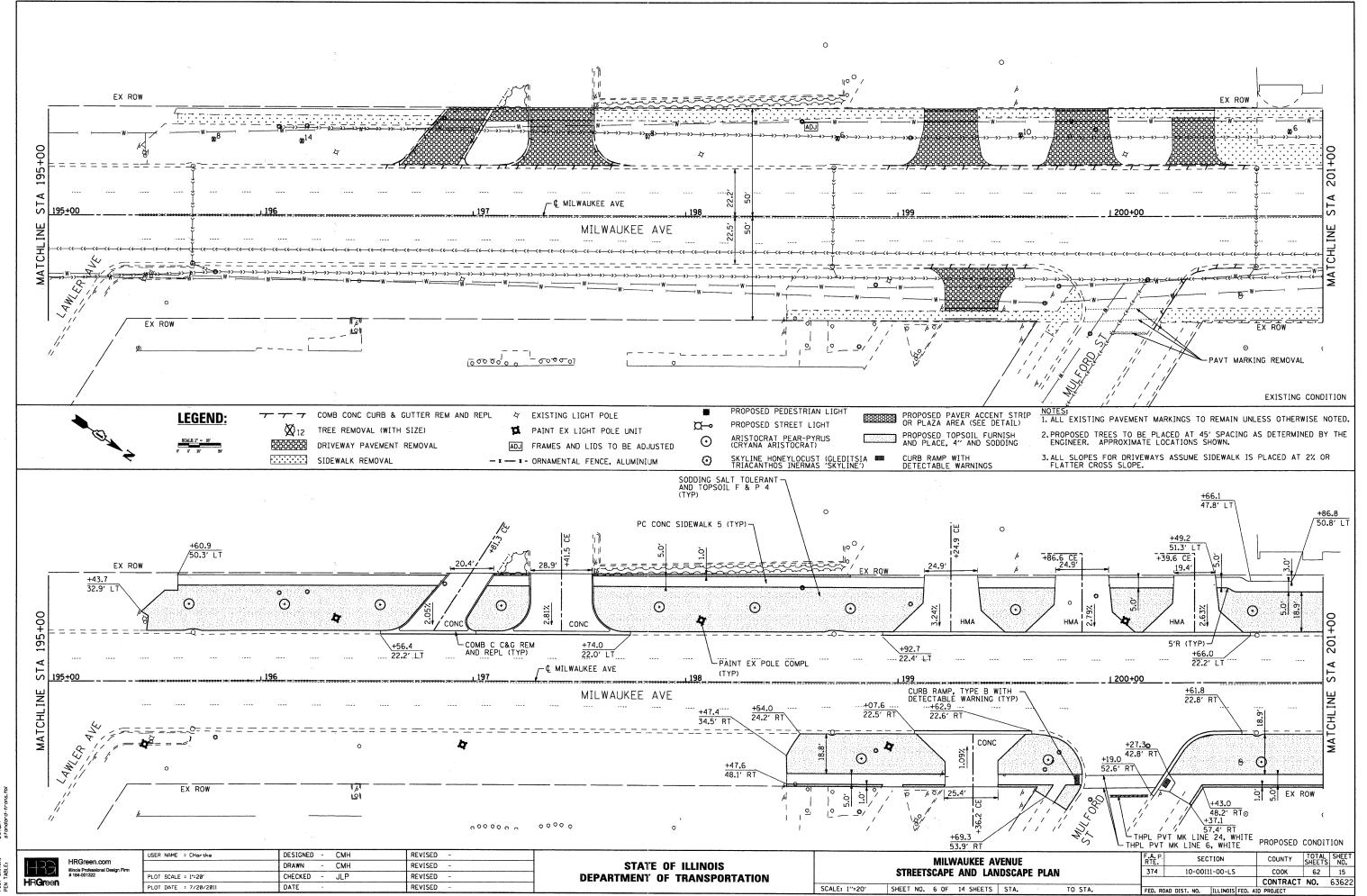




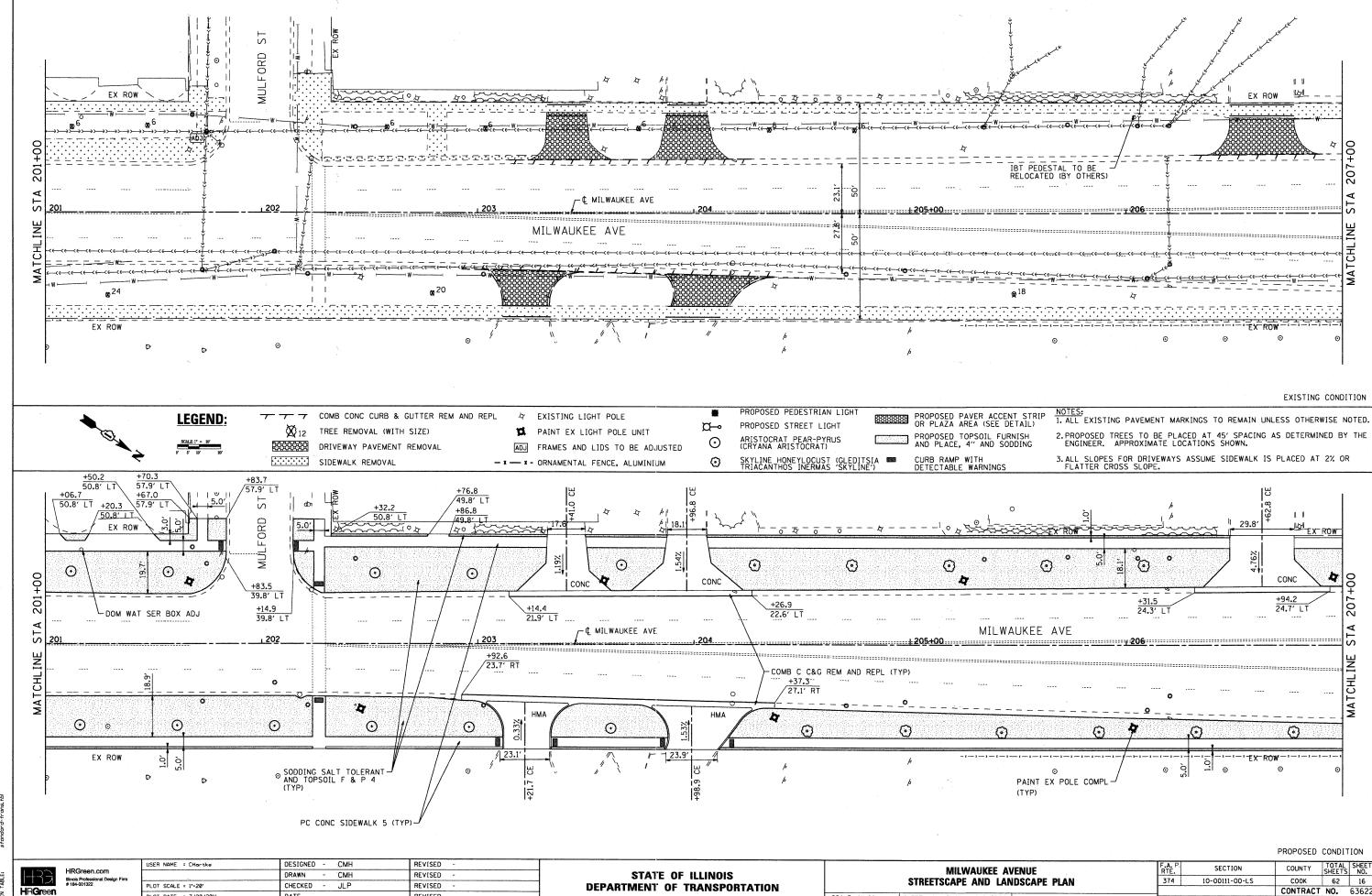
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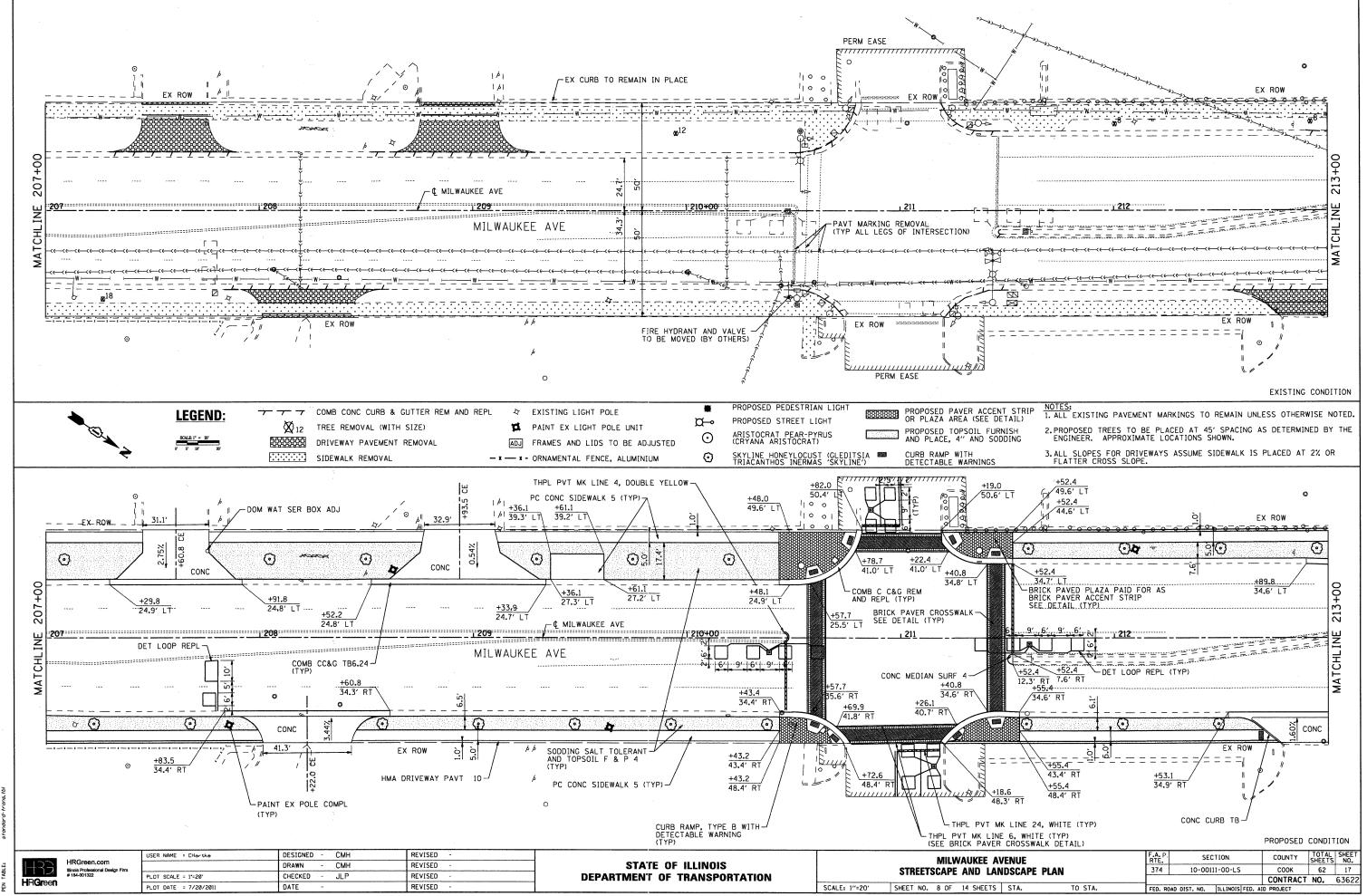
SHEET NO. 7 OF 14 SHEETS STA.

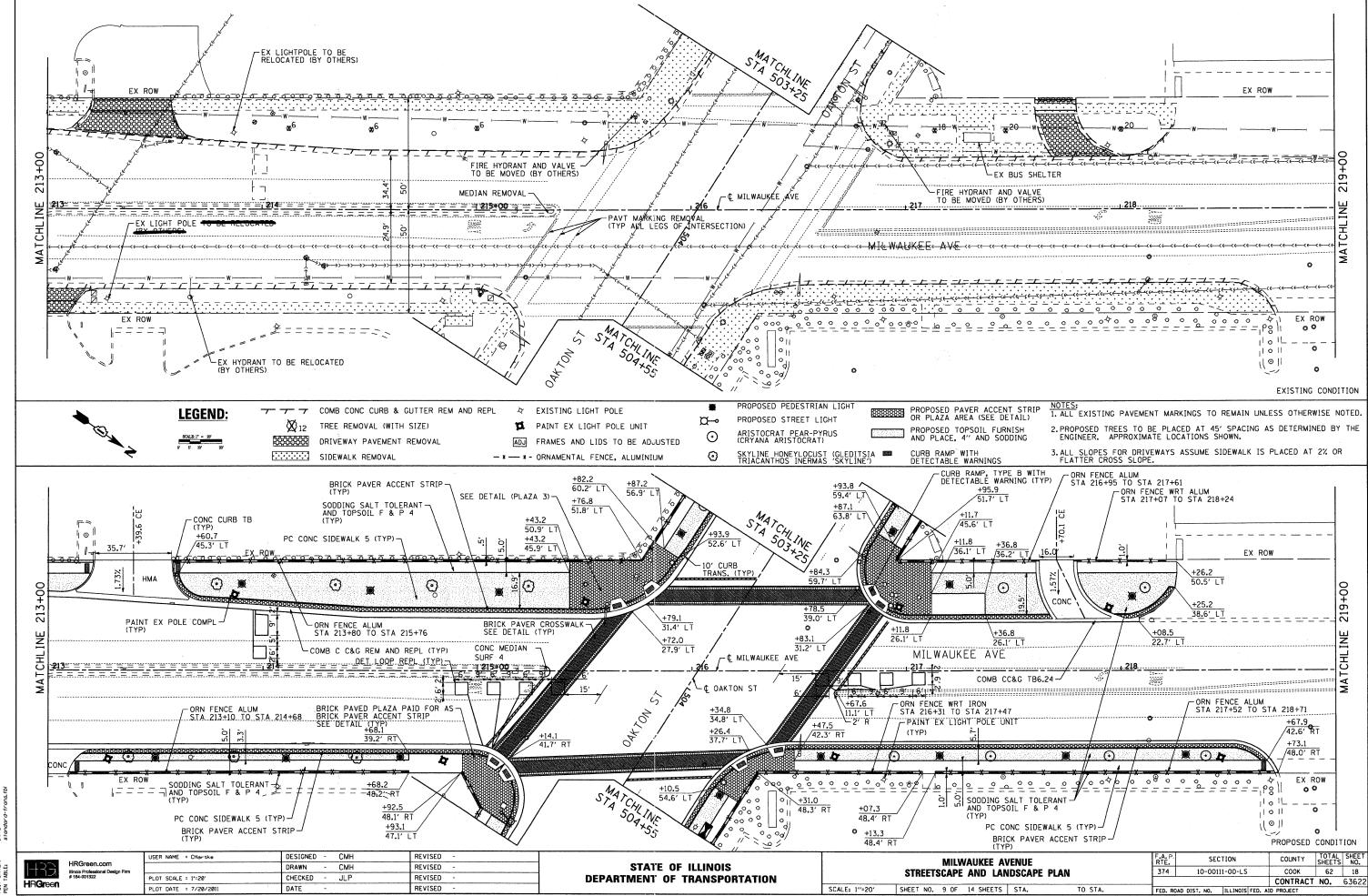
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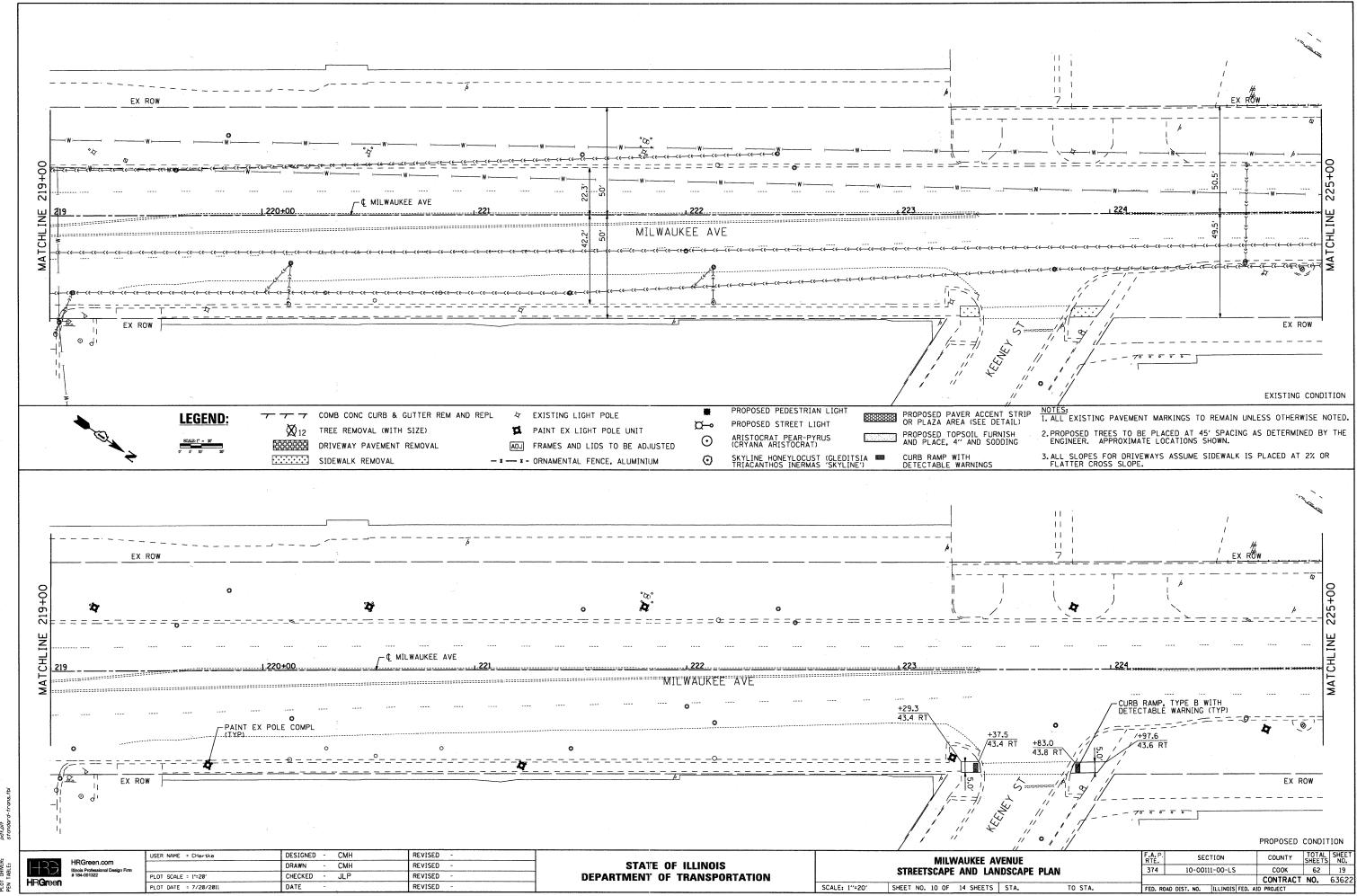
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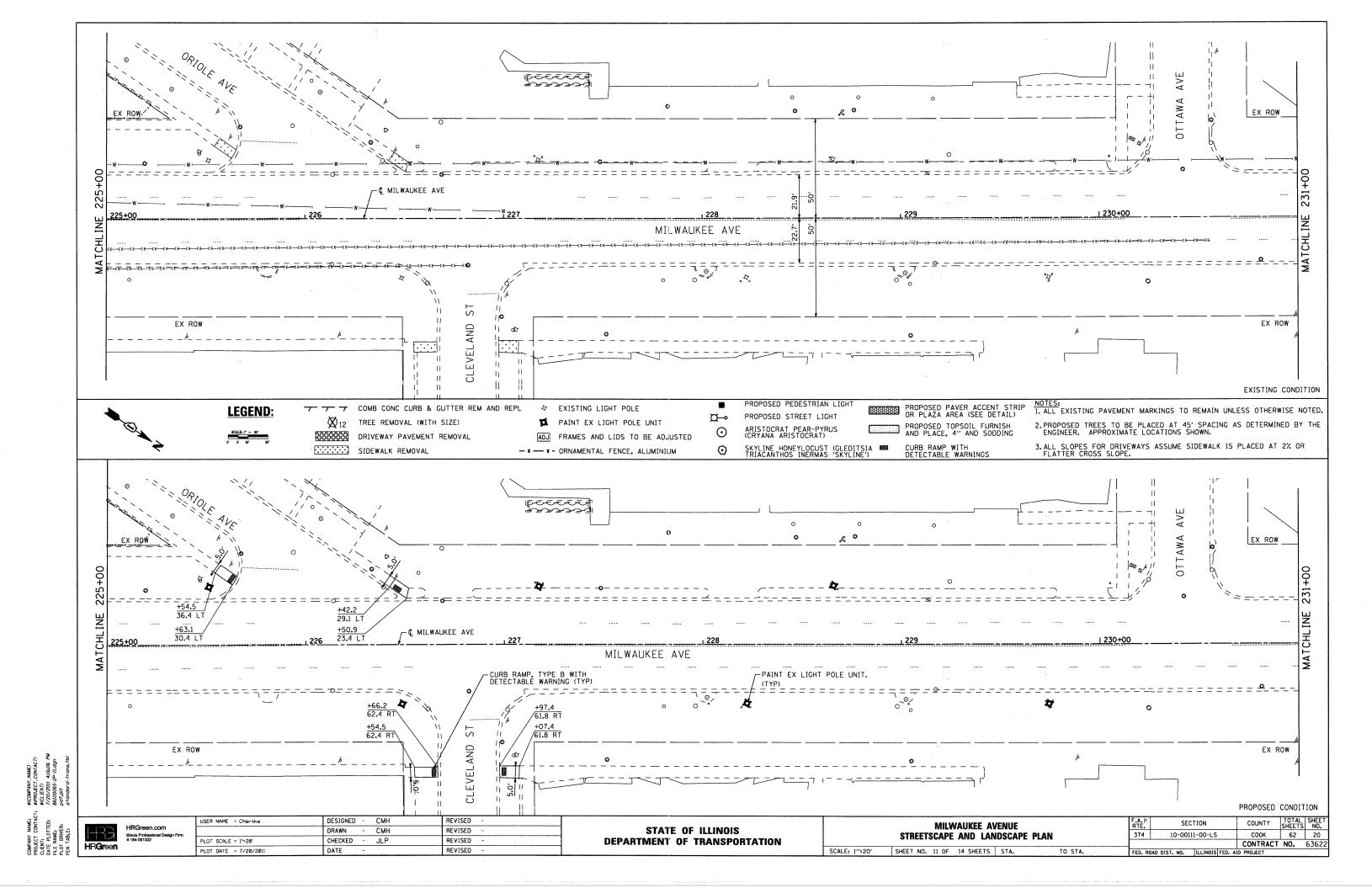
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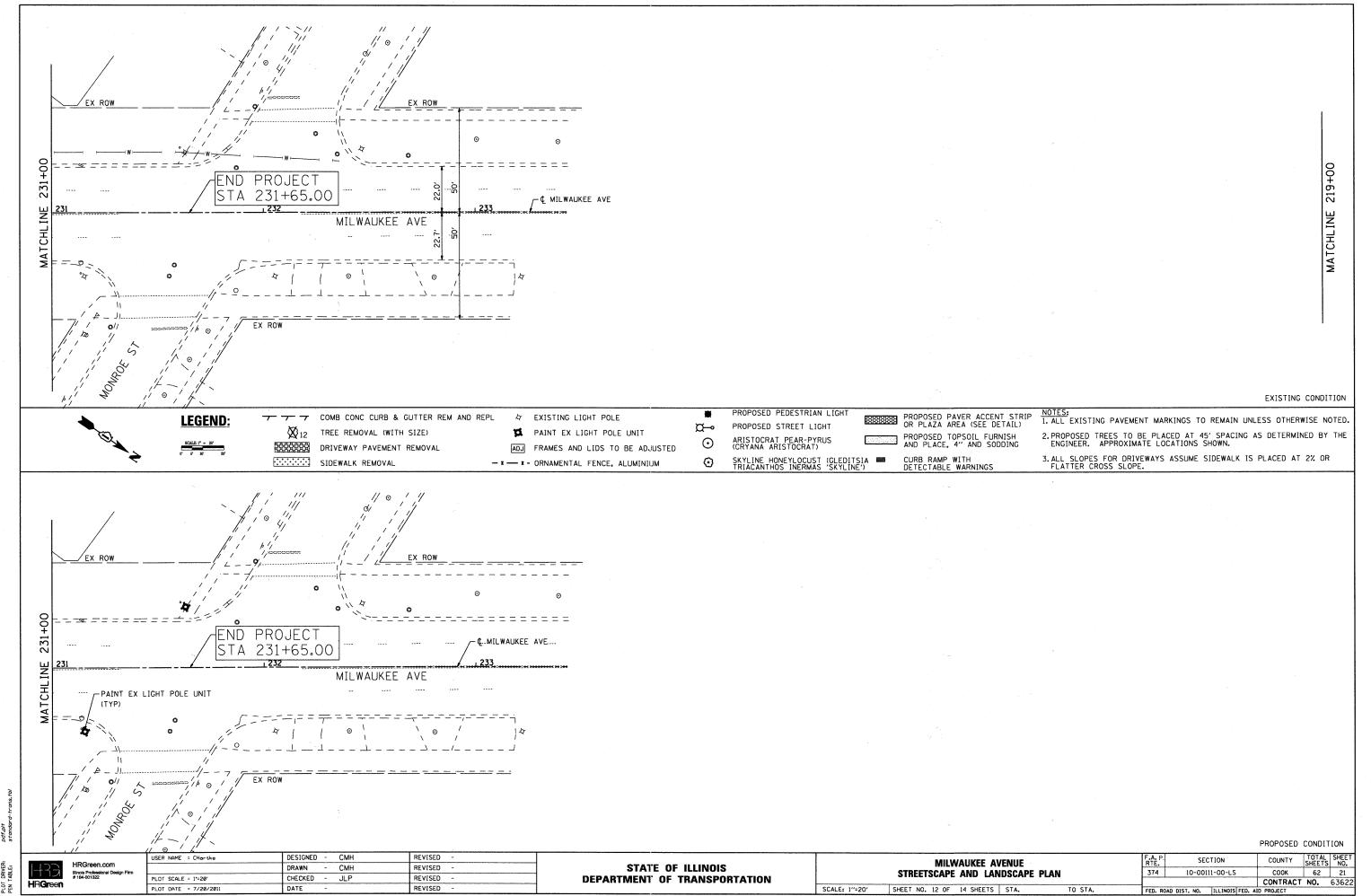
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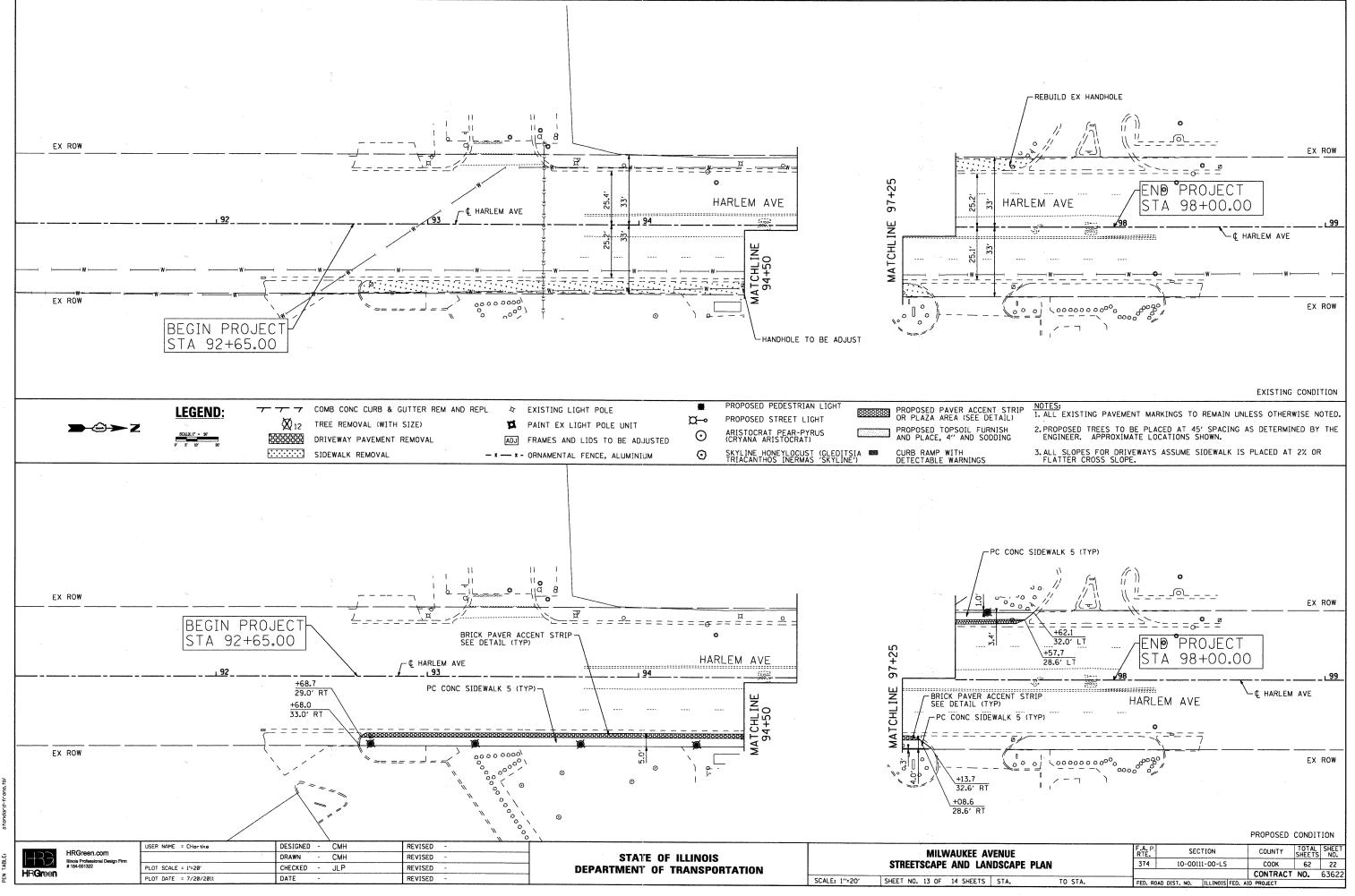




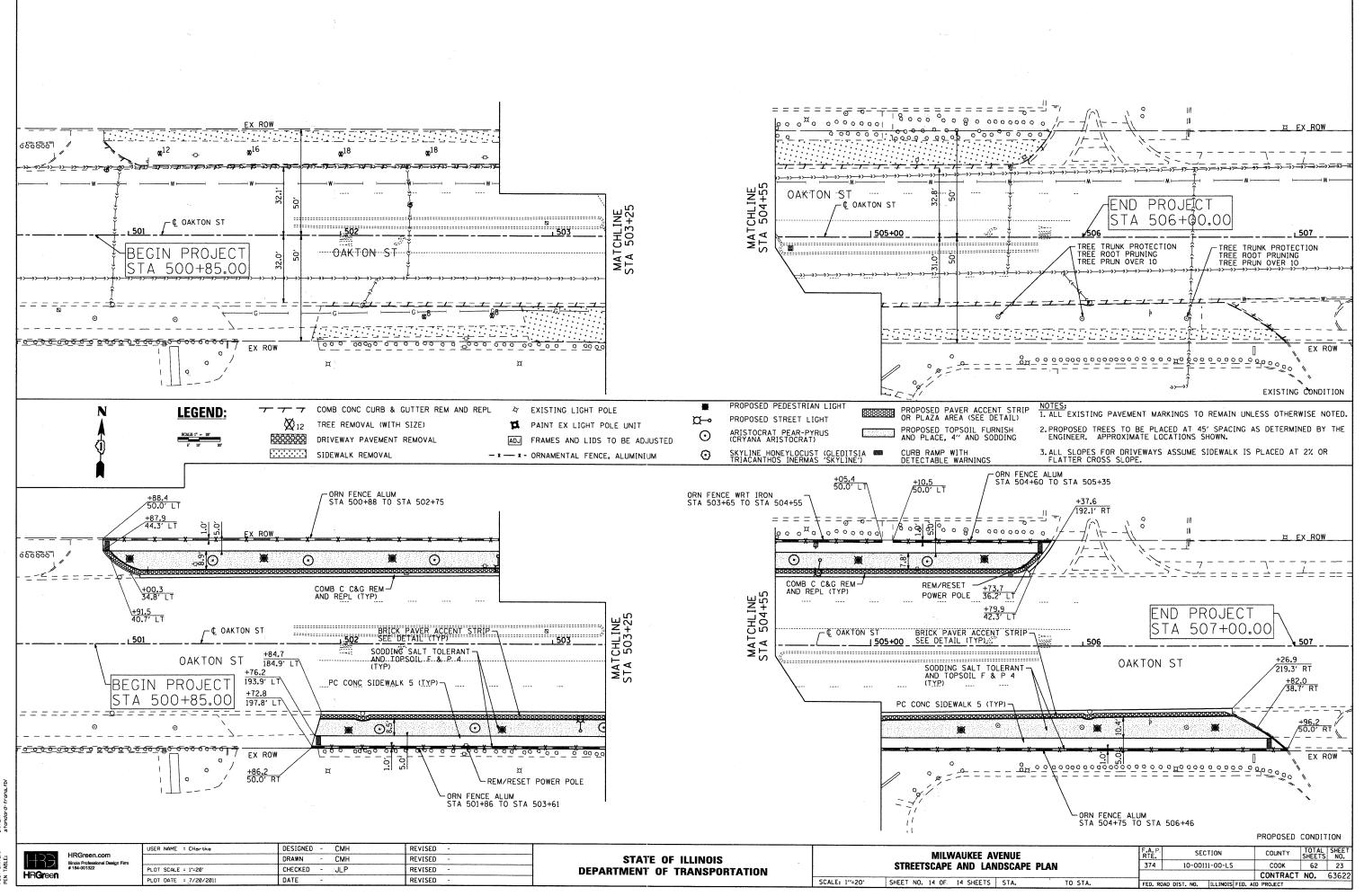




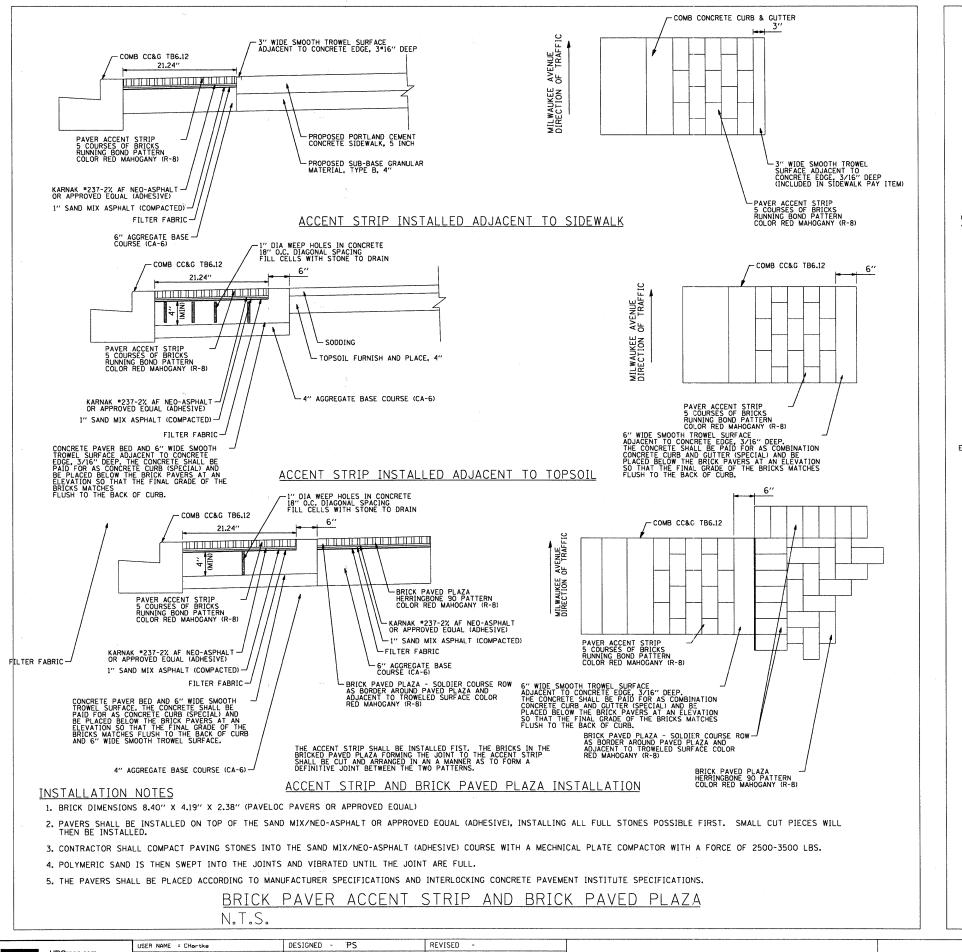
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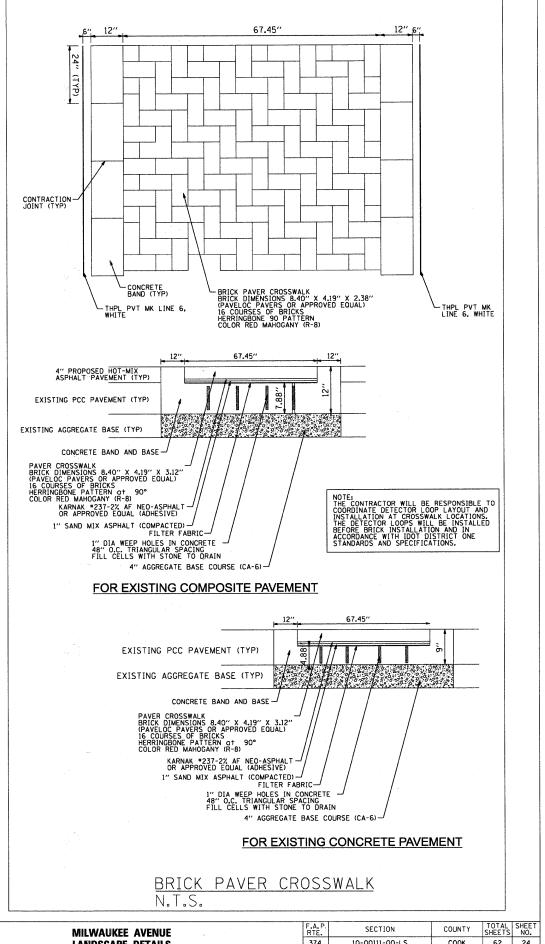


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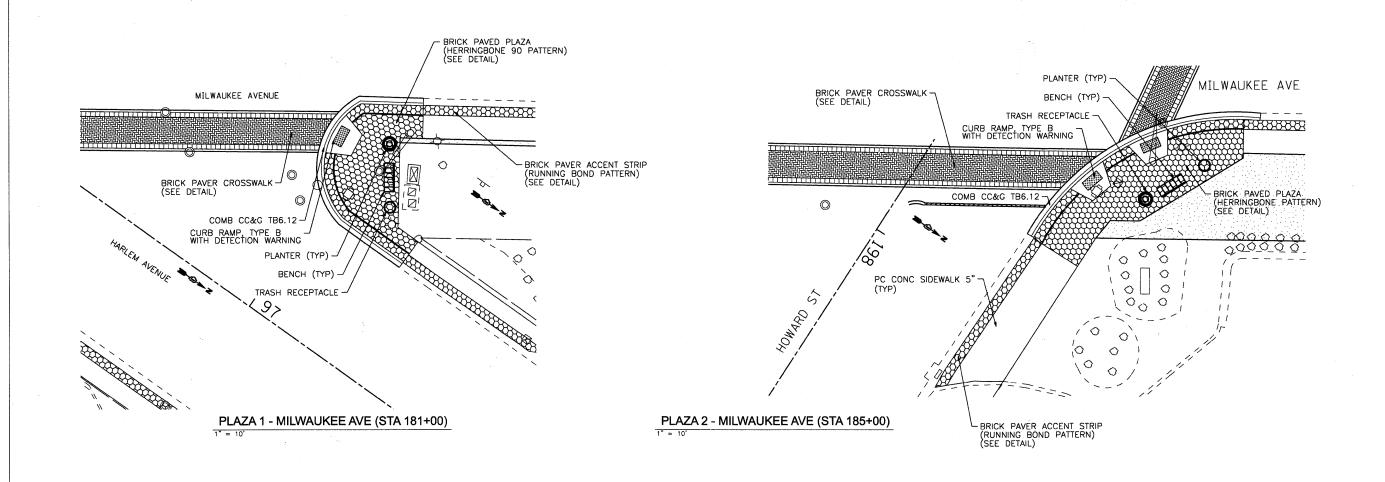
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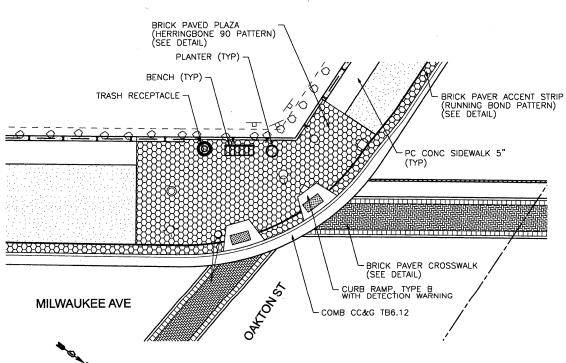
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

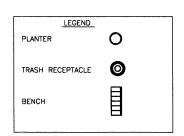
SCALE: NTS

COUNTY TOTAL SHEET NO.

COOK 62 24 LANDSCAPE DETAILS 10-00111-00-LS CONTRACT NO. 63622 SHEET NO. 1 OF 6 SHEETS STA. TO STA. FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT







PLAZA 3 - MILWAUKEE AVE (STA 216+00 SOUTHWEST CORNER)

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illinois Professional De
#184-001322

| <br>USER NAME = CHartke | DESIGNED | - | PS  | REVISED | - |
|-------------------------|----------|---|-----|---------|---|
|                         | DRAWN    | - | СМН | REVISED | - |
| PLOT SCALE = NTS        | CHECKED  | - | JLP | REVISED | - |
| PLOT DATE = 7/20/2011   | DATE     | - |     | REVISED | - |

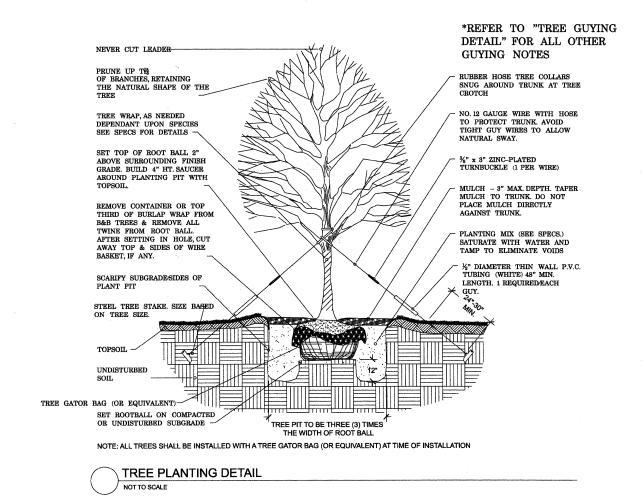
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|------------|------|----------------|
| DEPARTMENT | OF   | TRANSPORTATION |

SCALE: NTS

| <br>             | MILW | AUKEE A  | /ENUE |         | F.A. P.<br>RTE. | SECTION                         | COUNTY    | TOTAL<br>SHEETS | SHEET<br>NO. |
|------------------|------|----------|-------|---------|-----------------|---------------------------------|-----------|-----------------|--------------|
|                  | LAND | SCAPE DE | TAILS |         | 374             | 10-00111-00-LS                  | COOK      | 62              | 25           |
| <br><del>,</del> |      |          |       |         |                 |                                 | CONTRACT  | NO.             | 63622        |
| <br>SHEET NO.    | 2 OF | 6 SHEETS | STA.  | TO STA. | FED. RO         | AD DIST. NO.   ILLINOIS FED. AI | D PROJECT |                 |              |

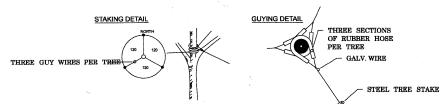
COMPANY
PROJECT
CLIENT:

86100065-ispde1-02.dgn



STAKING DETAIL **GUYING DETAIL** TWO SECTIONS OF RUBBER HOSE PER TREE - GALV, WIRE TWO GUY WIRES PER TREE STEEL TREE STAKE

\*APPLIES TO SINGLE TRUNK DECIDUOUS TREES 3\* CAL. AND LESS & EVERGREEN TREES 8\* HT. AND LESS & ALL MULTI-STEM TREES



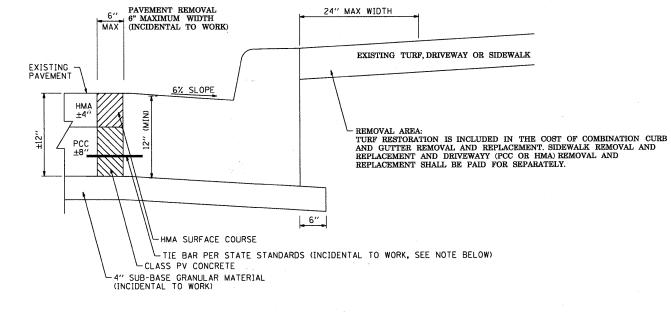
\*APPLIES TO SINGLE TRUNK DECIDUOUS TREES GREATER THAN 3" CAL. & EVERGREEN TREES GREATER THAN 8" HT.



#### REVISED USER NAME = CHartke HRGreen.com - CMH DRAWN REVISED CHECKED JLP REVISED **HRGreen** PLOT DATE = 7/20/2011

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

|            | MILW           | /AUKEE A\ | /ENUE |         | F.A.P.<br>RTE. | SECTION                         | COUNTY     | TOTAL<br>SHEETS |       |
|------------|----------------|-----------|-------|---------|----------------|---------------------------------|------------|-----------------|-------|
|            | LAND           | SCAPE DE  | TAILS |         | 374            | 10-00111-00-LS                  | COOK       | 62              | 26    |
|            |                |           |       |         |                |                                 | CONTRACT   | NO.             | 63622 |
| SCALE: NTS | SHEET NO. 4 OF | 6 SHEETS  | STA.  | TO STA. | FED. RO        | DAD DIST. NO.   ILLINOIS FED. A | ID PROJECT |                 |       |



#### NOTE:

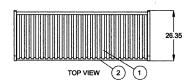
REMOVAL OF THE EXISTING PAVEMENT WILL BE REQUIRED IN ORDER TO INSTALL A FULL FRONT FACE FORM. STEEL ANGLE PIECES WILL NOT BE ALLOWED FOR FORMING. THE AREA BETWEEN THE EDGE OF THE EXISTING PAVEMENT AND THE FACE OF THE NEW GUTTER SHALL BE CLEANED OF ALL LOOSE MATERIAL AND FILLED WITH CLASS PV CONCRETE TO A 6 INCH (6") WIDTH.

THE 6" PCC WEDGE AT THE GUTTER FACE SHALL BE STRUCK OFF, CONSOLIDATED WITH A HAND VIBRATOR, AND FINISHED TO A TRUE AND EVEN SURFACE WITH FLOATS AND TROWELS. THE EDGES OF THE PCC WEDGE SHALL BE EDGED PARALLEL TO THE CURB FACE WITH AN EDGING TOOL HAVING A 1/4 IN. RADIUS EXTENDING TO A MAXIMUM DEPTH OF 1/4 IN.

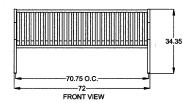
THE FINAL FINISH SHALL BE DONE WITH A WOODEN FLOAT, LEAVING AN EVEN SURFACE. AFTER THE WATER SHEEN HAS DISAPPEARED, THE SURFACE SHALL BE GIVEN A FINAL FINISH BY BRUSHING.

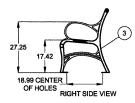
IF THE CONDITION OF THE EXISTING PAVEMENT TO REMAIN IS DETERIORATED TO THE EXTENT THAT DRILLING FOR INSTALLATION OF DOWEL BARS IS NOT FEASIBLE, THEN DOWEL BARS MAY BE OMITTED FOR THAT LOCATION.

COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT



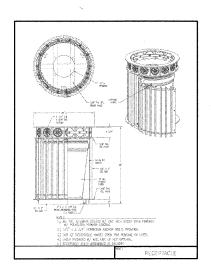


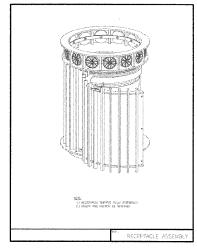




#### TYPICAL BENCH DETAIL

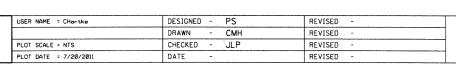
SCALE: N.T.S.





HRGreen.com

**HRGreen** 



3/4" DRILLED ANCHOR HOLE.
SECURE BOLTS WITH EPOXY GROUT 12" X 6" DIA. CONCRETE ANCHORING BLOCK 4 PER BENCH SUBGRADE

BENCH LEG

1/2" DIA. X 4-5" STAINLESS STEEL ANCHORING BOLT

MANUFACTURER: SITESCAPES OR APPROVED EQUAL

PRODUCT: Cityview Cast End Backed Bench CV1-1010DF OR APPROVED EQUAL

COLOR: Onyx

LENGTH: 6'-0"

FINISH:

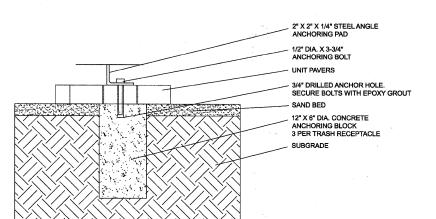
MATERIAL LIST:

1. Seat straps - 5/16" x 1 1/2" steel flat bar.

2. Support pipes - Ø 1.315" x .133" steel pipe.

3. End units - 1 1/4" cast iron with 9/16"

4. Mounted with four Ø 1/2" x 4-5" stainless steel anchor bolts (customer supplied).



**BENCH ANCHOR DETAIL** 

SCALE: N.T.S.

MANUFACTURER:

DuMor, Inc. OR APPROVED EQUAL

PRODUCT:

Receptacle 102-32SH-FTO OR APPROVED EQUAL

COLOR: Black

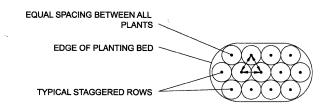
TYPICAL TRASH RECEPTACLE DETAIL

SCALE: N.T.S.

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

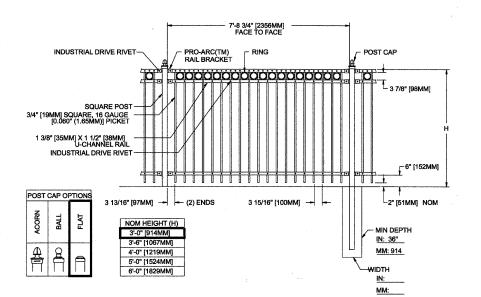
F.A.P. RTE. 374 COUNTY TOTAL SHEET NO.

COOK 62 27 SECTION MILWAUKEE AVENUE LANDSCAPE DETAILS 10-00111-00-LS CONTRACT NO. 63622 SCALE: NTS SHEET NO. 5 OF 6 SHEETS STA. FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT



### TYPICAL PLANTING BED PLAN

SCALE: N.T.S.



## ORNAMENTAL FENCE, ALUMINUM **TYPICAL DETAIL**

SCALE: N.T.S.

MANUFACTURER: MASTER HALCO OR APPROVED EQUAL

PRODUCT:I COLONIAL ALUMINUM Nom 8' Section Length - 3/4" PLUS OR APPROVED EQUAL

COLOR:Black

HEIGHT: 3'-0"

POST:Flat

MATERIAL: ALUMINUM

FINISH:Powder Coat

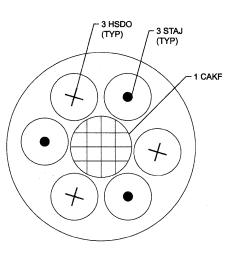
1. Metric dimensions are nominal equivalents to U.S. dimensions.

- 2. Footing width to be (4)x post width.
- 3. See panel & post selection sheet for available post sizes.
- 4. For installation on concrete see post detail.

#### **PLANT LIST**

| KEY  | COMMON NAME        | BOTANICAL NAME                           |
|------|--------------------|--|
| CAKF | Feather Reed Grass | Calamagrostis acutiflora 'Karl Foerster' |
| STAJ | Sedum-Autumn Joy   | Sedum telephium 'Autumn Joy'             |
| HSDO | Daylily ~          | Hemerocallis 'Stella de Oro'             |

 $\begin{array}{l} \textbf{NOTE:} \\ \hline \textbf{FURNISHING AND INSTALLING PLANTS IN PLANT BED IS INCLUDED IN THE COST OF PLANTER \\ \end{array}$ 



#### TYPICAL PLANTER DETAIL - PLAN VIEW

SCALE: N.T.S.



Custom Design Precast OR APPROVED EQUAL

PRODUCT: CDP3046 OR APPROVED EQUAL

TYPICAL PLANTER DETAIL - PROFILE VIEW

SCALE: N.T.S.

| USER NAME = CHartke   | DESIGNED - PS | REVISED - |
|-----------------------|---------------|-----------|
|                       | DRAWN - CMH   | REVISED - |
| PLOT SCALE = NTS      | CHECKED - JLP | REVISED - |
| PLOT DATE = 7/20/2011 | DATE -        | REVISED - |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

|            | ·         | MILW | AUKEE AV | ENUE  |         | F.A.P.<br>RTE | SECTION                        | COUNTY    | TOTAL | SHEET<br>NO. |
|------------|-----------|------|----------|-------|---------|---------------|--------------------------------|-----------|-------|--------------|
|            |           | LAND | SCAPE DE | TAILS |         | 374           | 10-00111-00-LS                 | COOK      | 62    | 28           |
| COLLE      | T ===     |      |          |       |         |               |                                | CONTRACT  | NO.   | 63622        |
| SCALE: NTS | SHEET NO. | 6 OF | 6 SHEETS | STA.  | TO STA. | FED. ROAD     | D DIST. NO.   ILLINOIS FED. AI | D PROJECT |       |              |

#### GENERAL NOTES

- 1. THIS PROJECT INCLUDES THE INSTALLATION OF PEDESTRIAN LIGHTING ALONG MILWAUKEE AVE BETWEEN HOWARD ST. AND HARLEM AVE. INCLUDING PEDESTRIAN LIGHTING ALONG HOWARD ST AND HARLEM AVE. AT THE INTERSECTION WITH MILWAUKEE. PEDESTRIAN LIGHTING SHALL ALSO BE INSTALLED AT THE INTERSECTION OF MILWAUKEE AVE. AND OAKTON ST.
- 2. THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO COORDINATE THE ELECTRIC SERVICE WORK
- 3. THE CONTRACTOR SHALL SUBMIT FOR THE RESIDENT ENGINEER'S REVIEW WITHIN 30 DAYS AFTER CONTRACT EXECUTION, EIGHT COPIES OF APPROVED MANUFACTURER'S PRODUCT DATA AND DETAILED SHOP DRAWINGS TO THE RESIDENT ENGINEER.
- 4. TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE LIGHT POLES, THE LIGHT POLES SHALL NOT BE ERECTED AND/OR LEFT TO STAND WITHOUT LUMINAIRE. NOTE THAT THE LIGHT POLES WILL NOT BE PAID FOR UNTIL THE POLES ARE FULLY APPROVED AND THE LUMINAIRES ARE INSTALLED.
- 5. THE QUANTITIES OF RACEWAY WHERE INDICATED IN THESE PLANS ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.
- 6. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. TO LOCATE AND MARK/STAKE ALL UNDERGROUND UTILITIES.
- 7. THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF NILES TO LOCATED AND MARK/STAKE ALL VILLAGE OWNED UNDERGROUND UTILITIES.
- 8. TRENCHES FOR LIGHTING RACEWAYS SHALL HAVE A MINIMUM DEPTH OF 30".
- 9. WHERE SEPARATE CIRCUIT RUNS ARE TO BE INSTALLED PARALLEL WITH EACH OTHER, ONE COMMON TRENCH SHALL BE USED AND SHALL BE MEASURED ONLY ONCE FOR PAYMENT, AS TRENCH AND BACKFILL FOR ELECTRICAL WORK.
- 10. THE CONTRACTOR SHALL COORDINATE THE FOUNDATION HEIGHTS WITH THE FINISHED SIDEWALK ELEVATION SO FOUNDATION DOES NOT PROTRUDE BEYOND SPECIFIED REQUIREMENTS.
- 11. AT THE COMPLETION OF THE PROJECT THE LIGHTING SYSTEMS SHALL BE OWNED AND MAINTAINED BY THE VILLAGE OF NILES.
- 12. LIGHTING SYSTEM INSTALLATION SHALL CONFORM TO THE LATEST IDOT STANDARDS, NEC AND LOCAL CODES.
- 13. ALL ELECTRICAL EQUIPMENT AND PRODUCTS SHALL BE U/L LISTED AND LABELED.
- 14. THE CONTRACTOR SHALL SUBMIT FOUR (4) SETS OF FULL SIZED COMPLETE AND ACCURATE "RECORD DRAWINGS" TO THE ENGINEER FOR REVIEW AND COMMENT, AS SPECIFIED. THE "RECORD DRAWINGS" SHALL BE UPDATED ON A REGULAR BASIS AND DEPICT ALL ROADWAY LIGHTING MATERIAL INSTALLATIONS WITH ANY CHANGES INDICATED IN RED. "REPORDUCIBLE RECORD DRAWINGS" SHALL BE SUBMITTED AT LEAST 7 DAYS BEFORE SCHEDULING A FINAL INSPECTION.
- 15. PROPOSED PEDESTRIAN LIGHTING UNITS SHALL BE SET AT THE BACK OF PROPOSED SIDEWALK.
- 16. CONTRACTOR SHALL TAKE CARE INSTALLING UNIT DUCT TO AVOID CONFLICTSWITH EXISTING UNDERGROUND UTILITIES AND TREES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AS DIRECTED BY THE ENGINEER.
- 17. CONTRACTOR SHALL TAKE CARE INSTALLING LIGHT POLE FOUNDATIONS TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES. SOME POLE LOCATIONS WHICH WILL REQUIRE OFFSET FOUNDATIONS HAVE BEEN INDICATED ON THE PLANS. THE ENGINEER SHALL DETERMINE IF ADDITIONAL LOCATIONS ARE REQUIRED.
- 18. ALL UNIT DUCT SHALL BE INSTALLED USING THE BORED AND PULLED METHOD. THE COST SHALL BE INCLUDED WITH PAY ITEM UNIT DUCT, 600V, 3 1/C NO. 6 AND 1/C NO. 8 GROUND (XLP-TYPE USE), 1 ½" DIA. POLYETHYLENE
- 19. THE CONTRACTOR SHALL CHISEL ARROWS LOCATING ALL CONDUIT CROSSINGS ACROSS ROADWAYS. THE CHISEL MARKS SHALL BE ON THE CURB.
- 20. GROUND RODS SHALL BE FURNISHED AND INSTALLED AS REQUIRED PER PLAN FOR EACH LIGHTING UNIT. THE COST SHALL BE INCLUDED WITH PAY ITEMS LIGHT POLE FOUNDATION 24" DIAMETER AND LIGHT POLE FOUNDATION 24" DIAMETER, OFFSET. GROUND RODS SHALL BE FURNISHED AND INSTALLED AS REQUIRED PER PLAN FOR EACH LIGHTING CONTROLLER. THE COST SHALL BE INCLUDED WITH PAY ITEM LIGHTING CONTROLLER.
- 21. RESTORATION OF PARKWAY AND PROJECT SITE SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND CONTRACT DOCUMENTS.

THE EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONTRUCTION OF THE PROPOSED PEDESTRIAN LIGHTING.

#### LIGHTING BILL OF MATERIALS

| PAY ITEM         | DESCRIPTION   | UNIT   | OUANTITY |
|------------------|---|--------|----------|
| 80400100         | ELECTRIC SERVICE INSTALLATION   | EACH   | 2        |
| 80400200         | ELECTRIC UTILITY SERVICE CONNECTION   | L SUM  | 1        |
| 81000600         | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL  | FOOT   | 100      |
| 81018900         | CONDUIT PUSHED, 4" DIA. GALVANIZED STEEL  | FOOT   | 560      |
| 81603050         | UNIT DUCT, 600V, 3-1/C NO. 6, 1/C NO. 8 GROUND (XLP-TYPE USE), 1° DIA. POLYETHYLENE | FOOT   | 3745     |
| 81702160         | ELECTRIC CABLE IN CONDUIT, 600V (KIP-TYPE USE) 1/C #1/0                             | FOOT   | 336      |
| 81900200         | TRENCH AND BACKFILL FOR ELECTRICAL WORK   | FOOT   | 100      |
| 8210225 <b>0</b> |   | EACH   | 9        |
| 82500350         | LIGHTING CONTROLLER, BASE MOUNTED, 240 VOLT, 100 AMP                                | EACH   | 2        |
| 83007500         | LIGHT POLE, ALUMINUH, +35 FT. H.H., 12 FT. MAST ARM                                 | EACH   | 9        |
| 83600200         | LIGHT POLE FOUNDATION, 24" DIAMETER   | FOOT   | 288      |
| 84200500         | REMOVAL OF LIGHTING UNIT, SALVAGE   | EACH   | 2        |
| X8250500         | LIGHTING UNIT COMPLETE, SPECIAL   | EACH   | 48       |
| X8360215         | LIGHT FOLE FOUNDATION 24" DIAMETER. OFFSET  | FOOT   | 18       |
| Z0033028         | MAINTENANCE OF LIGHTING SYSTEM  | CAL NO | 6        |

| FEREIAD                             |  |
|-------------------------------------|--|
| <b>~</b> ¤                          | PROPOSED LIGHTING UNIT: 35FT MH, 12FT MA<br>250W, 120V HPS LUMINAIRE   |
| 0———— E                             | EXISTING LIGHTING UNIT TO REMAIN   |
| NOT IT SHARED IS CALLEDY IN CITEMPS | UNIT DUCT, 600V, 3-1/C * 6, 1/C *8 GROUNI<br>(XLP-TYPE USE) 1" DIA. POLYTHYLENE                              |
|                                     | ELECTRIC SERVICE POLE  |
|                                     | PROPOSED LIGHTING CONTROLLER   |
| <u>Р</u>                            | RIGID GALVANIZED STEEL CONDUIT PUSHED AS INDICATED   |
| <u> </u>                            | RIGID GALVANIZED STEEL CONDUIT IN TRENCH AS INDICATED  |
| Ţ                                   | GROUND ROD   |
| ****                                | ELECTRIC CABLE IN CONDUIT, 3-1/C NO. 1/0   |
| ¤                                   | PROPOSED ORNAMENTAL LIGHTING UNIT:<br>ALUMINUM POST WITH CAST ALUMINUM<br>BASE 16 FT HEIGHT POST TOP MOUNTED |

LUMINAIRE SO WATT HPS. 120V

TO STA.

LEGEND

LTG-01

AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warran Avenue
Downwis Count, It 85515
[833] 70 1997 (i) [833 90 3803 55
www.xmhousquarking.or son

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VILLAGE OF NILES LIGHTING IMPROVEMENTS
GENERAL NOTES, LEGEND AND SUMMARY OF QUANTITIES

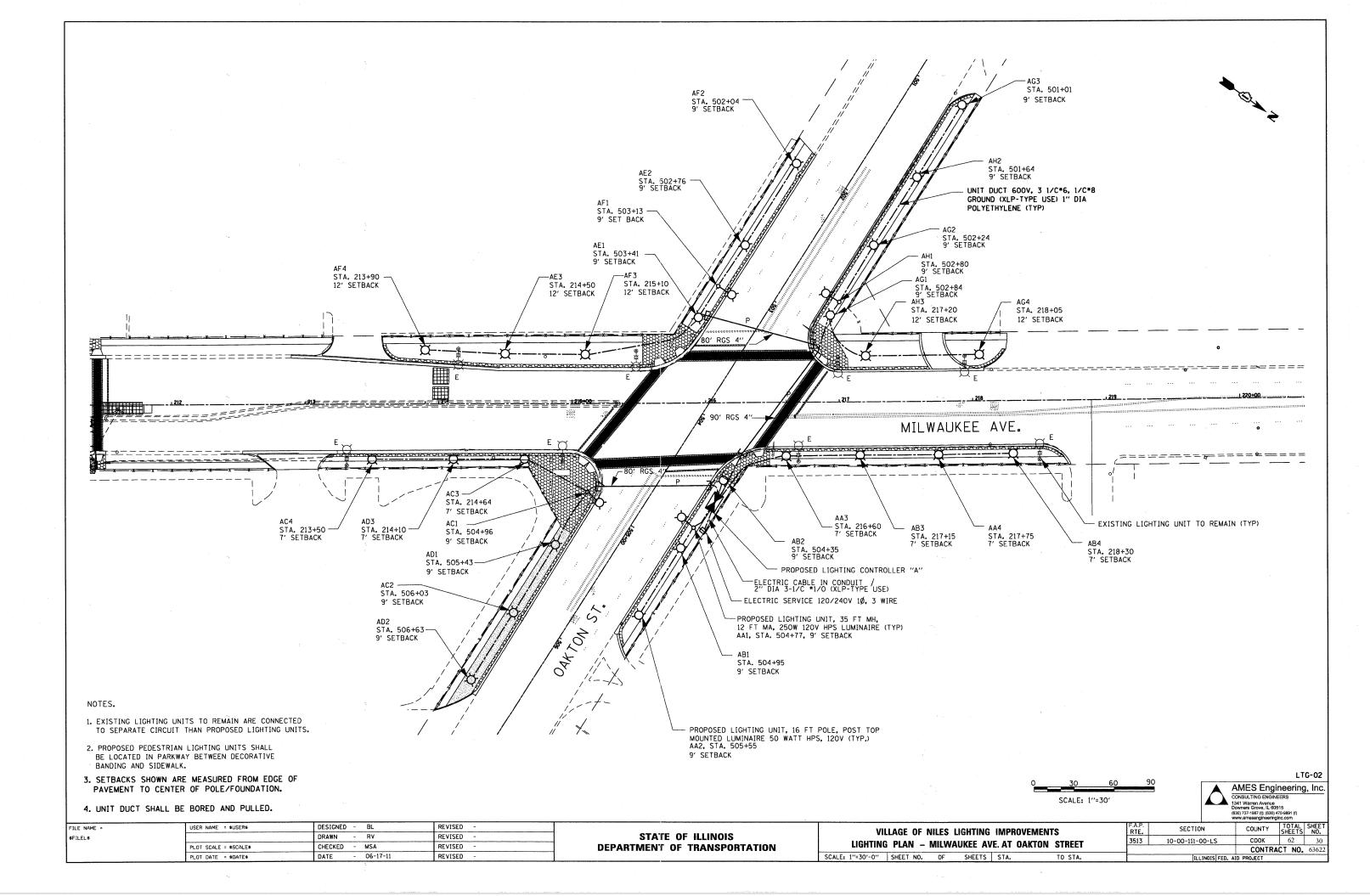
SHEET NO. OF SHEETS STA.

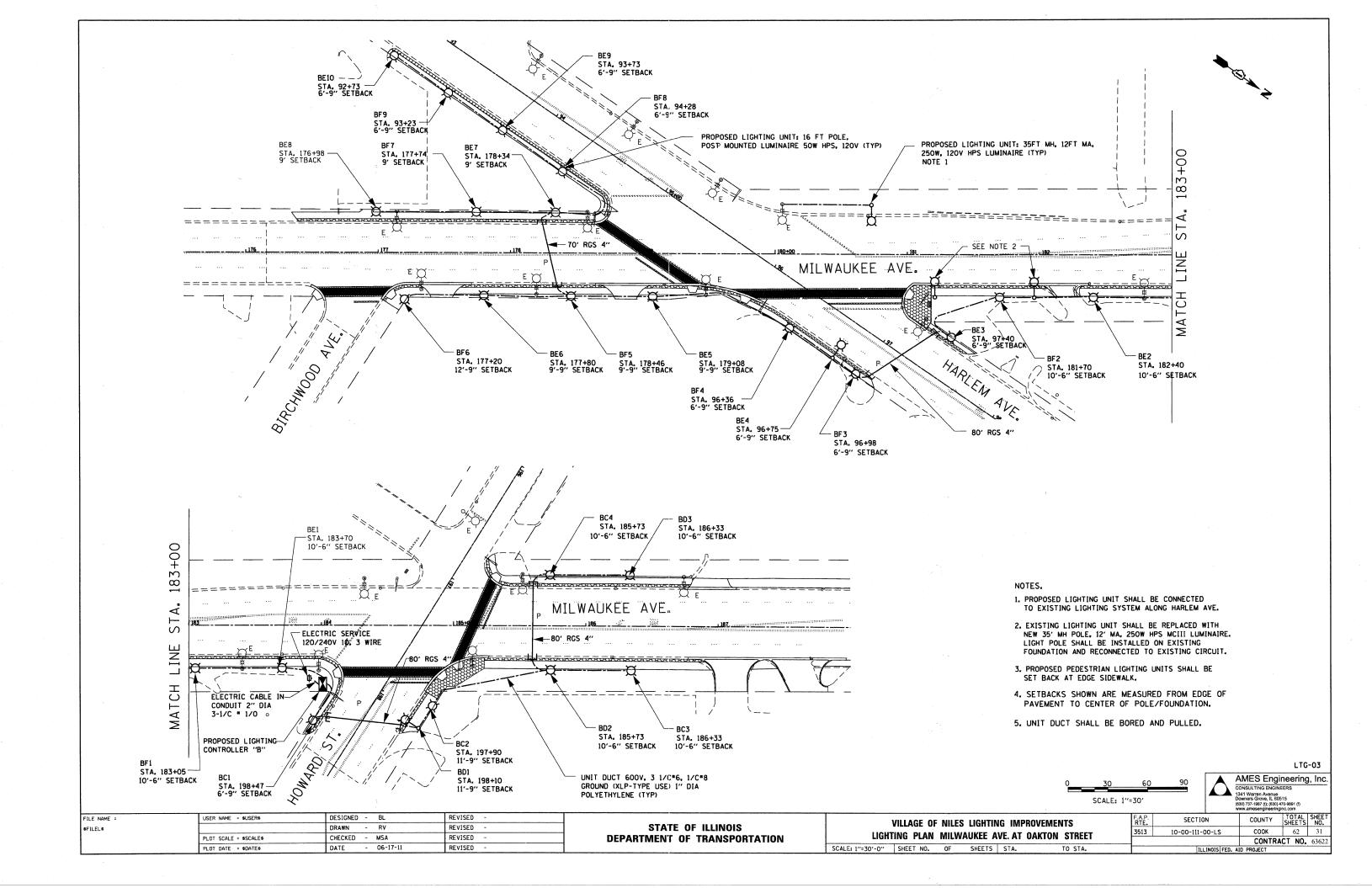
RIE. SECTION COUNTY TOTAL SHEETS NO. 3513 10-00-111-00-LS COOK GZ Z9

DIAMOGRAPH AND REACT NO. 636ZZ

FILE NAME = USER NAME = 6USER6 DESIGNED - BL REVISED 
\$FILE 16

PLOT SCALE = 4SCALE6 CHECKED - MSA REVISED 
PLOT DATE = 4DATE6 DATE - 06-17-11 REVISED -





#### CONTROLLER "A" @ OAKTON STREET

|           | RE          | ED              |         | BLA                                    | /CK    |
|-----------|-------------|-----------------|---------|--|--------|
| CIRCUIT - | AMPS @ 120V | VA <sup>°</sup> | CIRCUIT | AMPS @ 120V                            | VA     |
| Α         | 3.39        | 406.8           | В       | 1.72                                   | 206.4  |
| С         | 3.39        | 406.8           | D       | 1.29                                   | 154.8  |
| E         | 1.29        | 154.8           | F       | 3.39                                   | 406.8  |
| Ğ         | 1.72        | 206.4           | н       | 2.96                                   | 355.2  |
| I         | SPARE       | SPARE           | J       | SPARE                                  | SPARE  |
| TOTAL     | 9.79        | 1174.8          | TOTAL   | 9.36                                   | 1123.2 |
| TOTAL LO  | AD 19.15A   |                 |         | ······································ |        |

#### LOAD DATA:

50W HPS, 120V LUMINAIRE: 0.43A/LUMINAIRE 250W, 120V LUMINAIRE: 2.1A/LUMINAIRE

#### **LEGEND**

LUMINAIRES, 250W, 120V WITH RED CIRCUIT

LUMINAIRES, 250W, 120V WITH BLACK CIRCUIT

PROPOSED LIGHTING CONTROLLER UNIT DUCT 3 1/C #6 1/C #8 GROUND, 1" POLY.

LUMINAIRES, 50W, 120V RED CIRCUIT

LUMINAIRES, 50W, 120V BLACK CIRCUIT

LTG-04

AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warren Avenue
Downers Grove, IL 80515
(68) 737-1897 (f) (830) 470-9891 (f)
www.arnesengineeringin.com COUNTY TOTAL SHEETS NO.
COOK 62 32

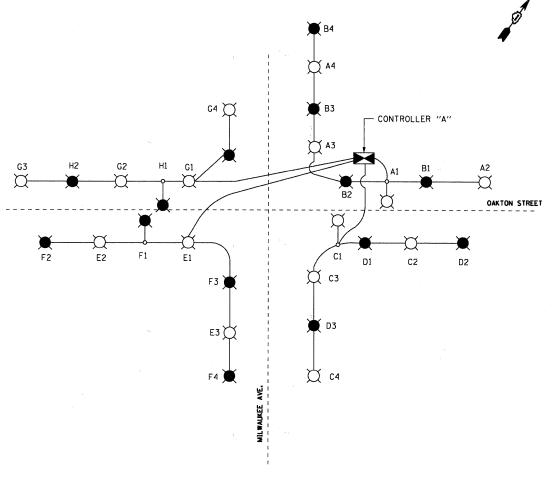
FILE NAME = USER NAME = \$USER\$ DESIGNED - BL REVISED DRAWN REVISED CHECKED - MSA PLOT SCALE = \$SCALE\$ REVISED PLOT DATE = \$DATE\$ DATE - 06-17-11 REVISED

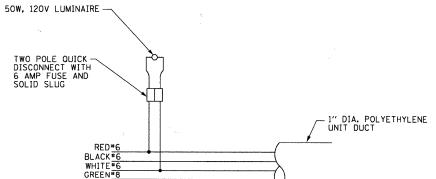
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

VILLAGE OF NILES LIGHTING IMPROVEMENTS WIRING DIAGRAM - MILWAUKEE AVE. AT OAKTON STREET SCALE: SHEET NO. OF SHEETS STA.

- 1" DIA, POLYETHYLENE UNIT DUCT

SECTION 3513 10-00-111-00-LS CONTRACT NO. 63622 ILLINOIS FED. AID PROJECT





## SINGLE POLE WIRING

EXISTING LIGHTING AT INTERSECTION IS ON A SEPARATE CIRCUIT AND SHALL REMAIN (NOT AFFECTED BY PROPOSED WORK AND NOT

# 250W, 120V LUMINAIRE -TWO POLE QUICK -DISCONNECT WITH 6 AMP FUSE AND SOLID SLUG RED#6 BLACK#6 WHITE#6

SINGLE POLE WIRING

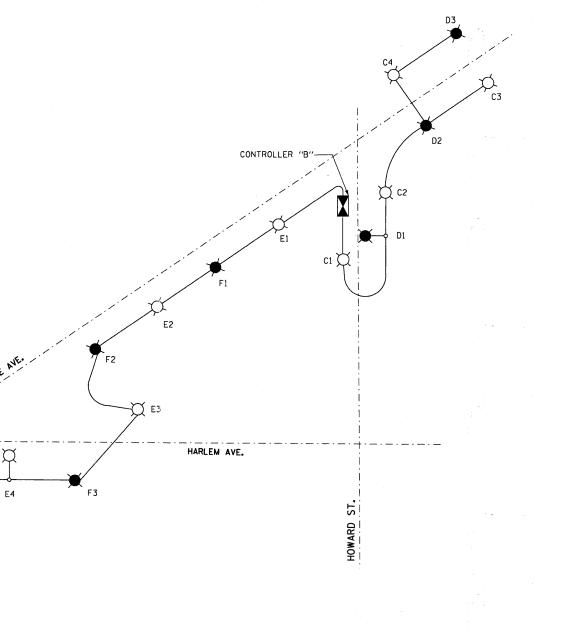
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SHOWN HERE).

#### CONTROLLER "B" @ HARLEM AVE.

|           | RI          | ED    |         | BL.         | АСК   |
|-----------|-------------|-------|---------|-------------|-------|
| CIRCUIT   | AMPS @ 120V | VA    | CIRCUIT | AMPS @ 120V | VA    |
| А         | SPARE       | SPARE | В       | SPARE       | SPARE |
| С         | 1.72        | 206.4 | D       | 2.96        | 355.2 |
| E         | 6.4         | 768   | F       | 3.87        | 464.4 |
| G         | SPARE       | SPARE | Н       | SPARE       | SPARE |
| I         | SPARE       | SPARE | J       | SPARE       | SPARE |
| TOTAL     | 8.12        | 974.4 | TOTAL   | 6.83        | 819.6 |
| TOTAL LOA | D 14.95 A   |       |         | ·           |       |





LEGEND

Ø

LUMINAIRES, 250W, 120V WITH RED CIRCUIT

LUMINAIRES, 250W, 120V WITH BLACK CIRCUIT

PROPOSED LIGHTING CONTROLLER 

UNIT DUCT 3 1/C #6 1/C #8 GROUND, 1" POLY.

LUMINAIRES, 50W, 120V RED CIRCUIT

LUMINAIRES, 50W, 120V BLACK CIRCUIT

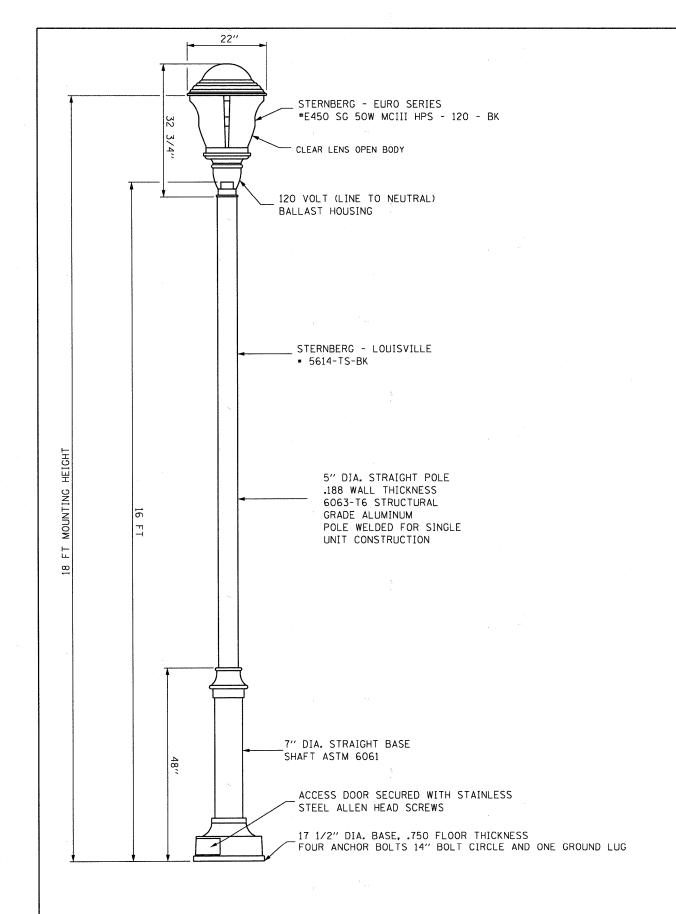
LOAD DATA:

250W HPS, 120V LUMINAIRE: 2.1A/LUMINAIRE 50W HPS, 120V LUMINAIRE: 0.43A/LUMINAIRE

NOTE: EXISTING LIGHTING AT INTERSECTIONS ARE ON A SEPARATE CIRCUIT AND SHALL REMAIN (NOT AFFECTED BY PROPOSED WORK AND NOT SHOWN HERE).

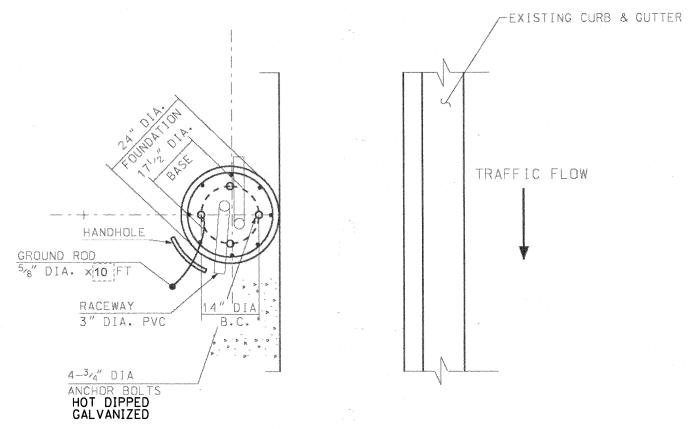
|               | LTG-05  |
|---------------|---|
| <b>A</b>      | AMES Engineering, Inc.                        |
| $I \subset X$ | CONSULTING ENGINEERS                          |
|               | 1341 Warren Avenue<br>Downers Grove, IL 60515 |
|               | (630) 737-1987 (t); (630) 470-9891 (f)        |

|             |                        |                 |           |                              |        |           |        |                |               |        | 1               | www.amesengineerin | iginc.com      |
|-------------|------------------------|-----------------|-----------|------------------------------|--------|-----------|--------|----------------|---------------|--------|-----------------|--------------------|----------------|
| FILE NAME = | USER NAME = \$USER\$   | DESIGNED - BL   | REVISED - |                              | ,      | MIACE OF  | MUEC   | LIGHTING IMPRO | WEBSERITO     | F.A.P. | SECTION         | COUNTY             | TOTAL SHEET    |
| \$FILEL\$   |                        | DRAWN - RV      | REVISED - | STATE OF ILLINOIS            |        |           |        |                |               | 7517   |                 | СООК               | SHEETS NU.     |
|             | PLOT SCALE = \$SCALE\$ | CHECKED - MSA   | REVISED - | DEPARTMENT OF TRANSPORTATION | WIRING | DIAGRAM   | - MILV | Naukee ave. At | OAKTON STREET | 3313   | 10-00-111-00-LS |                    | RACT NO. 63622 |
|             | PLOT DATE = #DATE#     | DATE - 06-17-11 | REVISED - |                              | SCALE: | SHEET NO. | OF     | SHEETS STA.    | TO STA.       |        | ILLINOIS FED.   | AID PROJECT        | ACT NO. 03022  |



ORNAMENTAL LIGHTING UNIT DETAILS

ALUMINUM POST WITH CAST ALUMINUM BASE /
POST TOP MOUNTED LUMINAIRE



# ANCHOR BOLTS AND HANDHOLE POSITION DETAILS

#### NOTES:

- 1. THE LIGHT POST ASSEMBLY SHALL MEET AASHTO DESIGN CRITERIA.
- THE BOLT CIRCLE ON THE BASE PLATE SHALL CONFORM WITH THE BOLT CIRCLE ON LIGHT POLE FOUNDATION WHICH IS 14" DIA AS SHOWN ABOVE.
- 3. THE LIGHT POST SHALL BE ERECTED AND LUMINAIRE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.
- 4. EACH LIGHT POLE SHALL BE GROUNDED IN STRICT CONFORMANCE WITH NEC.
- THE LIGHT POST ASSEMBLY BASE, POST SHAFT AND LUMINAIRE SHALL BE PAINTED IN POWDER COAT BLACK POLYESTER FINISH.
- 6. THE POST/LUMINAIRE MANUFACTURER SHALL SUBMIT COLOR SAMPLE TO OWNER. THE COLOR SAMPLE MUST BE APPROVED BY THE OWNER.
- 7. THE LIGHT POST AND LUMINAIRE SHALL BE SET PLUMB ON FOUNDATION.
- 8. THE CONTRACTOR SHALL COORDINATE TOTAL LENGTH OF ANCHOR BOLTS AND EXTENSION ABOVE TOP OF FOUNDATION WITH THE LIGHT POLE MANUFACTURER'S REQUIREMENTS. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION AND LENGTH WITH ENGINEER.
- 9. PLACEMENT OF ALL LIGHT POLES SHALL MEET ADA REQUIREMENTS.

10. THE LIGHT POLE SHALL BE LISTED OR CLASSIFIED BY A UNITED STATES TESTING LABORATORY SUCH AS UL OR ETL OR APPROVED OSHA EQUIVALENT.

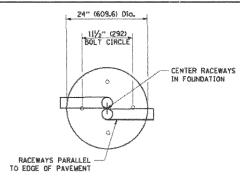
LTG-06

AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warren Avenue
Downers Grove, IL 80515
(850) 273-1987 (ir. 890) 475-989 (ir.

| FILE NAME = | USER NAME = \$ \$USER\$ | DESIGNED ~ BL   | REVISED - |                              |        |           |       |         |       |         | F.A.P. | SECTION         | COUNTY     | TOTAL S   | HEET  |
|-------------|-------------------------|-----------------|-----------|------------------------------|--------|-----------|-------|---------|-------|---------|--------|-----------------|------------|-----------|-------|
| \$FILEL\$   |                         | DRAWN - RV      | REVISED - | STATE OF ILLINOIS            |        |           | LIGHT | TING DE | TAILS |         | 3513   | 10-00-111-00-15 | соок       | 62        | 34    |
|             | PLOT SCALE = \$SCALE\$  | CHECKED - MSA   | REVISED - | DEPARTMENT OF TRANSPORTATION |        |           |       |         |       |         | 3313   | 10 00 111 00 13 | CONTRA     | ACT NO. ( | 53622 |
|             | PLOT DATE, = \$DATE\$   | DATE - 06-17-11 | REVISED - |                              | SCALE: | SHEET NO. | OF    | SHEETS  | STA.  | TO STA. |        | ILLINOIS FED.   | ID PROJECT |           |       |

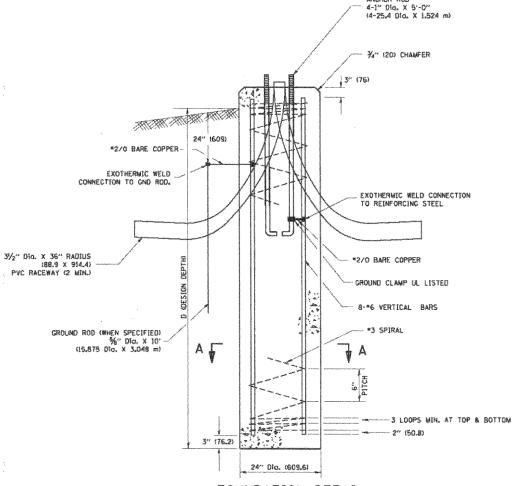
#### LIGHT POLE FOUNDATION DEPTH TABLE 30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

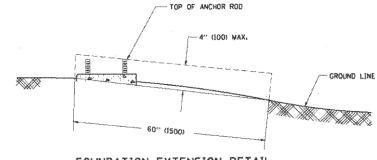
| 200. 00.000000000     | DESIGN DEPTH "T | " OF FOUNDATION |
|-----------------------|-----------------|-----------------|
| SOIL CONDITIONS       | SINGLE ARM POLE | TWIN ARM POLE   |
| SOFT CLAY             | 11'-0"          | 12'-8''         |
| 2 = 0.375 TON/SO. FT. | (3,35 m)        | (3.85 m)        |
| MEDIUM CLAY           | 9'-0"           | 14'-10''        |
| Ou = 0.75 TON/SQ.FT   | '- i2.74 mi     | (4,52 m)        |
| STIFF CLAY            | 7'-6"           | 8′-7″           |
| by = 1.50 TON/SQ. FT. | (2.29 m)        | (2,61 m)        |
| LOGSE SAND            | 9'-6"           | 10'-7"          |
| Ø = 34*               | (2.90 m)        | (3,22 m)        |
| MEDIUM SAND           | 9'-0"           | 9°-10°'         |
| Ø = 31.5°             | (2.74 m)        | (2.99 m)        |
| DENSE SAND            | 8'-3"           | 9'-7"           |
| Ø = 40°               | (2.51 m)        | (2,9[ m)        |



#### TOP VIEW

ANCHOR ROO





FOUNDATION EXTENSION DETAIL

6" (152.4)

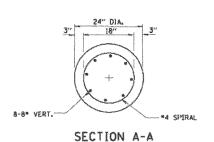
THREADED

%" T. X 4" DIA, --WASHER, TACK WELDED

5" (127.0)

ANCHOR BOLT DETAIL

## FOUNDATION DETAIL



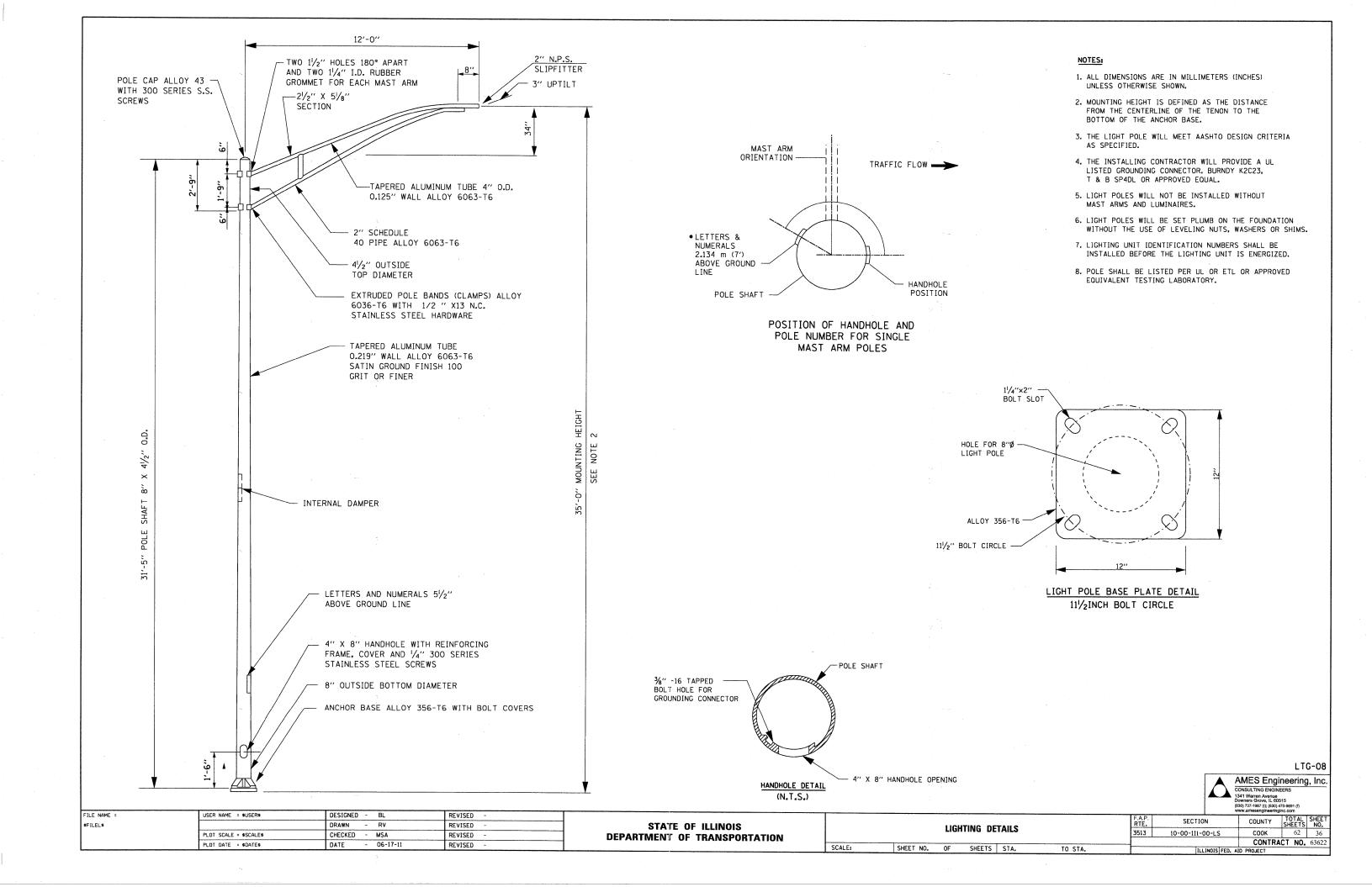
# NOTES

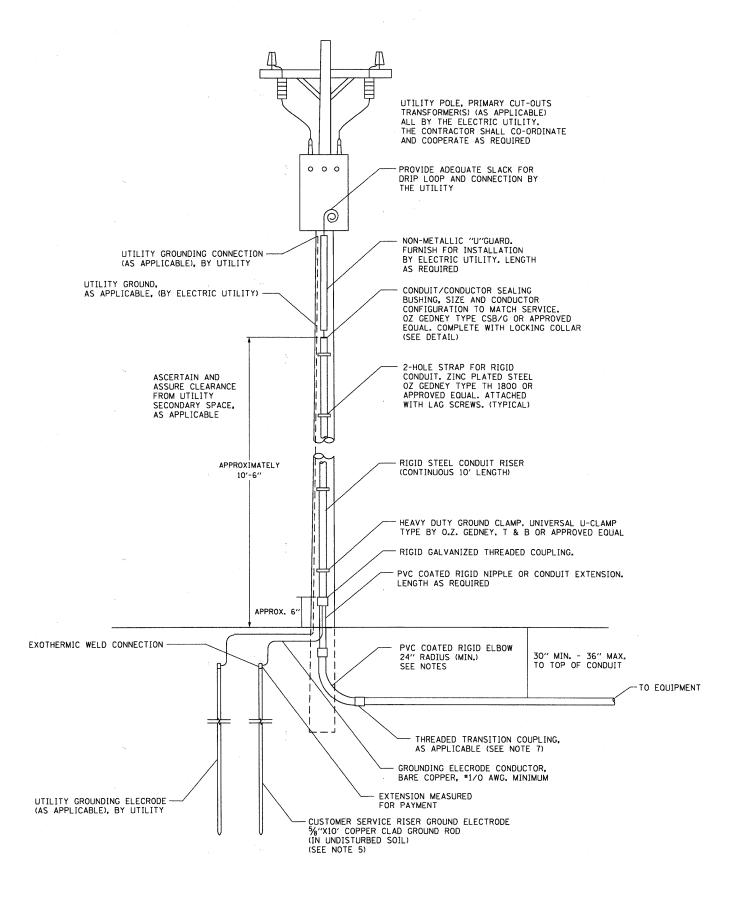
- 1. ALL DIMENSIONS ARE IN INCHES IMILLIMETERS) UNLESS OTHERWISE SHOWN.
- 2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
- 3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (100 mm) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, SEE FOUNDATION EXTENSION DETAIL.
- 4. THE HOLE FOR THE FOUNDATION SHALL BE WADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- 5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 74-IN. (20 mm).
- 6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- 7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE, COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD, A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- 8. THE ANCHOR ROOS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- 10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- 11. ANCHOR RODS SHALL PROJECT 23/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- 12. THE CONTRACTOR SHALL USE A \*3 SPIRAL AT 6" (152.4 mm) PITCH OR WAY SUBSTITUTE \*3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- 13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- 14. THE RACEWAYS SHALL PROJECT I" (25,4 mm) ABOVE THE TOP OF THE FOUNDATION.

LTG-07

AMES Engineering, Inc. CONSULTING ENGINEER

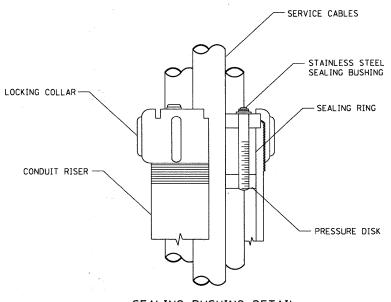
|           |   |                        |                 |           |                              |        |                          |         |             | www.a               | mesengineeringinc.com |    |
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| FILE NAME | = | USER NAME = \$USER\$   | DESIGNED - BL   | REVISED - |                              | FAP    |                          |         |             |                     |                       |    |
| \$FILEL\$ |   |                        | DRAWN - RV      | REVISED - | STATE OF ILLINOIS            |        | LIGHTING DETAILS         |         | 3513 10-00  | 0-111-00-LS         | COOK 62               | 35 |
|           |   | PLOT SCALE = \$SCALE\$ | CHECKED - MSA   | REVISED - | DEPARTMENT OF TRANSPORTATION |        |                          | 10 0    | 3 III 00 E3 | CONTRACT NO.        | 63622                 |    |
|           |   | PLOT DATE = \$DATE\$   | DATE - 06-17-11 | REVISED - |                              | SCALE: | SHEET NO. OF SHEETS STA. | TO STA. |             | ILLINOIS FED. AID F | PROJECT               |    |





### NOTES:

- 1. SERVICE VOLTAGE SHALL BE 120/240V AS INDICATED ON SHEET LTG-02 AND 04.
- 2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRIC UTILITY SERVICE INSTALLATION.
- 3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
- 4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- 5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACK FILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- 6. THE SERVICE METER SOCKET, AS APPLICABLE, MOUNTED ELSEWHERE AS INDICATED SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRICAL UTILITY SERVICE INSTALLATION PAY ITEM.
- 7. THE SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALLIC TO NON METALLIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- 8. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.

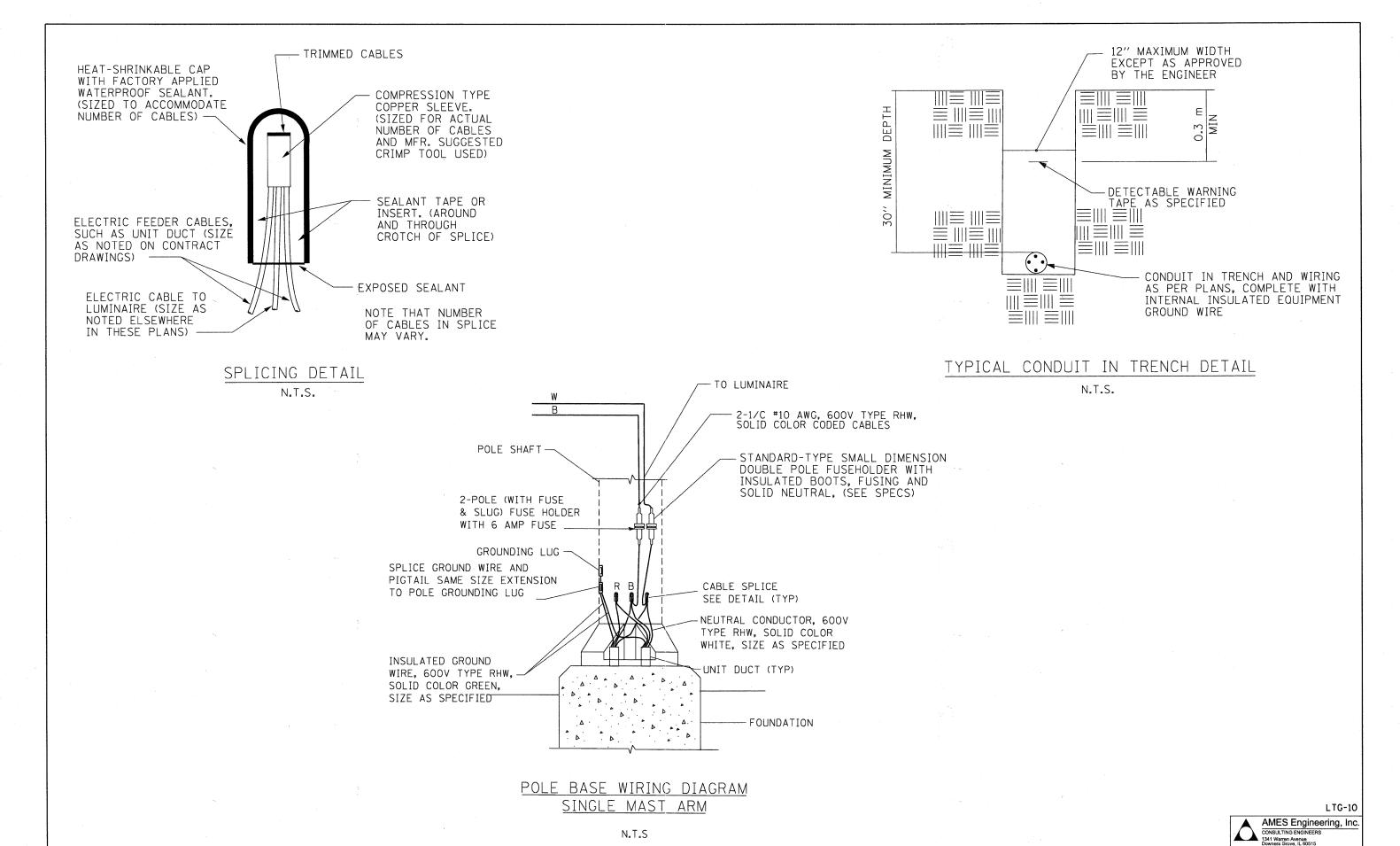


SEALING BUSHING DETAIL

LTG-09

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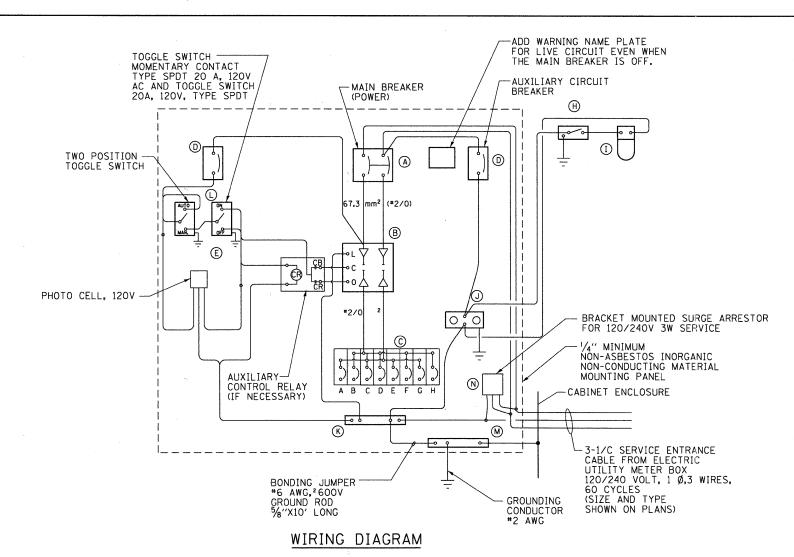
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| \$FILEL\$   |                        | DRAWN - RV      | REVISED - | STATE OF ILLINOIS            |        |           | LIGHTII | NG DET | AILS |         | 3513   | 10-00-111-00-15 | соок              | 62         | 37    |
|             | PLOT SCALE = \$SCALE\$ | CHECKED - MSA   | REVISED - | DEPARTMENT OF TRANSPORTATION |        |           |         |        |      |         | 3313   | 10-00-111-00-L3 | CONTR             | PACT NO    | 62622 |
|             | PLOT DATE = \$DATE\$   | DATE - 06-17-11 | REVISED - |                              | SCALE: | SHEET NO. | OF S    | SHEETS | STA. | TO STA. |        | ILLINOIS FED.   | 00,111            | ACT NO.    | 03022 |



 
 COUNTY
 TOTAL SHEETS NO.

 COOK
 62
 38

 CONTRACT
 NO.
 63622
 USER NAME = \$USER\$ DESIGNED - BL REVISED FILE NAME : SECTION STATE OF ILLINOIS REVISED LIGHTING DETAILS \$FILEL\$ DRAWN - RV 3513 10-00-111-00-LS PLOT SCALE = \$SCALE\$ CHECKED ~ MSA REVISED **DEPARTMENT OF TRANSPORTATION** PLOT DATE = \$DATE\$ DATE - 06-17-11 REVISED SCALE: SHEET NO. OF SHEETS STA. TO STA.



PHOTOCELL MOUNTED
IN CABINET OVERHANG

CABINET OVERHANG

CABINET DOOR

# PHOTOCELL IN CABINET OVERHANG MOUNTING DETAIL

NOT TO SCALE

### NOTES:

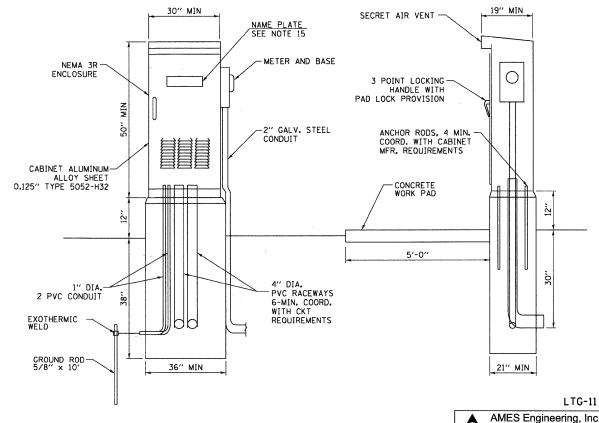
- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.
- 2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
- 3. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
- 4. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
- 5. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 6.35 mm (1/4") DIA. STAINLESS STEEL HINGE PIN.
- 6. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
- CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
- 8. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.

- 9. CABINETS SHALL BE PRIMED AND PAINTED POWDER COATED BLACK AS SPECIFIED.
- 10. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
- 11. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.

  R = RED BL = BLUE W = WHITE
  B = BLACK Y = YELLOW G = GREEN
- 12. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
- 13. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- 14. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
- 15. 304.8 mm (12") X 406.4 mm (16") STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "VILLAGE OF NILES" LIGHTING CONTROLLER UNLESS OTHERWISE SPECIFIED.
- 16. SERVICE DISCONNECT SHOULD HAVE UL LABEL AND THE EQUIPMENT SHOULD BE SUITABLE FOR SERVICE ENTRANCE EQUIPMENT.

### PANEL EQUIPMENT

|      |      | BILL OF MATERIAL  |
|------|------|---|
| ITEM | QTY. | DESCRIPTION   |
| A    | 1    | MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT<br>100AMP. FRAME, 100AMP. NON-INTERCHANGEABLE<br>TRIP INTERRUPTING RATING NEMA-22000 AMP.<br>AT 240 VOLT.      |
| В    | 1    | REMOTE CONTROL CONTACTOR, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINCLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUITS 120 VOLT COIL, ASCO 92 |
| С    | 8    | CIRCUIT BREAKERS, 1 POLE, 277V., 100AMP. FRAME<br>50AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING<br>RATING NEMA-14,000 AMP. AT 120 V.                   |
| D    | 2    | CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V.,<br>100AMP. FRAME, 15AMP. NON-INTERCHANGEABLE TRIP<br>INTERRUPTING RATING NEMA-14,000 AMP. AT 120 V.  |
| Ε    | 1    | PHOTECELL, 120V   |
| н    | 1    | SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN.  |
| I    | 1    | INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.  |
| J    | 1    | 20 A., 120 V., DUPLEX RECEPTACLE, GFCI.   |
| К    | 1    | COPPER NEUTRAL BUS 6.35 mm (1/4") X 25.4 mm (1")<br>X 304.8 mm (12") LONG MOUNTED ON PANEL WITH<br>LUGS AND 4 SPARE LUGS.                             |
| L    | 1    | TOGGLE SWITCHES MOUNTED IN 101.6 mm (4") X 101.6 mm (4") BOX.   |
| М    | 1    | COPPER GROUND BUS 6.35 mm (1/4") X 25.4 (1")<br>304.8 mm (12") LONG MOUNTED ON PANEL WITH LUCS<br>AND SPARE LUCS.                                     |
| N    | 1    | SURGE ARRESTOR  |



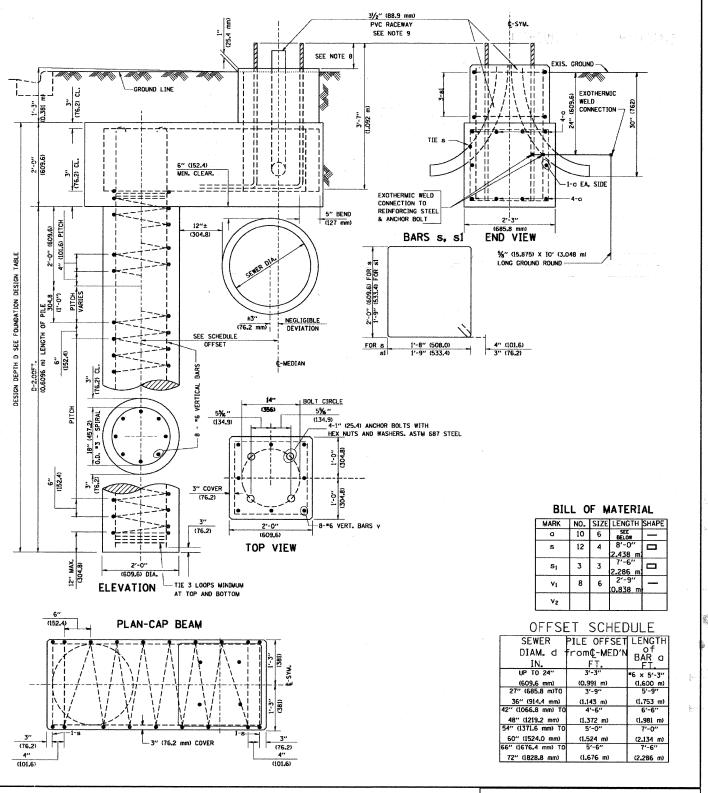
| ľ |                  |           |    | TIMO DE | F.A.P.<br>RTE. | SECTION | COUNTY | TOTAL<br>SHEETS  | SHEET<br>NO. |        |       |
|---|------------------|-----------|----|---------|----------------|---------|--------|------------------|--------------|--------|-------|
|   | LIGHTING DETAILS |           |    |         |                |         | 3513   | 10-00-111-00-LS  | 62           | 39     |       |
| L |                  |           |    |         |                |         |        |                  | CONTRA       | CT NO. | 63622 |
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### FOUNDATION DESIGN TABLE

|                            | DESIGN DEPTH (               | OF FOUNDATION      | ::          | REINFORCEMENT | IN FOUNDATION |            |  |
|----------------------------|------------------------------|--------------------|-------------|---------------|---------------|------------|--|
| TYPE OF SOIL               | SINGLE ARM                   | TWIN ARM           | SINGLE      | ARM           | TWIN ARM      |            |  |
| 3.                         | D                            | , D,               | VERT BARS   | SPIRAL        | VERT BARS     | SPIRAL     |  |
| SOFT CLAY                  | 13'-0''                      | 15'-0''            | 8-#6X12'-6" | #3X122'       | 8-#6X14'-3"   | *3X141′    |  |
|                            | (3 <b>.</b> 962 m)           | (4 <b>.</b> 572 m) | (3.810 m)   | (37.186 m)    | (4.343 m)     | (42,977 m) |  |
| MEDIUM CLAY                | 9'-6''                       | 10′-9"             | 8-#6X9'-0'' | #3X90'        | 8-#6X10'-0''  | #3X100'    |  |
|                            | (2 <b>.</b> 896 m)           | (3,277 m)          | (2.743 m)   | (27.432 m)    | (3.048 m)     | (30.480 m) |  |
| STIFF CLAY                 | 7'-0''                       | .8′-0"             | 8-#6X6'-6"  | *3X66′        | 8-#6X7'-6"    | #3X76′     |  |
|                            | (2 <b>.</b> 134 m)           | (2 <b>.</b> 438 m) | (1.981 m)   | (20.112 m)    | (2.286 m)     | (23.165 m) |  |
| LOOSE SAND                 | 9'-0''                       | 10'-0''            | 8-*6X8'-6"  | #3X85'        | 8-#6X9'-6''   | #3X94′     |  |
|                            | (2.743 m)                    | (3.048 m)          | (2.591 m)   | (25.908 m)    | (2,896 m)     | (28.651 m) |  |
| MEDIUM SAND                | 8'-3''                       | 9'-0''             | 8-#6X8'-0"  | #3X78′        | 8-#6X8'-6''   | #3X85'     |  |
|                            | (2 <b>.</b> 515 m)           | (2.743 m)          | (2.438 m)   | (23.774 m)    | (2.591 m)     | (25.908 m) |  |
| DENSE SAND                 | 7′-9″                        | 9'-0''             | 8-#6X7'-6"  | #3X73′        | 8-#6X8'-6''   | #3X85′     |  |
|                            | (2.362 m)                    | (2.743 m)          | (2.286 m)   | (22.250 m)    | (2.591 m)     | (25.908 m) |  |
| ROCK OR<br>SOLIDIFIED SLAG | 5'-0''<br>(1 <b>.</b> 524 m) | 5′-0″<br>(1.524 m) | NONE        | NONE          | NONE          | NONE       |  |

### NOTES

- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- 3. EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER,
- 4. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- 5. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- 6. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- 7. THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2¾" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- 8. RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.



LIGHT POLE FOUNDATION
OFFSET
14" (356 mm) BOLT CIRCLE

3513

LTG-12

AME CONS.J 1341 We Downer

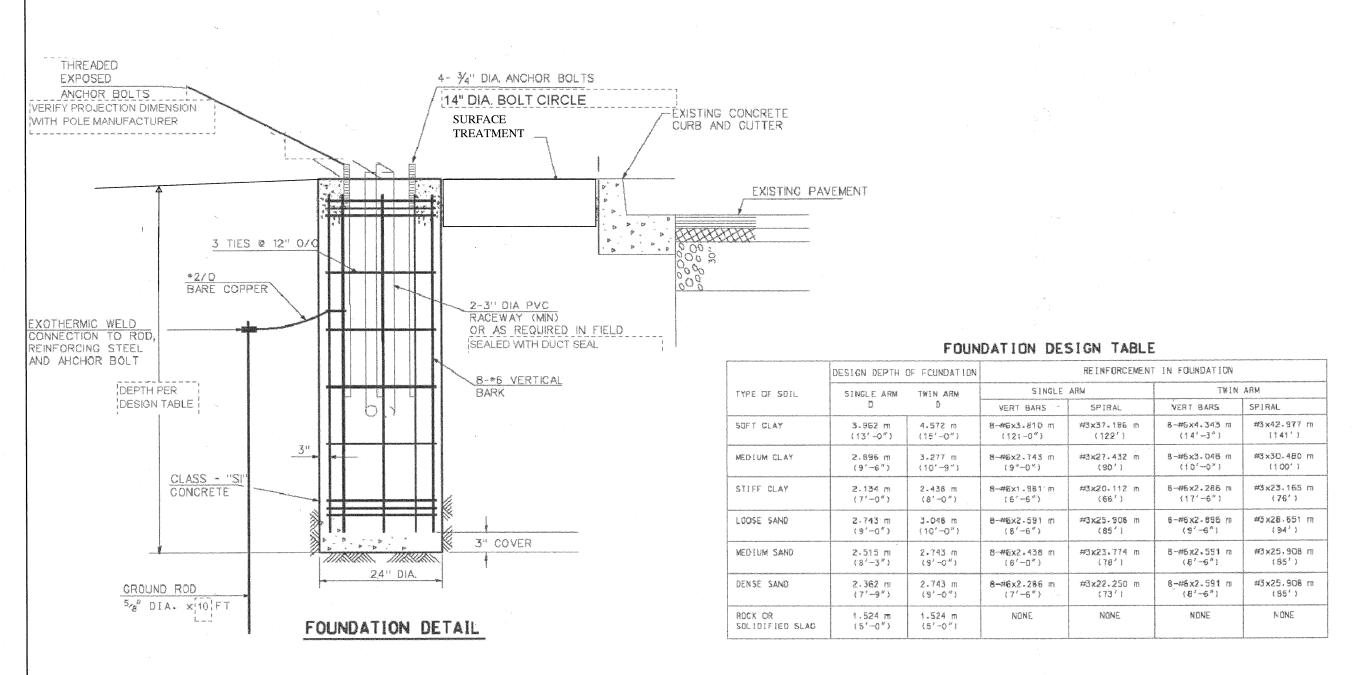
AMES Engineering, Inc. CONS.J.TINS ENGINEERS 1341 Warren Avenue Downster Stover, I. 80515 (810) 737 1987. (j. (610) 470-9481. (r)

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|--|----------------------|-----------------|-----------|
| ##JLEL#  |                      | DRAWN - RV      | REVISED - |
|  | PLDT SCALE = *SCALE* | CHECKED - MSA   | REVISED - |
| A CONTRACTOR OF THE CONTRACTOR | PLOT DATE : *DATE:   | DATE - 06-17-11 | REVISED - |

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|------------|------|----------------|
| DEPARTMENT | OF   | TRANSPORTATION |

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|           | LIGHTING  | DETAILS                       |                                     |      |
|           |   |                               | 1                                   |      |
| SHEET NO. | OF SHEE   | TS STA.                       | TÖ                                  | STA. |



### FOUNDATION NOTES

- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AND AUGER, 24" IN DIAMETER.
- THE CONTRACTOR SHALL USE "3 SPIRAL AT 6" PITCH OR AT HIS OPTION MAY SUBSTITUTE "3 TIES AT 12" O.C.
- THE ANCHOR SHALL BE A TACK WELDED PLATE TYPE BOLT OR HOOK TYPE BOLT. COLD BENDING OF THE HOOK BOLT WILL NOT BE ALLOWED.
- 4. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ENTIRE LENGTH OF THE ANCHOR BOLTS AS WELL AS THE NUTS AND WASHERS SHALL BE HOT DIP CALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A 153.
- 6. CONCRETE SHALL BE CLASS "SI". CONCRETE FOUNDATION MUST BE CURED FOR (10) TEN DAYS BEFORE THE LIGHT STANDARD IS ERECTED.
- 7. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.
- ANCHOR BOLTS PROJECTION ABOVE THE TOP OF THE FOUNDATION, SHALL BE ACCORDING TO THE MANUFACTURER RECOMENDATIONS.

- 9. RACEWAYS SHALL PROJECT I" ABOVE THE TOP OF THE FOUNDATION.
- 10. REINFORCEMENT BARS SHALL COMPLY WITH ARTICLE 1006.10 OF THE STANDARD SPECIFICATION.
- 11. THE CONTRACTOR SHALL COORDINATE TOTAL LENGTH OF ANCHOR BOLTS AND EXTENSION ABOVE TOP OF FOUNDATION WITH THE LIGHT POLE MANUFACTURER'S REQUIREMENTS. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENSION AND LENGTH WITH ENGINEER. MINIMUM ACCEPTABLE EMBEDDMENT LENGTH FOR ANCHOR BOLTS CONFORMING TO NOTE 5 IS 36". ANCHOR ROD SHALL BE A MINIMUM OF 3/4" IN DIAMETER CONFORMING TO ASTM F 1554 (GR. 105).
- 12. FOUNDATION DEPTH SHOWN ASSUMES MEDIUM CLAY OR SAND. THE ENGINEER SHALL DETERMINE ACCEPTABILITY. IN THE EVENT SOFT MATERIAL OR FILL IS ENCOUNTERED, ENGINEER MAY REQUIRE INCREASED FOUNDATION DEPTH.
- 13. GROUND ROD AND GROUNDING EQUIPMENT IS INCIDENTAL TO FOUNDATION PAY ITEM (TYP).

LTG-13

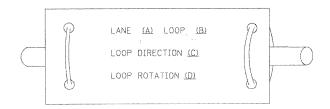
AMES Engineering, Inc.
CONSULTING ENGINEERS
1341 Warren Avenue
Downers Grove, ILe 6061s
(630) 737-1967 (t); (630) 470-9891 (t)
www.amesendineerindin.com

| FILE NAME = | USER NAME = \$USER\$   | DESIGNED - BL   | REVISED - |                              |        |           |      | *************************************** |       |         | F.A.P. | SECTION         | COUNTY    | TOTAL | SHEET<br>NO. |
|-------------|------------------------|-----------------|-----------|------------------------------|--------|-----------|------|---|-------|---------|--------|-----------------|-----------|-------|--------------|
| \$FILEL\$   |                        | DRAWN - RV      | REVISED - | STATE OF ILLINOIS            |        |           | LIGH | TING DE                                 | TAILS |         | 3513   | 10-00-111-00-LS | СООК      | 62    | 41           |
|             | PLOT SCALE = \$SCALE\$ | CHECKED - MSA   | REVISED - | DEPARTMENT OF TRANSPORTATION |        |           |      |   |       |         |        | CONTR           | RACT NO.  | 63622 |              |
|             | PLOT DATE = \$DATE\$   | DATE - 06-17-11 | REVISED ~ |                              | SCALE: | SHEET NO. | OF   | SHEETS                                  | STA.  | TO STA. |        | ILLINOIS FED. A | D PROJECT |       |              |

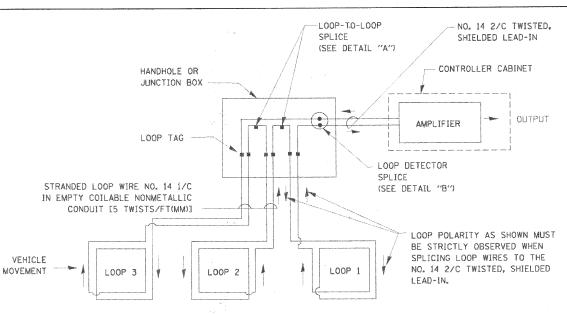
### LOOP DETECTOR NOTES

- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 2. 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.
- 3. 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.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. 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.
- 6. 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.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

### LOOP LEAD-IN CABLE TAG

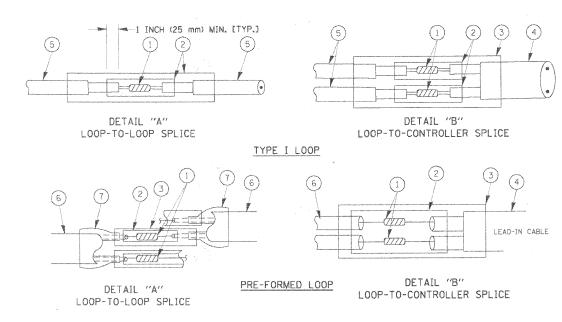


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \*1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



### 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 DETECTOR SPLICE

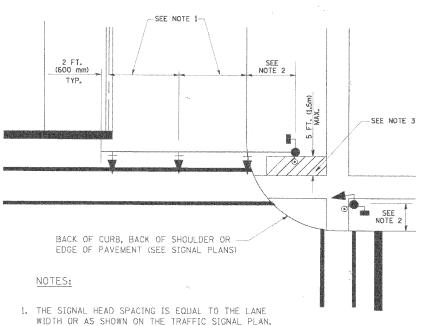
- OF THE SOLDER SHALL BE SMOOTH. WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
- (4) NO. 14 2/C TWISTED, SHIELDED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

THEAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

|         |                       |                 |           |   | C on                         | -ANOU! SEMES. | THOU COIL S OIL MILHOVED EGOME         |           |                 |                     |            |          |
|---------|-----------------------|-----------------|-----------|---|------------------------------|---------------|--|-----------|-----------------|---------------------|------------|----------|
| gn Firm | USER NAME = CHartke   | DESIGNED - DAD  | REVISED - |   |                              |               | DISTRICT ONE                           | F.A<br>RT | P.              | SECTION             | COUNTY     | TOTAL SI |
|         |                       | DRAWN - BCK     | REVISED - | 1 | STATE OF ILLINOIS            |               |  | 37        | 4 10            | 0-00111-00-LS       | соок       | 62       |
|         | PLOT SCALE =          | CHECKED - DAD   | REVISED - |   | DEPARTMENT OF TRANSPORTATION |               | STANDARD TRAFFIC SIGNAL DESIGN DETAILS |           | CONTRACT NO     |                     |            |          |
|         | PLOT DATE = 7/20/2011 | DATE - 10-28-09 | REVISED - |   |                              | SCALE:        | SHEET NO. 1 OF 7 SHEETS STA. TO STA.   | FEI       | D. ROAD DIST. N | NO. ILLINOIS FED. A | ID PROJECT |          |
|         |                       |                 |           |   |                              |               |  |           |                 |                     |            |          |

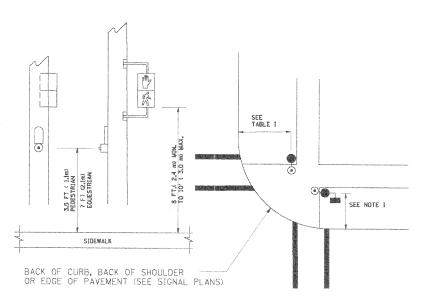
### TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



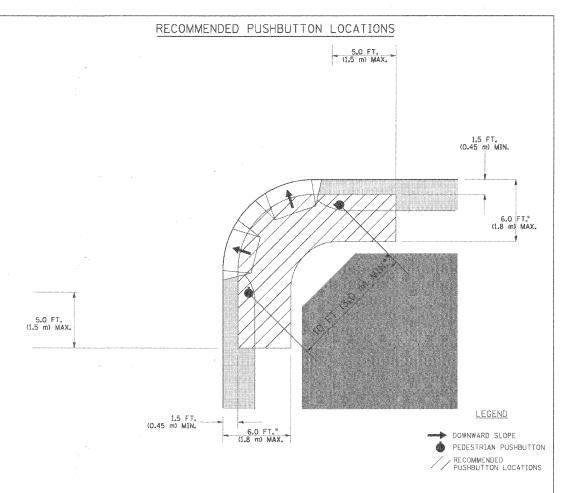
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BIGYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE HISED.
- 5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCO AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT" ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.

### PEDESTRIAN SIGNAL POST PEDESTRIAN PUSH BUTTON POST



### NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
- 3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCO AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

### NOTES:

- PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
- 2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
- 3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT
- 4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
- . THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAYEMENT.

### TRAFFIC SIGNAL FOLIPMENT OFFSET

|                                       | INALIO SIGNAL EQUITMENT O   | II Juli   |
|---------------------------------------|---|---|
| TRAFFIC SIGNAL EQUIPMENT              | COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION) | SHOULDER/NON-CURBED AREA (MINIMUM<br>DISTANCE FROM EDGE OF PAVEMENT<br>TO CENTERLINE OF FOUNDATION) |
| TRAFFIC SIGNAL MAST ARM POLE          | 6 FT (1.8m)   | SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)  |
| TRAFFIC SIGNAL POST                   | 4 FT (1.2m)   | SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)  |
| PEDESTRIAN SIGNAL POST                | 4 FT (1.2m)   | SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)  |
| PEDESTRIAN PUSHBUTTON POST            | 4 FT (1.2m)   | SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)  |
| TEMPORARY WOOD POLE                   | 6 FT (1.8m)   | SHOULDER WIDTH '+ 2 FT (0.6m), MINIMUM 10 FT (3.0m)   |
| CONTROLLER CABINET                    | 6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2   | SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.                                      |
| SERVICE INSTALLATION,<br>GROUND MOUNT | 6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2   | SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.                                      |

### NOTES:

- CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
- 4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN SIGNAL SIG PUSHBUTTONS, THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

SCALE:

**HRGreen** 

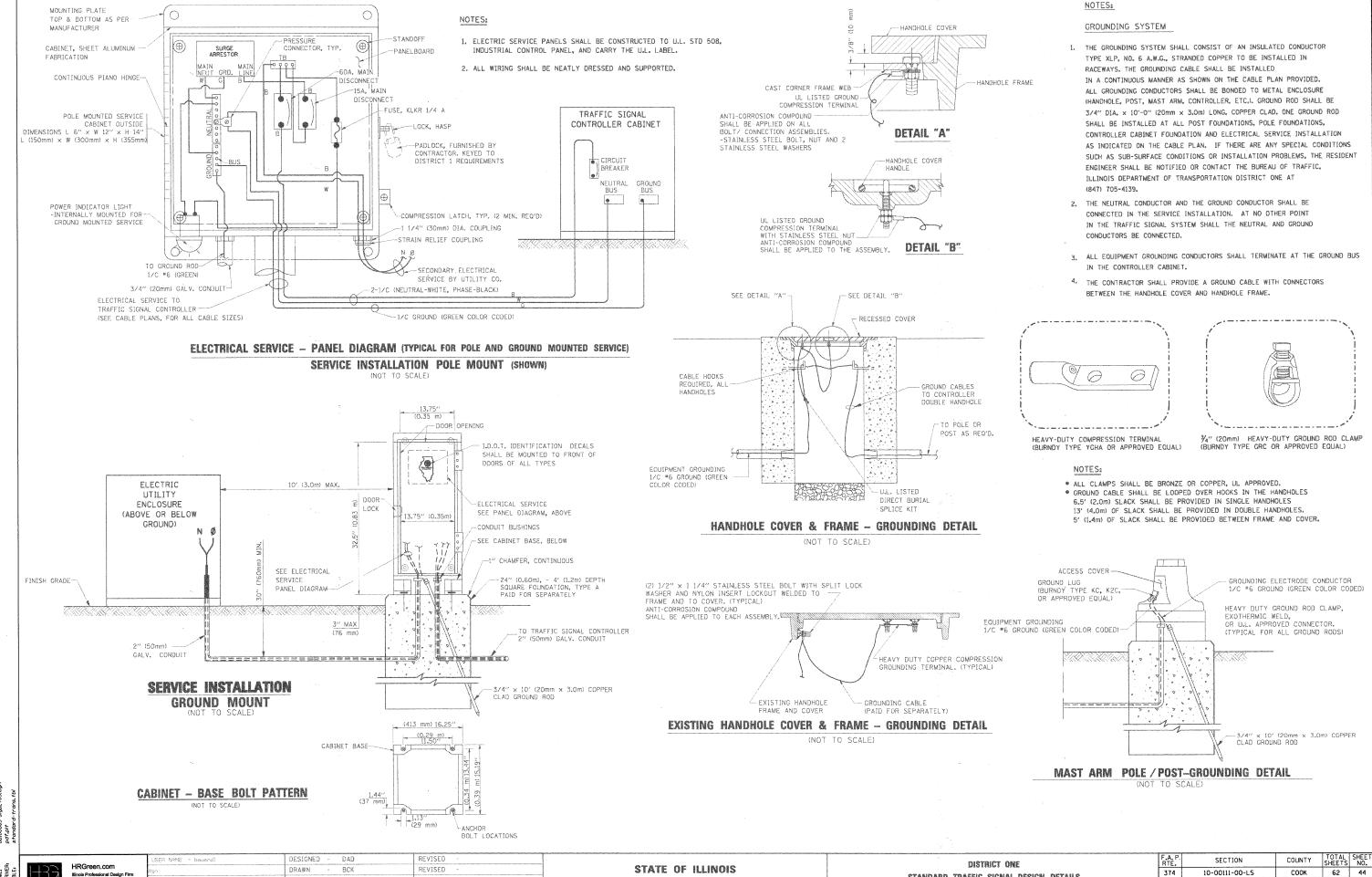
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| USER NAME = bauerd1         | DESIGNED - DAD  | REVISED = |
|-----------------------------|-----------------|-----------|
| dgn '                       | DRAWN - BCK     | REVISED - |
| PLOT SCALE = 50.0000 '/ IN. | CHECKED - DAD   | REVISED - |
| PLOT DATE = 11/4/2009       | DATE - 10-28-09 | REVISED - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET NO. 2 OF 7 SHEETS STA.

| _ | F.A.P.<br>RTE. | SE            | CTION         | COUNTY      | TOTAL<br>SHEETS | SHEET<br>NO. |
|---|----------------|---------------|---------------|-------------|-----------------|--------------|
|   | 374            | 10-00         | 111-00-LS     | соок        | 62              | 43           |
|   |                |               |               | CONTRACT    | NO.             | 63622        |
| _ | FED. R         | OAD DIST. NO. | ILLINOIS FED. | AID PROJECT |                 |              |



**HRGreen** 

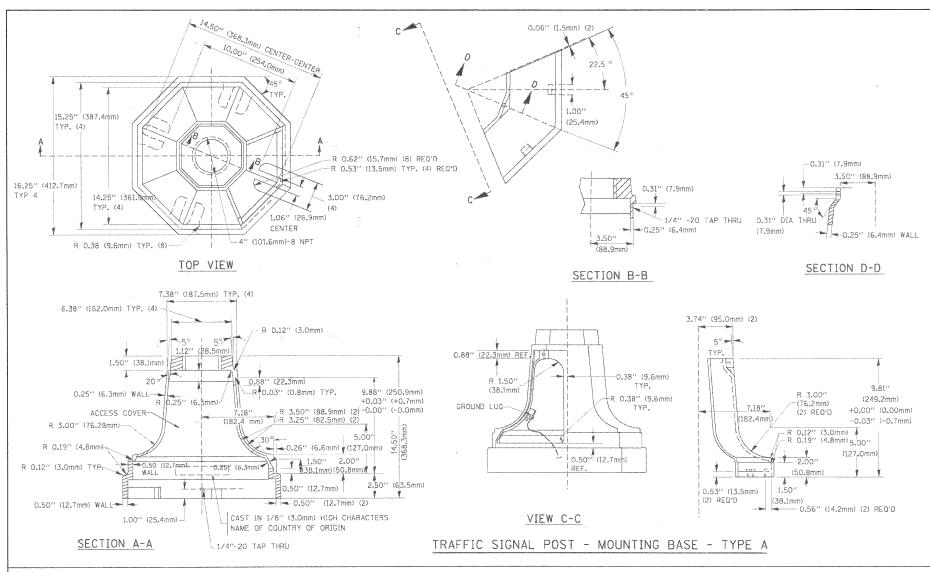
OT SCALE : 50.0000 '/ IN. CHECKED DAD REVISED 10-28-09 REVISED

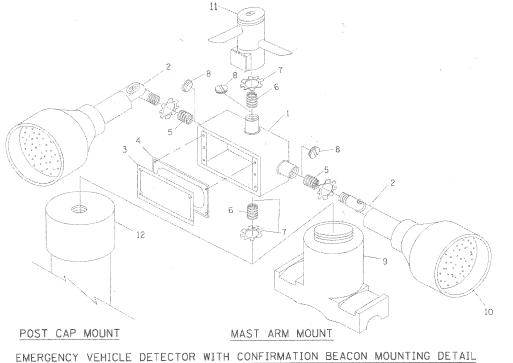
**DEPARTMENT OF TRANSPORTATION** 

STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET NO. 3 OF 7 SHEETS STA. TO STA.

SCALE:

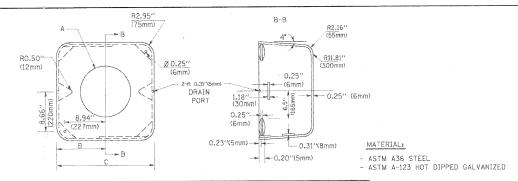
CONTRACT NO. 63622







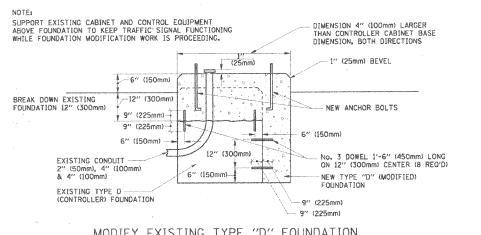
- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT ITEM \*2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT ITEM \*9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM \*9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A  $\frac{3}{4}$ "(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.



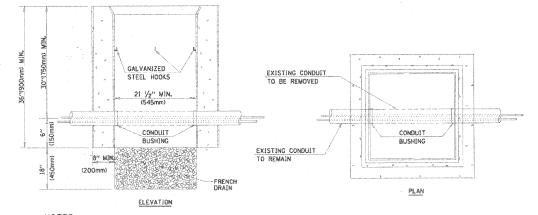
| A      | В             | С            | HEIGHT                    | WEIGHT          |
|--------|---------------|--------------|---------------------------|-----------------|
| VARIES | 9.5′′(241mm)  | 19''(483mm)  | 7" (178mm) - 12" (300mm)  | 53 lbs (24kg)   |
| VARIES | 10.75"(273mm) | 21.5"(546mm) | '7" (178mm) - 12" (300mm) | 68 lbs (31 kg)  |
| VARIES | 13.0′′(330mm) | 26"(660mm)   | 7" (178mm) - 12" (300mm)  | 81 lbs (37 kg)  |
| VARIES | 18.5"(470mm)  | 37"(940mm)   | 7" (178mm) - 12" (300mm)  | 126 lbs (57 kg) |

### SHROUD

- 1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



### MODIFY EXISTING TYPE "D" FOUNDATION



### NOTES:

SCALE:

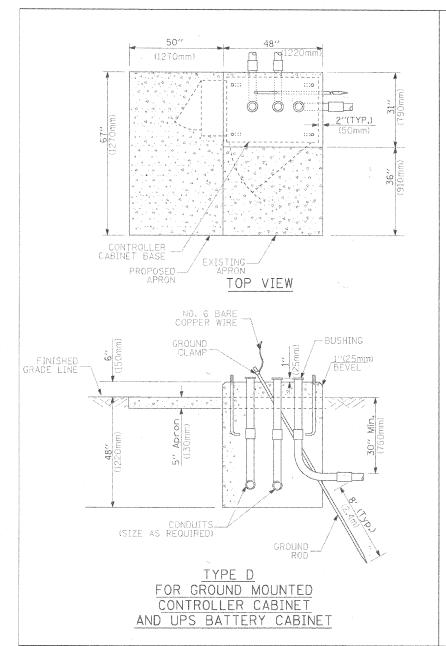
- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

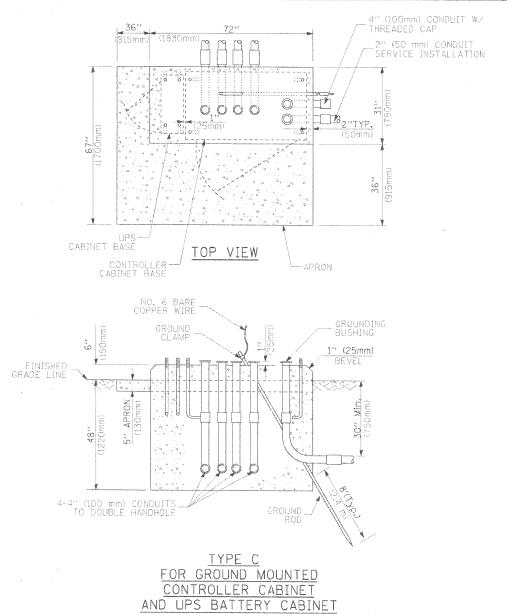
### HANDHOLE TO INTERCEPT EXISTING CONDUIT

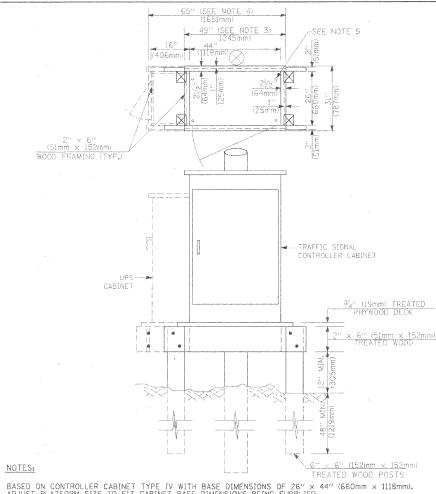
| DISTRICT ONE                             | F.A.P.<br>RTE. | SECTION                       | COUNTY     | TOTAL<br>SHEETS | SHEET<br>NO. |
|--|----------------|-------------------------------|------------|-----------------|--------------|
| STANDARD TRAFFIC SIGNAL DESIGN DETAILS   |                | 10-00111-00-LS                | соок       | 62              | 45           |
| 21 YUNDAUN INVILIF SIRUAT DESIRU DETAITS |                |                               | CONTRACT   | NO.             | 63622        |
| SHEET NO. 4 OF 7 SHEETS STA. TO STA.     | FED. R         | OAD DIST. NO. ILLINOIS FED. A | ID PROJECT |                 |              |

HRGreen com **HRGreen** 

REVISED DAD DESIGNED DRAWN 8CK REVISED CHECKED DAD REVISED 10-28-09 REVISED







- 1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF  $26^{\prime\prime} \times 44^{\prime\prime}$  (660mm  $\times$  1118mm), ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16"  $\times$  25" (406mm  $\times$  635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE, FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS. WASHERS AND NUTS.
- 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

### TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM

| CABLE SLACK LENGTH                                | FEET | METER |
|---|------|-------|
| HANDHOLE  | 6,5  | 2.0   |
| DOUBLE HANDHOLE                                   | 13.0 | 4.0   |
| SIGNAL POST                                       | 2.0  | 0.6   |
| MAST ARM  | 2.0  | 0,6   |
| CONTROLLER CABINET                                | 1.5  | 0.5   |
| FIBER OPTIC AT CABINET                            | 13.0 | 4.0   |
| ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION) | 1,5  | 0.5   |
| GROUND CABLE<br>(SIGNAL POST, MAST ARM, CABINET)  | 1.5  | 0.5   |
| GROUND CABLE                                      | 5.0  | 1.6   |

| VERTICAL CABLE LENGTH   | FEET   | METER |
|---|--------|-------|
| MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD)                                     |        |       |
| (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)                   | 20.0+L | 6.0+L |
| BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)                                    | 13.0   | 4.0   |
| PEDESTRIAN PUSH BUTTON  | 6.0    | 2.0   |
| SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP                                   | 13.5   | 4.1   |
| SERVICE INSTALLATION POLE MOUNT TO GROUND   | 13.5   | 4.1   |
| SERVICE INSTALLATION GROUND MOUNT   | 6.0    | 2.0   |
| FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT) | 3.0    | 1.0   |

VERTICAL CABLE LENGTH

DEPIH OF FOUNDATION

SCALE:

| Mast Arm Length  | ① Foundation<br>Depth       | Foundation<br>Diameter | Spiral<br>Diameter | Quantity of<br>Rebars | Size of<br>Rebars |
|--|-----------------------------|------------------------|--------------------|-----------------------|-------------------|
| Less than 30' (9,1 m)  | 10'-0" (3 <sub>x</sub> 0 m) | 30" (750mm)            | 24" (600mm)        | 8                     | 6(19)             |
| Greater than or equal to 30' (9.1 m) and less than                     | 13'-6" (4.1 m)              | 30" (750mm)            | 24" (600mm)        | 8                     | 6(19)             |
| 40' (12,2 m)   | 11'-0'' (3.4 m)             | 36" (900mm)            | 30" (750mm)        | 12                    | 7(22)             |
| Greater than or equal to<br>40′ (12.2 m) and less than<br>50′ (15.2 m) | 13'-0'' (4.0 m)             | 36'' (900mm)           | 30" (750mm)        | 12                    | 7(22)             |
| Greater than or equal to -<br>50° (15.2 m) and up to<br>55' (16.8 m)   | 15'-0" (4.6 m)              | 36" (900mm)            | 30" (750mm)        | 12                    | 7(22)             |
| Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)       | 21'-0" (6.4 m)              | 42" (1060mm)           | 36" (900mm)        | 16                    | 8(25)             |
| Greater than or equal to<br>65' (19.8 m) and up to<br>75' (22.9 m)     | 25′-0′′ (7.6 m)             | 42'' (1060mm)          | 36" (900mm)        | 16                    | 8(25)             |

### NOTES:

4'-0'' (1.2m) 4'-0" (1.2m) 4'-0" (1.2m)

4'-0" (1.2m)

- 1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assembles under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

4. For most arm assembles with dual arms refer to state standard 878001.

TYPE C - CONTROLLER W/ UPS TYPE D - CONTROLLER SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE

FOUNDATION TYPE A - Signal Post

### CABLE SLACK

| L |                          |
|---|--------------------------|
| ı |                          |
| ı | 1-3-31                   |
| ١ |                          |
| ١ | <b>H</b> R <b>Gr</b> een |
| ١ | HINGREER                 |

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| USER NAME = CHartke   | DESIGNED | - | DAG      | REVISED |  |
|-----------------------|----------|---|----------|---------|--|
|                       | DRAWN    |   | BCK      | REVISED | The state of the s |
| PLOT SCALE =          | CHECKED  |   | DAD      | REVISED |  |
| PLOT DATE = 7/20/2011 | DATE     |   | 10-28-09 | REVISED | -  |

| DISTRICT ONE                           | F.A.P.<br>RTE. | SECT         | ION             | COUNTY    | TOTAL<br>SHEETS | SHEET<br>NO. |  |
|--|----------------|--------------|-----------------|-----------|-----------------|--------------|--|
| STANDARD TRAFFIC SIGNAL DESIGN DETAILS |                | 10-00111     | -00-LS          | COOK      | 62              | 46           |  |
|  |                |              |                 | CONTRACT  | NO.             | 63622        |  |
| SHEET NO. 5 OF 7 SHEETS STA. TO STA.   | FED. RO.       | AD DIST. NO. | LLINOIS FED. AI | D PROJECT |                 |              |  |

## TRAFFIC SIGNAL LEGEND

| ITEM  | REMOVAL  | EXISTING   | PROPOSED   | ITEM  | REMOVAL                                   | EXISTING   | PROPOSED   | ITEM REM  | OVAL EXISTING  | PROPOSED   |
|---|--|--|--|---|---|--|--|---|--|--|
| CONTROLLER CABINET  | R  |  |  | EMERGENCY VEHICLE LIGHT DETECTOR  | R   | œ  | ***************************************  | ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE                               |  |  |
| RAILROAD CONTROL CABINET  |  | B×18   | F  | CONFIRMATION BEACON   | $R_{o-0}$                                 | 00   | <b>~</b>   | NOT 14 IT OF GREEGE HOTES, OTHERWISE  | ,  |  |
| COMMUNICATIONS CABINET  | CC R   | ECC  |  | HANDHOLE  | R 🖂                                       |  |  | COAXIAL CABLE   | — <u>C</u>   | (c)  |
| MASTER CONTROLLER   |  | EMC  | [MC]   |   | 0   |  |  | VENDOR CABLE FOR CAMERA   |  |  |
| MASTER MASTER CONTROLLER  | R  | EMMC   | MMC  | HEAVY DUTY HANDHOLE   | R_  | 1-1  | H  | COPPER INTERCONNECT CABLE,  |  |  |
| UNINTERRUPTIBLE POWER SUPPLY SERVICE INSTALLATION,                          | [UPS]  | EUPS   | UPS  | DOUBLE HANDHOLE JUNCTION BOX  | R (III)                                   |  | <u> </u>   | NO. 18 3 PAIR TWISTED, SHIELDED   | (6)  | ······································   |
| (P) POLE OR (G) GROUND MOUNT  | -□ <sup>R</sup>  | ——P  | - P  | GALVANIZED STEEL CONDUIT  | [ Mar. ]                                  |  |  | FIBER OPTIC CABLE NO. 62.5/125, MM12F   | -(12F)-  |  |
| TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT                           | R  | P  | P  | IN TRENCH (T) OR PUSHED (P) TEMPORARY SPAN WIRE, TETHER WIRE,                   | 8   | 18821798971888118891189911189111                           | sharm name collect econor per  | FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F   | <u> </u>   | —(24F)—  |
| STEEL MAST ARM ASSEMBLY AND POLE  | R  | 0-1  |  | AND CABLE   | encommunication and the define a feet man | - mandadad of the Communication of American Control (1987) | ***************************************  | FIBER OPTIC CABLE NO. 62.5/125,   |  |  |
| ALUMINUM MAST ARM ASSEMBLY AND POLE   | Commence of the same of the sa | Comment of the Commen |  | COMMON TRENCH   |   |  | СТ   | (NUMBER OF FIBERS & TYPE TO BE  |  |  |
| STEEL COMBINATION MAST ARM<br>ASSEMBLY AND POLE WITH LUMINAIRE              | PO-X   | O-X  |  | COILABLE NONMETALLIC CONDUIT (EMPTY)  |   | p.   | CNC  | NOTED ON PLANS)  GROUND ROD AT (C) CONTROLLER,  |  |  |
| STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA                | P <sub>O</sub>   | Q  | PTZ)1  | SYSTEM ITEM INTERSECTION ITEM   |   | S  | S  | (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE  | C  | C 1  |
| SIGNAL POST   | EUSP!<br>R <sub>ec</sub>   | 0  | •  | REMOVE ITEM   | R   |  |  |   | oce  |  |
| TEMPORARY WOOD POLE (CLASS 5 OR   | "O<br> ⊗ 7   | ~ ⊗  | <b>®</b>   | RELOCATE ITEM   | RL  |  |  |   |  |  |
| BETTER) 45 FOOT (13.7m) MINIMUM   |  |  |  | ABANDON ITEM  | А   | B  | herepennent .  | STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED  | 191<br>  |  |
| CUY WIRE  | >======================================  | >  |  | 12" (300mm) TRAFFIC SIGNAL SECTION  |   | R  | R  | ALUMINUM MAST ARM POLE AND RMF  |  |  |
| SIGNAL HEAD   | -₹>  | ->   |  | 12" (300mm) RED WITH 8" (200mm)   |   | Ŗ  |  | FOUNDATION TO BE REMOVED  | THE CONTRACT OF THE CONTRACT O |  |
| SIGNAL HEAD CONSTRUCTION STAGES<br>NUMBERS INDICATE THE CONSTRUCTION STAGE) | _  |  | 2  | YELLOW AND GREEN TRAFFIC SIGNAL FACE  |   |  | R  | STEEL COMBINATION MAST ARM ASSEMBLY  AND POLE WITH LUMINAIRE AND  FOUNDATION TO BE REMOVED          |  |  |
| SIGNAL HEAD WITH BACKPLATE  | +5 <sup>R</sup>  | +  | •  |   |   | H  | Y  |   |  |  |
| SIGNAL HEAD OPTICALLY PROGRAMMED  | -R<br>>''P''   |  | 17011  | SIGNAL FACE   |   |  | G<br><b>⊕</b> Y  | SIGNAL POST AND FOUNDATION R TO BE REMOVED  | MF<br>O  |  |
| FLASHER INSTALLATION -<br>IS DENOTES SOLAR POWER)                           | R<br>O⇒″F″   | ○-©″F″   | • · · · · · · · · · · · · · · · · · · ·          |   |   |  | <b>4</b> G   | INTERSECTION & SAMPLING (SYSTEM) DETECTOR   | ISI  | IS   |
| PEDESTRIAN SIGNAL HEAD  | R :  | ` <b></b> []   | urn a  |   |   | R  | S S S S S S S S S S S S S S S S S S S  | SAMPLING (SYSTEM) DETECTOR  | S  | S  |
| PEDESTRIAN PUSHBUTTON DETECTOR  | R<br>©   | <b>©</b>   | <b>©</b>   | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD                       |   |  | G  | EXISTING INTERSECTION LOOP DETECTOR   | P  |  |
| ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR                                   | R<br>APS   | @AF5   | APS  APS  APS  APS  APS  APS  APS  A             |   |   |  | <b>€</b> Y <b>€</b> G  | PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR  EXISTING PREFORMED INTERSECTION LOOP DETECTOR |  |  |
| ILLUMINATED SIGN "NO LEFT TURN"   | R  |  | 6  |   |   | 14 <b>p</b> 117  | "P"  | PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR  | <u>"PP</u> "   |  |
| ILLUMINATED SIGN  | p  |  |  | 12" (300mm) PEDESTRIAN SIGNAL HEAD<br>WALK/DON'T WALK SYMBOL                    |   |  |  | PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR   | P15  | PIS  |
| 'NO RIGHT TURN''  | (3)  | Ø  | <b>@</b>   | 12" (300mm) PEDESTRIAN SIGNAL HEAD<br>INTERNATIONAL SYMBOL, OUTLINED            |   |  |  | PREFORMED SAMPLING (SYSTEM) DETECTOR  | PS   | [PS]   |
| DETECTOR LOOP, TYPE I   |  |  |  |   |   |  |  |   |  |  |
| PREFORMED DETECTOR LOOP   |  | P  | P  | 12" (300mm) PEDESTRIAN SIGNAL HEAD<br>INTERNATIONAL SYMBOL, SOLID               |   |  | *  | RAILROAD SY   | <b>/MBOLS</b>  |  |
| MICROWAVE VEHICLE SENSOR  | R<br>Ma  | M  | <b> (M</b> ) <b>(M</b> ) <b>(M</b> ) <b>(M</b> ) | PEDESTRIAN SIGNAL HEAD, INTERNATIONAL<br>SYMBOL, WITH COUNTDOWN TIMER           |   | C<br>C<br>D  | <b>₽</b> C<br><b>f</b> D   |   | EXISTING   | PROPOSED   |
| VIDEO DETECTION CAMERA  | R<br>(V)   | (V)1   |  | RADIO INTERCONNECT  | <del>            </del>                   | ##+  |  | RAILROAD CONTROL CABINET  | B B  |  |
| VIDEO DETECTION ZONE  |  |  |  | RADIO REPEATER  | R ERR                                     | ERR  | RR   | RAILROAD CANTILEVER MAST ARM  |  | The state of the s |
| PAN, TILT, ZOOM CAMERA  | R<br>POZI  | PEN.   | PIZN   | DENOTES NUMBER OF CONDUCTORS, ELECTRIC  | Control of the Control                    |  | Mark and an and declaration of the supply  | FLASHING SIGNAL   | <del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>   | <b>X</b> -X  |
| WIRELESS DETECTOR SENSOR  | RW   |  | (W)  | CABLE NO. 14, UNLESS NOTED OTHERWISE,<br>ALL DETECTOR LOOP CABLE TO BE SHIELDED |   | (5)  | (5)  | CROSSING GATE   | <del>\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ </del>  | X-X  |
| WIRELESS ACCESS POINT   |  |  |  | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)                              |   |  | (1)  | CROSSBUCK   | <u>₹</u>   |  |
| USER NAME - bauerdl   |  | DESIGNED - DAG/BCK   | REVISED -  |   |   |  | and the same of th | DISTRICT ONE  | F.A.P. SECTION   | COUNTY TOTAL SHEETS  |

COMPANY NAME: \$10 PROJECT CONTACT: \$10 CLIENT: \$10 DATE PLOTTED: 7/ FILE NAME: 86

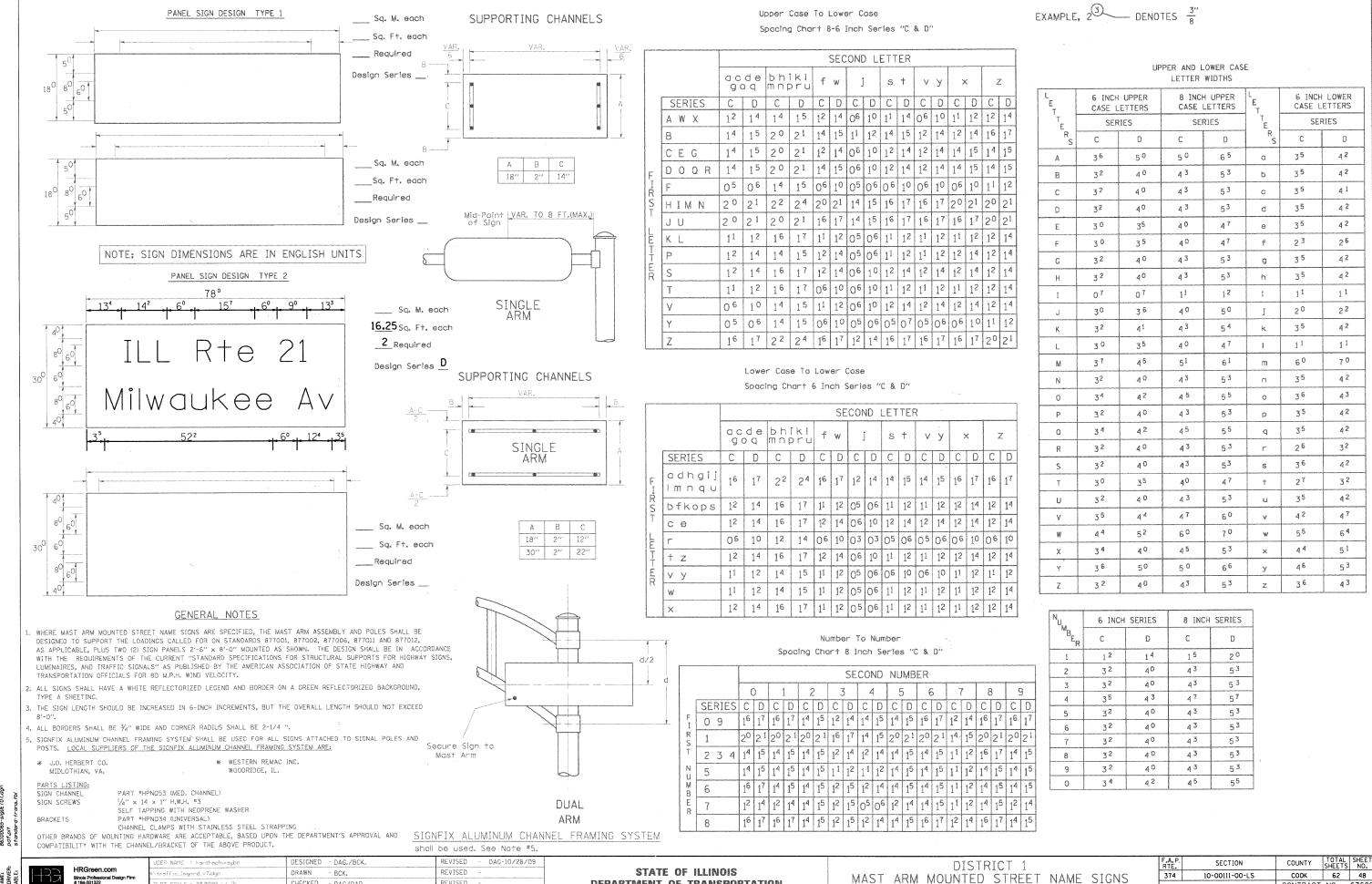
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: SHEET NO. 6 OF 7 SHEETS STA. TO STA.

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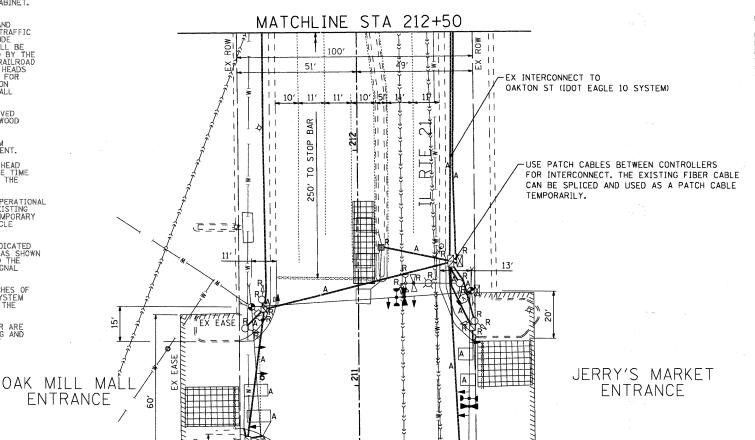
**DEPARTMENT OF TRANSPORTATION** 

SCALE: SHEET NO. 7 OF 7 SHEETS STA.

CONTRACT NO. 63622 FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT

#### NOTES FOR TEMPORARY TRAFFIC SIGNALS

- 1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- 2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS23 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- 3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER, COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACE TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD SHALL
- 4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- 5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- 6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
- 7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- 8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- 9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT I AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
- 10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



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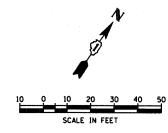
- REBUILD EX HANDHOLE

TEMPORARY WOOD
POLE CLASS 5
OR BETTER (50' MIN.) 15' TRUSS ARM COIL 20' OF SLACK CABLE BAND TO POLE END CAP VIDEO DETECTION CLEVIS -EXTRUDED SPACER NOTE: THE EQUIPMENT AND WORK `-2" SCH. 40 PIPE REQUIRED TO MOUNT THE VIDEO DETECTION CAMERAS WILL NOT SPUN TAPERED & FLATTENED ALUM. BE PAID FOR SEPARATELY, BUT TUBE SHALL BE INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC EXTRUDED OVAL STRUT SIGNAL INSTALLATION. FORGED ANGLE
THIMBLEYE GUY WIRE TEMPORARY WOOD POLE 

## TEMPORARY VIDEO DETECTION CAMERA MOUNTING DETAIL

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.

| 6<br>2<br>1<br>4 | EACH<br>EACH<br>EACH<br>EACH | SIGNAL POST<br>STEEL COMBINATION MAST ARM ASSEMBLY AND POLE<br>CONTROLLER AND CABINET<br>SIGNAL HEAD, 1-FACE, 3 SECTION |
|------------------|------------------------------|---|
| 2                | EACH                         | SIGNAL HEAD. 1-FACE. 5 SECTION  |
| 2                | EACH                         | SIGNAL HEAD, 2-FACE, 2-3 SECTION  |
| 2                | EACH                         | SIGNAL HEAD. 2-FACE. 1-3 SECTION. 1-5 SECTION   |
| 2                | EACH                         | TRAFFIC SIGNAL BACKPLATE  |
| 2                | EACH                         | PEDESTRIAN SIGNAL HEAD. 1-FACE  |
| 2                | EACH                         | PEDESTRIAN PUSHBUTTON   |
| 1                | EACH                         | CONFIRMATION BEACON   |
| 1                | EACH                         | EMERGENCY VEHICLE LIGHT DETECTOR  |



### CONSTRUCTION NOTES

ALL TEMPORARY PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND DISCONNECTED WHEN EXISTING PAVEMENT IS REMOVED AND REMAINED BAGGED UNTIL PAVEMENT IS RESTORED.

FINAL DETECTION CAMERA POSITIONS TO BE DETERMINED BY THE CONTRACTOR TO INSURE CORRECT ZONE COVERAGE, INCLUDING FAR-OUT DETECTION IS WORKING PROPERLY.

### 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 ROADWAYS 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 UNNOWED LAWNS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

### NOT

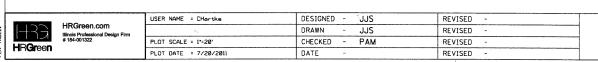
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

### NO T

EXISTING LIGHT DETECTOR AMPLIFIER, INDUCTIVE LOOP DETECTORS AND ALL OTHER CONTROL EQUIPMENT AND ALL OTHER CONTROL EQUIPMENT SHALL BE RE-USED FOR THE PERMANENT INSTALLATION.

### N

THE EXISTING INTERCONNECT CONDUIT AND CABLE (IDOT EAGLE 10 SYSTEM) WILL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION UNTIL TEMPORARY SIGNALS ARE REMOVED AND THE NEW INTERCONNECT FIBER CABLE IS CONNECTED.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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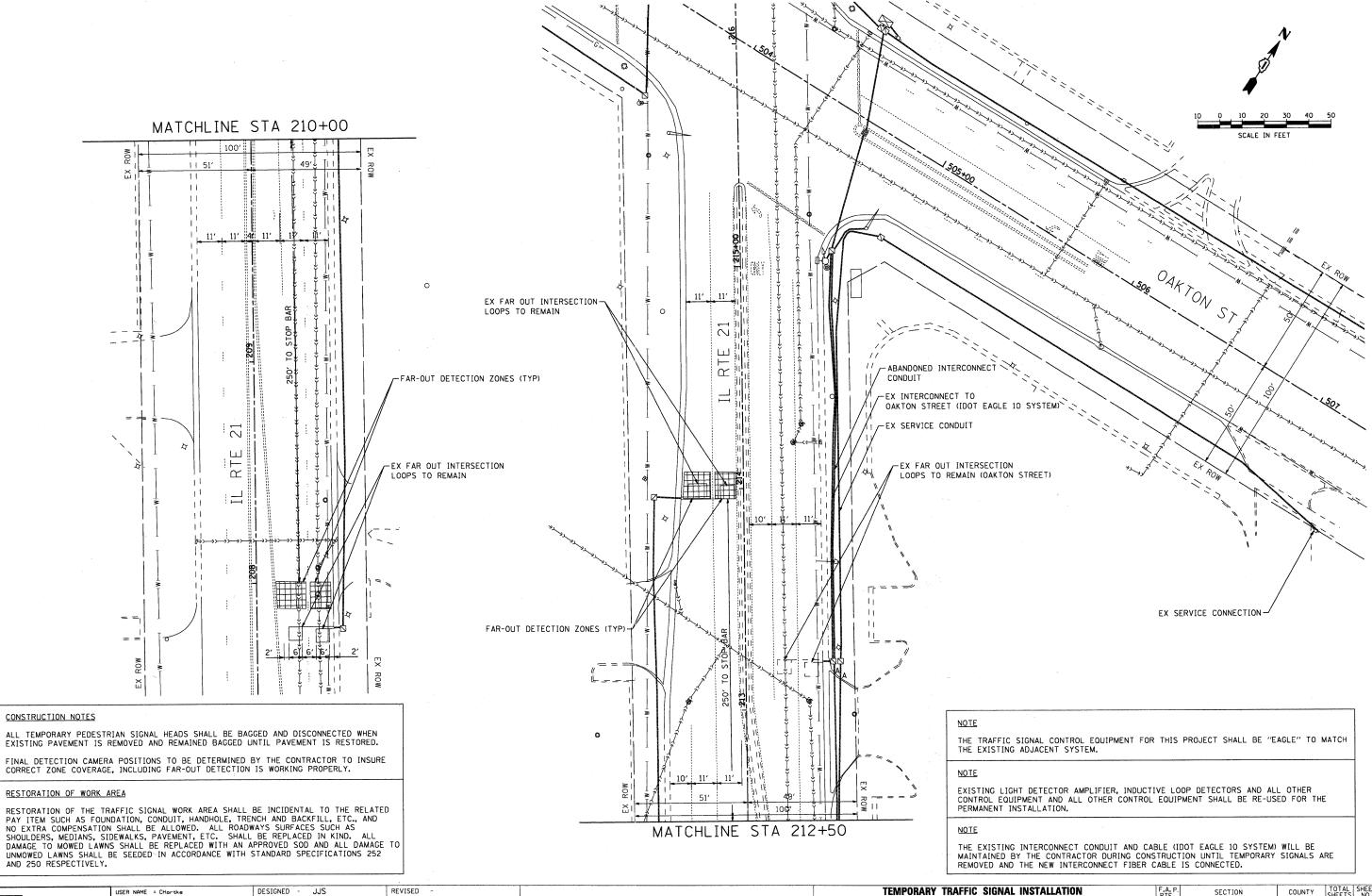
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TEMPORARY TRAFFIC SIGNAL INSTALLATION
AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
MILWAUKEE AVE AT OAK MILL MALL ENTRANCE

SCALE: 1"=20" SHEET NO. 1 OF 8 SHEETS STA. TO STA.

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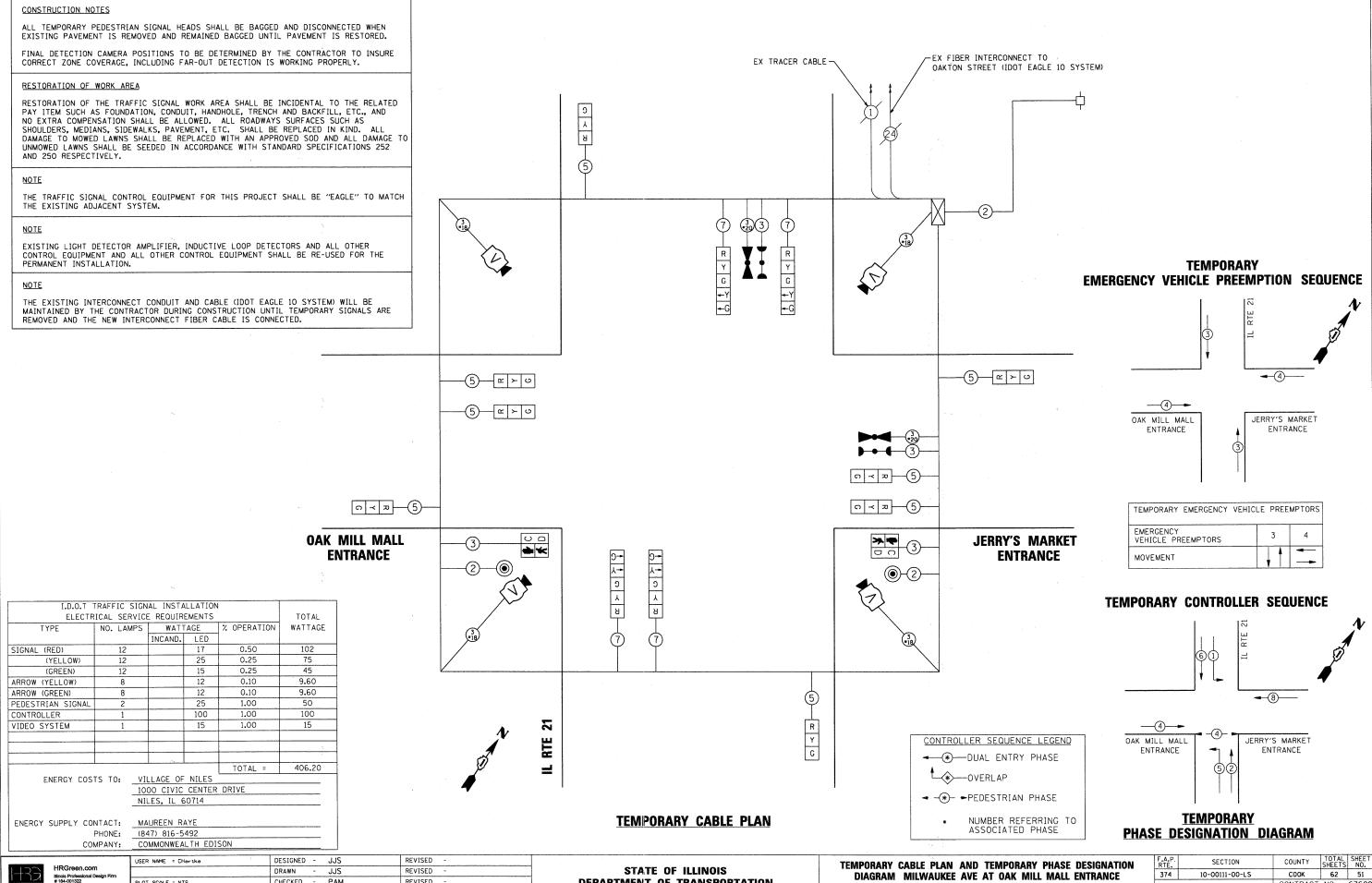
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION
AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
MILWAUKEE AVE AT OAK MILL MALL ENTRANCE
20' SHEET NO. 2 OF 8 SHEETS STA. TO STA.

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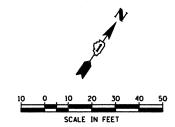
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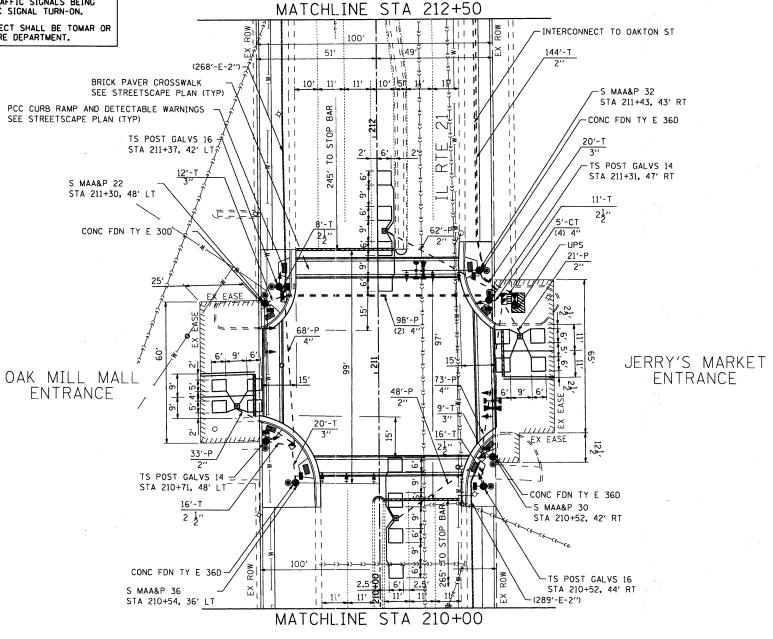
**DEPARTMENT OF TRANSPORTATION** 

SHEET NO. 3 OF 8 SHEETS STA.

CONTRACT NO. 63622 FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT

- NEW LED CONFIRMATION DETECTORS AND BEACONS SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS FOR EVP. THIS WORK SHALL BE INCLUDED IN THE COST FOR THE UNINTERRUPTIBLE POWER SUPPLY.
- 2. ALL NEW TRAFFIC SIGNAL EQUIPMENT INCLUDING POSTS AND MAST ARMS SHALL ARRIVE AT THE PROJECT SITE WITH A BLACK FACTORY FINISH IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- STOP BARS ARE NOT TO BE PLACED PRIOR TO THE PROPOSED TRAFFIC SIGNALS BEING OPERATIONAL. THEY MUST BE IN PLACE AT THE TIME OF TRAFFIC SIGNAL TURN-ON.
- 4. THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT FOR THIS PROJECT SHALL BE TOMAR OR AN APPROVED EQUAL AS REQUIRED BY THE VILLAGE OF NILES FIRE DEPARTMENT.





### 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 ROADWAYS 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 LAWNS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

### NOTE

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

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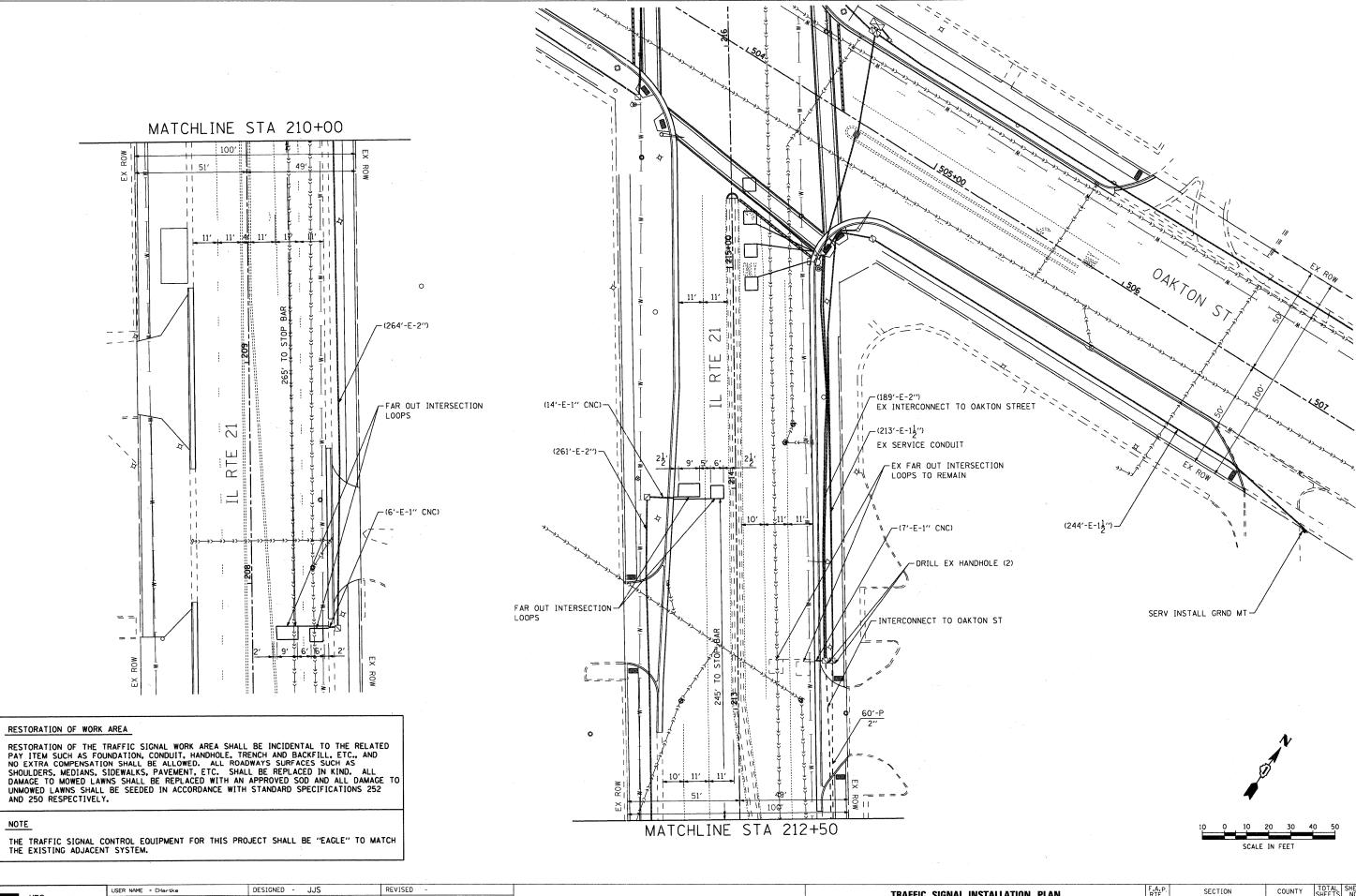
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| HRGreen.com                                  |      |
|--|------|
| Illinois Professional Design<br># 184-001322 | Firm |
|  | Г    |

| USER NAME = CHartke   | DESIGNED - JJS | REVISED - |
|-----------------------|----------------|-----------|
|                       | DRAWN - JJS    | REVISED - |
| PLOT SCALE = 1"=20"   | CHECKED - PAM  | REVISED - |
| PLOT DATE = 7/20/2011 | DATE -         | REVISED - |
|                       |                |           |

|               | TRAFFIC<br>MILWAUKEE | SIGNAL<br>AVE AT |        |      |         |
|---------------|----------------------|------------------|--------|------|---------|
| SCALE: 1"=20" | SHEET NO.            | 4 OF 8           | SHEETS | STA. | TO STA. |

| RTE. | Ρ.   |       | SE   | CTION     |      | COUNTY | SHEETS   | SHEET<br>NO.                            |       |
|------|------|-------|------|-----------|------|--------|----------|---|-------|
| 374  |      | 10    | 00-0 | 111-00-LS |      |        | СООК     | 62                                      | 52    |
|      |      |       |      |           |      | Т      | CONTRACT | NO.                                     | 63622 |
| FED. | ROAD | DIST. | NO.  | ILLINOIS  | FED. | AID    | PROJECT  | *************************************** |       |



HRGreen

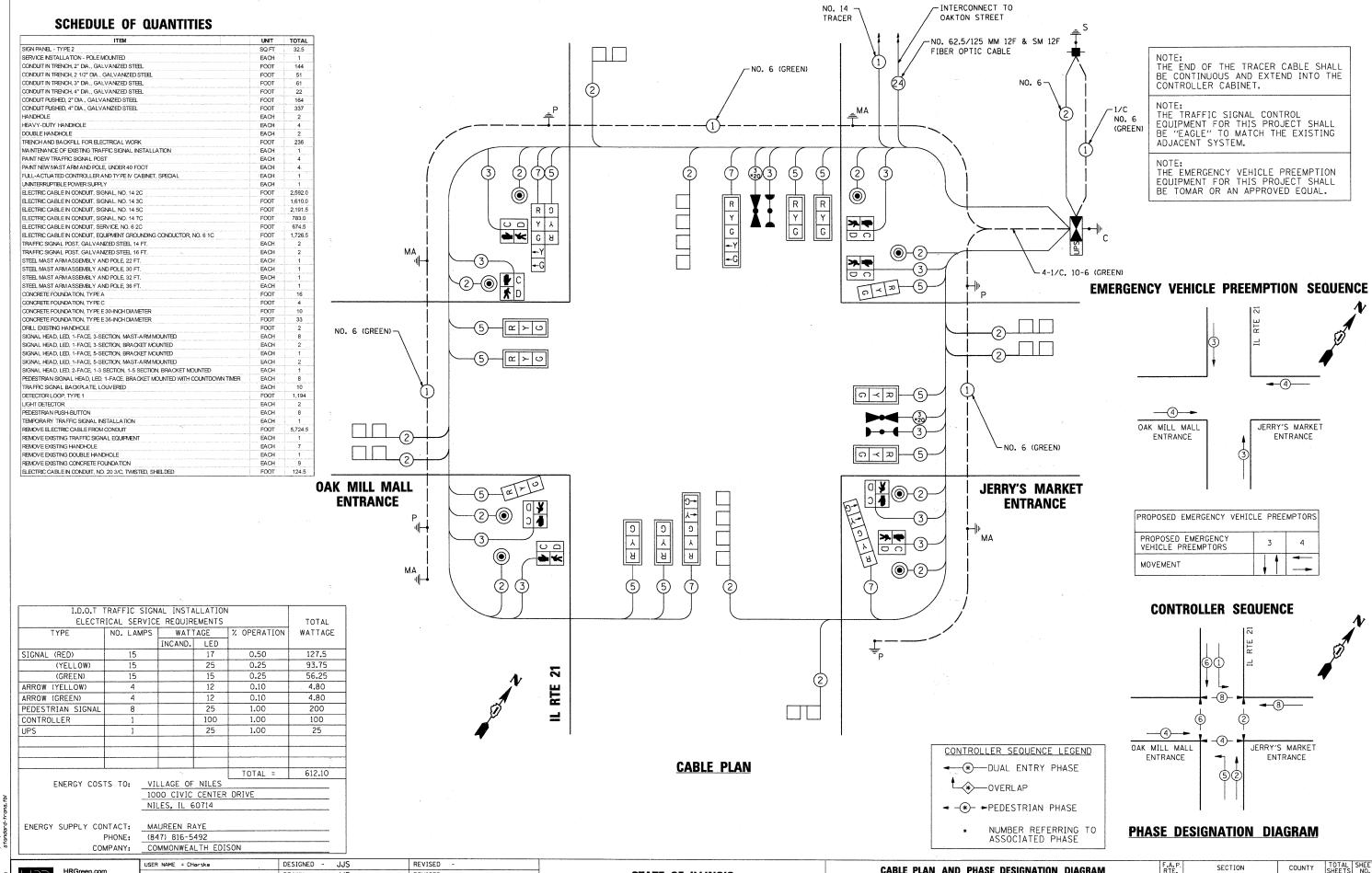
NOTE

DRAWN REVISED - JJS CHECKED - PAM REVISED PLOT SCALE = 1'=20' PLOT DATE = 7/20/2011 DATE REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

TRAFFIC SIGNAL INSTALLATION PLAN MILWAUKEE AVE AT OAK MILL MALL ENTRANCE SCALE: 1"=20' SHEET NO. 5 OF 8 SHEETS STA. TO STA.

374 СООК 62 10-00111-00-LS CONTRACT NO. 63622 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



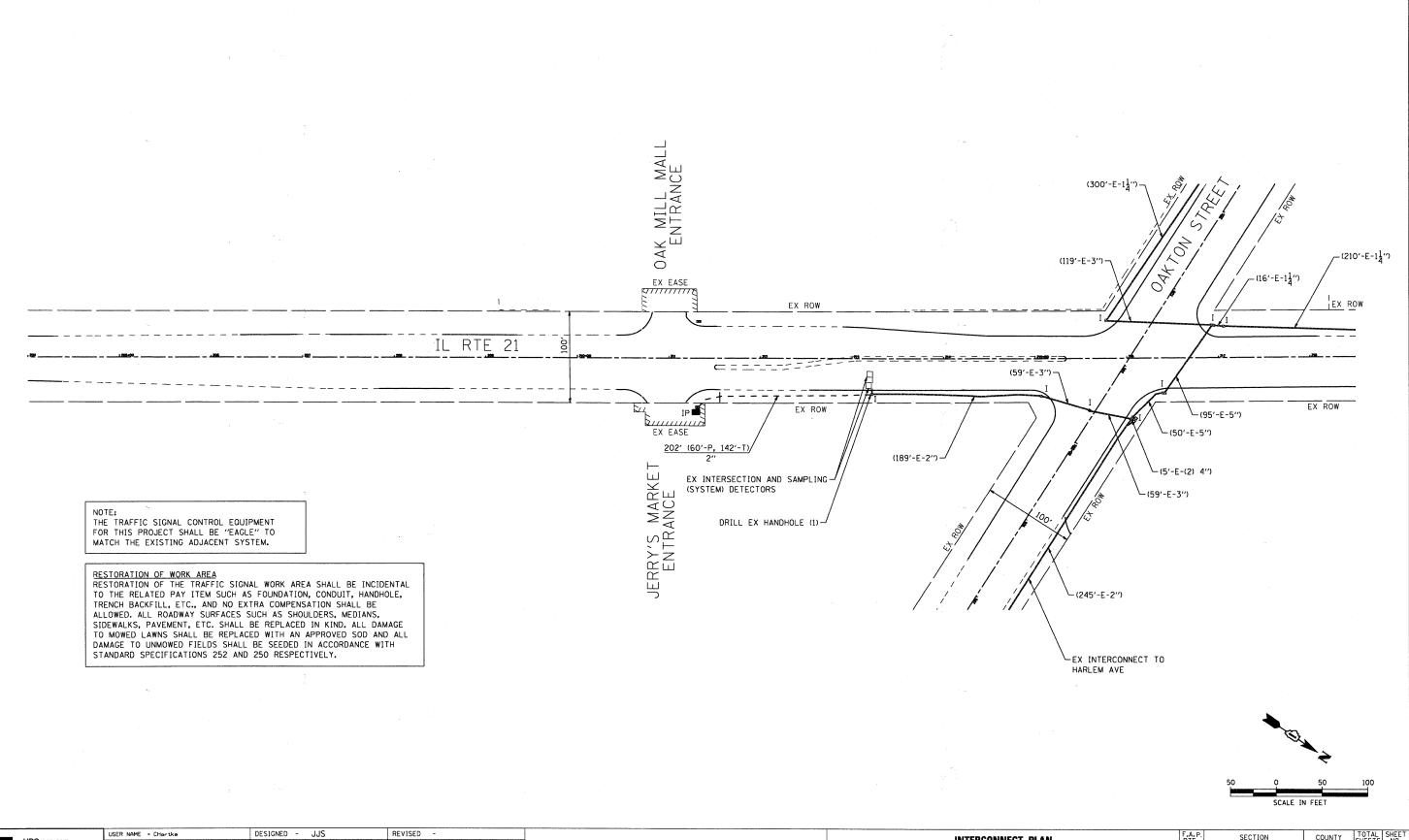
COMPANY NAM PROJECT CON' CLIENT: DATE PLOTTED FILE NAME: HRGreen.com
Illinois Professional Dec
#184-001322

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM MILWAUKEE AVE AT OAK MILL MALL ENTRANCE

SHEET NO. 6 OF 8 SHEETS STA.

SCALE: NTS



\$(COMPANY\_NAME \$(PROJECT\_CONT) \$(CLIENT) 7/20/2011 4:19:1 B6100065-s(gINT) pdf.pH standard-trank

COMPANY NAME: \$
PROJECT CONTACT: \$
CLIENT: \$
DATE PLOTTED: 7
FILE NAME: 8
PLOT DRIVER: P

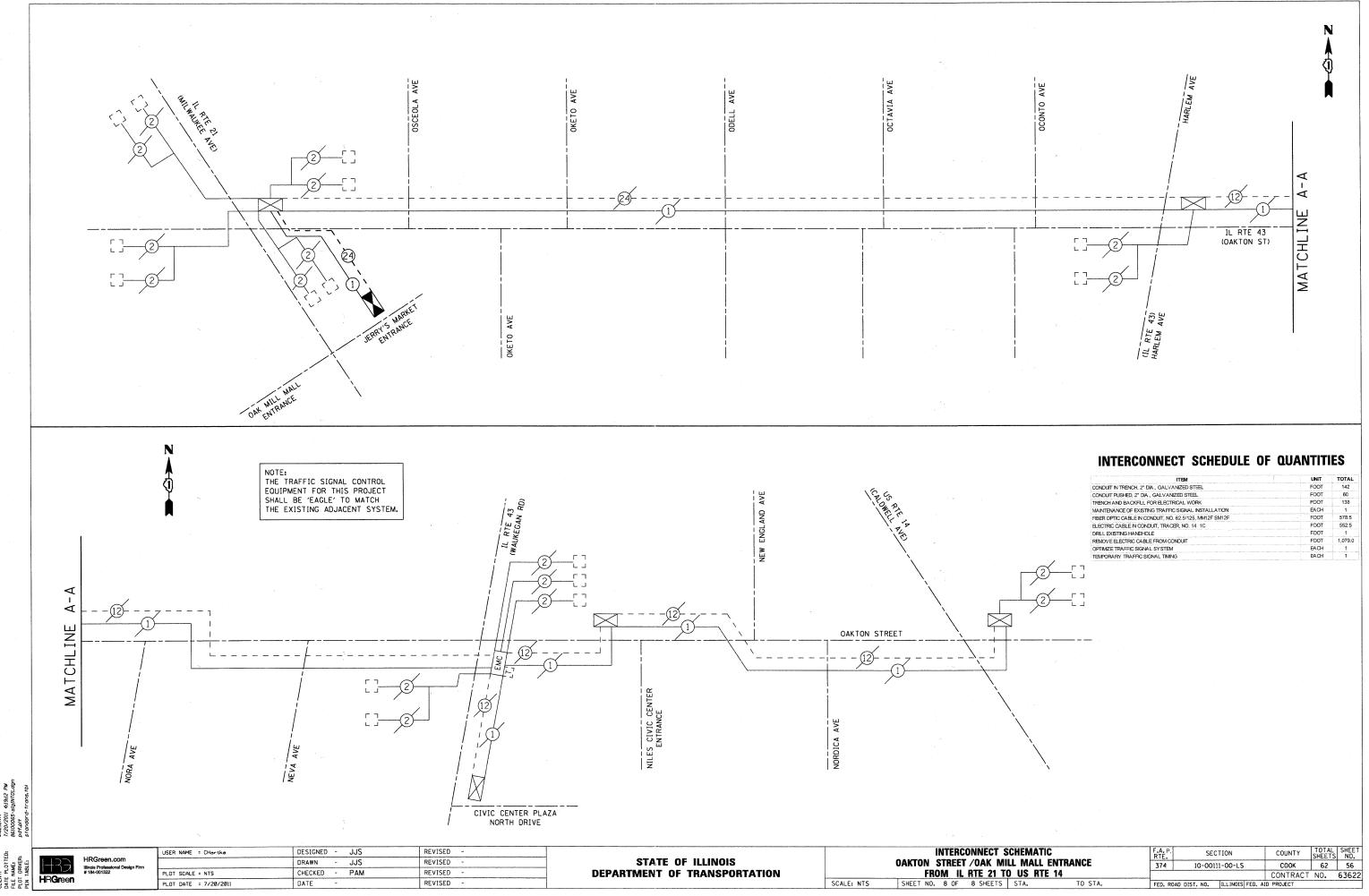
HRGreen.com
Illinois Professional Design Firm
# 184-001322

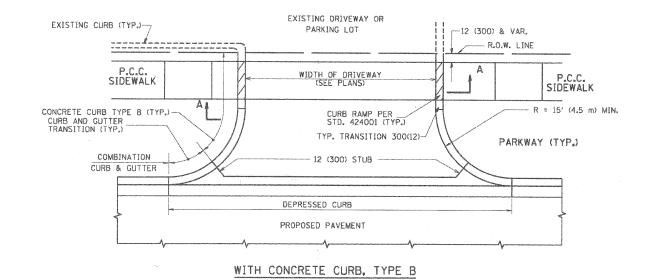
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

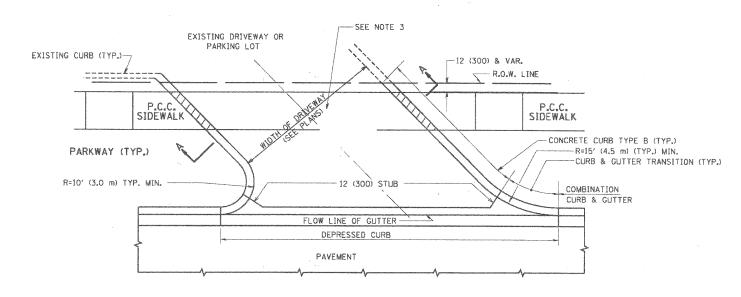
INTERCONNECT PLAN
OAK MILL MALL ENTRANCE TO OAKTON STREET

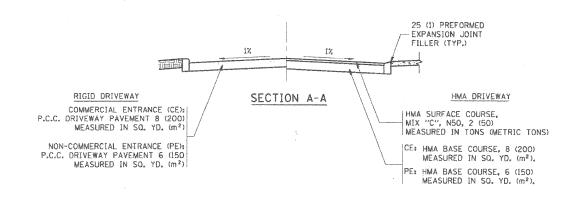
SCALE: 1"=50' SHEET NO. 7 OF 8 SHEETS STA. TO STA.

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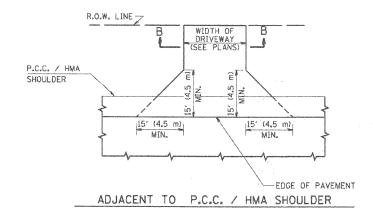


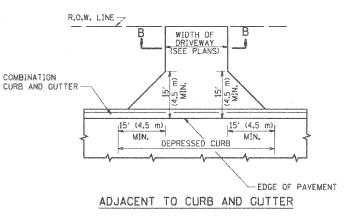


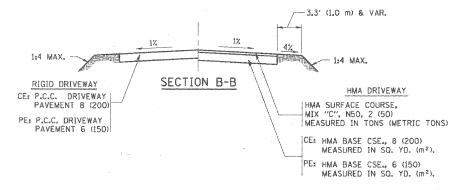




WITH CONCRETE CURB, TYPE B







### RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "C", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD. (m<sup>2</sup>).

### GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY OUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY,

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

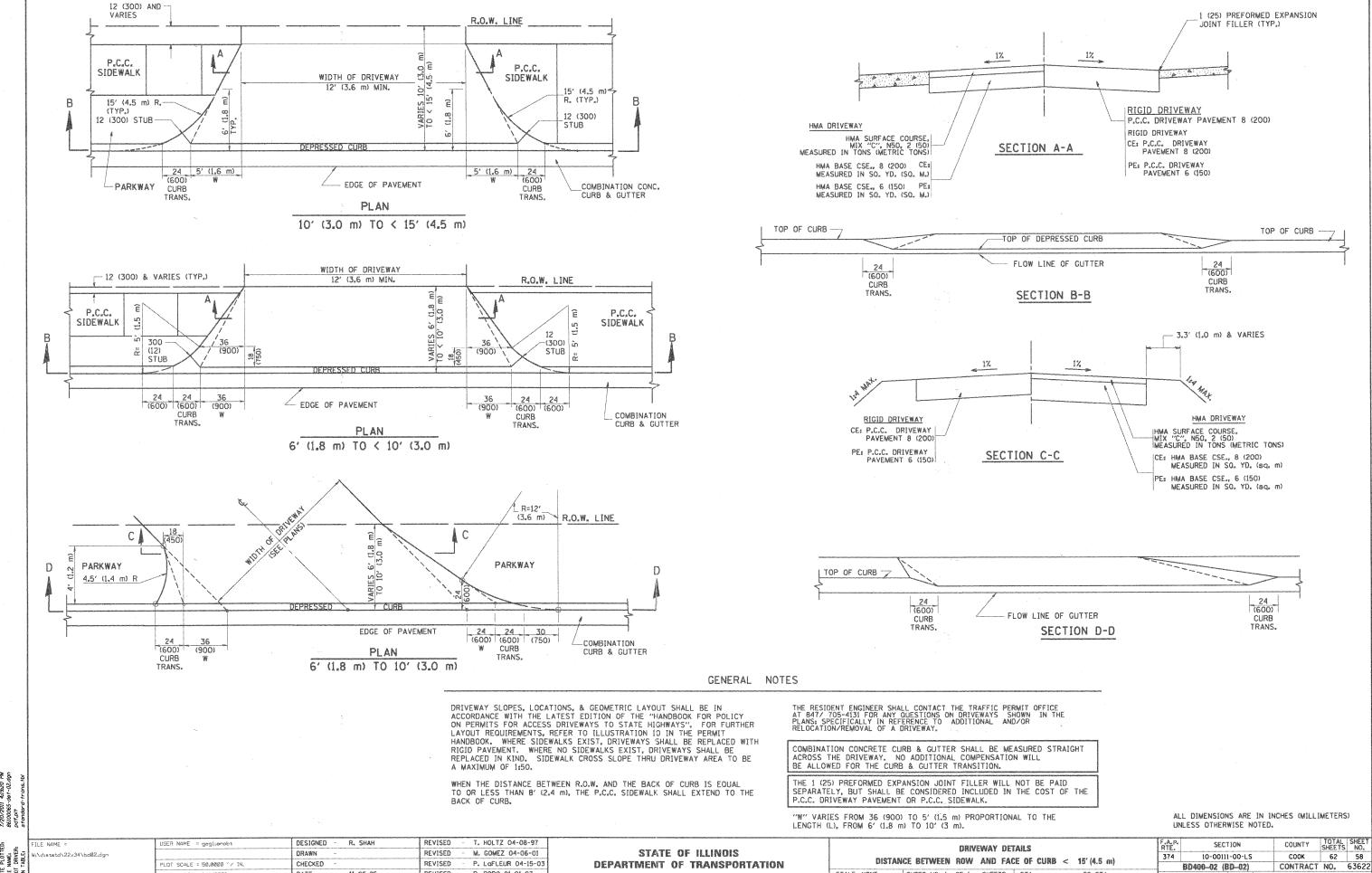
1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK,

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

NAME: \$(COMPANY\_NAME)
CONTACT: \$(PRO\_ACT\_CONTACT)
\$(CLENT)

| ILE NAME =                        | USER NAME = bauerdl         | DESIGNED - R. SHAH | REVISED - M. GOMEZ 04-06  | -01  |
|-----------------------------------|-----------------------------|--------------------|---------------------------|--|
| ::\projects\distatd22x34\bdØl.dgn |                             | DRAWN              | REVISED - P. LOFLUER 04-1 | 5-03   |
|                                   | PLOT SCALE = 49,9999 '/ IN. | CHECKED -          | REVISED - R. BORO 01-01-0 | 7  |
|                                   | PLOT DATE = 6/12/2008       | DATE - 11-04-95    | REVISED - R. BORO 06-11-0 | 8  |
|                                   |                             |                    |                           | - Constitution of the Cons |

| DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.           | E. SECTION                             | COUNTY    | TOTAL<br>SHEETS | SHEET<br>NO. |
|--|--|-----------|-----------------|--------------|
| AND FACE OF CURB & EDGE OF SHOULDER > = 15'(4.5 m)   | 4 10-00111-00-LS                       | СООК      | 62              | 57           |
|  | BD0156-07 (BD-01)                      | CONTRACT  | NO.             | 63622        |
| SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. FED | D. ROAD DIST. NO. 1   ILLINOIS FED. A) | D PROJECT |                 |              |



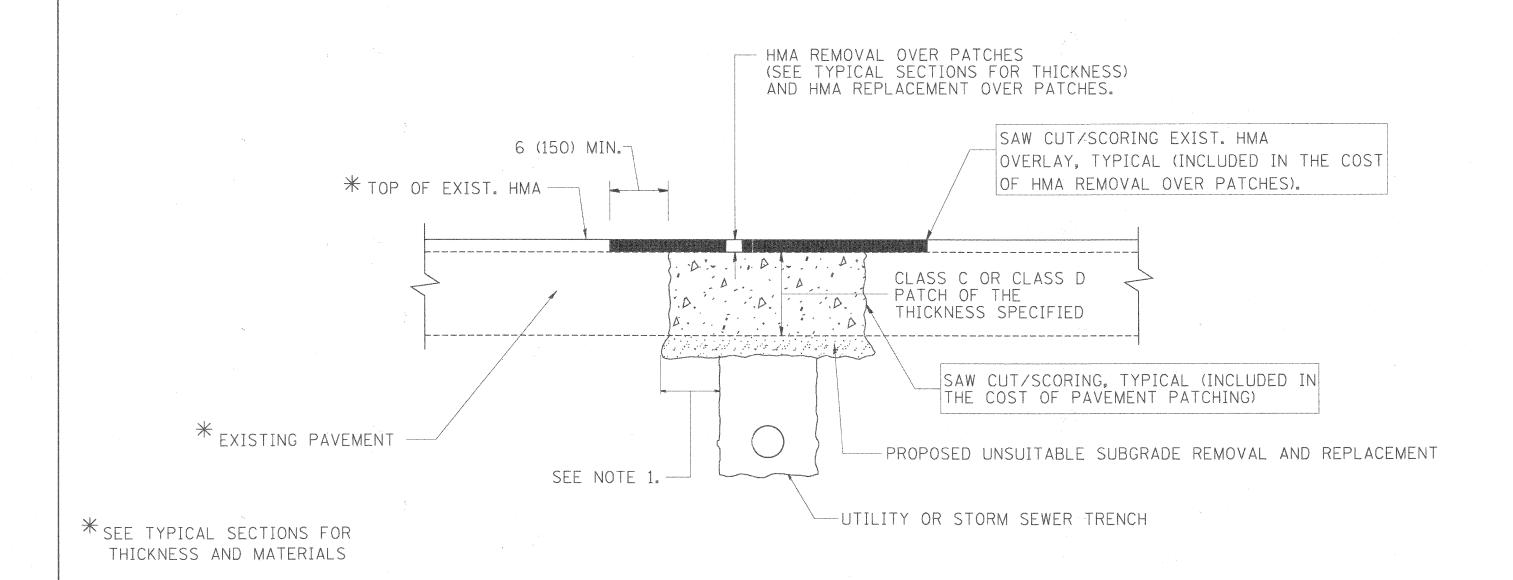
SHEET NO. 1 OF 1 SHEETS STA.

FED. ROAD DIST. NO. 1 | ILLINOIS FED. AID PROJECT

- R. BORO 01-01-07

ME: SICOMPANY\_NAME)
ITACT: SIPPOLECT\_CONTACT)
SICLIENT)
T/20/2011 4:19:20 PM
BEIDOOGS-det-02.dgn

PLOT DATE = 1/4/2008



### NOTES:

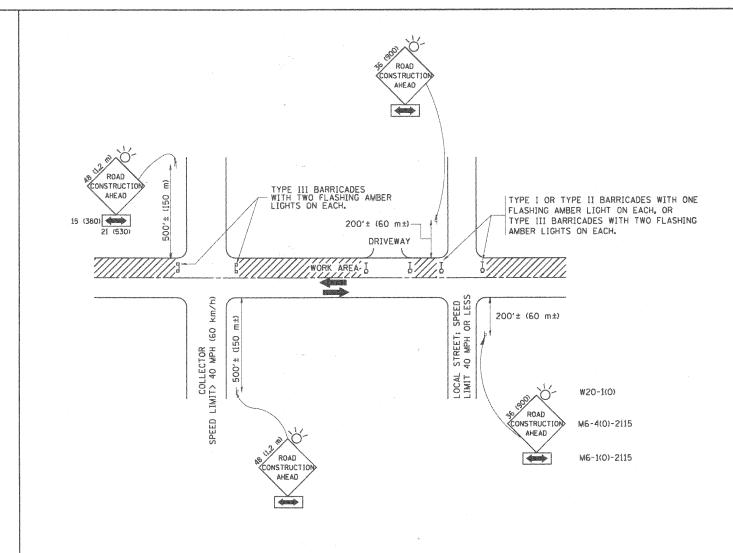
- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

### SEQUENCE OF CONSTRUCTION

- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE FULL DEPTH PATCHES
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

| ,,    | FILE NAME =               | USER NAME = geglienobt     | DESIGNED - R. SHAH | REVISED - A. ABBAS 01-20-98 |                              | marinament marketiate mon                        | EAP SECTION COUNTY J.S.                         | TAL SHEE            |
|-------|---------------------------|----------------------------|--------------------|-----------------------------|------------------------------|--|---|---------------------|
| Έ     | Wildistatd\22x34\bd22.dgn |                            | DRAWN -            | REVISED - A. ABBAS 04-27-98 | STATE OF ILLINOIS            | PAVEMENT PATCHING FOR                            | 374 10-00111-00-LS COOK 6                       | 62 59               |
| TAB   | ·                         | PLOT SCALE = 50.000 '/ IN. | CHECKED -          | REVISED - R. BORO 01-01-07  | DEPARTMENT OF TRANSPORTATION | HMA SURFACED PAVEMENT                            | BD400-04 (BD-22) CONTRACT NO                    | 02 33               |
| PEN P |                           | PLOT DATE = 1/4/2008       | DATE - 10-25-94    | REVISED - R. BORO 09-04-07  |                              | SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT | / <sub>s</sub> 0302 |
| 8     |                           |                            |                    |                             |                              |  |   |                     |



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

### NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- OF THE MAIN ROUTE.

  OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION,
- 2. SIDE ROAD WITH A SPEED LIMIT CREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

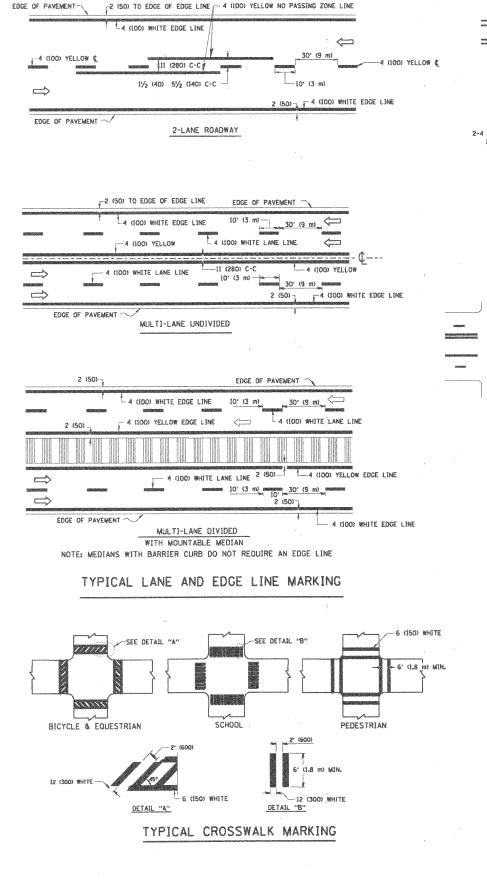
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

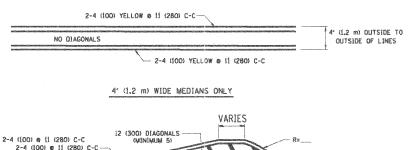
All dimensions are in millimeters (inches) unless otherwise shown.

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|             | TR    | AFFI | C  | CON  | ITROI | . AND  | PROTEC  | TION                                    | FOR   |    |      |
|-------------|-------|------|----|------|-------|--------|---------|---|-------|----|------|
|             | SIDE  | RO/  | DS | , IN | TERS  | ECTION | IS, AND | DRIV                                    | EWAYS |    |      |
| SCALE: NONE | SHEET | NO.  | 1  | OF   | ţ     | SHEETS | STA.    | *************************************** |       | TO | STA. |

| <br>F.A.P.<br>RTE. | SECTION        | COUNTY   | TOTAL<br>SHEETS | SHE |
|--------------------|----------------|----------|-----------------|-----|
| 374                | 10-00111-00-LS | COOK     | 62              | 60  |
|                    | TC-10          | CONTRACT | NO.             | 636 |
|                    |                |          |                 |     |





VARIES

12 (300) DIAGONALS

(4 (100) © 11 (280) C-C

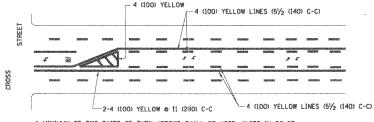
(MINIMUM 5)

MEDIAN LENGTH

FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
78' (25 m) C-C (SOMPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

### MEDIANS OVER 4' (1.2 m) WIDE

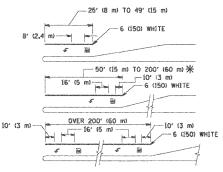


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR, ADDITIONAL PAIRS SHALL BE PLACED AT 200' (50 m) TO 300' (90 m) INTERVALS,



MEDIAN WITH TWO-WAY LEFT TURN LANE

### TYPICAL PAINTED MEDIAN MARKING

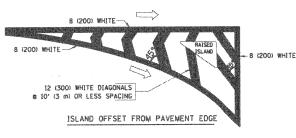


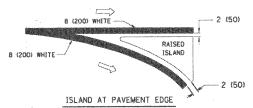
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SO. FT. (1.5 m² ) 100 AREA = 20.8 SQ. FT. (1.9 m²)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

### TYPICAL TURN LANE MARKING





### TYPICAL ISLAND MARKING

| TYPE OF MARKING   | WIDTH OF LINE   | PATTERN                 | COLOR                          | SPACING / REMARKS  |
|---|---|-------------------------|--------------------------------|--|
| CENTERLINE ON 2 LANE PAVEMENT   | 4 (100)   | SKIP-DASH               | YELLOW                         | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| CENTERLINE ON MULTI-LANE UNDIVEDED PAYEMENT   | 2 e 4 (100)   | SOLID                   | XETTOM.                        | 11 (2BO) C-C   |
| NO PASSING ZONE LINES:<br>FOR ONE DIRECTION<br>FOR BOTH DIRECTIONS                                | 4 (100)<br>2 m 4 (100)  | SOLID<br>SOLID          | AETFOM<br>AETFOM               | 5/2 (140) C-C FROM SKIP-DASH CENTERLINE<br>11 (280) C-C<br>ONIT SKIP-DASH CENTERLINE BETWEEN   |
| LANE LINES  | 4 (100)<br>5 (125) ON FREEWAYS  | SKIP-DASH<br>SKIP-DASH  | WHITE<br>WHITE                 | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| DOTTED LINES IEXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)                                   | SAME AS LINE BEING<br>EXTENDED  | SKIP-DASH               | SAME AS LINE BEING<br>EXTENDED | 2' (GOO) LINE WITH 6' (L8 m) SPACE   |
| EDGE LINES  | 4 (100)   | SOLID                   | YELLOW-LEFT<br>WHITE-RIGHT     | OUTLINE WOUNTABLE WEDIANS IN<br>YELLOW: EDGE LINES ARE NOT<br>USED NEXT TO BARRIER CURB  |
| TURN LANE MARKINGS  | 6 (150) LINE; FULL<br>SIZE LETTERS &<br>SYMBOLS (8' (2.4m))                           | SOL ID                  | WHITE                          | SEE TYPICAL TURN LANE MARKING DETAIL   |
| TWO WAY LEFT TURN MARKING   | 2 # 4 (100)<br>EACH DIRECTION   | SKIP-DASH<br>AND SOLID  | AETTOM                         | 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH, 51/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE  |
| \.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.  | 8' (2.4m) LEFT ARROW  | IN PAIRS                | WHITE                          | SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL   |
| CROSSWALK LINES (PEDESTRIAN)<br>A. DIAGONALS (BIKE & EQUESTRIAN)<br>B. LONGITUDINAL BARS (SCHOOL) | 2 8 6 (150)<br>12 (300) 8 45°<br>12 (300) 9 90°                                       | SOLID<br>SOLID<br>SOLID | WHITE<br>WHITE                 | NOT LESS THAN 6' (1.8 m) APART<br>2' (500) APART<br>2' (500) APART<br>SEE TYPICAL CROSSWALK MARKING DETAILS.   |
| STOP LINES  | 24 (600)  | SOLID                   | WHITE                          | PLACE 4' 11.2 m) IN ADVANCE OF AND PARALLEL TO CROSSMULA, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED WEDIANS   | 2 & 4 ((00) WITH<br>12 (300) DIAGONALS<br>8 45°                                       | SOL 10                  | YELLOW:<br>TWO WAY TRAFFIC     | 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.   |
| ***   | NO DIAGONALS USED FOR<br>4' (1.2 m) WIDE MEDIANS                                      | ÷                       | WHITE:<br>ONE WAY TRAFFIC      |  |
| GORE MARKING AND<br>CHANNELIZING LINES  | 8 (200) WITH 12 (300)<br>DIAGONALS # 45°  | SOLID                   | WHITE                          | DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 46MPH (70 km/h)) 30' (9 m) C-C (0VER 45MPH (70 km/h))                      |
| RAILROAD CROSSING   | 24 (600) TRANSVERSE<br>LINES, "RR" IS 6' (1.8 m)<br>LETTERS, 16 (400)<br>LINE FOR "X" | SOLID                   | WHITE                          | SEE STATE STANDARD 780001<br>AREA OF9<br>"R"33,6 SQ, FT, (0,33 m²) EACH<br>"X"554,0 SQ, FT, (5,0 m²)   |
| SHOULDER DIAGONALS  | 12 (300) @ 45°  | SOLID                   | WHITE - RIGHT<br>YELLOW - LEFT | 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))<br>75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)<br>150' (45 m) C-C (0YER 45MPH (70 km/h))                        |

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

COUNTY TOTAL SHEET NO. DESTGNED EVERS REVISED -T. RAMMACHER 10-27-94 SECTION USER NAME = goglienobt ILE NAME = DISTRICT ONE REVISED -A. HOUSEH 10-09-96 STATE OF ILLINOIS DRAWN diststd\22x34\tol3.dqn 10-00111-00-LS соок 62 61 374 TYPICAL PAVEMENT MARKINGS PIDT SCALE = 50.000 '/ IN. CHECKED REVISED -A. HOUSEH 10-17-96 **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 63622 TC-13 DATE 03-19-90 REVISED - T. RAMMACHER 01-06-00 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. FED. ROAD DIST. NO. 1 | ILLINOIS FED. AID PROJECT

## LOOPS NEXT TO SHOULDERS PROVIDE A PAYEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' 1900 mm) X WIDTH OF PAVED SHOULDER PAVED OR NON-PAVED SHOULDER **H** (1.5 m) (1.8 m) (1.5 m) \* 1" (25 mm) UNIT DUCT-TRENCHED (3.0 m) (3.0 m) TO E/P \*\*

\* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS

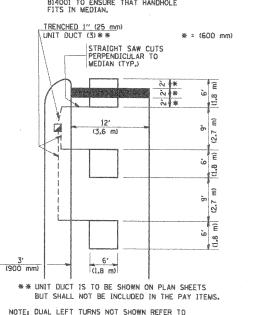
BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

\* = (600 mm)

### LEFT TURN LANES WITH MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

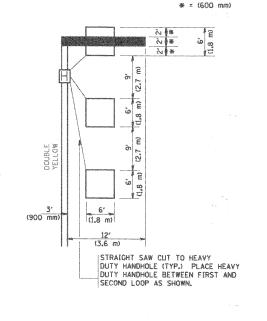
HANDHOLE LOCATION WAY HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD BIADOL TO ENSURE THAT HANDHOLE ETTS IN MEDIAN.



PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

### LEFT TURN LANES WITHOUT MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

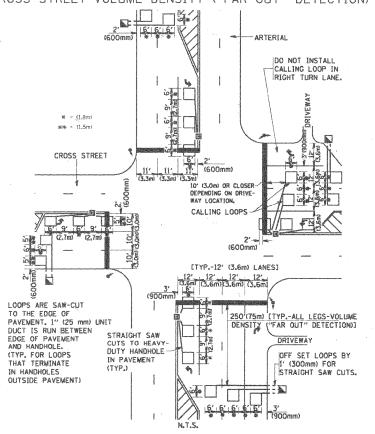
(PROTECTED / PERMITTED LEFT TURN PHASING)

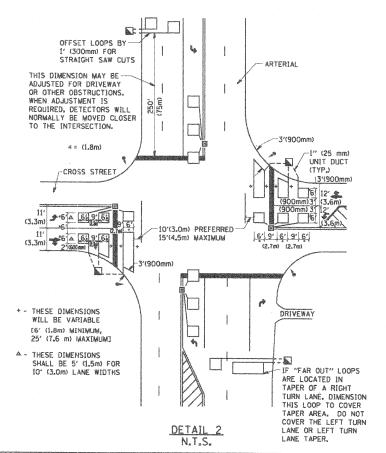


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)





NOTE:

**NOTES** 

SHIELDED.

PAVEMENT.

(1.8 m)

VEHICLES LOOP DETECTORS

FOR DETECTOR LOOPS.

(I.e. 1-1/2, 1-3/4, 2).

PLACEMENT OF DETECTORS

PAVEMENT EXTENDED.

SPECIFIC GEOMETRIC CONSIDERATIONS.

ON ALL SIGNAL LAYOUT PLAN SHEETS.

\* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED.

\* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE

LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE

DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY, THIS ITEM IS INCIDENTAL TO THE PAY ITEM

\* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET

\* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE

\* WHEN NON-LOCKING, PRESENCE DETECTION IS USED. MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR

\* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND

SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE

CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM)

DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE

INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A

AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW

LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE

ADVANCE OF STOP BARS, "UPTIGHT" DETECTION REFERS TO

10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF

LOOP LOCATIONS AND SIZES, ADJUSTMENTS WILL BE NECESSARY FOR

DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT

TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN

NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND

INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.

\* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT

ALL DETAILS AND NOTES SHOWN ARE FROM THE I,D,O,T, DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

N.T.S. DESIGNED REVISED TILE NAME : JSER NAME = geglienabi diststd\22x34\ts07.dgr DRAWN REVISED LOT SCALE = 50.0000 '/ IN. CHECKED REVISED DATE REVISED LOT DATE = 1/4/2008

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING SHEET NO. 1 OF 1 SHEETS STA. TO STA.

SECTION COUNTY TOTAL SHEE' SHEETS NO. 374 10-00111-00-LS COOK 62 62 TS-07 CONTRACT NO. 63622